

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 December 22, 2016, 138 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
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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12/3/2016	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.
11/5/2016	SPOT Report	Li-ion	E-cig/charger	N/A	N/A	A passenger's backpack containing an e-cigarette battery installed in charger experienced thermal runaway, emitted smoked and caught fire in the food court area of Seattle international Airport (SEA).
10/30/2016	Carrier/SPOT Report	Li-ion	E-cig	Alaska	Passenger	At Ketchikan, AK (KTN) airport, during boarding of Alaska Airlines flight 67, a passenger's backpack containing an e-cigarette caught fire. The passenger dumped contents on the floor and crew used fire extinguishers to put out the fire. No injuries reported. Scorch marks to carpet of the aircraft were the result of the fire.

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10/23/2016	Carrier/SPOT Report	Li-ion	E-cig Charging unit (non-powered)	United	Passenger	Ramp personnel observed smoke emitting from a passenger's bag while loading baggage on flight 1712. Ramp personnel pulled and opened the bag and called Seattle FD. They responded and applied approximately 4 gallons of water on the bag. It was determined to contain two (2) Lithium Batteries of undetermined size, which experienced thermal runaway while connected to a charger inside a passenger's checked bag.
9/24/2016	Media Reports	Li-ion	Samsung Tablet	Delta	Passenger	Flight 138 en route from Detroit, MI to Amsterdam (Netherlands) was about 60nm east of Manchester (UK) when the crew reported smoke in the cabin. The aircraft diverted to Manchester, UK. Maintenance crews located a Samsung tablet computer, which suffered a thermal runaway, stuck beneath a seat. It is presumed the tablet was lost by a passenger on the previous sectors flown by the aircraft.
9/23/2016	Media Reports	Li-ion	Samsung smart phone	Indigo	Passenger	An Indigo Airbus performing flight from Singapore to Chennai (India) was descending towards Chennai when a passenger noticed smoke coming from the overhead bin near seat row 23. Cabin crew extinguished the flames with a fire extinguisher and doused the phone with water before isolating it in a container. The crew identified a Galaxy Note 2 smartphone had overheated. The aircraft landed safely at Chennai. India's DGCA confirmed a smartphone Lithium Battery had suffered a thermal runaway. The occurrence is being investigated.
9/7/2016	Airport Operations	Li-ion	E-cig	N/A	N/A	As a passenger was entering the baggage claim area of DAL airport an e-cig in her purse exploded and burned the purse, some of its contents and charred her shirt. Witnesses stated there were small projectiles, which were on fire exiting her purse. They were extinguished by people standing at the baggage claim area waiting for their bags.
9/3/2016	Carrier/TSA SPOT report	Li-ion	E-cig	Spirit	Passenger	Spirit Airline employee was sorting bags and noticed one bag was smoking. The employee made immediate notification to his management, who in turn notified Denver Police (DPD) and TSA. DPD was in the area and first to

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						respond and determined it was an e-cigarette device in a passenger's checked bag. There was no fire only smoldering coming from the bag. Once the reaction of the battery was stopped the damage was to the a few clothing items in the bag.
8/22/2016	Media Reports	Li-ion	Cell Phone	SkyMark	Passenger	A rechargeable battery of a smartphone in a carry-on baggage located under the seat of a passenger of flight SkyMark SKY/BC732 from New Chitose to Tokyo/Haneda, operated by a Boeing 737-86N, ignited and smoked just after take-off at 00:19 JST. The fire was immediately extinguished by the cabin crew. Two crew members suffered minor burn on their right arm or left hand fingers.
8/13/2016	Carrier	Li-ion	Spare batteries/ charging device	United	Passenger	UAL1102, B739, EWR-SJU, reported a fire on board when a checked bag in the cargo hold area caught fire. Aircraft landed on runway 22L at SJU where the fire department responded and the cargo hold fire bottle was deployed. Taxied to the ramp with all passengers on board. 8/13 1702z. This was originally reported as an e-cig but it was determined to be 2 re-chargeable li-ion batteries in their charging unit.
8/5/2016	Carrier	Li-ion	Power pack/charging device	Delta	Passenger	A passenger's personal lithium battery charging device caught fire prior to takeoff (during pushback) in a seat pocket DL flight 949 in Newark, NJ (EWR) destined to Detroit MI (DTW). The device was taken by a passenger to the aft lavatory sink to extinguish. Subsequently, the aft lavatory smoke detector activated and alerted the crew. The device was removed from the aircraft and the EWR Hazardous Materials Field Office is further investigating. Preliminary indications reveal the device is described as a "Pink Moon Portable Power Charger". The flight was delayed 34 minutes with no damage to the aircraft/aft lavatory. There was discoloration of the seat pocket due to the heat generated from the device.

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8/2/2016	Carrier	Li-ion	tablet	Southwest	Passenger	At MDW airport during boarding a passenger carrying a backpack advised a flt attendant that the bag was smoking. The bag was removed from the aircraft and the Chicago Fire Department responded, extinguished the fire and determined that the tablet, RCA Model RCT6773W22 powered by a 7.5 watt hour battery overheated in the passenger's backpack.
7/21/2016	Carrier	Li-ion	Spare batteries for cell phone	FedEx	Cargo	FedEx reported that a package was found smoking in the sort facility in Memphis, TN. The package was removed from the sort, and once removed it burst into flames. The fire was extinguished, and no injuries or damage was reported. The shipper is from the Santo Domingo and the package was being shipped to Calif. The paperwork for the shipment reflected spare cell phone parts. FDEA reported that the package contain several lithium ion batteries. The package was heavily damaged, so it was unknown if a handling label was on the package
7/15/2016	Carrier	Li-ion	Vivitar Power pack	American Airlines	Passenger	AA flt from DTW-DFW diverted to Wichita Falls, TX due to a li-ion battery/power pack emitting fumes suspected of entering thermal runaway
7/6/2016	Carrier	Li-ion	Cell Phone	United	Passenger	Passenger's cell phone battery exploded in flight. Fire extinguished by crew.
6/17/2016	Carrier	Li-ion	e-Cig and charger	American	Passenger	A passenger's checked bag containing an E-cig, charger and two spare 3.7 volt lithium ion batteries was smoking as it was offloaded from an American Airlines flight in Chicago, IL. Fire was extinguished with water.
6/16/2016	Carrier	Li-ion	vaporizer	Alaska	Passenger	Passenger had checked a bag, which contained a lithium battery powered vaporizer with batteries installed as well as a charger attached to a spare battery. Flammable aerosol hairsprays and other toiletries were also contained within the bag. During screening, a TSA agent noticed the passenger's bag smoking and extinguished the fire. The Port of Seattle Fire department responded, ensured the fire was completely extinguished, and determined the spare lithium battery in the checked bag was the cause.

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6/14/2016	Carrier	Li-ion	e-Cig	Spirit	Passenger	During boarding a passenger was carrying a backpack when another passenger noticed the fire. The plane was offloaded immediately. The DEN Fire Department responded, extinguished the fire and determined the e-cigarette in the carry-on bag (backpack) was the cause. The aircraft was cleared, cleaned and put back in service. The passenger chose to take the remains of the backpack with him.
6/10/2016	Carrier	Li-ion	e-Cig	Spirit	Passenger	Flt 765 from San Jose Costa Rica to Fort Lauderdale, e-cig began to smoke in a passengers backpack on seat. Fire extinguished with a fire extinguisher and then the e-cig was submerged in water. Flight continued and landed in FLL without further issues.
5/15/2016	Media Reports	Li-ion	Cell Phone	Qantas	Passenger	The Australian Transport Safety Bureau (ATSB) reported about two hours prior to estimated landing in Dallas Ft. Worth a passenger alerted cabin crew to smoke in the cabin, the flight attendants started their basic fire drill, two flight attendants proceeded to the source of the smoke with fire extinguishers, the service manager alerted flight crew and all cabin crew to the presence of smoke. The source of smoke was located at seat 19F in Zone F at the upper deck. The crew removed the seat cushions and covers from seat 19F, while the cabin manager switched off all electric supplies to the center column of seats. After further dismantling of the seat cabin crew found a crushed personal electronic device (PED) wedged tightly into the seat's mechanism and assessed the PED contained a Lithium battery. The battery, at that time, was no longer emitting smoke; however a strong acrid smell remained in the cabin. The crew maneuvered the seat and freed the PED, then put the PED into a jug of water, which was further put into a metal box and was being monitored for the remainder of the flight.
5/6/2016	Media Reports	Li-ion	power pack	V Air	Passenger	A V Air Airbus A321-200, registration B-22610 performing flight ZV-252 from Taipei (Taiwan) to Tokyo Haneda (Japan) with 161 people on board, had just reached cruise level 350 about 150nm northeast of Taipei when smoke emanated from a battery carried by a passenger prompting the crew to return

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						to Taipei where the aircraft landed safely on runway 23L about 30 minutes later. Taiwan's ASC reported the smoke was caused by a non-genuine power bank carried by a passenger in the carry-on luggage that burned out. The ASC opened an investigation into the occurrence and dispatched investigators on site. Taiwan's Civil Aviation Authority reported the power bank was a lithium type power bank made in China. Cabin crew quickly cooled the battery down and put it into a bucket of cold water to prevent a further overheating.
4/3/2016	Carrier	Li-ion	electronic equipment	Kalitta Air	Cargo	1 box of 43 boxes in Cargo shipment of atomization devices w/ lit-ion batteries began to smoke during loading- entire shipment was removed from aircraft and brought to cargo warehouse. Fire department was called and submerged them in water. Many of the devices had lights on them indicating they were "on".
3/20/2016	media	Li-ion	i-Phone		Passenger	Passengers phone began to burn in flight from SEA-HNL
3/17/2016	Carrier	Li-ion	E-cig	Alaska	Passenger	AS f1t 807-Passenger's cell phone caught fire in f1t. Extinguished by f1t attendant. Originally reported as e-cig.
3/16/2016	Carrier	Li-ion	E-cig	Delta	Passenger	DL f1t 689- E-cig in passenger's carry-on caught fire during boarding process. Fire extinguished by f1t attendant
2/13/2016	Carrier	Li-ion	Camera battery charger	Korean Air	Passenger	Passenger smelled smoke and alerted the f1t attendant, who discharged a fire extinguisher on the seat where the smoke/smell was coming from. Camera battery charger was lodged between 2 seats and appeared to have overheated.

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1/15/2016	Carrier	Lithium-ion	Laptop	Delta	Passenger	As DL flight 1961 from Minneapolis, MN-Atlanta, GA arrived at the gate in Atlanta, a flight attendant notified the captain that they had smoke in the cabin. The captain opened the cockpit door and confirmed heavy smoke in the cabin. The passengers were told to continue deplaning out of the boarding door. After a few minutes, the captain observed that the smoke had dissipated and he was informed that passengers had opened the over wing exits and were standing on the wings. The ramp personnel assisted several passengers off of the wings while other passengers returned to the cabin and exited the boarding door. During the deplaning, it was determined that a passenger bag in an overhead bin at row 13 was on fire. Flight attendants used a halon and a water fire extinguisher in the bin and the fire extinguished. Aircraft rescue and firefighting (ARFF) personnel arrived and inspected the aircraft and confirmed that the fire was out. Law enforcement met the aircraft and examined the contents of the bag, which contained two laptops, a projector, and an extension cord. Additionally, a small plastic lighter was found in the overhead bin; the lighter was observed to be melted. Law enforcement released the passenger bag and contents to Delta and it will be secured in quarantine. At this time, injuries have been reported, but the specifics are unknown
1/12/2016	Carrier	Lithium-ion	E-cig	Hawaiian Airlines	Passenger	Hawaiian Airlines (HALA) flight 226 from Honolulu (HNL) to Maui (OGG) received an aft Cargo Fire Warning while in flight above the island of Lanai. Both fire extinguisher bottles were discharged at intervals and the aircraft landed in OGG without further incident. After the passengers deplaned, the aft cargo door was opened to discover two burnt suitcases. The source came from a soft sided duffel bag, which contained an e-cigarette (e-cig) powered by two batteries. Additional fire damage occurred to a hard sided wheeled bag. Hawaiian Airlines Director of Flight Safety, the Maui Police Department, and the FAA (HNL) Hazmat Agents conducted investigations. It was noted that the clean appearance of the inside of the battery compartment and the charred exterior indicated that the e-cig was activated and heated up until it dried out the cotton in it and ignited. The box style e-cig is believed to be an "unregulated" style, meaning it does not contain a computer chip that regulates the battery output. This style typically does not contain any safety

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						features to prevent accidental activation. Further investigation is ongoing.
1/8/2016	Carrier	Lithium-ion	Laptop	American	Passenger	American Airlines flight 1647 from Miami, FL to Mexico City, Mexico reported that a customer's Apple laptop computer went into thermal runaway 1 hour after departure from MIA. The laptop was plugged into a power port and became very hot. There was the presence of a strong smell of plastic in the cabin. The laptop was taken from the customer and placed in the galley in a container. It never caught fire. Upon landing in Mexico City, the laptop was given back to the customer.
12/27/2015	Carrier	Lithium-ion	E-cig (spare)	JetBlue	Passenger	A passenger's carry-on bag on a JetBlue flight departing San Juan, PR airport caught fire at the gate while boarding. The flight was deplaned and the fire was extinguished, no injuries or fatalities. Actual cause of fire was one of a total of two (2) 9 watt lithium ion batteries with unprotected terminals loosely placed within a small metal box that also contained an e-cigarette (vaporizer) and other non-hazardous items. It was apparent that the lithium ion battery experienced a thermal runaway
10/12/2015	Carrier	Lithium-ion	iPhone 6+ inserted into a GuestLogix XPDA-IP6	Alaska	Passenger	Alaska airlines flight 17 from Newark, NJ- Seattle, Washington diverted to Buffalo, NY when a Point of sale device/credit card reader, an iPhone 6+ inserted into a GuestLogix XPDA-IP6 ("sleeve") , which is powered by a 3.7V 3100 mAh (11.507 Wh) li-ion battery overheated and began to burn. Flight attendant extinguished it with a fire extinguisher.
10/12/2015	Carrier/TSA Report	Lithium-ion	E-cig	Delta	Passenger	DL flight 304, from Montego Bay, Jamaica to Atlanta, GA received a cargo fire warning as it was preparing for takeoff. The flight crew aborted takeoff and activated the cargo compartment fire suppression system and evacuated passengers via emergency slides. 7 bags were found to have fire damage, one bag contained an e-cigarette, which overheated and caused the burning.

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9/28/2015	Carrier	Lithium-ion	E-cig	Mesa	Passenger	Mesa flight 5092, from Washington Dulles-Greenville Spartanburg, SC, declared an emergency at the gate due to smoke in the cabin. Passengers evacuated at gate. Fire department extinguished a passenger carry-on bag. It contained jewelry, a kindle, numerous battery chargers and 1 lithium-ion battery for an e-cig. Battery was burnt beyond recognition.
9/24/2015	Carrier	Lithium-ion	Power pack	United	Passenger	United flight 925 from London Heathrow – Washington Dulles, VA, the passenger in seat 29K had a Battery Pack incident in flight. A 5600mAh battery pack overheated and began to emit smoke, but there was no fire. The device was placed in water and cooled, no injury or damage were reported.
9/15/2015	Fire Dept	Lithium-ion	Multistar 8.0 High Capacity Multi-Rotor Battery	FedEx	Cargo	The Pittsburgh, PA airport fire department responded to a report of a burning package, which was determined to be a USPS package transported from an unknown flight to the cargo facility by a Worldwide cargo runner. Significant burning and damage to the contents, which included numerous li-ion battery packs each containing 4 cells.
7/10/2015	Carrier I-2015070411	Lithium-ion		FedEx	Cargo	Smoke observed from package during sorting at Bangladore, India. No further information available at this time.
6/17/2015	Carrier	Lithium-ion	E-cig	Southwest Airlines	Passenger	During a Southwest flight from LAS-ALB a passenger stated he felt the e-cigarette in his pants pocket pop and he leg began to burn. When he removed the e-cig from his pocket he saw the battery shoot out of the device. The e-cig was cracked and smoking. The crew submerged the battery and device in water. The passenger had minor burns on his leg but refused medical attention upon arrival in ALB.
6/10/2015	Carrier	Lithium-ion	E-cig	Southwest Airlines	Passenger	A passengers checked bag containing an E-cig and two spare 3.7 volt lithium ion batteries was smoking as it was offloaded from a Southwest Airlines flight in Albuquerque, NM. One of the batteries was not protected from short circuit causing burning and smoke.

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6/6/2015	Carrier	Lithium-ion	Spares for camera	Mesa	Passenger	After landing in Houston, TX (KIAH), Mesa flight 4001 was being unloaded when a ramp agent observed smoke coming from a checked bag in the forward cargo bin. The agent removed the bag from the loading belt and sprayed it with a fire extinguisher. The IAH fire department responded and took control of the bag. The bag contained professional camera equipment with lithium-ion batteries. According to preliminary information the camera bag was initially brought aboard as a carry-on, but was allegedly checked at the gate because the flight attendant advised that there was no room in the passenger cabin. Preliminary reports also indicate that the passenger made the flight attendant aware of the contents of the bag.
5/6/2015	Carrier E-2015050080	Lithium-ion	N/A	Polar Air Cargo Worldwide, Inc.	Cargo	During offload of the aircraft at Leipzig, Germany, onto the belt loader one (1) of eighty (80) packages from a single shipment containing lithium batteries began to smoke. The Fire Brigade extinguished the package on the ramp. The remaining shipments were inspected and checked with a temperature entropy camera, which revealed no signs of heating.
4/30/2015	Carrier	Lithium-ion	N/A	UPS	N/A	While loading packages into a ULD at Louisville, KY a package was emitting a burning odor. The package contained one (1) non-specification fiberboard box that contained: One (1) 7.2V/Li-ion 3400 mAh/24.5Wh "Phase One Digital Back" Battery, two (2) batteries similar in size and shape of the "Phase One Digital Back" Battery, marked with "Brian Garland Photography", but no other descriptive markings, three (3) "Phase One" 645 7.4V/2000 mAh Li-Ion. The batteries were not properly packaged and did not contain any marking, labelling or shipping papers to communicate the hazardous nature of the contents

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4/25/2015	Carrier	Lithium-ion	E-cig	Air Wisconsin	Passenger	Upon landing at Richmond, VA (KRIC) the pilot of Air Wisconsin flight 4010 reported smoke and fire onboard the aircraft in the passenger cabin and declared an emergency. The aircraft stopped and performed an emergency evacuation of passengers and crew on the taxiway. No injuries were reported. The fire was extinguished by the flight attendant with an onboard fire extinguisher. Upon investigation by the fire department it was determined that the cause of the fire and smoke was a spare lithium battery inside of the passengers back pack , which was not in appropriate packaging, and was unprotected and mixed with loose coins
3/15/2015	Carrier	Lithium-ion	Quadcopter	KLM	Passenger	During taxi-in at the Bangkok (BKK), the flight attendants of a B777 passenger carrying aircraft became aware of a strong 'electrical smell' in the forward cabin and noticed a plume of light grey smoke coming from an overhead stowage bin above passenger seat row 5 DEF. The bin contained carry-on baggage (black zipper suitcase) holding what appeared to be a drone (quad-copter) with HD video camera equipment in possession of a professional TV broadcasting team. The suitcase contained four spare lithium ion batteries (rated 99.9Wh each) and one lithium ion battery attached to the drone. The latter had gone into a 'thermal runaway', melting a hole through the suitcase. The ensuing fire was swiftly and successfully extinguished by two flight attendants after discharging two portable BCF fire extinguishers, immediately followed by pouring approximately 5 liters of fluid over it (from mineral water bottles, coffee jugs etc.).
2/13/2015	Carrier	Lithium-ion	N/A	FedEx	Cargo	While loading a FedEx Express aircraft in Bend, Oregon, smoke was seen coming from a unit load device being loaded onto the aircraft. A package inside the container was smoking. This package contained undeclared hazardous materials (lithium ion batteries) having no dangerous goods markings, labels or other indicia communicating the hazardous nature of the cargo.

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1/4/2015	TSA Spot Report	Lithium-ion	E-Cig	SkyWest	Passenger	SkyWest ramp agent observed a passenger bag to be on fire in the baggage make-up area. The fire was extinguished and the police were called. The police determined the likely cause of the fire was due to the E-cig vaporizer overheating and burning inside the bag. The passenger was notified of the incident upon arrival in Eugene.
12/15/2014	Carrier	Lithium-ion	Cautery unit	Horizon Air	Passenger	Horizon Air ramp agent found bag flaming and sparking during offload. The agent extinguished the fire in the snow. Source of the flames was from a Cautery unit, a small medical device, which uses electric current to heat the tip.
12/8/2014	Carrier-I-2014120433	Lithium-ion		DHL	C	DHL personnel discovered a package containing 2 re-chargeable lithium-ion batteries (undeclared) had caught fire at some point but had self-extinguished. It is not known when it happened, it was discovered at the sort facility in Ontario, CA. They were not transported by aircraft.
9/18/2014	Carrier	Lithium-ion	Cell Phone	Euro Wings	Passenger	Cell phone used by the crew as a POS (point of sale) device caught fire on a Eurowings Canadair CRJ-900 as it was descending towards Stuttgart, Germany. It was extinguished by the flight attendant. The crew declared an emergency reporting a cell phone had caught fire and advised they would evacuate the aircraft after landing. The airport stopped departures to accommodate the emergency. The aircraft landed safely and passengers deplaned normally.
8/9/2014	Carrier	Lithium-ion	E-Cig	JetBlue	Passenger	JetBlue Airlines ramp agent discovered a bag emitting smoke. The bag was removed from the aircraft bin and put on the ground. A fire extinguisher was used to attempt to put the fire out without success. The contents were removed and the source of the fire was an electronic cigarette, which continued to burn after it was removed from the bag. JetBlue personnel

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						extinguished the fire.
5/27/2014	Carrier	Lithium-ion	Quad-Copter	Hawaiian Airlines	Passenger	Hawaiian Airlines ramp agent noticed a foul odor coming from a bag while loading baggage onto the aircraft. The bag, which contained a Quad Copter powered by a lithium ion battery, was removed from the aircraft bin and put on the ground as it began to burn. The bag was doused with coffee, which extinguished the fire.
4/26/2014	Media Reports	Lithium-ion	Drone	Fiji Airways	Passenger	During the preflight inspection the captain of a Fiji Airways flight from Melbourne, Australia to Fiji noticed smoke coming from the cargo compartment. After further investigation it was determined that approximately 26 undeclared lithium ion batteries, used to power a drone, were in a passenger bag, which was the cause of the smoke. 19 batteries were in-tact and 6-8 were destroyed by the fire.
3/4/2014	UAE GCA	Lithium-ion	Battery Storage Unit	UA/ FlyDubai	Passenger	Report from United Arab Emirates (UAE) General Civil Aviation Authority concerning a group traveling on behalf of National Geographic with checked baggage, one bag was a plastic hard sided case containing lithium-ion batteries. The team was traveling from Washington, DC on a United Airlines flight to Dubai, UAE, where they were transferring to a Flydubai flight that was destined for Khartoum, Sudan. Ramp workers loading the Flydubai flight noted that one corner of a checked bag was hot and melting. The bag was immediately removed and the fire department was called. All other bags related to the passengers were off loaded and rescreened. Additional batteries were found and appropriately packaged and shipped via cargo carrier to Khartoum.

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2/25/2014	DOT 5800.1 Form No E2014020367	Lithium-ion	E-cigarettes	DHL	Cargo	Report from DHL of an international shipment that originated in Hong Kong. It was discovered damaged by fire at the Erlanger, KY sort center. The shipment contained 25 E-cigarette devices, which were enclosed in bubble wrap packaging. The contents and packaging were discovered charred and melted. The shipping documents provided inaccurate information about the contents. The package and contents were so damaged it was not possible to establish if the devices were equipped with an effective means of preventing accidental activation. The remaining pieces of the package were removed and stored by DHL. (revised 2/10/2015)
1/21/2014	DOT 5800.1 Form No I2014010428	Lithium-ion	N/A	FedEx	Cargo	Report from Federal Express of an undeclared shipment containing eleven 8 volt lithium-ion batteries that were shipped from Mumbai, India to Sydney, Australia. During processing at the sort center, the shipment was being reviewed by Indian officials when they noted it was extremely hot. When officials separated the package they noted smoke and upon opening the shipment one of the lithium-ion batteries became engulfed with flames. A Security Guard on duty immediately extinguished the flame. The remaining pieces in the shipment are being kept at an isolated location within the Federal Express facility.
10/27/2013	DOT 5800.1 Form No I20113110194	Lithium-ion	N/A	FedEx	Cargo	Report from Federal Express of a shipment containing 174 individually packaged lithium-ion batteries destined for Anchorage, AK. During handling at the Memphis, TN sort facility a single battery was damaged by a dolly. This caused the battery to short circuit and smolder. An employee noticed smoke emitting from the package and reacted immediately with a fire extinguisher. No other damage occurred. The shipper was notified and the remaining contents were shipped without incident.
10/2/2013	DOT 5800.1 Form No 12013100468	Lithium-ion	Lap Top	FedEx	Cargo	Report from Federal Express of a lap top that was damaged by a dolly during handling and caught on fire. The incident occurred at the Memphis, TN sort facility. The battery was removed, and the lap top returned to the shipper.

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9/26/2013	FAA Regional Operations Center	Lithium-ion	Digital Camera Battery	AA	Passenger	Report from American Airlines of flight #1159 departing Chicago O'Hare (ORD) for Lambert-St. Louis International (STL) made an emergency landing when smoke was detected onboard the aircraft. A lithium-ion battery short circuited in a digital camera and caused a small fire in the overhead compartment. A Flight Attendant extinguished the fire and the plane landed without incident. All 120 passengers and six crew members switched planes and continued to STL.
6/28/2013	DOT 5800.1 Form No I2013070459	Lithium-ion	N/A	FedEx	Cargo	Report from Federal Express of a metal case containing two lithium-ion batteries and 12 aerosol cans that were found to be emitting a strong burning smell. The terminals from one or both of the batteries came in contact with the aerosol cans or each other, which likely resulted in a short-circuit creating enough heat to singe a portion of the package. The shipment was discovered at the Indianapolis, IN facility.
6/27/2013	DOT 5800.1 Form No I2013070217	Lithium-ion	Battery Chargers	UPS	Cargo	Report from UPS of a shipment, which was emitting smoke during the sort process at the Ontario, CA facility. The shipment contained battery chargers with lithium-ion batteries. Several batteries had overheated and appeared charred. The items were placed in a 55-gallon drum and taken to a disposal area.
6/3/2013	DOT 5800.1 Form No E2013060491	Lithium-ion	N/A	WN	Passenger	Report from Southwest Airlines of smoke coming from a passenger's bag on the baggage carousel at the San Diego International Airport. Police officers noted that a lithium-ion battery in the suitcase had come into contact with a screw driver and the items melted. The damaged objects were removed and there was no evidence indicating other damage occurred as a result of the incident.
5/18/2013	DOT 5800.1 Form No I2013050356	Lithium-ion	N/A	DHL	Cargo	Report from DHL Express indicated that two of four boxes in a smoking shipment at their Erlanger, KY facility contained equipment installed with lithium ion batteries that showed evidence of fire.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
3/28/2013	DOT 5800.1 Form No I2013040388	Non-spillable, electric storage	N/A	FedEx	Cargo	Report from Federal Express indicated that one of eight packages in a shipment containing undeclared batteries was on fire and another two showed evidence of burning at its Memphis, TN sort facility.
10/27/2012	DOT 5800.1 Form No I2012120190	Lithium-ion	N/A	FedEx	Cargo	Report from Federal Express indicated that a shipment loaded for an outbound flight at its Memphis, TN facility was smoking. The shipment was found to contain 52 undeclared AA ion batteries housed in a box that was burned.
9/27/2012	DOT 5800.1 Form No I2012100187	Lithium-ion	N/A	Southwest	Passenger	Report from Southwest Airlines indicated that a cell phone and spare battery in passenger carryon baggage overheated during flight and potentially caught fire. One flight attendant and two passengers who handled the battery sustained burns.
6/7/2012	DOT 5800.1 Form No I2012060342	Lithium-ion	N/A	UPS	Cargo	Report from United Parcel Service indicated that at its Louisville, KY facility, a package containing 18 approximately 1 ounce lithium ion batteries from 6 various manufacturers melted through their plastic wrap causing the outer package to start burning.
5/5/2012	DOT 5800.1 Form No E2012050211	Lithium-ion	N/A	UAL	Passenger	Report from United Airlines indicated that while loading bags a ramp agent at Newark, NJ noticed two apparent batteries on the ramp that appeared to have come from a whole that burned through a piece of checked baggage that had just been loaded into an aircraft bin.
4/22/2012	DOT 5800.1 Form No I201240360	Lithium-ion	N/A		Cargo	Air Express International indicated that a packaged opened during the sort at its Erlanger, KY facility. The package contained 17 lithium ion batteries. As one of the batteries was being returned to the package, it shorted out and caught fire. One employee was injured and treated at the facility.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
4/17/2012	DOT 5800.1 Form No E2012050009	Lithium-ion	Personnel air purifier	Pinnacle	Passenger	Report from Pinnacle Airlines indicated that a flight attendant described a shooting fire from a passenger's device at about the same time that the captain felt a small thud. Within seconds the flight crew noticed a strong burning electrical odor and the flight attendant observed a burning battery on the floor of the aisle. As trained, the flight attendant used water from the service cart to extinguish the fire almost immediately.
3/24/2012	DOT 5800.1 Form No E2012040410	Lithium-ion	Battery powered device	Atlas Air Cargo	Cargo	Report from Atlas Air indicated that a package caught fire at its Incheon, Korea facility. The package appeared to contain a lap top computer.
3/2/2012	DOT 5800.1 Form No I2012030493	Lithium-ion	N/A	FedEx	Cargo	Report form Federal Express indicated a fire in a package at its Toluca, Mexico facility. When asked, the consignee reported that he had ordered a lithium battery for a bicycle.
2/25/2012	Air Carrier report	Lithium-ion	Lithium-ion battery powered surf board	FedEx	Cargo	Initial report form Federal Express indicated that a smoking unit load device was discovered at the Memphis, TN airport facility. Inspection revealed the contents of the ULD included a smoking and burning self-propelled surf board.
10/29/2011	Transportation Safety Board of Canada	Lithium-ion	Battery packs for electronic device	Austrian Airlines	Passenger	A cargo pallet carrying lithium-ion battery packs caught fire on the ramp awaiting loading on Austrian Airlines flight AUA72 at Toronto/Lester B. Pearson Intl. Airport, Ontario, Canada.
10/10/2011	DOT5800.1 Form No I2011110306	Lithium-ion	Electronic reading device	United	Passenger	Report from United Airlines indicated that the device left in a seat by a passenger began to smoke resulting in a small fire when the seat was moved back to the upright position (NFI).

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
9/30/2011	DOT5800.1 Form	Lithium-polymer cells in equipment	Battery pack for remote control device	Delta	Passenger	Report from Delta Airlines indicates passenger checked in with Air Canada in YKA for flight to YVR and subsequent DL flight to SLC. During transfer at YVR, checked bag began to smolder. As DL agent lifted the bag, it burst into flames. Subsequent inspection of bag revealed it contained two large battery packs.
8/17/2011	DOT5800.1 Form No E2011090166	Lithium-ion	Camera	Delta	Passenger	Report from Delta Airlines indicates that a passenger, prior to a flight from Amsterdam to Detroit, was changed batteries for a camera and placed the "used" batteries in a camera bag. The batteries became hot and caused smoke. All batteries involved were left at the boarding gate before takeoff.
3/29/2011	DOT5800.1 Form	Lithium-ion	Battery packs for electric bicycles	FedEx	Cargo	Initial report from Federal Express indicated that the batteries offered for shipment from Kwun Tong, China to Southampton, England caught fire for an unknown reason at the facility in Tsun Wan, Hong Kong.
3/21/2011		Lithium-ion batteries contained in equipment including lithium polymer batteries	Unknown	FedEx	Cargo	Initial report from Federal Express indicated that the package offered for shipment from Mumbai, India to Shenzhen, China was observed to be smoking by a customs official at the facility in Guangzhou, China. Subsequent indicated the package contained the batteries.
1/11/2011	2011Dot 5800.1 Form No E2011020150	Lithium-ion	MP3 player	Delta	Passenger	Report from Delta Airlines indicated that during DL# 1036 from SLC-ATL a passenger's device became very hot and the plastic started to melt. There was no flame present. A flight attendant cooled the device with water.
10/6/2010	DOT5800.1	Lithium-ion	N/A	UPS	Cargo	Initial report from United Parcel Service indicated that an electric storage acid battery offered for air shipment from Shanghai, China was observed smoking

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
	Form and FAA report					at the facility in Cerritos, CA. Subsequent investigation by FAA indicated that the battery appeared to be an 18.5 Volt, 30Ah (555Wh) Lithium Ion Battery (Lithium Cobalt Oxide (LiCoO ₂)).
8/28/2010	DOT5800.1 Form	CR 123A primary lithium battery in a device	Flashlight	FedEx	Cargo	Initial report from Fed Ex indicated that the flashlight in a backpack belonging to a jump seating crewing member caught on fire while at the gate in Memphis, TN. The report indicated that one of the flashlight batteries exhibited signs of thermal runaway causing the fire.
8/18/2010	DOT5800.1 Form	Non-spillable, electric storage	N/A	UPS	Cargo	Initial report from United Parcel Service indicated a worker at the Ontario, CA facility noticed a smoking package offered for air shipment to Newbury Park, CA. Subsequent inspection indicated that package contained two batteries in contact and short circuiting.
5/6/2010	DOT5800.1 Form and airport responders	Report indicates 2 loose CR123 lithium batteries	N/A	Delta	Passenger	Initial report from Delta Airlines and incident response personnel indicated that while placing a checked bag on a cart at the Seattle-Tacoma International airport, a baggage handler heard a "pop" and saw a flame and then smoke coming from the bag. Airport police and others responded to the incident. The terminal was evacuated. At the conclusion of the response, reports and eyewitness accounts obtained indicated the baggage remnants included the CR 123 lithium batteries.
4/20/2010	DOT5800.1 Form	Lithium-ion	Curling Iron	American	Passenger	Initial report from American Airlines indicated that a lithium-ion battery powered curling in checked baggage may have switched to the on position in the bag room at Narita Airport, Japan after a flight. The incident caused the associated spare lithium-ion batteries in proximity to the curling iron to go into a thermal runaway condition. As a result, the bag and some contents were scorched.
2/9/2010	Report from Air Carrier	Lithium metal w/liquid	N/A	UPS	Cargo	Initial report from United Parcel Service Airline indicated that, subsequent to air transport from Hong Kong, during the local ground portion of the delivery,

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
		cathode battery				the truck driver heard a loud pop. First responders were called to the scene. One of the batteries in one of the packages in the shipment ruptured, discharged soot and dislodged other batteries in the package.
9/9/2009	Report from Air Carrier	Lithium-ion	Personal Electronic Device	American	Passenger	Initial report from American Airlines indicated that one of its company-owned batteries available for on-board use by passengers was dropped in-flight and caught fire.
8/25/2009	Report from Air Carrier	Lithium-ion	GPS tracking device	FedEx	Cargo	Initial report from Federal Express indicated that a burning and smoking package was discovered at the Medford, MA facility. The package was in route to Seattle, WA. An unsuccessful attempt was made to extinguish the fire by cutting open the package and applying a fire extinguisher. The Fire Department had to be called. Subsequent inspection revealed that two of the devices heated and caused the surrounding packaging to ignite.
8/15/2009	Report from Air Carrier	Lithium-ion	N/A	UPS	Cargo	Initial report from United Parcel Service Airline indicated that a smoldering package was noticed at its Taiwan Hub. The package was transported from Macau, China. Inspection of other packages in the same consignment indicated that similar batteries were offered without terminal protection.
8/14/2009	Report from Air Carrier	Lithium metal	e-cigarettes	FedEx	Cargo	Initial report from Federal Express indicated that upon landing at Minneapolis-St. Paul Airport the crew was alerted to a fire by a warning light associated with a forward compartment. Upon subsequent inspection of the relevant Unit Load Device, numerous packages were discovered with smoke and fire damage.
7/15/2009	Report from Air Carrier – DOT 5800.1 Form	Lithium-ion	Transported “loose” in packages without out cell phones	UPS	Cargo	Initial report from United Parcel Service Airline indicated that one of several related packages transported from Romulus, MI was discovered to be emitting smoke and smoldering in Santo Domingo, Dominican Republic. Upon inspection, package contained numerous loose lithium-ion batteries with “...no protection of the contact points...” Package documentation indicated, “used

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
						batteries – non haz”.
6/18/2009	Report from Air Carrier	Lithium-ion	Bicycle Power Device	UPS	Cargo	Initial report from United Parcel Service Airline indicated that a burned package was discovered in Honolulu inside a Unit Load Device as it was being unloaded. The package was originally loaded in Philadelphia and was subsequently transported on UPS flight # 2967 from Ontario, California. DOT Form 5800.1 report to follow.
8/8/2008		Lithium ion/Type CF623/11.1-volt	Dell laptop computer	American	Passenger	While in flight, a passenger on American Airlines flight 1539 from Washington National to Dallas Ft Worth, noticed his Dell laptop was smoking. The passenger removed the battery pack and gave it to a flight attendant. The flight attendant placed the battery in a coffee pot in the aft gallery and poured water and Sprite on it. Dell has been advised of the incident.
8/6/2008	Air carrier report	Lithium-ion	Electrical equipment	UPS	Cargo	UPS Airline reports that a package containing LED lamps powered by excepted lithium ion batteries was transported on UPS#0213 on 04-AUG from Louisville, KY to Cologne, Germany. It was subsequently observed smoking in a UPS ground sort facility in Copenhagen, Denmark.
3/18/2008	United Airlines (UALA) Pilots' internet forum	“CR123A” Lithium metal	Flashlight	United	Passenger	In Denver, a UALA employee had two flashlights that contained CR123A Lithium batteries. Flashlight used for inspection of aircraft started to dim. Flashlight was turned off and placed in storage compartment in cockpit of 757. A banging noise described like gunshots originated from the flashlight. Cap on the on/off switch blown off and became projectile. Employees hand and fingers burned when he touched the flashlight to move it to the rear of the cockpit. Mechanic responded and safely removed the flashlight.
3/4/2008		Lithium ion/polymer/3.7V 1000mAH	Personal binocular video control unit	United	Passenger	An i-Theater Video Display Unit used for viewing entertainment systems was charged at home prior to United flight from Chicago to Tokyo. Control unit was in use for 2.5 hrs. during the flight. Control unit began to generate heat, caused the plastic case to swell and emitted 10” plume of sparks and debris.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
						United Captain doused unit with water. Small area of carpet damage to aircraft and no injuries to passengers or crew.
2/29/2008	TSA report	"C" Cells	Make-shift power unit	Unknown	Passenger	The make-shift power unit for a passenger's laptop computer began to smoke during pre-board security screening at Terminal 7 of the Los Angeles International Airport.
2/14/2008		unknown	Flashlight	Northwest	Passenger	Approximately two-thirds of the 389 passengers had boarded a Northwest Airlines Tokyo-Hong Kong flight, when a passenger's carry-on bag caught fire in an overhead bin. Flight attendants put out the fire with two fire extinguishers. One passenger suffered a minor burn when he tried to put out the fire by hand. Early indications are that a battery in a small flashlight inside the bag caught fire.
12/27/2007	Air carrier incident report	Lithium metal (lithium manganese dioxide) <i>House of Batteries</i> prototype, 15-volt, (Five <i>Ultralife</i> 3-volt D cells connected in series). The battery contained 16.65 grams of lithium (3.3	SSCOR medical suction pump	UPS	Cargo	Shipment was submitted to UPS for "2 nd day Air" service. After pick-up and ground transportation, the package "spontaneously combusted" on the conveyor at a UPS package sort facility in Cerritos, Calif. An employee put out the fire with a facility fire extinguisher.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
		grams per cell).				
12/15/2007	Air carrier incident report	Lithium ion/polymer for radio controlled model helicopter	Packed with radio controlled helicopter kit	FedEx	Cargo	A package containing an R/C helicopter kit with lithium polymer batteries was being sent from Hong Kong to the Netherlands. It was discovered emitting smoke at the FedEx sort center in Frankfurt, Germany. The package was brought outside the building and the fire was extinguished.
12/11/2007	Air carrier report	Lithium ion/polymer for radio controlled model planes: FlightPower F3A, 5350 mAh, 18.5 V		UPS	Cargo	A package of lithium polymer batteries for remote control aircraft was being transported by UPS from Argentina to San Marino via Cologne, Germany. At the UPS hub in Cologne, a customs inspector cut into the box with a knife, accidentally cutting into a battery, which then caught fire. The battery had a soft plastic exterior without a hard metal shell. A fire alarm was triggered and 400-500 people were evacuated from the facility for 35 minutes. The transport section of the accompanying MSDS stated the batteries were "non-regulated".
9/30/2007	Air carrier report	Lithium-ion <i>Xiamen Powerlong</i> 3.7v, 4000 mAh and 5200 mAh		FedEx	Cargo	After flying from Hong Kong, a Korea-bound box was emitting smoke upon offload at the FedEx Hub at Subic Bay, Philippines. No flames were seen. The box was removed from the sort. The outer-most box was an overpack containing three inner fiberboard boxes. It's believed each of the inner boxes contained 120 lithium-ion batteries. The fire was contained to one inner box.
8/8/2007	Report from German	Lithium polymer (ion)		FedEx	Cargo	The batteries traveled from Hong Kong to Frankfurt on a FedEx flight. During customs inspection, one of the 440 batteries in the package started to burn.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
	transport officials	Arkai 11.1 Volt				
6/14/2007	Police report. FAA agent statement.	Lithium-ion CR123A (probable lithium metal)	Ecoquest "Fresh Air Buddy" personal air purifier	Unknown	Passenger	While walking in the Long Beach, CA, airport terminal prior to flight, a passenger's personal air filter worn around her neck exploded in a streak of fire. The battery was ejected at high speed across the terminal and melted the carpet where it came to rest. Passenger was uninjured but suffered scorches/burns on her clothing. A non-rechargeable lithium metal battery may have been put into a recharger before inserting it into the air purifier.
6/5/2007	Airline report. Video from witness also posted to the internet. DOT incident report # 2007070001	Lithium-ion	Dell laptop computer	Unknown	Passenger	While waiting in the airport gate area, a passenger plugged his laptop computer into an electrical outlet on a column in the seating area. At some point the computer began smoking. Airline agent suggested the passenger unplug or shutoff the computer but passenger did not. The computer eventually burst into flames. Fire extinguishers were used to suppress—but not quickly extinguish—the fire.
5/15/2007	NASA ASRS Report # AB 2007: 26/9-1 5/15/07 730630	Lithium-ion battery pack for Sony PSP	No indication that battery was in or attached to Sony PSP device	Unknown	Passenger	Ramp worker removed checked bag that was on fire when loading passenger aircraft. Fire department determined that the fire was caused by a battery-pack for a Sony PSP handheld video game. <i>Note: This information comes from an anonymous report via the NASA ASRS. Airline, location, persons involved and exact date are unknown.</i>

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
3/19/2007	Air carrier report	"CR123" lithium metal	Possibly a camera <i>No passenger took responsibility for the battery</i>	Unknown	Passenger	1 ½ hours into a passenger flight from Buenos Aires to Miami a small explosion occurred in the Business Class section of the aircraft. There were sparks then a flash and smoke. Flight attendants, then the Captain, responded. Battery fragments were the only evidence found. It is suspected that the battery dropped into a seat and arced against a metal seat frame causing it to explode. The ruptured battery splattered debris on overhead bins. A fragment hit a passenger in the head burning her hair near her earlobe. Seven flight attendants were affected by smoke/fume inhalation. All refused medical treatment in Miami. One aircraft seat bottom and four seat covers were damaged and replaced.
3/9/2007	Air carrier reports	Lithium-ion	Laptop computer and power converter.	Unknown	Passenger	Passenger flight from Toronto to Dallas/Ft. Worth diverted to St. Louis after strong electrical burning smell in the cabin. Source was laptop being used by a passenger while plugged in to aircraft power port via power converter. Power converter reportedly heated up. Aircraft power port and laptop reportedly in normal working condition afterwards.
3/1/2007	Australia CASA report	Lithium metal (non-rechargeable)		Unknown	Passenger	US mail package from EBay internet vendor containing twenty-four Surefire SF123A batteries were transported on a passenger flight from LAX to Sydney and caught fire at the Sydney Mail Gateway Facility.
2/26/2007	FAA case # 2007NE700130	Two 12-volt batteries		Unknown	Passenger	During checked baggage screening, TSA personnel discovered two 12-volt batteries in a passenger's tool box, reportedly for a business demo. The battery terminals were exposed. Upon examination, one of the terminals touched the ETD table and sparked causing the screener to drop the battery. The battery landed with both terminals down and started smoking. TSA determined the batteries were not "hazmat" and the airline agreed to transport the batteries as long as the terminals were protected.
2/10/2007	Air carrier reports	<i>Energizer</i> lithium metal 9-volt,	Packed with professional audio/video	Unknown	Passenger	While still climbing after takeoff from JFK, smoke began pouring from an overhead bin in the passenger cabin. Passengers alerted the flight attendants who responded. A flight attendant opened the bin and saw thick black smoke

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
		<i>Energizer</i> lithium metal AA, and <i>IDX</i> NP-L50S lithium ion batteries were all present.	equipment			<p>and flames in the rear of the bin. As the plane returned to the airport for an emergency landing flight attendants were able to put out the fire, discharging two Halon fire extinguishers. Water was applied to some cloth embers that continued to burn after the Halon was used.</p> <p>Cockpit crew smelled some light smoke in the cockpit and donned O2 masks for approx. 20 seconds until the smoke dissipated.</p> <p>Source of fire, bag with audio-video equip was secured in a lavatory. Aircraft landed and taxied to the gate. One passenger complained of chest pains and needed assistance in exiting the aircraft.</p> <p>The fire apparently was caused by loose batteries that were packed in a bag with other audio-video equipment. One <i>Energizer</i> lithium metal 9-volt was destroyed in the fire and seems most likely to be source of the fire.</p>
12/15/2006	Media reports and airport operations incident report.	<p>One Lithium metal CR123A (probable)</p> <p><i>Passenger also purchased Lithium-ion rechargeable CR123A battery and charger for the device</i></p>	"Fresh Air Buddy" personal air filter	Unknown	Passenger	<p>On a Houston-Portland passenger flight, a personal air filter, being worn on a strap around a passenger's neck, started a fire in the cabin. The device started making hissing sounds and then emitted bright sparks/flash and a clap/bang sound. The passenger removed the device and it fell between two seat cushions where it continued to burn and smoke. Passengers dumped water on the device and then flight attendants put out the fire with a Halon fire extinguisher. The aircraft diverted to Colorado Springs. The passenger wearing the device suffered a superficial burn to his chest. Dozens of passengers were examined by EMT personnel, mainly for complaints related to inhalation of smoke and/or Halon fumes. Five or six passengers were taken to the hospital. The two fire-resistant aircraft seat cushions were replaced due to having holes burned in them.</p> <p>The airline flight attendant accidentally disposed of the battery, so a determination of what type of lithium battery (primary vs. secondary) could not be made. NTSB took possession of the device and sent to their lab for</p>

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
						analysis. Lab analysis of the damaged device was inconclusive in determining what caused the malfunction.
12/14/2006	Report from air carrier	Counterfeit CR123A, lithium metal	Flashlight "Superfire WF-501B"	UPS	Cargo	During a UPS cargo flight from Sydney, Australia to Guangzhou, China, at 38,000 ft., the crew heard a loud bang. A crewmember found that his flashlight in a bag next to his seat was warm and had a strong odor coming from it. The flashlight was opened and there was soot/residue from burning. One of the two batteries (now determined to be counterfeit) was damaged. Earlier the crewmember had dropped the flashlight about 6 inches into his bag and heard a thump.
11/11/2006	Notification by US Customs and CPSC FAA case # 2007WP700045	Lithium-ion		Unknown	Cargo	After being shipped by air from China to the US, some batteries were selected for inspection by US Customs. While on the desk of an import specialist, the battery started emitting sparking flames and smoke.
9/15/2006	FAA Case # 2006GL700427	Silver oxide button cells, various sizes		DHL	Cargo	During off-loading at their Plymouth, MN facility, DHL/Airborne personnel discovered two boxes that were warm to the touch. The boxes were opened and found to contain hundreds and hundreds of button cell batteries loosely packed together in a plastic bag liner. Batteries were being shipped by a small business battery recycler that stated they thought all batteries were discharged. Tests showed many still had positive voltage.
9/15/2006	Air carrier report	Lithium-ion	IBM Laptop computer	United	Passenger	Approximately 15 minutes prior to departure of a LAX-LHR transatlantic flight, the laptop computer of a passenger began to smoke. The relief pilot and purser assisted the passenger in removing the laptop from the airplane. The

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
						laptop was placed on the floor of the gate area where it continued to smoke from the battery pack area and a small flame appeared. A customer service representative discharged a fire extinguisher on the fire. The battery pack continued to smoke for an additional couple minutes with white smoke and a strong odor. The Fire Department responded and discarded the burnt battery pack. The passenger stated the laptop was an IBM that belonged to his company and had been in his possession the entire time, having original parts and never having been serviced. The passenger was reportedly not using aircraft power to operate the computer. The airplane remained in service and departed on time without the incident passenger.
7/17/2006	FedEx Notification to FAA	<i>EaglePicher-Kokam</i> Lithium ion/polymer (used for remote control models), 122 batteries of various sizes		FedEx	Cargo	The unlabeled/marked package was discovered to have caught fire while being held in bond for customs clearance in Korea. Package had traveled to Korea in FedEx system from Vienna via Paris and Subic Bay.
7/1/2006	UK CAA report to FAA	Unknown	Photographic flash gun	British Airways	Passenger	Upon arriving at home after a flight, a British Airways passenger found that his battery-powered photographic flash unit in his baggage had burnt holes in some of his clothing. Plastic housing on flash unit had also melted.
6/2/2006	China CAA report	Lithium ion / polymer, 7.4-volt; 10000 mAh		Air China	Passenger	An Air China passenger flight from Guangzhou to Chengdu diverted takeoff due to a lithium battery fire in the cargo hold. While taxiing for departure the fire alarm for the lower deck cargo compartment activated. The Captain immediately released the fire extinguisher and the aircraft stopped taxiing. Passengers were evacuated. A burnt package containing lithium polymer batteries was discovered in the cargo hold up against the ceiling of the

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
						compartment on top of the other packages. Burn marks were visible on the ceiling. Shipment was declared as electric parts; there was no indication of lithium batteries or Dangerous Goods. No UN test report was available for the batteries. Eleven other boxes were in the shipment.
5/15/2006	Lufthansa DG Occurrence Report # 0001/06 DOT incident report # 2006060033	Lithium-ion (VGP-BPL2/VGP-BPS2 or equivalent)	Laptop with spare battery	Lufthansa	Passenger	Shortly before flight departure, a burning smell was detected in the first-class cabin of a Lufthansa ORD-MUC flight. Maintenance personnel were called to check and found it was coming from hand luggage inside an overhead luggage bin above seat 2A. The flight attendants evacuated the passengers in first class and first 2 rows of coach class. Crew used extinguishers to prevent setting off what was seen as the beginning of a slow fire. Maintenance immediately brought the bag outside the aircraft onto the ramp where it started to catch fire. Fire dept. was called to assist. Fire was eventually put out after reigniting once. Fire apparently started from the extra battery pack for a laptop, which was purchased on eBay. Flight departed 1 hour 18 minutes late.
3/3/2006	FedEx incident report	Lithium-ion button cells, mfr. by <i>Lixing</i>		FedEx	Cargo	US-bound package was noticed to be smoking at outbound FedEx station in Shenzhen, China. Upon inspection, the package of lithium ion batteries was discovered to be on fire.
6/29/2005	FAA case # 2005WP700218 DOT Incident report # 2005080470	Lithium-ion	Battery-pack	UPS	Cargo	At UPS in Ontario, Calif., during unloading of a ULD from Shanghai, it was discovered that a fire had taken place inside the ULD. A package containing a lithium-ion battery pack was identified as the source of the fire. Upon discovery, the burnt package and its contents were cool to the touch and there was no smoldering evident.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
5/18/2005		18 D-cell batteries	Marine buoy	FedEx	Cargo	A FedEx employee in Fredericksburg, VA, was injured when a package that he was loading into a ULD exploded. The package contained a marine buoy powered by a battery-pack containing 18 D-cell batteries. Apparently some of the batteries had deteriorated causing gas to build up in a sealed container. Static electricity generated by sliding the box may have been the ignition source.
2/11/2005	FAA incident summary DOT incident report # 2005030047	Lithium battery, solid cathode, manufactured by <i>Eagle Picher</i> of Surrey, BC, Canada.	None	FedEx	Cargo	An undeclared package containing 18 lithium batteries caught fire while being unloaded from a conveyor belt at the FedEx facility in White Bear Lake, MN. FedEx cargo handlers report hearing a “pop” sound and then seeing the box “lifted” off the conveyor belt by the force. The shipment had flown from Los Angeles to Minneapolis and was to be trucked to Clear Lake, WI. Only one battery caught fire.
10/29/2004	Greensboro FSDO briefing paper and media accounts	<i>Ultralife</i> 9-volt lithium (traditional 9-volt form: rectangular with two terminals on top)	Camera equipment	Unknown	Passenger	Shortly after departure, the battery exploded in the hand of a cameraman traveling on the VP campaign plane of Sen. Edwards (the cameraman reportedly was in the process of changing batteries). It spewed shrapnel and ignited a fire in the seat, which was extinguished by flight attendants and others. The flight crew declared an emergency and returned to Raleigh-Durham airport without further incident.
8/7/2004	FAA incident summary statement, DOT Incident Report #2004081622	Lithium-ion	Lithium-ion batteries assembled together in a plastic case	FedEx	Cargo	Prototype lithium batteries shipped under a competent authority approval from California to Europe apparently started a fire in a ULD during the loading process at the FedEx Memphis hub. The ULD had just been loaded for a transatlantic flight (Memphis-Paris). The ULD and many other packages in it were damaged/destroyed by fire. Shipment apparently was in violation of the DOT approval allowing the prototype battery to be shipped.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
4/1/2004	Transport Canada	CR123 lithium batteries	Flashlight	Unknown	Passenger	A flight attendant lent a passenger a flashlight, which was recently purchased in Beijing. The passenger dropped the flashlight while it was on. Later the passenger put the flashlight in a seatback pocket. A few minutes later, the flashlight began to emit smoke and noxious fumes. The flashlight became so hot it could only be handled with oven mitts.
11/2/2003		Ni-Cad, Ni-Metal Hydride, and/or Lithium (according to label on computer)	Notebook computer – Toshiba Satellite model # 815-S129	Unknown	Passenger	At security screening, a passenger's bag contained a computer bearing a warning label on the bottom near the battery compartment: "Warning: Hot base may cause burn. Avoid prolonged contact with bare skin." Battery compartment was hot. Screener had passenger turn off computer.
8/12/2002	DOT Incident report #2002090134	Lithium-ion	Samsung minicomputer (palm pilot)	FedEx	Cargo	Burning odor detected by handlers at the Los Angeles FedEx inbound package sort center. Battery apparently short-circuited causing the bubble wrap in the package to burn and melt onto the unit.
4/12/2002	DOT Incident report #2002050519	Lithium-ion	None	FedEx	Cargo	Lithium batteries shipped under exception by Abbott Labs did not have terminals protected from short circuit. Started fire inside package at FedEx Indy sort facility.
11/3/2000	FAA EIR # 2001NM710044	Hawker lithium sulphur dioxide batteries	None	FedEx	Cargo	While in route by road to the FedEx Cargo facility in Portland, OR, a lithium battery shorted and ruptured, burning its packaging. The shorted battery had long flexible protruding positive and negative terminals. Two FedEx drivers were treated at a hospital after inhaling fumes from the incident.
10/25/2000	DOT Incident report #20010043	Hawker Cyclon, 2-volt, nonspillable	None	FedEx	Cargo	Eleven batteries (approx. D-size), with positive and negative terminals on the same end were packed loosely in a box. They shorted and caught their packaging on fire. Discovered at FedEx cargo sort center in Ft. Worth after first flight.

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
6/1/1999	NASA ASRS Report	Camcorder battery	Possibly Camcorder	Unknown	Passenger	During ground maintenance delay, flight attendant noticed burning smell. Passengers deplaned. Overhead bin opened to reveal smoke from a passenger bag. Upon opening, cloth items discovered to be smoldering, and a camcorder battery in the bag was extremely hot.
4/28/1999	AWP report/ NTSB Rec. A-99-85	Primary Lithium batteries, Sanyo CR2 (excepted)	None	Unknown	Passenger	120,000 lithium batteries were being shipped on two pallets. After being unloaded from a passenger flight from Japan, a cargo employee at LAX mishandled one of the two pallets causing lithium batteries to dislodge from their packaging. The pallet later caught on fire along with the second pallet, which it was placed next to. Initial attempts to extinguish the blaze using water/chemical fire extinguishers failed.
10/10/1998	FAA AAL Special Agent statement	Unknown	336 laptop computers	Unknown	Cargo	Fire warning diverted cargo aircraft. Captain/flight engineer inspected cargo area. Both noted heat rising between pallets on jet flat, as well as strange odor and lung irritation. Fire fighters sprayed pallet with retardant. No further evidence of heat exposure or fire.
5/19/1998	FAA #EA19980082	Unspecified batteries	Uninterruptible power supply (UPS) units (2)	Unknown	Cargo	One of the UPS units exploded during offloading of a truck.
9/26/1996	DOT Incident report #1996110343	Lithium-ion	None	Unknown	Cargo	Eight lithium batteries were connected in a series and packed with bubble wrap inside a plastic express envelope. There were exposed connections on one end and loose wires on the other end. The batteries were not secured from movement within the package and a short-circuit resulted causing the packaging to burn. Burnt package discovered at Airborne sort center after first flight and prior to trans-Pacific cargo flight.
5/8/1994	UK CAA DG	Duracell	None	Unknown	Passenger	Consignment of lithium batteries found emitting smoke in ULD during truck

Date	Source	Type of Battery	Device (if applicable)	Carrier	Aircraft Type (Passenger or Cargo)	Incident Summary
	Occurrence Report Database (G. Leach)	lithium batteries (excepted from ICAO regulation by SP A45)				transport to LHR. Fire damage. Batteries were smaller in diameter than a dime and about 5 mm high. They had been tossed loosely into a box. Positive and negative terminals had "tails", which were prone to short circuiting. The shipper was prosecuted by the UK CAA for failure to comply with Special Provision A45 of the ICAO Technical Instructions and fined £1200 with £300 costs.