

# One Overheated Elon Musk-Type Lithium ion Laptop Battery Could Down An Airliner: Study

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(Bloomberg) -- A single personal electronic device that overheats and catches fire in checked luggage on an airliner can overpower the aircraft's fire suppression system, potentially creating a fire that could rage uncontrolled, according to new government research.

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Regulators had thought that single lithium battery fires would be knocked down by the flame-retardant gas required in passenger airliner cargo holds.

But tests conducted by the U.S. Federal Aviation Administration found the suppression systems can't extinguish a battery fire that combines with other highly flammable material, such as the gas in an aerosol can or cosmetics commonly carried by travelers.

“That could then cause an issue that would compromise the aircraft,” said Duane Pfund, international program coordinator at the U.S. Pipeline and Hazardous Materials Safety

Administration, speaking Wednesday at an aviation safety forum in Washington. PHMSA regulates hazardous materials on airliners along with FAA.

The research highlights the growing risks of lithium batteries, which are increasingly used to power everything from mobile phones to gaming devices. Bulk shipments of rechargeable lithium batteries have been banned on passenger planes.

The findings last year by the FAA prompted the government to advocate that the United Nations International Civil Aviation Organization call for a ban on electronic devices larger than a mobile phone in

checked bags. That effort fell short, Pfund said.

“One way or another, we have to deal with these hazards,” said Scott Schwartz, director of the Air Line Pilots Association’s hazardous goods program. ALPA, the largest pilots union in North America, is holding its annual safety conference.

ALPA hasn’t taken a formal position on whether there should be a ban on lithium batteries in checked bags and some fear that many passengers would simply ignore it. At the very least, the union is seeking greater education campaigns so travelers are less likely to place spare batteries and electronics in their checked bags.

While fires in carry-on items create their own hazards on flights, experience has shown that they can be extinguished with water. Crew can't reach bags in cargo areas during flight, so must rely on a plane's fire suppression systems.

The U.S. Homeland Security Department in June 2017 funneled more such electronics into cargo holds out of fears that electronics as small as a tablet computer could be used to hide terrorist bombs. The agency stopped short of a threatened ban on taking the devices into airline cabins, but required additional screening of electronics.

The FAA hasn't imposed any new restrictions on what passengers may pack in checked bags. Last year, in a notice to airlines, it said they should conduct a safety study to determine what more they should do to limit the risks of battery fires in cargo areas.

The FAA tests found that the anti-fire halon gas installed in airline cargo areas wouldn't extinguish a lithium battery fire, but it prevents the blaze from spreading to adjacent material such as cardboard or clothing.

However, aerosol cans exploded in tests even after being bathed in the halon gas, the FAA found.

“There is the potential for the resulting event to

exceed the capabilities of the airplane to cope with it,” the FAA said in a notice to airlines last year.