

# PEDs in Passenger Checked Baggage

## BACKGROUND

New data demonstrates significant fire risk to commercial aircraft when Portable Electronic Devices (PEDs) are placed in checked baggage. The risk is not new but has so far been considered acceptable for several reasons. FAA testing had confirmed that a fire resulting from lithium battery thermal runaway in a PED would likely exhaust itself because of the lack of oxygen in a packed suitcase. If the contents of the suitcase did catch fire, it was believed that a Class A fire (fuelled by common flammable materials such as cloth, paper, and wood) would result. Halon fire suppression systems installed in almost all passenger cargo compartments are very effective on such fires since they were designed for this type of event.

## CURRENT SITUATION

Tests at the FAA William J. Hughes Technical Center, however, have demonstrated serious risks when a single lithium battery installed in a PED goes into thermal runaway inside a checked passenger baggage that also contains other allowable dangerous goods such as flammable aerosols (e.g. hair spray), or flammable liquids (e.g. nail polish remover). The results of these tests show that the consequences of such a situation are likely to be catastrophic and might lead to the loss of an aircraft.

The seriousness of this risk should not be underestimated. It was originally thought that very few PED's larger than cellular telephones were placed in checked baggage by passengers, on the assumption that passengers would not subject their PED's to possible theft or damage and would most likely want them available for use inflight, but data suggests otherwise. Not only do many PEDs end up in checked luggage, they are also often not powered off or not protected against inadvertent activation as required by regulation. The different modes of laptop computers (sleep, hibernation, on, off) and their lengthy shutdown routines, especially when automatic updates are being installed, can also make passengers erroneously believe that their PED is depowered.

## POSITION

Due to the unacceptable risk to flight safety described above, PEDs larger than cell phones should be prohibited in passengers' checked baggage and only allowed in the aircraft as carry-on items in the passenger cabin.

## NOTE

IATA has developed a multi-language infographic to alert passengers carrying PEDs on the latest requirements, <https://www.iata.org/whatwedo/ops-infra/baggage/Pages/ped.aspx>.