

Report: FAA too reliant on Boeing for battery test

May 22 2014, by Scott Mayerowitz



In this Jan. 7, 2013, file photo, a Japan Airlines Boeing 787 jet aircraft is surrounded by emergency vehicles while parked at a terminal E gate at Logan International Airport in Boston as a fire chief looks into the cargo hold. The FAA failed to properly test the Boeing 787's lithium-ion batteries and relied too much on Boeing for technical expertise, a new report from the National Transportation Safety Board says Thursday, May 22, 2014. (AP Photo/Stephan Savoia, File)

The government failed to properly test the Boeing 787's lithium-ion batteries and relied too much on Boeing for technical expertise, a new report says.

The National Transportation Safety Board Thursday criticized the process used by the Federal Aviation Administration to certify the new jet in 2007. It also recommended that the FAA needed to look outside the aviation industry for technical advice.

The report directly conflicts with the FAA's own internal study released in March, which said the agency had "effective processes in place to identify and correct issues that emerged before and after certification."

The 787—also known as the Dreamliner—is the first commercial jet to rely on rechargeable [lithium-ion batteries](#) to power key systems. The batteries are lighter, letting airlines save fuel. However, a January 2013 fire aboard a 787 parked at a gate in Boston broke out when one of a battery cell experienced an uncontrollable increase in temperature and pressure, known as a thermal runaway. Nobody was injured, but that fire—and a subsequent smoke condition on a separate plane nine days later—led to a worldwide grounding of the Dreamliner fleet.

Boeing subsequently redesigned the ventilation system around the batteries and the planes resumed flying. There are now 140 Dreamliners operating around the world. Another 891 have been ordered by airlines.



In this Jan. 24, 2014 photo, National Transportation Safety Board's Joseph Kolly, holds a fire-damaged battery casing from the Japan Airlines Boeing 787 Dreamliner that caught fire at Logan International Airport in Boston, at the NTSB laboratory in Washington. The FAA failed to properly test the Boeing 787's lithium-ion batteries and relied too much on Boeing for technical expertise, a new report from the National Transportation Safety Board says Thursday, May 22, 2014. (AP Photo/Manuel Balce Ceneta, File)

In its report Thursday, the safety board says the problems go back to September 2004, when Boeing first told aviation regulators of its plans to use lithium-ion batteries on the 787. The FAA was forced to create the first-ever requirements for use of lithium-ion batteries on commercial jets.

One of the nine requirements the FAA came up with was that the "design of the lithium-ion batteries must preclude the occurrence of self-sustaining, uncontrolled increases in temperature or pressure." In other words, no thermal runaways.

When Boeing and the FAA worked together to set up certification tests in March 2006, they considered the smoke a battery fire might cause but, according to the safety board's report, "Boeing underestimated the more serious effects of an internal [short circuit](#)." In January 2007, the FAA approved the testing plan proposed by Boeing. It did not include testing for such short circuits.

To avoid such oversights again, the NTSB suggests that the FAA needs to look outside the [aviation industry](#) for expertise when approving a [new technology](#). For instance, the Department of Energy has done extensive testing on lithium-ion batteries. If the FAA had reached out to the Energy Department or other experts, the report says, the FAA could have recognized that its tests "were insufficient to appropriately evaluate the risks" of a battery short circuit.

The safety board recommends that the FAA reviews its lithium-ion [battery](#) testing process. Also, any certification of new technology should involve "independent and neutral experts outside of the FAA and an aircraft manufacturer."

The FAA has 90 days to respond.

© 2014 The Associated Press. All rights reserved.

Citation: Report: FAA too reliant on Boeing for battery test (2014, May 22) retrieved 9 April 2024 from <https://phys.org/news/2014-05-faa-reliant-boeing-battery.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.