

Boeing, FAA misjudged pilot response to 737 MAX trouble: government report

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The NTSB said Boeing should correct plane design and pilot training to provide clearer warnings of trouble

Boeing and the Federal Aviation Administration misjudged how pilots would respond to multiple alerts and alarms as they encountered trouble

when flying the 737 MAX, according to a government report released Thursday.

The FAA needs to adopt a more realistic view of how pilots react under such scenarios as they certify planes, the National Transportation Safety Board said.

The report from the independent government agency comes more than six months after the 737 MAX was grounded globally following two fatal crashes which killed 346 people.

"We saw in these two accidents that the crews did not react in the ways Boeing and the FAA assumed they would," NTSB Chairman Robert Sumwalt said.

"Those assumptions were used in the design of the airplane and we have found a gap between the assumptions used to certify the MAX and the real-world experiences of these crews, where pilots were faced with multiple alarms and alerts at the same time."

In both the Lion Air and Ethiopian Airlines crashes, pilots had difficulty controlling the plane once a flight handling system called the Maneuvering Characteristics Augmentation System was activated based on erroneous signal readings, according to preliminary investigations.

Boeing did not fully brief pilots on the MCAS system until after the Lion Air crash in October 2018.

Boeing testing of the system under the FAA's oversight failed to take into account the cockpit chaos that ensued due to myriad alerts, the NTSB said.

"Multiple alerts and indications in the cockpit can increase pilots'

workload and can also make it more difficult to identify which procedures the pilots should conduct," the NTSB said.

The NTSB recommended the FAA revise plane design and pilot training based on pilot response and ensure clearer "failure indications" are provided to pilots to improve response.

An FAA spokesman said the agency "will carefully review these and all other recommendations" and that the lessons learned from the crashes "will be a springboard to an even greater level of safety" as it works to certify the MAX to fly again.

Boeing also said it will take the NTSB recommendations into account. The company has said it expects to win approval to resume flights on the MAX early in the fourth quarter.

"Safety is a core value for everyone at Boeing," a company spokesman said. "We value the role of the NTSB in promoting aviation safety. We are committed to working with the FAA in reviewing the NTSB recommendations."

Will Boeing MAX timeframe hold?

The report comes two days after a critical assessment of the FAA by the US Office of Special Counsel, which concluded that 16 of 22 FAA safety inspectors lacked proper training to assess pilot training on the Boeing 737 MAX and other planes.

The special counsel report also said the FAA had misrepresented the training of its inspectors in correspondence with Congress.

Michel Merluzeau of the aerospace consultancy AIR said there is still a good chance Boeing can obtain approval to resume flights on the 737

MAX in 2019 because FAA certification focuses on pilot training to handle the MCAS rather than more long-term questions surrounding pilot training.

But "there's no absolute guarantee" on that time-frame, said Merluzeau, noting that the Boeing situation is also being monitored closely on Capitol Hill.

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