

Boeing continues to whitewash 737 crashes

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US aerospace giant Boeing released a statement Sunday attempting to whitewash its culpability in two deadly airplane crashes involving the company's new 737 Max 8 aircraft. The statement was released more than six months after the crash of Lion Air Flight 610, which killed 189 people, and nearly two months after the crash of Ethiopian Airlines Flight 302, which killed a further 157 people, for a total of 346 men, women and children.

The statement, which confirms a *Wall Street Journal* report published six days earlier, reveals that Boeing realized "within several months after beginning 737 MAX deliveries" in 2017 that its "angle of attack disagree" alert did not work on Max 8 planes unless those planes were equipped with a safety upgrade package that cost airline companies an additional fee to install. Boeing told neither the airlines, nor the Federal Aviation Administration (FAA), nor any other regulatory agency about this problem until after last October's Lion Air crash.

Investigators have concluded that in both crashes a malfunctioning angle of attack indicator, whose readings disagreed radically with a second AoA indicator on the planes, triggered an automated anti-stall system, which repeatedly pushed the aircraft nose downward, overriding desperate attempts by the pilots to lift the nose and restabilize the flight. The Lion Air plane crashed 13 minutes after takeoff from Jakarta and the Ethiopian Airlines flight plunged to earth just six minutes after takeoff from Addis Ababa.

The *Wall Street Journal* article implied that Boeing deliberately restricted the AoA disagree alert, a standard feature on earlier 737 models, to aircraft with the supplemental safety upgrade, but the company in its statement on Sunday said it had intended the warning to function on all 737 Maxes, but discovered that it did not work on planes without the upgrade only after the new planes were in service. It attributed the flaw to a "software problem."

However, it acknowledged that it never informed the carriers, including Southwest in the US and Lion Air in Indonesia, that the AoA disagree alert did not work on

their 737 Max 8s. Moreover, the manual it supplied to the carriers presented the alert as functioning on all of the aircraft. This means that scores of 737 Max 8s were flying around the world for months, carrying thousands of passengers, without their pilots being aware that in the event of a disagreement between the readings of the two AoA sensors, the warning light would not go on.

The absence of an AoA disagree alert on the Max model is particularly dangerous because, unlike the earlier versions, on the Max model, with its automated "MCAS" anti-stall system, such a malfunction can suddenly pitch the plane's nose downward. The preliminary report released last month on the Ethiopian Airlines crash stated that it took more than four minutes for the pilots to realize that incorrect data from one of the AoA sensors was prompting MCAS to push the jet's nose down.

In its statement, Boeing downplayed the importance of the AoA disagree indicator, saying it did not inform the airlines or the FAA about the problem until after the Lion Air crash because it did not consider the alert to be "necessary for the safe operation of the airplane."

The latest revelation and Boeing's acknowledgement, notwithstanding the company's efforts at cover-up and damage control, provide further evidence of colossal and likely criminal negligence, if not even more serious crimes. They also underscore the corrupt and incestuous relationship between the nominal regulator, the FAA, and the corporations it supposedly regulates. In fact, since 2005, the FAA has allowed Boeing, the largest US-based producer of commercial aircraft and the world's second biggest defense contractor, to appoint its own employees to certify the safety of its planes—a program that was reauthorized in 2012 by Congress and the Obama administration.

"Imagine you're driving a car without a tire pressure issue warning light on your dashboard," commented Rytis Beresnevičius, a full-time reporter for *AviationCV*, in an interview with the *World Socialist Web Site*.

"Sure, under sunny and clear weather conditions you might not encounter any danger when driving with a

deflated tire, but as soon as it rains—you're essentially at risk to injure not only yourself, but others around you as well, as the deflated tire might prevent you from handling your car properly. So the tire pressure light indicates to a driver that he or she should be careful and stop at the nearest gas station to put some air into the deflated tire.

“Following the car analogy, imagine the car being an aircraft and the driver being the pilot. Except a pilot is in the direct control of hundreds of human lives. Imagine the [angle of attack disagree] alerts being the tire pressure warnings, and a stall being a dangerous situation when driving. But when you're in a car, you can get lucky and not hit anything. When an aircraft encounters a stall, the pilots have a very narrow window of time to correct it. A mistake can launch the aircraft into an unrecoverable stall. That is what happened with the Lion Air Boeing 737 MAX crash —except the pilots did not make a mistake.”

The automated anti-stall system, MCAS (Maneuvering Characteristics Augmentation System), was installed on 737 Max planes to compensate for a tendency of the plane to stall. The 737 Maxes were rushed onto market to compete with Europe-based rival Airbus' 320neo jet. Boeing marketed the new 737 with the claim that it was cheaper to put into service than the Airbus jet because it supposedly required virtually no additional training for pilots familiar with the older 737 models.

One anomaly Boeing has yet to explain is the fact that MCAS is triggered by readings from only one of the plane's two AoA sensors. It has always been standard protocol, and is the case on previous 737 models, that redundancy is built into a system that is critical to the safety of the aircraft, such as MCAS. This would require that MCAS be triggered by readings from both AoA sensors, not just one.

Boeing and the FAA continued to insist that the 737 Max was safe to fly even after the March 10 Ethiopian Airlines Flight 302 crash. It was only after virtually every other government and regulatory agency in the world had banned the plane that the US agreed, on March 13, to ground the 737 Max fleet. Now Boeing and the FAA are rushing to complete a software “patch” that will supposedly correct the problems so as to resume 737 Max flights by this summer.

Rytis continued: “In my opinion, [angle of attack disagree alerts] are absolutely necessary. The pilot needs to know if anything has gone wrong about the sensors, especially crucial ones as the AoA sensor, as disagreeing readings on the flight deck can confuse the pilots and lead to dangerous, even fatal situations.

“The press release is just Boeing shifting the blame somewhere else. They are defending their greed, as the AoA sensors, linked to the AoA disagreement alert, is an optional extra that airlines have to pay for. Boeing is defending their negligence, as they did not share the information that the alert is not working properly or that the alert only works when you purchase the optional sensors. They knew that fact since 2017 and they shared it with the FAA and their airline customers ONLY after the Lion Air Boeing 737 crashed. This is an identical situation to the MCAS information—Boeing informed airlines about the system only after a fatal accident.”

When asked if pilots could react properly to a problem with their aircraft without proper alerts, Rytis responded, “No, they can't. Following the same car analogy, when you know your tire is deflated, you know how to handle the situation and drive safely without taking an unnecessary risk. But when you're not fully aware of the situation, you can judge it the wrong way, as you can only guess what is wrong.

“Again, that's what happened with the Lion Air crash. The pilots did not know how to turn MCAS off. They did not know that there were faulty AoA sensors in the first place. If the pilots had known about the malfunctioning sensors, the aircraft wouldn't have even lifted off the ground.

“But Boeing, shockingly, decided that they did not need to include the AoA disagree alert as standard. Or that aircraft pilots needed to know that there is even a system like MCAS on board the 737 Max. Stating that those features are only supplemental information, Boeing showcased how careless they can be. With reports revealing that another of their jets, the 787, is manufactured in a way to maximize profits, the company is under a lot of harsh criticism at the moment.”



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