

# “Sully” Sullenberger testifies that the 737 Max 8 was “fatally flawed”

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Captain Chesley “Sully” Sullenberger testified before the House Subcommittee on Aviation on Wednesday on the deadly airplane crashes of two Boeing 737 Max 8 aircraft, Lion Air Flight 610 and Ethiopian Airlines Flight 302, which together claimed 346 lives. He stated that software operating on the plane “was fatally flawed and should never have been approved.”

Sullenberger is best known for safely landing a critically damaged Airbus 320 on the Hudson River in 2009, saving all 155 people on board. Since then, he has become one of the world’s experts in aviation safety.

What was described in his remarks was a company that rushed ahead with the production of a deadly airplane design to compete with its European-based rival, Airbus, in an effort to secure US, European and Asian market share. At the same time, the company did all it could to hide the new jet’s flaws from its pilots and passengers, in order to sell as many Max 8s as it could. Before the two crashes, Boeing had sold 387 aircraft and had a backlog of more than 4,600 orders.

In his speech, Sullenberger reviewed the events that led up to the creation of the faulty software, the Maneuvering Characteristics Augmentation System, including the attempt by Boeing to update an aircraft more than 50 years old without any serious modifications to the frame of the jet itself. “Boeing discovered an aircraft handling issue,” Sullenberger noted, and chose to deal with the problem “by adding a software feature [MCAS] to the 737 Max.”

“In adding MCAS,” he said, “Boeing added a computer-controlled feature to a human-controlled airplane but without also adding to it the integrity, reliability and redundancy that a computer-controlled system requires.”

This in turn “gave MCAS too much authority,

meaning that they allowed it to autonomously move the horizontal stabilizer to the full nose-down limit,” meaning that, in the event of a problem with the hardware that provides MCAS with data, the software could force the plane into a nosedive from which, by virtue of giving MCAS so much control, the pilots could not recover.

Sullenberger also rejected the idea, put forward by Boeing and the FAA, that pilots should have been able to overcome the software’s flaws. “Boeing has even said that in designing MCAS they did not categorize a failure of MCAS as critical because they assumed that pilot action would be the ultimate safeguard,” he said.

“We owe it to everyone who flies, passengers and crews alike, to do much better than to design aircraft with inherent flaws that we intend pilots will have to compensate for and overcome.”

Moreover, as has been reported previously, MCAS was not widely known to pilots because Boeing neglected to put any information about the software into the Max 8 handbook, either when the aircraft was first released or after the Lion Air crash. The aerospace giant did not want to reveal that it had put an airplane with a tendency to stall on the market, and thus hid its attempted fix from regulatory agencies, pilots and passengers.

In other words, Boeing executives evidently acted in a reckless and negligent manner, contributing to the deaths of 346 people. It speaks to the level of integration between Boeing and the US government that none of Boeing’s leadership has been charged or even arrested for the lives lost.

Sullenberger also called for pilots to be given access to full simulator training before flying the Max 8. During the 737 Max 8 rollout, Boeing told its pilots that they could learn all they needed to know about flying

the new type of airplane from a 56-minute presentation on an iPad and a 13-page manual. Both were approved by the Federal Aviation Administration and the pilots' union, and neither included any information about MCAS.

"In addition to fixing MCAS in a way that resolves all the many issues with it," Sullenberger said, "we must provide detailed system information to pilots that is more complete, give pilots who fly the 737 MAX additional Level D full flight simulator training so that they will see, hear, feel, experience and understand the challenges associated with MCAS."

"Pilots must develop the muscle memory to be able to quickly and effectively respond to a sudden emergency. Reading about it on an iPad is not even close to sufficient; pilots must experience it physically, firsthand."

The retired pilot's suggestions would allow pilots to experience both the error itself and the associated alerts—all of which are distracting and can prevent a safe landing—while "in a simulator, not in flight with passengers and crew on board." Boeing's most recent plans to reintroduce the 737 Max 8 do not include any simulator time for airline pilots.

Sullenberger concluded his remarks with many questions, including, "Has the Federal Aviation Administration (FAA) outsourced too much certification work?" This should be taken as rhetorical. Starting in 2005 and expanded during the Obama administration, the FAA introduced the Organization Designation Authorization program, which allows the agency to appoint as "designees" airplane manufacturers' employees to certify their own company's aircraft on behalf of the government.

Sullenberger stated finally: "These crashes are demonstrable evidence that our current system of ... certification has failed us."

These words should be taken by the American and international working class as a warning of the inherent incompatibility between safe, comfortable and affordable air transport, and the private ownership of the airline industry. These airline catastrophes will only be brought to a halt when airlines are expropriated on an international scale and transformed into publicly owned and democratically controlled utilities based on social need, not private profit.



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