Boeing 737 MAX – Still Not Fixed (Addendum)

I wrote a report on Jan 20, 2021 expressing concerns about unresolved issues stemming from the Lion Air & Ethiopian Airlines accident investigations that led me to question the thoroughness of the investigations, the FAA's recertification process, and ultimately the safety of the 737 MAX. We are learning new information about the increasing number of MAX airplanes that are being grounded once again, this time for electrical problems mere months after being recertified.

How can Boeing and the FAA claim the airplane is 100% safe now, when they do not have a solution for this electrical problem, and more importantly, cannot explain how this electrical defect went undetected for more than 2 years? This reinforces my belief, expressed in my January 20th report several months before the latest disclosures, that an electrical system malfunction may have triggered the two crashes. Yes, MCAS caused the airplanes to pitch down and crash, but it was an electrical system malfunction that likely caused the Angle of Attack Sensor to send faulty data to MCAS. And software fixes do not solve electrical problems.

This latest 737 MAX production revelation exposes the dangers of a flawed FAA recertification process that began with a refusal to investigate a wide range of production troubles at Boeing's 737 Factory. Boeing, the NTSB, and the FAA failed to act on repeated warnings of production process breakdowns including electrical system installation problems dating back to 2018, the year both airplanes were produced.¹ Inconceivably there is no evidence indicating international accident investigators, unaware of all the production problems, were afforded the opportunity to investigate the factory. With this in mind, it is no surprise that new discoveries related to 737 MAX production defects continue to come to light since the airplane has been returned to service.

The recent admission by Boeing and the FAA of their combined failure to detect a critical electrical system defect that has roots in the 737 Factory going back at least to Jan 2019 is disconcerting.² This is particularly bad news since it comes on the heels of the 20-month recertification process that resulted in the FAA Administrator saying, "The path that led us to this point was long and grueling. But we said from the start that we would take the time necessary to get this right. We were never driven by a timeline, but rather followed a methodical and deliberate safety process."³

It is even more troubling to learn that accident investigators from Boeing, the NTSB, and the FAA knew back in December 2018, one month after the Lion Air crash, that the doomed airplane had evidence of electrical system issues, and these same organizations knew soon after the Ethiopian Airlines crash that it too had unexplainable electrical system issues as outlined in my 1/20/21 report.⁴

Boeing and the FAA were motivated to expedite the recertification process and despite promises not to cut any corners, simply neglected to address the electrical system anomalies identified in the accident reports. Instead, they focused their attention on MCAS software and pilot training while defending the actions and inactions of their employees. The scope of the recertification process was constrained from the outset because Boeing and the FAA knew these production problems existed even before they started the recertification effort.

¹ U.S. Congressional Records (Pierson biography, communications with Boeing, NTSB, FAA, and DOT leadership)

² <u>Boeing faces new hurdle in 737 MAX electrical grounding issue</u>, NASDAQ, Eric M. Johnson, David Shepardson, Tracy Rucinski, May 5, 2019

³ FAA Ungrounds 737 MAX, YouTube Video, FAA Administrator Steve Dickson, Nov 18, 2020

⁴ 737 MAX – Still Not Fixed.pdf

Boeing and the FAA continue to insist the 737 MAX aircraft is safe and the FAA's recertification process fixed all the problems associated with the two crashes. Both continue to deny the direct role Boeing's production operations played in the crashes. As a result, airlines have confidently placed orders for billions of dollars' worth of new airplanes, many of which continue to be plagued by unexplained and serious safety issues.

As 737 MAX inflight safety incidents continue to occur and new production quality defects continue to surface, expect these same organizations to continue characterizing these events as "minor," "routine," and "not related to the two accidents." How do we have any confidence this airplane is truly safe?

~ Ed Pierson May 10, 2021