

United States Senate

May 21, 2019

VIA ELECTRONIC DELIVERY

Mr. Daniel Elwell
Acting Administrator
Federal Aviation Administration
U.S. Department of Transportation

Dear Acting Administrator Elwell:

I write to request that the Federal Aviation Administration (FAA) publish a comprehensive advisory circular that standardizes guidance on best practices for manufacturing, operating, testing and maintaining angle of attack (AOA) sensors, particularly the AOA wind vane component, to ensure effective compliance with all applicable regulatory requirements. High-profile fatal crashes involving 737 MAX series aircraft brought attention to the dangers of malfunctioning AOA sensors. However, problems originating with a damaged or malfunctioning AOA sensor are not limited to any single model of aircraft or manufacturer. Enhancing AOA sensors must be a priority for the entire aviation industry and regulatory system.

A recent FAA emergency airworthiness directive (AD) issued on April 18, 2019 demonstrates the dangers of malfunctioning AOA sensors. This AD was necessitated by a manufacturing flaw in the torqueing of set screws that secure the potentiometer shaft to the AOA vane shaft and the failure to apply thread locker to secure the set screws. It noted that the AOA sensor flaw could result in unintended automatic flight control activations; difficulty controlling the aircraft; excessive nose-down attitude and possible impact with terrain.

AOA vanes are on the outside of the aircraft and vulnerable to projectiles and significant wear and tear. Yet, malfunctioning AOA sensors can result in a series of cascading failures that significantly impair aviation safety. That is why I am calling on the FAA to issue a clear and comprehensive advisory circular that sets forth standardized best practices for industry and flight crews in regard to manufacturing, operating, testing and maintaining AOA sensors.

Thank you in advance for your consideration of my urgent request and I look forward to learning about how FAA will begin developing this critical advisory circular. If you have any questions about this request, please do not hesitate to contact my Senior Policy Adviser, Mark Copeland, at Mark_Copeland@duckworth.senate.gov or (202) 224-2854.

Sincerely,



Tammy Duckworth
United States Senator