

Continued Airworthiness Notification to the International Community

To: Civil Aviation Authorities

Date: October 8, 2019

From:

Federal Aviation Administration
Aircraft Certification Service
System Oversight Division, AIR-800
2200 South 216th Street
Des Moines, WA 98198

Subject: This message is to advise you of FAA's ongoing activities related to the potential for leading edge (LE) outboard (OB) slats being out of position without annunciation on Boeing Model 787 airplanes.

Situation Description: Boeing has identified a potential condition where the LE OB slat system on one or both wings could be out of position, without flight deck annunciation (specifically the LE OB slats could be in the flaps up position instead of the takeoff position). A 787 operator reported a less severe event where some of the LE OB slats on one wing were out of position with flight deck annunciation. Takeoff was not attempted and the airplane was taxied back to the gate. The operator reported that several slats were skewed and not in their commanded position. This was determined to be caused by overload of the mechanical fuse ("shearout") device within five of the ten LE OB slat geared rotary actuators (GRA) on one wing. The airport was experiencing icing conditions both during the inbound flight of the event airplane and during that planned takeoff. In this reported case, the system performed as intended and the airplane did not take off. A subsequent review of the 787 slat drive system identified a potential condition in which the LE OB slat system on one or both wings could be out of position without flight deck annunciation. This condition, if not addressed, could result in insufficient lift, resulting in inability to maintain continued safe flight and landing.

Aircraft/ Engine Make, Model and Series: All Boeing Model 787-8, 787-9, and 787-10 airplanes.

U.S.-registered fleet: 118 airplanes; **Worldwide fleet:** 860 airplanes

Operators: The major 787 operators are United Airlines, American Airlines, All Nippon Airways, Japan Airlines, Air Canada, Norwegian Air Shuttle, Etihad Airways, Qatar Airways, British Airways, Hainan Airlines, and Air India.

Ongoing activities: The FAA is working with Boeing to develop interim action to address this issue. This interim action would change how the airplane is operated after landing in icing conditions and is likely to consist of an airplane flight manual (AFM) limitation prohibiting flap/slat retraction after landing, a new aircraft maintenance manual (AMM) operation check (LE OB slat inspection) prior to flap/slat retraction after landing, and repetitive operational checks of the LE OB slats. The FAA is also working with Boeing to develop terminating action to address this issue.

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