

2/28/2019

**FOR YOUR INFORMATION**

2019-13/3-3

1592961

To: Boeing Commercial Airplane Company

Info: FAA (AVP-1, AVP-200, AFS-200, AFS-900, AFS-280, AFS-100, ANM-100, SEA-ACO, SEA-AEG, AQS-230), A4A, ALPA, AMFA, ASAP, ATSG, CAPA, IAM, ICAO, ICASS, IFALPA, IPA, NTSB, PAMA, TWU

From: Becky L. Hooey, Director  
NASA Aviation Safety Reporting System

Re: MD-11 Spoiler Frozen in Flight

We recently received an ASRS report describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the enclosed deidentified report.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dennis Doyle at (408) 541-2831 or email at [dennis.j.doyle@nasa.gov](mailto:dennis.j.doyle@nasa.gov)



Aviation Safety Reporting System  
P.O. Box 189 | Moffett Field, CA | 94035-0189



**ACN: 1592961**

**Time**

Date: 201811

Local Time Of Day: 0001-0600

**Place**

Locale Reference.Airport: ZZZ.Airport

State Reference: US

**Environment**

**Aircraft 1**

ATC / Advisory.Center: ZZZ

Make Model Name: MD-11

**Component 1**

Aircraft Component: Spoiler System

**Person 1**

Function.Flight Crew: Captain

ASRS Report Number: 1592961

**Events**

Anomaly.Aircraft Equipment Problem: Less Severe

Anomaly.Deviation - Altitude: Crossing Restriction Not Met

Anomaly.Deviation - Procedural: Clearance

Anomaly.Inflight Event / Encounter: Weather / Turbulence

Detector.Person: Flight Crew

Result.Flight Crew: Overcame Equipment Problem

Result.Air Traffic Control: Issued New Clearance

Result.Air Traffic Control: Provided Assistance

**Narrative 1**

During descent on the arrival, left spoiler stuck in the stowed position resulting in a significant right rolling moment. I immediately stowed the spoilers and determined that they were probably frozen (heavy rain and icing earlier in the flight during departure.) This is not a rare event but still requires some steps. We immediately notified Center that we were requesting relief on the STAR from the airspeed constraints and would be unable to make the next STAR altitude constraint because our spoilers were unavailable. I did not declare an emergency because ATC said that there was no problem with that "do the best you can with the altitude" and airspeed restrictions were removed. The rest of the descent was uneventful with regard to the spoiler system and they thawed out around 6,000-8,000 feet and were usable normally for landing. We never declared an emergency nor requested traffic priority and the requests and notifications we made to ATC were acknowledged quickly and they were a great help. I believe that water intrusion caused ice to form on the left set of spoilers keeping them stuck in the stowed position until we descended in to a warmer air mass. While this is not a normal occurrence it isn't extremely rare either (when encountering a significant precipitation event during climbout and then climbing to cold air) - probably 4-5 times over my aircraft 12+years. I'm not sure that this can be prevented per say - because you aren't aware of when the ice formation actually happens, so using a spoiler extension/retraction procedure following a precipitation encounter when freezing air mass is involved may not solve the problem.

**Synopsis**

MD-11 Captain reported the left spoiler became stuck in the stowed position during descent.