
Appendix D: Comments from the Swedish Accident Investigation Authority and the United Kingdom Air Accidents Investigation Branch



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N686PA Unalaska, Alaska, October 17, 2019	

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SHK and AAIB UK Submission of dissenting opinion to the draft report dated October 22, 2021: *Aircraft Accident Report - Runway Overrun During Landing, N686PA, Unalaska, Alaska, October 17, 2019*

As accredited representatives from the Swedish Accident Investigation Authority (SHK) jointly with the Accredited Representative of the UK Air Accidents Investigation Branch (UK AAIB) we are hereby respectfully sending a submission of dissenting opinion to the NTSB.

Following separate and joint discussions between the investigating authorities, the NTSB, UK AAIB and SHK, we have now reviewed the NTSB amended report dated October 22, 2021 and request that our comments of dissenting opinion be appended to the final report (ref. chapter 6.3 including note 2 of Annex 13 to the Chicago Convention).

The statements below are the common and mutually agreed statements from the UK AAIB and SHK accredited representatives to this accident investigation.

Yours sincerely,

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Dissenting opinions:**3.2: Probable cause:**

Based on the factual reports, we consider that the operational factors of landing the aircraft, from an unstable approach, in a reported wind well beyond the aircraft limitations, on a challenging runway without full consideration to the aircraft performance at time of arrival were the primary cause of this accident.

The aircraft had made many successful flights with the antiskid anomaly, including several to the accident airport; all were without incident. We consider it is the intentional exceedance of the aircraft limits, on a limiting runway, that revealed the previously hidden latent antiskid anomaly, and both were required to cause the accident.

We believe the *Probable Cause* section of the report does not reflect the causes of the accident in proportion to their actual contribution as described in the Analysis and the Findings sections of the report, neither does it highlight the wind conditions reported and recorded in the Meteorology factual report which indicated a tailwind of at least 20 knots*.

Our analysis of the crew's disregard to changes in the dispatch planning conditions, the aircraft configuration, the repetitively reported wind speed which exceeded the aircraft tailwind limitations and the option of a fully available into wind reciprocal runway to be the dominating causal factors in this accident.

Furthermore, to try and prevent such accidents from happening in the future, we believe that addressing the operational aspects of landing in conditions clearly beyond the aircraft limitations will have better and broader effect.

Other comments:

We were surprised that a transport category aircraft is permitted to proceed with a landing in conditions and configuration different from those used in the pre-dispatch calculations, without an analysis of landing performance using time of arrival conditions and the inclusion of safety factors.

There have been several similar landing overrun accidents and we therefore suggest that a safety recommendation, to make it an operational requirement for the operator to evaluate the Time of Arrival conditions and re-evaluate the aircraft landing performance based on the FAA SAFO** guidelines, would be an important step in trying to prevent similar accidents in the future.

4.0 Recommendations:

Regarding the recommendation to Saab.

Mitigating safety actions have been taken by both the landing gear manufacturer and Saab which should be sufficient to prevent re-occurrence of similar events.

The following safety actions were taken:

- Updated instructions and procedures and manuals for repair and overhaul
- Saab's mandatory one-time inspection of the Saab 2000 aircraft fleet
- Incorporation of a functional test of the anti-skid harness in the Aircraft Maintenance Manual (AMM) following maintenance, overhaul and installation of landing gear on aircraft.

We consider that these safety actions in addition to the existing instructions and illustrations provide an adequate multi-layered mitigation for such a system and therefore suggest these safety actions are included as safety actions taken, rather than a recommendation for a redesign.

Consideration should also be taken to proportionality in that Saab 2000 production ended 1999 and less than 45 aircraft remain in operational service worldwide.

* The wind reported from the AWOS just before landing (touchdown at time 1739:54) was 300/22 G25 kt (at time 1738), 310/23 (at time 1739), 310/20 G25 (at time 1740) and 310/19 G25 (at time 1741).

** 19001 (Landing Performance Assessments at Time of Arrival dated March 11, 2019). To find the Landing Distance Required (LDR), multiply the certificated (i.e., AFM dry, unfactored) Landing Distance by the applicable LDF in Table 1 (1.67) for the runway conditions existing at the time of arrival.