

---

## Comments of the SHK, representing Sweden as State of Design

Chapter 6.3 of Annex 13 to the Convention on International Civil Aviation provides that the State conducting the investigation shall send a copy of the draft Final Report to all States that participated in the investigation, inviting their significant and substantiated comments on the report as soon as possible. If the State conducting the investigation receives comments within the period stated in the transmittal letter, it shall either amend the draft Final Report to include the substance of the comments received or, if desired by the State that provided comments, append the comments to the Final Report.

The Swedish Accident Investigation Authority (SHK), representing Sweden as State of Design, wishes the following comments to be appended to the Final Report on the serious incident to Saab 2000, G-LGNO, approximately 7 nm east of Sumburgh Airport, Shetland on 15 December 2014:

The investigation of this incident has led to the following important facts and findings as published in the final report:

- The SAAB 2000 aircraft was appropriately certified.
- The aircraft and its systems behaved as designed and expected when the incident occurred.
- The commander, apparently because of stress although not in any situation of urgency, deviated from standard procedures, which may have led to increased stress on the co-pilot.
- Pilot command inputs were made to counter the crew's erroneous perception that the lightning strike had caused the aircraft to immediately start to descend, which in fact it had not.
- The crew acted under the erroneous perception that the autopilot had disconnected. In fact it had not, and no alerts to that effect have been shown to have been given to the crew by the aircraft systems.
- In fact, numerous aural and visual warnings, including a Master caution, were given by the aircraft systems to alert the crew to the fact that the autopilot was not disconnected. These warnings were, however, either not noticed or not understood, and in any case not acted upon by the crew.
- These facts and findings, in SHK's view, all indicate that the explanation for this incident lies in the flight operative, rather than the continuing airworthiness, area and that the incident was caused by the crew's insufficient understanding and handling of the aircraft systems, in turn pointing to the importance of measures to be taken in the area of crew management, e.g. regarding information to and

training of crew, actions which according to the final report have also subsequently been enacted by the operator concerned. We therefore do not consider any safety recommendations in that area necessary.

Requiring, as do the recommendations in the final report, the modification of a whole fleet of certified aircraft is a very invasive measure with far-reaching consequences. To motivate safety recommendations to that effect therefore requires particularly serious concerns with respect to safety risks; or in other words the recommendations need to be clearly proportionate to the problem they aim at resolving. Requiring modification of the autopilot system of the SAAB 2000 aircraft based on the facts and findings of the investigation of this incident, which was caused by insufficient understanding and handling of the aircraft systems by crew, in our opinion is disproportionate.