



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Office of the Administrator

800 Independence Ave., S.W.  
Washington, D.C. 20591

**DEC 23 2013**

Mr. Jonas Bäckstrand  
The Swedish Accident Investigation Authority (SHK)  
P.O. BOX 12538  
102 29 Stockholm  
Sweden

Dear Mr. Bäckstrand:

This is in response to Safety Recommendation RL 2013:03 R1 issued on January 25, 2013. The Swedish Accident Investigation Authority, *Statens haverikommission* (SHK), issued this recommendation following the investigation of a serious incident that occurred on April 4, 2012, in the airspace east of Gävle, Sweden. At 09:50 local time, the flightcrew of a Boeing 737-600, registered LN-RPS, received a left "Bleed Trip Off" warning while climbing through 37,000 feet. The flightcrew handled the warning in accordance with the Quick Reference Handbook (QRH) and continued climbing. About a minute later, the flightcrew received a second warning and shut off the system in accordance with the QRH.

Upon reaching their cruising altitude of 41,000 feet, the flightcrew received a right "Bleed Trip Off" warning. The captain declared an emergency, and commenced an emergency descent. The flightcrew donned their oxygen masks, and the captain initiated a manual deployment of the oxygen masks in the cabin. During the emergency descent, the audible warning for the cabin altitude sounded, which is an indication that the cabin altitude has exceeded 10,000 feet. Upon reaching 10,000 feet, the flightcrew leveled off, canceled the emergency, and proceeded to an alternate destination. The remainder of the flight continued uneventfully. According to the incident report, there were no injuries, and there was no damage to the aircraft. Safety Recommendation RL 2013:03 R1 was assigned Federal Aviation Administration (FAA) control number 13.010.

13.010. Change the Boeing B737 QRH-NNC (Non-Normal Checklist) "Bleed Trip Off" so that a limitation of the flight altitude should be taken into consideration in the event of failure of one pressurization system during flight in the same way as when this is identified before dispatch (Cf. MMEL (Master Minimum Equipment List) point 21-01).

FAA Comment. The FAA worked with Boeing to evaluate the failure risk of the dual pressurization system and the impact on safety and operations of limiting the service ceiling of the aircraft after an inflight single system failure.

Our analysis showed that the risk associated with a sequential pressurization system failure does not warrant mandatory corrective action. This is due to the low probability of such an event occurring combined with the demonstrated effectiveness of existing warning systems and operational

procedures. As a result, the FAA does not plan to mandate changes to existing manuals to address this safety concern.

We also determined that the potential increase in safety afforded by the proposed altitude limitation following a single pressurization system failure may be partially negated by an increase in risk due to greater exposure to weather, increased fuel consumption, adverse impact on reserves, and other operational issues. Such a risk assessment is significantly different than that which is considered for MMEL dispatch. In these instances, the airplane is intentionally dispatched one failure away from a complete loss of pressurization. When operating under the provisions of the MMEL, the operator can plan for and thus mitigate the incremental risk increase associated with lower altitude operations.

The FAA has concluded its evaluation of this safety recommendation and does not plan any further action. As a result, Safety Recommendation 13.010 has been classified as: closed-not adopted. If you have any questions regarding this safety recommendation, please contact Chris Pedersen, AVP-420, at (202) 267-9055.

Sincerely,

  
Tony Fazio  
Director, Office of Accident Investigation  
And Prevention