



EASA Safety Information Bulletin

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Subject: Boeing 737 Cabin Altitude Warning Confusion

Ref. Publication: Federal Aviation Administration (FAA) Safety Alert for Operators (SAFO) N° 08016 dated 07 July 2008.
Air Accident Investigation & Aviation Safety Board (AAIASB) Greece
Aircraft Accident Report 11/2006 Helios Airways Flight HCY522 dated 04 October 2006.

Description: The Accident Report issued by the investigation board after a Boeing B737-31S accident highlighted that the aeroplane failed to pressurize the cabin, and that the flight crew did not react properly to the cabin altitude warning horn, which resulted in incapacitation of the flight crew due to hypoxia (lack of oxygen in body) and consequent loss of aeroplane control.

In particular, it was discovered that the flight crew misinterpreted the intermittent cabin altitude warning horn as a false takeoff warning horn. On the B-737 the same intermittent horn is used for both conditions. Subsequent data gathering revealed that this misinterpretation occurred in other instances involving several operators.

The FAA issued Airworthiness Directive (AD) 2006-13-13 making certain emergency procedures in the Airplane Flight Manual immediate action items (also known as recall or memory items). Since the publication of the AD there have been several more incidents in which B-737 flight crews have failed to recognize and respond appropriately to a valid cabin altitude warning horn. In one case the crew reported they first believed it to be a cell phone. In all cases the crews were unaware of the meaning of the intermittent warning horn until looking at the cabin altimeter and rate of climb indicator on the overhead panel. There are further indications that some crews have delayed responding to the horn because of air/ground sensing system failures, or because of conditioning during training to react only to a rapid decompression, without considering the possibility of a slow loss of cabin pressure. In some cases, illumination of the EQUIP COOLING light has added further confusion, resulting in further delay in donning oxygen masks.

A crew's awareness of the possibility for confusion is essential to their quick response in donning an oxygen mask and avoiding hypoxia. It is also essential to establish communications between the flight deck

and the cabin since people become at least partially hypoxic even at 10 000 feet cabin altitude.

FAA issued SAFO N° 0816 to emphasize the importance of donning oxygen masks immediately any time the intermittent warning horn sounds during flight. EASA supports the content of this SAFO.

Recommendation: EASA recommends that operators and training organisations remind flight and cabin crews of B-737 model aeroplanes the absolute necessity of donning an oxygen mask - flight crews as soon as an intermittent warning horn sounds during flight, cabin crew whenever the passenger oxygen masks deploy automatically. This action should be included in manuals reflecting the check-list system referred to in paragraph OPS 1.210 (b) of the EU-OPS Regulation, and in all phases of training and checking.

Applicability: All Boeing B-737 model aeroplanes.

Contact: For further information contact the Airworthiness Directives, Safety Management and Research Section, Certification Directorate, EASA.
E-mail: ADs@easa.europa.eu .