

December 1, 2008

B-H210-08-00734

Docket Management Facility  
U.S. Department of Transportation  
400 Seventh Street SW  
Nassif Building, Room PL-401  
Washington, DC 20590  
Attention: Airworthiness Rules Docket No. FAA-2008-1166



**Subject: Comments, IAR Docket No. FAA-2008-1166 (Directorate Identifier 2008-NM-179-AD): "Revision to AFM to Include A New Flightcrew Briefing That Must be Done Before First Flight of the Day", Airplane Model 737**

The Boeing Company provides these comments in response to the Federal Aviation Administration's invitation to address Docket No. FAA-2008-1166; Directorate Identifier 2008-NM-179-AD. By these comments, Boeing requests the FAA to amend its November 10, 2008 Airworthiness Directive to clarify the rationale for issuing the AD as an interim measure.

On August 14, 2005, a Helios Airways B737-300 crashed near the town of Grammatiko, Greece. The Hellenic Republic Ministry of Transportation and Communication Air Accident and Investigation & Aviation Safety Board determined that the direct causes of the accident were the non-recognition that the cabin pressurization mode selector was in the MAN (manual) position during the performance of the Preflight procedure, Before Start checklist and After Start checklist; the non-identification of the warnings and the reasons for the activation of the warnings (Cabin Altitude Warning horn, passenger oxygen mask deployment indication, Master Caution) and continuation of the climb; and the subsequent incapacitation of the pilots due to hypoxia.

As a result of this accident and the causes of it, the FAA and Boeing took steps to revise procedures in order to remind flight crews of the need to set the Pressurization Mode Selector correctly and respond to the aural Cabin Altitude Warning in the manner described in the Boeing "Cabin Altitude Warning or Rapid Depressurization" checklist. See AD 2006-13-13; Boeing Multi-Operator Message 1-116769621. Pilot procedures described in the Boeing-recommended Flight Crew Operation Manual, the Quick Reference Handbook, and other flight crew publications, have for many years advised B737 pilots about how to configure their instruments to best avoid pressurization problems and how to respond in the event that the Cabin Altitude Warning horn sounds in flight. It is important that pilots receive training and are knowledgeable about their aircraft



systems and procedures, including the systems and procedures related to pressurization.

AD 2008-NM-179-AD states that it is being issued because of “continuing reports that flightcrews have failed to recognize and react properly to the cabin altitude warning horn.” With the single exception of the Helios accident of August 2005, there have been no reports in which the crew failed to resolve a pressurization problem. Following the implementation of the steps taken by the FAA and Boeing to revise procedures in order to remind flight crews of the need to set correctly the Pressurization Mode Selector and to respond correctly to the Cabin Altitude Warning horn, the number and rate of events involving even momentary delay between the sounding of the Cabin Altitude Warning horn and the recognition of a cabin altitude problem have steadily **decreased, not increased.** In all such events, the flight crews responded to indications of a cabin altitude problem and took steps to avoid an unsafe flight. A review of crew reports indicates that this improvement in crew performance comes as a result of the effectiveness of the additional reminders inserted into the procedures, an improvement in operator training, and the publicity surrounding the Helios accident. Boeing notes that there have been no reported events in 2008, found to date, identifying any delay in responding to the Cabin Altitude Warning.

Boeing supports the most recent action by the FAA in Docket No. FAA-2008-1166, of mandating pre-flight briefings that address the need to don oxygen masks, establish communications and perform the appropriate checklist, as this mandate will further reinforce the need by the flight crews to react properly to the Cabin Altitude Warning horn, in accordance with well-established procedures. However, as set forth above, Boeing does not believe there is a trend of "continuing reports that flightcrews have failed to recognize and react properly to the cabin altitude warning horn" to support this action, and therefore recommends the following changes to the AD:

SUMMARY (page 1)

*...This AD results from continuing reports that flightcrews have failed to recognize and react properly to the cabin altitude warning horn. We are issuing this AD to further prevent failure of the flightcrew to recognize and react properly to a valid cabin altitude warning horn, which could result in incapacitation of the flightcrew due to hypoxia (lack of oxygen in body) and consequent loss of airplane control.*

SUPPLEMENTARY INFORMATION – Actions Since Related AD was Issued  
(page 2)

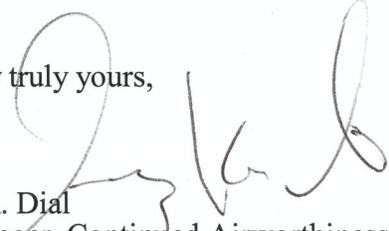
*Since we issued AD 2006-13-13, ~~we have received continuing reports of in-service events involving failure of the flightcrew to recognize and react properly to valid cabin altitude warning horns. Therefore, we have determined that a new flightcrew briefing before the first flight of the day and following any change in flight crewmembers, in addition to the existing AFM procedures, is appropriate to remind flight crews of well-established procedures and to further mitigate the risk of additional events~~*



Unsafe Condition (page 5)

*(d) This AD results from ~~continuing reports that flightcrews have failed~~ at concern that flightcrews may fail to apply well-established procedures so as to recognize and react properly to the cabin altitude warning horn. We are issuing this AD to further prevent failure of the flightcrew to recognize and react to a valid cabin altitude warning horn, which could result in incapacitation of the flightcrew due to hypoxia (lack of oxygen in body) and consequent loss of airplane control.*

Very truly yours,

  
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