

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

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(202) 426-8787

ISSUED: June 9, 1976

Forwarded to:

Honorable John L. McLucas
Administrator
Federal Aviation Administration
Washington, D. C. 20591

} SAFETY RECOMMENDATION(S)

A-76-73 through 75

On August 7, 1975, a Continental Air Lines Boeing 727 crashed after takeoff from Stapleton International Airport, at Denver, Colorado. The aircraft was evacuated successfully after it came to rest about one-quarter mile beyond the end of runway 35. Based on its investigation of the accident, the National Transportation Safety Board has concluded that the flightcrew's performance during the emergency evacuation did not conform to the desired or expected standards of a well trained flightcrew.

Following the accident, the flightcrew evacuated the aircraft through the cockpit windows instead of manning their evacuation duty stations in the passenger cabin. In addition, the Safety Board's investigation disclosed that the two flight attendants assigned to the forward cabin were trapped in their seats and were incapacitated during the accident. Consequently, there was no evacuation assistance available for the passengers in the forward cabin.

The Continental Air Lines approved flight manual contains the following evacuation duty assignments for the flightcrews:

o Captain- Forward cabin

Proceed to cabin, evaluate escape potentials, and direct the evacuation of passengers. When all possible assistance has been rendered, leave airplane and direct passengers away from area.

o First Officer-Mid cabin

Supervise evacuation of the mid cabin area. When all possible assistance has been rendered, leave airplane and assist in directing passengers away from area.

o Second Officer-Aft cabin

Supervise evacuation of the aft cabin area. When all possible assistance has been rendered, leave airplane and assist in directing passengers away from area.

The flight manual does not contain information regarding the flight attendants' duties and responsibilities during an emergency evacuation. Similarly, the flight attendants' manual does not contain information regarding the flightcrews' duties and responsibilities during an emergency evacuation.

During its investigation, the Safety Board found that Continental's training program for its flightcrews differs from that for its flight attendants. While the Safety Board found the flight attendants' training to be adequate, it found that the flightcrew training was inadequate. For example, the Safety Board reviewed the FAA-approved, Continental Air Lines Crewmember Emergency Evacuation training program and found that flight attendants receive actual "hands-on" emergency evacuation training in aircraft during both initial and recurrent training. Recurrent training is conducted every 6 months--DC-10 training is given during one semiannual session, and Boeing 727 training is given during the other. During all training sessions, the flight attendants receive simulated evacuation drills which are timed. In each session, they also review the evacuation duties of the flightcrew.

On the other hand, flightcrew emergency evacuation training is conducted annually and by a training department different from that used for flight attendant training. Flightcrew training includes "hands-on" operation of exits, audio-visual presentations of evacuations, and discussions of the locations and uses of emergency equipment. The flightcrews' training program does not include an explanation of flight attendants' evacuation duties nor does it include simulated evacuation drills. The Safety Board believes that this training program does not provide the necessary emphasis on the duties and responsibilities of flightcrews toward their passengers and other crewmembers.


The Safety Board believes that the flightcrews' performance may be attributable, in part, to an inadequate awareness of the importance of their roles in effecting a successful emergency evacuation. Moreover, the Board believes that adequate awareness and appropriate performance can be achieved through proper training. In fact, the Safety Board's accident experience has shown that a crewmember's response to an emergency depends almost entirely on his training. Flightcrews must understand that they must lead the evacuation and that they must act swiftly and aggressively to assist passengers. In order to do so, each crewmember must have a firm understanding of his duties and responsibilities and of the duties of other crewmembers so that his efforts will complement theirs. Also, if a crewmember becomes disabled during the accident,

each crewmember must be capable of assuming the duties of another. The Safety Board believes that these objectives can be achieved through improved training.

In view of the above, the National Transportation Safety Board recommends that the Federal Aviation Administration:

1. Require modification of Continental Air Lines' flightcrew emergency evacuation training program to insure that adequate emphasis is placed on the aspects of crew coordination, team effort, and awareness of individual crewmember's responsibilities as leaders of an evacuation. (Class II - Priority Followup) (A-76-73)
2. Issue an Air Carrier Operations Bulletin to require that Principal Operations Inspectors review the emergency evacuation training programs of their assigned air carriers to insure that adequate emphasis is placed on the aspects of crew coordination, team effort, and awareness of individuals' responsibilities as leaders of an evacuation. (Class II - Priority Followup) (A-76-74)
3. Require that the flightcrew manuals and the flight attendant manuals of all air carriers include the evacuation duty assignments of the entire crew. (Class II - Priority Followup) (A-76-75)

TODD, Chairman, McADAMS, BURGESS, HALEY, and HOGUE, Members, concurred in the above recommendations.


By: Webster B. Todd, Jr.
Chairman

THESE RECOMMENDATIONS WILL BE RELEASED TO THE PUBLIC ON THE ISSUE DATE SHOWN ABOVE. NO PUBLIC DISSEMINATION OF THIS DOCUMENT SHOULD BE MADE PRIOR TO THAT DATE.