

UNITED STATES OF AMERICA  
NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: April 28, 1971

Adopted by the NATIONAL TRANSPORTATION SAFETY BOARD  
at its office in Washington, D. C.  
on the 7th day of April, 1971

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FORWARDED TO: )  
Honorable John H. Shaffer )  
Administrator )  
Federal Aviation Administration )  
Department of Transportation )  
Washington, D. C. 20590 )  
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SAFETY RECOMMENDATION A-71-25 thru 30

As a result of a recent incident involving a Boeing 747 which encountered severe turbulence, six passengers and one stewardess were hospitalized, and 15 passengers and one stewardess were treated for minor injuries. All injuries were the result of the severe turbulence encountered while climbing through flight level 280 at an indicated air speed of 280 knots.

The National Transportation Safety Board believes the following areas require review by the Federal Aviation Administration:

Seatbelt Discipline: During this accident, seatbelt signs were on throughout the flight; however, of two hospitalized passengers, one indicated she did not have her seatbelt fastened, and another had his seatbelt fastened, but it was very loose because he was not able to take up the slack of the belt. Both of these passengers were injured when their heads struck the ceiling on the initial sharp downdraft but were able to maintain their seated position during the remaining turbulence encounter.

The Safety Board recommends that:

1. Seatbelt discipline be strictly enforced when the seatbelt sign is on. Attendants should make

a careful visual inspection of all seatbelts before takeoff and offer assistance to anyone encountering difficulty with a snug fit. When the seatbelt sign is on for prolonged periods, a public address announcement should be made at regular intervals.

747 Overhead Bin Failures: During this encounter with turbulence, several of the overhead storage bins in the passenger compartment dropped open, allowing their contents to spill out. It is not known if these reported failures contributed to any injuries of cabin occupants. However, the Safety Board recommends that:

2. Locking mechanisms be inspected and either be replaced with locks of a new design or the defective lock mechanisms be returned to serviceable condition by rework or repair.
3. The FAA correct any crashworthiness deficiencies in Boeing 747 overhead storage bins by establishing a deadline date for compliance with any modification requirements.

Economy Seat Headrest Separation: During this accident, several seat headrests were reported to have been thrown from their seat units. Examination of like headrests in another PAA 747 revealed that all such units tested were easily removed by hand without deactivating the lock mechanism. It is not known if these reported failures contributed to injuries, but the Safety Board recommends that:

4. FAA examine these seats with a view toward improving the crashworthiness of seats/headrests and establishing a deadline date for compliance with any modification requirements.

Narrow Aisle Stretchers: Following the abort of the flight and the landing, difficulty was encountered in removing from the aisle passengers suspected of having back injuries. This was because the aisle widths were too narrow for standard stretchers, resulting in great difficulty transferring patients from lying positions in the aisle to stretchers. The Safety Board recommends that:

5. The FAA advise medical facilities serving airports to stock narrow "carrying boards" or narrow stretchers that can be easily used in the space of an air carrier passenger compartment aisle to facilitate removal of non-ambulatory patients.

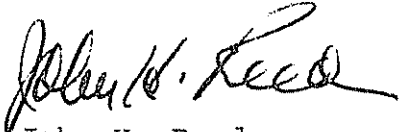
Air Carrier Policy on Deviation of Flight: Following this encounter with turbulence, the flight service director went forward to the cockpit and advised the captain that several passengers were severely injured or ill. The captain requested the service director to return to the passenger compartment and to reassess the situation. After reassessing the cabin injuries, the attendant reported to the captain a second time that several persons appeared to be severely injured. Ten to fifteen minutes elapsed between the initial report of passenger injuries and the captain's decision to divert the flight and return to his destination. The aircraft was met by the chief physician at John F. Kennedy International Airport. The Safety Board recommends that:

6. The FAA review and, where appropriate, amend air carrier policy concerning in-flight assessments of injury or illness of passengers in order to preclude unnecessary delays in securing necessary medical assistance.

Members of the Safety Board staff would be pleased to discuss these recommendations with your staff should you feel further clarification is required.

These recommendations will be released to the public on the issue date shown above. No public dissemination of the contents of this document should be made prior to that date.

Reed, Chairman; Laurel, McAdams, Thayer and Burgess, Members, concurred in the above recommendations.

  
By: John H. Reed  
Chairman