

# NATIONAL TRANSPORTATION SAFETY BOARD WASHINGTON, D.C.

ISSUED: September 4, 1981

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Forwarded to:  
  
Honorable J. Lynn Helms  
Administrator  
Federal Aviation Administration  
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)  
  
A-81-99 and -100

On December 3, 1980, Ransome Airlines Flight 944, a Nord 262, experienced a rapid decompression at 8,000 feet m.s.l. when the main cabin door opened in flight. As a result, one passenger sustained minor injuries. The flight made an emergency landing at Groton, Connecticut, without further incident. The National Transportation Safety Board's investigation of this incident revealed that the door had not been properly closed and locked.

The aircraft departed Providence, Rhode Island, on a scheduled passenger flight to Newark, New Jersey. When the flight was climbing through about 6,000 feet m.s.l. with the cabin altitude selected at sea level, the flight attendant, after being unable to see the latching fingers within the main cabin door through the viewing windows, notified the captain that they did not appear normal. The flight attendant's training manual references centering lines painted on the viewing windows of the cabin door which enables the flight attendant to observe the correct latching finger engagement, a red door lock safety latch, and the associated red lock tab. However, on this aircraft, there were no centering lines on the viewing windows, and the door lock safety latch and the associated lock tab were not painted red.

The flight attendant asked the captain if she should "jiggle" the door handle; the captain told her to leave it alone. Although the flight continued to climb to a higher altitude, the crew did not attempt to verify the condition of the main cabin door. Shortly thereafter, as the flight attendant entered the aft galley, the main cabin door opened outward resulting in a rapid decompression of the cabin. One passenger received minor injuries as a result.

Examination of the aircraft disclosed that ten ceiling panels were pulled loose and four wall panels were distorted inward. The interior of the cabin was strewn with insulation and soundproofing material. The entrance door to the cockpit had separated from its attachment points and was lodged in the forward cabin aisle.

The upper and lower door sections of the main cabin door were removed from the aircraft and tested for proper locking. The door handle was closed slowly and the door microswitch for the annunciation warning light tripped to the closed position. The latching fingers were then visible through the viewing windows. The door handle was rotated an additional 25° before the lock safety latch positively engaged.

The aircraft maintenance log for November 11, 1980, stated "Passenger entrance door switch for annunciator warning light is sticking, indicates door is locked when open." The corrective action indicated in the log was, "could not duplicate, test ok." On November 28, 1980, it was reported in the maintenance log that, "the left spade indicates lower than the right one when the door is closed and locked." The corrective action indicated was, "adjusted spade indicator." The Safety Board believes that the maintenance action, which involved bending of the latching fingers, taken on November 28, 1980, to correct the problem only changed the indication of the latching fingers and did not ensure their proper engagement.

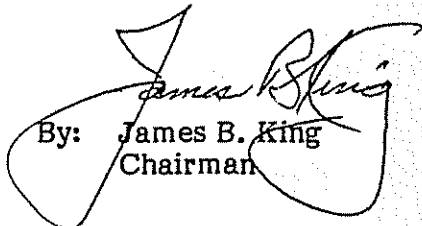
Although the aircraft operator's flight manual does not specifically address procedures to be followed if a potential leak exists in the pressurized cabin, safe operating practices dictate that the cabin pressure be decreased immediately to reduce the forces that could cause a leak and decompression. The continuation of the climb with the cabin pressurized and with the cabin altitude selected at sea level further aggravated an unsafe situation.

In view of the potential catastrophic situation created by inflight opening of doors on pressurized cabins--ejection of crewmembers or passengers, injury to passengers during the decompression, and possible structural damage with attendant adverse effects on airplane controllability, the Safety Board recommends that the Federal Aviation Administration:

Review the flight operations manuals and flight attendant's manual of all commuter airlines operating Nord 262 aircraft to insure that they include appropriate information regarding procedures to be followed when a potential leak is identified in pressurized cabins. (Class II, Priority Action) (A-81-99)

Require on Nord 262 aircraft that the markings on the main cabin doors, viewing window centering lines, red door lock safety latch, and latch lock tab conform to those described in the flight attendant's manual. (Class II, Priority Action) (A-81-100)

KING, Chairman, DRIVER, Vice Chairman, GOLDMAN and BURSLEY, Members, concurred in these recommendations. McADAMS, Member, did not participate.

By:  James B. King  
Chairman