

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: February 13, 1980

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Forwarded to:

Honorable Langhorne M. Bond  
Administrator  
Federal Aviation Administration  
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-80-13 and -14

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On March 1, 1979, a Beech 70 Excalibur Conversion (Queen Air), N777AE, crashed just after takeoff from the Gulfport-Biloxi Regional Airport, Gulfport, Mississippi. The aircraft was being operated by Universal Airways, Inc., under 14 CFR 135.

The aircraft took off from runway 17 and reached an altitude of 100 feet at the departure end of the runway. At this time, the pilot told Gulfport Tower, "Universal 76 is taking it around, going to land, going to land on 13." Witnesses stated that as the aircraft began a right turn the nose "pitched up" following which the aircraft immediately entered a steep dive, which it maintained until ground impact. All eight occupants were killed; there was no fire after impact.

The investigation revealed that the nose baggage door came open on takeoff and struck the left propeller. The door apparently had not been secured properly by the station agent who had removed baggage from the compartment.

The forward baggage compartment door is hinged at the top and is opened by turning a D-shaped handle. The latching mechanism incorporates three sliding bayonet latches which are held in the latched position by an overcenter cam. A microswitch is mounted ahead of the forward bayonet and door frame and is connected in series to the left engine starter switch. The door must be fully latched and the microswitch actuated by the pressure of the bayonet point before the engine can be started. This feature was designed by Beech to ensure safety of operation of the aircraft. On N777AE, however, the safety interrupt feature had been bypassed by a wire installed between the battery terminals of the two-engine magneto/start switches. This allowed both engines to be started even though the door was not fully latched.

In a similar accident involving a Ross Aviation Beech 65-80 (Queen Air) at Albuquerque, New Mexico, on May 19, 1972, nine persons were killed. As a result of that accident and a similar accident involving a Beech 99, the Safety Board issued Safety Recommendations A-72-78 through -81 directed to the Administrator. These recommendations dealt with the need for: secondary locking devices; cargo restraint systems; an alert to all air taxi operators; rulemaking to revise 14 CFR 135; and evaluation of the applicability of 14 CFR 23.787(b) to this type of nose cargo compartment.

The FAA issued an alert to all operators and owners regarding the need for positive door closure and for rigging the door actuating mechanism in accordance with the manufacturer's instructions. In addition, the FAA responded that if the door latching mechanism was properly maintained and fully secured by the operator, the requirements for cargo compartments and cargo security and protection contained in 14 CFR 23.787(b) would be satisfied. As you may know, based on this response the recommendations were "Closed - Unacceptable Action " by the Board.

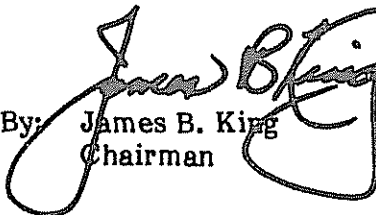
In 1976, Beech Aircraft Corporation surveyed 66 Beech Queen Airs that were equipped with nose baggage doors. The findings of the survey indicated that only 10 of the 66 aircraft had properly operating starter interrupt systems.

In view of these findings, the unacceptable response to our previous recommendations and the Gulfport accident, the Safety Board concludes that action is still required to prevent inadvertent opening of nose baggage doors in flight. Therefore, the Safety Board recommends that the Federal Aviation Administration:

Take action to provide double failure protection by means of a secondary locking device on nose baggage doors of light twin engine aircraft engaged in Part 135 operations. (Class II, Priority Action) (A-80-13)

Require that the nose baggage door interrupter system on all Beech Aircraft models so equipped be operational before flight. (Class II, Priority Action) (A-80-14)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in these recommendations.

By:  James B. King  
Chairman