NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

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ISSUED: March 6, 1975

Forwarded to:
Honorable Alexander P. Butterfield
Administrator
Federal Aviation Administration
Washington, D. C. 20591

SAFETY RECOMMENDATION(S)

A-75-20 & 21

The National Transportation Safety Board has investigated a recent, nonfatal accident involving a Cessna Model 402B, N69391. This accident reinforces the Board's belief that the in-flight opening of nose compartment doors may be a general problem on light twin-engine aircraft.

The pilot of N69391 stated that although he had closed and latched the left-hand nose compartment door, the door opened shortly after takeoff at an altitude of 150 feet. He reported that the aircraft rolled sharply to the left, yawed right, and assumed a descending attitude from which he was not able to recover.

The in-flight opening of nose baggage doors is not confined to any one model. In researching this recent incident, the Safety Board discovered numerous unreported instances that occurred on other light twin-engined aircraft.

Although the causes of the door openings were not determined in most cases, one general aviation manufacturer, which experienced five such openings during company operations, attributed the causes to failure to secure the door properly or to improper latch adjustments. In either case, the Safety Board believes that a careful preflight check of the door latch mechanisms and of the security of the doors might have prevented the doors from opening in flight. Nevertheless, reliance exclusively on human inspection and detection is inadequate. Consequently, in view of the potentially catastrophic consequences, a more positive or failsafe locking mechanism is required.

The Safety Board has not attempted to evaluate the aerodynamic effect of open baggage compartment doors; however, we believe that disturbances of air flow over a primary surface could in some cases produce a serious controllability problem.

In addition to the aerodynamic effects, loss of cargo into a propeller is a hazard; the Board cited this problem in our Safety Recommendations A-72-78 through 81, a copy of which is attached. These recommendations were based on an air taxi accident during which nine occupants of a Beechcraft 65B80 were killed when the nose baggage door opened in flight and on an air taxi incident during which a Beechcraft 99 landed successfully after the baggage door opened and loose cargo struck a propeller.

Based on the Board's recommendations, the FAA took corrective action on the particular models of aircraft involved, issuing a letter on the Beech 65 and AD 72-26-1 on the Beech 99. We understand that the FAA is proposing rulemaking which would eliminate the problem on all newly certificated airplanes. However, the problem will still remain on aircraft presently in service.

Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

1. Issue Airworthiness Directives to require that nose compartment doors on all light, twin-engine airplanes be modified to incorporate a double locking device similar to that required by AD 72-26-1 for Beechcraft 99 series airplanes.

2. Until these modification kits are available, notify pilots of all light, twin-engine airplanes of the need for extra care in closing the doors and in maintaining the airworthiness of the door latch mechanisms.

Our Bureau of Aviation Safety staff is available for additional discussion if desired.

REED, Chairman, McADAMS, BURGESS, and HALEY, Members, concurred in the above recommendations. THAYER, Member, did not participate.

By: John H. Reed
Chairman

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.

Attachment