

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

FOR RELEASE: 6:30 P.M., E.D.S.T., AUGUST 14, 1975

ISSUED: 8/14/75

Forwarded to:

Honorable James E. Dow
Acting Administrator
Federal Aviation Administration
Washington, D. C. 20591

SAFETY RECOMMENDATION(S)

A-75-66 and 67

An accident on February 5, 1975, near Hillsboro, Oregon, involving a Champion Citabria Model 7KCAB, disclosed a maintenance problem and safety-related operational circumstances which require remedial action by FAA. The Citabria is certificated in the aerobatic category. The two pilots aboard were performing slow-rolls when the accident occurred.

The airplane's right wing collapsed during one of these maneuvers, for reasons which have not yet been determined. The wing spars and wing brace struts failed at several locations and the inboard portion of the wing containing the fuel tank rotated against and blocked the single entry/exit door. Although this blockage might have effectively precluded his exit through the doorway, the surviving pilot seated in front nonetheless attempted to jettison the door using the quick-release mechanism. He pulled the safety locking pin and pushed down on the release handle according to the emergency instructions, but he could not release the door because an accumulation of rust between the forward door hinges and hinge pins prevented extraction of the hinge pins.

Since the windshield had loosened and separated from the airplane during the sequence of structural failure, the pilot was able to evacuate through this forward open area and parachute to the ground. The rear-seat occupant did not exit the airplane and was killed.

This accident emphasizes that required emergency or quick-release doors on aerobatic airplanes should be periodically inspected and actuated to assure proper operation. Any significant restraint at the hinges due to rust, foreign matter, or material deformation is critical since, as evidenced in the above case, such a condition could render

1595

the release mechanism ineffective. The problem was further substantiated during the Board's examination of these mechanisms on other Citabria airplanes when rusty hinges also prevented release of one of the five doors examined. This maintenance item is applicable not only to the Citabria, but to all other aerobatic airplanes as well.

The single quick-release door required on the Citabria normally provides for a clear and unobstructed emergency opening on the right-hand side of the airplane. However, the particular operational circumstances of this accident demonstrate a need to consider an alternate means of escape in this airplane. Exit through the left front side window appears possible and an evaluation should be made regarding such potential use. If alternate emergency escape through the window is feasible, this fact should be mentioned in the Citabria owners manual and appropriately noted in the airplane.

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

1. Issue Airworthiness Directives requiring periodic inspection of emergency quick-release doors and related systems on all aerobatic airplanes. (Class II)
2. Evaluate the feasibility of using the Citabria's left front side window as an alternate emergency exit. (Class II)

Personnel from our Bureau of Aviation Safety will be made available in the event that any further information or assistance is required.

REED, Chairman, McADAMS, THAYER, BURGESS, and HALEY, Members, concurred in the above recommendation.

Jos
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.