

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

Log 1198

ISSUED: August 14, 1980

Forwarded to:

Honorable Langhorne M. Bond
Administrator
Federal Aviation Administration
Washington, D.C. 20594

SAFETY RECOMMENDATION(S)

A-80-76 and -77

On March 8, 1980, N720R, a Swearingen SA-226AT aircraft, experienced a rapid decompression near Albany, New York, at 16,000 ft after part of the aft cargo compartment door separated in flight. The aircraft cabin had just attained a pressure differential of about 7 psi to maintain a sea level cabin altitude. Some interior furnishings, including an unoccupied passenger seat, were ejected from the aircraft. During the decompression, two passengers were injured slightly by flying debris. The dorsal fin and upper fuselage were damaged slightly when the upper portion of the cargo door rotated upward about its hinge, broke the overcentering arm link attachments, separated, and struck the fuselage. The aircraft landed safely at Glen Falls, New York. The separated portion of the cargo door was recovered on May 14, 1980.

On March 14, 1980, the Safety Board issued Safety Recommendations A-80-20 and -21 which recommended that the Federal Aviation Administration issue airworthiness directives to require an immediate inspection to assure proper adjustment and structural integrity of the door latches, and to assure safe operation of the aircraft by restricting pressurization until appropriate corrective action was taken. Airworthiness Directives T80SW14 and 15, issued by the FAA, and Service Bulletin 52-009, issued by the manufacturer, during March 1980 accomplished these urgent actions.

Our examination of the separated portion of the cargo door confirmed the previous indications that misadjustment of a latch was a major factor in the separation of the door. The examination also revealed that the "click-clacks" (split barrel) on one of the highly loaded latches had been filed or ground down, which reduced the diametrical engagement of the latch in its receptacle. The Safety Board could not determine who had performed the unauthorized maintenance procedure. The airworthiness of the fuselage depends on the integrity of the passenger and cargo door latches to withstand flight and pressurization loads, and it is imperative that the latch components and the sill receptacles be maintained dimensionally so that proper engagement takes place.

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Additionally, the examination revealed a broken latch actuator rod which prevented one latch from being engaged. Our analysis indicated that the rod was probably broken when someone forced the handle to the closed position while the latch was not properly engaged. The compression buckling of the rod caused stress which resulted in the failure of the rod end in its threaded shank.

Since the additional unsafe conditions found on the accident aircraft might be present on other aircraft in the Swearingen fleet, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Issue a telert maintenance bulletin to alert operators of Swearingen Models SA226-AT and SA226-TC aircraft of the dangers of machining or filing any component of the latch or receptacle to ease the engagement. (Class II, Priority Action) (A-80-76)

Issue an addition to the General Aviation Airworthiness Alerts, Advisory Circular 43-16, to alert operators of SA226 aircraft to the unsafe condition which can result from forcing the latching mechanism while the latches are not properly engaged. (Class II, Priority Action) (A-80-77)

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

James B. King
By: James B. King
Chairman
for