

Log 1940 SP-20



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Date: May 19, 1987

In reply refer to: A-87-26

Honorable Donald D. Engen
Administrator
Federal Aviation Administration
Washington, D.C. 20591

The National Transportation Safety Board is investigating the collision between a Piper Apache and a Pan American B-727 that occurred on the parallel taxiway to runway 36L at Tampa International Airport in Tampa, Florida, on November 6, 1986. The Piper Apache was cleared for a second instrument landing system (ILS) approach to runway 36L after the first attempt resulted in a missed approach. The weather was indefinite ceiling, sky obscured, and visibility 1/16 mile in fog.

Following its second approach, the Piper Apache landed on taxiway "W" adjacent to runway 36L and collided with the Pan American B-727, which was taxiing south on taxiway "W." The number 1 engine of the Piper Apache was embedded in the nose of the B-727 just below the radome. The Piper Apache skidded along the left side of the B-727, burst into flames, passed under the left wing of the B-727, and continued to burn as it came to rest approximately 100 feet behind the B-727. The B-727 crew saw the Piper Apache approximately 2.4 seconds before impact and the captain applied the brakes and turned to the right. The B-727 went off the taxiway and stopped on the grass between the taxiway and runway 36L. The B-727 was evacuated and two passengers and one flight attendant received minor injuries. The pilot and only occupant of the Piper Apache was fatally injured.

Although the investigation of the accident is not complete, it was determined that two of the four exits did not operate properly during the evacuation of the B-727. The purser, who occupied the forward jumpseat, started to open the left forward entry door (L-1) shortly after the flightcrew announced over the public address system to "evacuate the airplane." The purser opened the door approximately 18 inches but could not open it farther. The captain then pushed on the door and it still did not open completely. The captain and the purser together opened the door and the slide deployed and inflated automatically. Two flight attendants opened the aft left service door (L-2) and the slide inflated automatically. One flight attendant then attempted to open the aft right door (R-2) and was struggling with it when the flight engineer told her that all the passengers were off the airplane, so she stopped her efforts.

The aft right door (R-2) was opened at the accident site as part of the Safety Board's investigation. The door opened normally approximately 9 inches and stopped with the slide pack remaining stowed in the slide container. The door required eight separate attempts to push it open. Once the door opened, the slide deployed and inflated normally.

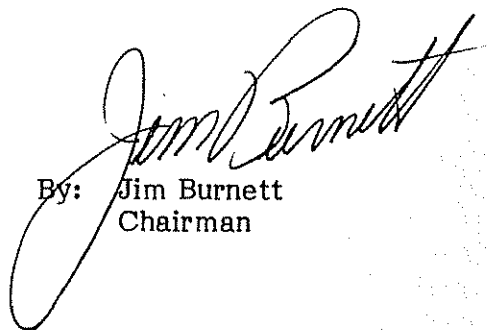
Examination of the R-2 door slide container disclosed that the decorative carpeting that had been applied to the exterior surface of the hinged inboard half of the slide container and wrapped around the edges had interfered with separation of the two halves of the container. Pan Am had made the decorative carpet modification on all four of the slide containers. The interference and resultant resistance increased the force required to separate the two halves of the slide container.

In order to closely observe the significance of the resistance between the slide container halves, and to determine if there was anything unique with the installation in the accident airplane, the same R-2 slide container from the accident airplane was then installed on the R-2 door of another B-727-200 airplane and a slide was installed in the container. The door opening sequence was started, and the door opened part way; the slide latch disengaged from the container, and then resistance was encountered. Further opening of the door required a rocking motion because of the resistance, and the door eventually opened. The additional force and motion was required because the container halves did not separate easily, which in turn caused the slide to be pulled down inside the container. The downward force did not provide a sufficient lateral force to separate and open the container.

This investigation has made the Safety Board aware that modifications can be made to the slide containers that do not have an apparent effect of inhibiting performance but that can seriously degrade the performance of an emergency exit. Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Alert the FAA principal maintenance inspectors of operators with airplanes that have door-mounted evacuation slide containers to verify that any modified slide containers open freely and without resistance or interference. (Class II, Priority Action) (A-87-26)

BURNETT, Chairman, GOLDMAN, Vice Chairman, LAUBER and NALL, Members concurred in this recommendation.



By: Jim Burnett
Chairman