

Log # 2608B



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Date: December 20, 1996

In reply refer to: A-96-165

Mr. Morris Nachtomi
Chief Executive Officer
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On December 20, 1995, at 1136, Tower Air flight 41, a Boeing B-747, veered off the left side of runway 4L during an attempted takeoff at John F. Kennedy International Airport (JFK), Jamaica, New York. The flight was a regularly scheduled passenger/cargo flight conducted under the provisions of Title 14 Code of Federal Regulations (CFR) Part 121. Of the 468 persons aboard (451 passengers, 12 cabin crewmembers, 3 flightcrew members, and 2 cockpit jumpseat occupants), 24 passengers sustained minor injuries, and a flight attendant received serious injuries. The airplane sustained substantial damage. The weather at the time of the accident was partially obscured, with a 700-foot broken cloud ceiling, 1½ mile visibility, light snow, and fog.

The National Transportation Safety Board determined that the probable cause of this accident was the captain's failure to reject the takeoff in a timely manner when excessive nosewheel steering tiller inputs resulted in a loss of directional control on a slippery runway. Inadequate Boeing 747 slippery runway operating procedures developed by Tower Air, Inc., and the Boeing Commercial Airplane Group and the inadequate fidelity of B-747 flight training simulators for slippery runway operations contributed to the cause of this accident. The captain's reapplication of forward thrust before the airplane departed the left side of the runway contributed to the severity of the runway excursion and damage to the airplane.¹ During the accident sequence, two service carts came loose and resulted in the serious injury of a flight attendant.

Flight attendants at Tower Air were trained in accordance with an FAA-approved program. At the time of the accident, under the provisions of this program, new hires received 40 hours of basic indoctrination covering safety regulations, company policies, procedures, forms, and organizational and administrative practices. They then received 16

¹ For more detailed information, read Aircraft Accident Report—"Runway Departure During Attempted Takeoff, Tower Air Flight 41, Boeing 747-136, N605FF, John F. Kennedy International Airport, New York, New York, December 20, 1995" (NTSB/AAR-96/04)

hours of initial training (14 hours classroom and 2 hours competency check) on B-747 cabin familiarization (including the aircraft systems they would be operating), authority of the pilot-in-command, and passenger handling. They also received 28 hours of emergency procedures training, including drills that provided instruction and practice in the use of emergency equipment and procedures.

Training on operating the serving carts was included in the 16-hour initial training module. This training was conducted in a classroom, and one of the three types of carts in the fleet was brought to the classroom for demonstration purposes. Students were shown how the brakes operated and were given a chance to maneuver the cart. According to routine flight attendant training practices at Tower Air, the cart used for this demonstration could have been any of the meal or beverage carts found on any of the various models of the Tower Air airplanes. Ice carts, which have different primary attachment mechanisms from those of most other carts, were not specifically included in classroom cart demonstrations. At a separate time, students were shown the galleys while performing a "walkaround" on the actual airplane; however, no carts were installed in the galleys during the "walkaround" training session.

Neither slides nor photographs of carts were included in the Tower Air initial flight attendant training program. Students received a "Galley & Service Equipment" handbook during initial training that included a diagram showing an "Atlas"-style cart, which was used on some B-747s in the Tower Air fleet, but not on the former TWA aircraft. The "Atlas" cart had a different primary attachment mechanism from the "TWA" beverage and ice carts installed on N605FF. This handbook also described preflight procedures for the galley, again without specific reference to the "TWA"-type carts.

Although Tower Air operated B-747s with three different kinds of galleys and service carts (with significant differences in the method used to secure each type of cart), new flight attendants were only provided "hands on" training with a single empty cart. Further, their classroom did not have a galley mock-up, and the actual airplane galleys used for "walkaround" training usually were not equipped with carts when trainees were brought aboard. Therefore, flight attendants did not actually operate carts in a galley setting until they began flying. The Safety Board concludes that Tower Air flight attendant galley security training was inadequate because flight attendants had not received "hands on" training with all the galley equipment that they were required to operate. The Safety Board believes that Tower Air should revise its initial flight attendant training program to include "hands-on" training for securing each type of galley and cart included in its B-747 fleet.

Therefore, as a result of its investigation of this accident, the National Transportation Safety Board recommends the following to Tower Air, Inc.:

Revise Tower Air's initial flight attendant training program to include "hands-on" training for securing each type of galley and cart included in its Boeing 747 fleet. (A-96-165)

Also as a result of its investigation, the Safety Board issued Safety Recommendations A-96-150 through -164 to the Federal Aviation Administration

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation A-96-165 in your reply.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.

By. 
Jim Hall
Chairman
