



Aviation Investigation Final Report

Location:	NEW YORK, New York	Accident Number:	NYC99LA235
Date & Time:	January 13, 1999, 16:55 Local	Registration:	N785AT
Aircraft:	Boeing 727-200	Aircraft Damage:	None
Defining Event:		Injuries:	1 Serious, 160 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

The ground handler attempted to close the cargo door of the parked Boeing 727, in preparation for its departure. She released the support strut, the door fell down, and the strut penetrated her hand. About 3 weeks prior to the accident, the cargo door was reported as 'heavy to open.' Corrective action consisted of re-securing the forward counterbalance hinge. About a month after the accident, the cargo door was reported as, 'heavy when opening.' Corrective action at that time was: 'Adjusted cable tension on fwd balance.'

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Inadequate counterbalancing to compensate for the weight of the cargo door.

Findings

Occurrence #1: MISCELLANEOUS/OTHER
Phase of Operation: STANDING

Findings

1. (C) DOOR,CARGO/BAGGAGE - IMPROPER BALANCE
2. (C) MAINTENANCE - INADEQUATE - OTHER PERSON

Factual Information

On January 13, 1999, about 1655 Eastern Standard Time, a ground support handler was seriously injured when a cargo door strut on a Boeing 727-200, N785AT, crushed her hand. At the time, the airplane, which was operating as American Trans Air flight 751/752, was parked at a gate at La Guardia International Airport (LGA), New York, New York. The captain, first officer, second officer, 4 flight attendants, and 153 passengers were uninjured. The flight was preparing to depart, operating under 14 CFR Part 121.

According to a written statement by the handler, her supervisor told her to close one of the cargo doors. The handler wrote:

"The baggage compartment doors are held wide open above and perpendicular to the fuselage of the 727 by an expandable metal bar. The expandable metal bar is connected to the inside and left hand side (looking at the bar from the inside) of the door and it latches into a notch on the right hand side (looking at it from the outside) of the fuselage of the airplane.

I attempted to close the aft baggage compartment door, but when I tried to undo the latch, the bar violently popped out of the notch. The door came crashing down at high velocities, the bar swung into the belly of the aircraft with my hand. With that, the bar penetrating, crushing and tearing the left palm between the pointer finger and thumb, also injuring arm/shoulder/neck."

The accident was not reported by the airline. It was reported to the Safety Board by the injured handler in August 1999, and confirmed in September 1999. According to the airline's director of safety, the handler had worked for Signature Flight Support, which provided the ground support to the airline at La Guardia. The airline was unaware of the accident because Signature had not reported it.

In a letter to the airline dated August 18, 1999, the handler's supervisor wrote that the handler had reported to work on the day of the accident after recuperating for a couple of days, from a lower back injury. She was going to be on light duty, and was instructed to only wing walk and assist with radio communications. The supervisor also stated that the handler was signed off to work on the ramp and on the Boeing 727, and that she had "received on-the-job training for this particular task."

In another statement dated January 13, 1999, the supervisor stated that when he asked the handler what happened, she said that the door came down on her while she was closing it. "She was holding the bar that braces the door up with her right hand. It probably came down on her too hard, and she couldn't handle it...."

In an undated statement, a witness wrote that he saw the handler pull out the bar that secured

the baggage door when it was it open. "She lost control of the bar, turn[ed] side way[s] to brace from the impact of the aircraft door. The door hit her and she fell to the ground...."

The Boeing 727 maintenance manual excerpt provided by the airline stated that the aft cargo door was a plug-type, outward-upward opening door. The door was equipped with two balance mechanisms to counterbalance the weight of the door to facilitate door opening. The forward balance mechanism had a rotary snubber to prevent the door from opening or closing with excessive force. A support strut was also present, to secure each door in the fully open position.

The maintenance manual also stated that the cargo door would have been closed "by removing the support strut from the fuselage fitting, telescoping the strut and stowing it in the slotted bracket by the door....The cargo door then swings down...."

The ground service manual in use included the following procedure: "Pull cargo door down using Support Strut."

According to the airline's maintenance records, a discrepancy was written up on the cargo door, dated December 25, 1998. It stated: "Aft cargo door heavy to open." The corrective action was: "Found fwd counterbalance hinge loose from mount. Resecured counterbalance hinge as required. Ops check good at this time."

On February 7, 1999, the following discrepancy was written: "Aft cargo door heavy when opening." The following day, the corrective action was: "Adjusted cable tension on fwd balance as required...."

The airline also reported that on the day of the accident, a daily service check was performed on the airplane. Part of the service check required a visual inspection of the cargo bay area, which required the mechanic to open, and then secure, the cargo bay door.

Pilot Information

Certificate:	Airline transport	Age:	49, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Unknown Unknown	Last FAA Medical Exam:	
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	Registration:	N785AT
Model/Series:	727-200 727-200	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	21691
Landing Gear Type:	Retractable - Tricycle	Seats:	0
Date/Type of Last Inspection:	January 11, 1999 Continuous airworthiness	Certified Max Gross Wt.:	194800 lbs
Time Since Last Inspection:		Engines:	3 Turbo fan
Airframe Total Time:	51818 Hrs	Engine Manufacturer:	
ELT:		Engine Model/Series:	
Registered Owner:	COMERICA LEASING CORP	Rated Power:	
Operator:	AMERICAN TRANS AIR	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	AMTR

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:	LGA ,22 ft msl	Distance from Accident Site:	
Observation Time:	16:51 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 2000 ft AGL	Visibility	9 miles
Lowest Ceiling:	Overcast / 3600 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	18 knots / 21 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	-2°C / -7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(LGA)	Type of Flight Plan Filed:	Unknown
Destination:		Type of Clearance:	
Departure Time:	00:00 Local	Type of Airspace:	

Airport Information

Airport:	LA GUARDIA LGA	Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	7 None	Aircraft Damage:	None
Passenger Injuries:	153 None	Aircraft Fire:	None
Ground Injuries:	1 Serious	Aircraft Explosion:	None
Total Injuries:	1 Serious, 160 None	Latitude, Longitude:	40.770568,-73.869728(est)

Administrative Information

Investigator In Charge (IIC): Cox, Paul

Additional Participating Persons: NONE ;

Original Publish Date: September 19, 2000

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=47451>

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