



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Charlotte, North Carolina	Accident Number:	NYC08LA234
Date & Time:	June 28, 2008, 18:15 Local	Registration:	N725PS
Aircraft:	Bombardier, Inc. CL-600-2C10	Aircraft Damage:	Substantial
Defining Event:	Ground handling event	Injuries:	64 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

A CRJ 200 had completed the pushback process and was waiting for taxi clearance. A CRJ 700 was being pushed back from another gate, with a wing walker stationed at the left wing. The wing walker was aware of the CRJ 200, and when the pushback commenced, he believed that the tugdriver was only going to pushback the airplane about 10 feet. As the tugdriver continued to push the airplane past 10 feet, the wing walker signaled the tugdriver to stop. Witnesses observed the wing walker signaling the tugdriver to stop as the tugdriver continued to push the airplane. The tail section of the CRJ 700 struck the tail section of the CRJ 200, which resulted in substantial damage to the empennages of both airplanes. Due to lightning in the vicinity of airport, ground crewmembers were not using headsets.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The tugdriver and wing walker's lack of communication and the tugdriver's failure to properly monitor the wing walker. Contributing to the accident was the lightning in the vicinity of the airport, which resulted in the ground crewmembers not wearing headsets.

Findings

Personnel issues	Lack of communication - Ground crew
Personnel issues	Monitoring other person - Ground crew
Environmental issues	Lightning - Effect on operation

Factual Information

History of Flight

Pushback/towing

Ground handling event (Defining event)

On June 28, 2008, about 1815 eastern daylight time, a Bombardier Inc. CL-600-2C10 (CRJ 700), N725PS, was being pushed back for taxi to takeoff, when it struck a standing Bombardier Inc. CL-600-2B19 (CRJ 200), N228PS, at the Charlotte-Douglas International Airport (CLT), Charlotte, North Carolina. Both airplanes were substantially damaged, and both flights were operated by PSA Airlines Inc., doing business as US Airways Express. There were no injuries to the 2 flight crewmembers, 2 flight attendants, and 60 passengers on board the CRJ 700, or the 2 flight crewmembers, 1 flight attendant, and 45 passengers on board the CRJ 200. Visual meteorological conditions prevailed, and instrument flight rules flight plans were filed for both flights, which were conducted under the provisions of 14 Code of Federal Regulations (CFR) Part 121.

According to a representative from PSA Airlines Inc., due to lightning in the vicinity of CLT, ground crew members were not utilizing headsets. The CRJ 200 had completed the pushback process from gate E21, and was waiting for taxi clearance. The CRJ 700 was parked at gate E12, when it was cleared for pushback by ramp control. A wing walker was stationed at the left wing, in plain sight of the tug driver. The wing walker was aware of the CRJ 200, and when the pushback commenced, he believed that the tug driver was only going to pushback the airplane about 10 feet, just enough to trigger the aircraft communication addressing and reporting system (ACARS) "out" time. As the tug driver continued to push the airplane past 10 feet, the wing walker signaled the tug driver to stop. He continued to attempt to alert the tug driver; however, the tug driver did not observe the wing walker before the tail section of the CRJ 700, struck the tail section of the CRJ 200.

The empennages of both airplanes were substantially damaged.

Two other ground crew members stated that they observed the wing walker signaling the tug driver to stop as the tug driver continued to push the airplane. One of the ground crew members, who was working at gate E14 ran toward the tug driver and tried to get his attention. He stated that the tug driver was focused on the cockpit of the airplane and was directing the starting of the airplane's number 2 engine.

The tug driver stated that he began the pushback as normal and gave the flight crew the signal to start the number two engine. He was not aware that anything was wrong until he observed the ground crew member from gate E14.

Pilot Information

Certificate:	Airline transport	Age:	30,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):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	March 25, 2008
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	May 7, 2008
Flight Time:	5316 hours (Total, all aircraft), 2393 hours (Pilot In Command, all aircraft), 226 hours (Last 90 days, all aircraft), 76 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Co-pilot Information

Certificate:	Commercial	Age:	31,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	August 8, 2007
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 19, 2008
Flight Time:	177 hours (Total, all aircraft), 86 hours (Last 90 days, all aircraft), 46 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bombardier, Inc.	Registration:	N725PS
Model/Series:	CL-600-2C10	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal; Transport	Serial Number:	10186
Landing Gear Type:	Retractable - Tricycle	Seats:	75
Date/Type of Last Inspection:	June 26, 2008 Continuous airworthiness	Certified Max Gross Wt.:	44998 lbs
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:	9011 Hrs at time of accident	Engine Manufacturer:	GE
ELT:	Installed, not activated	Engine Model/Series:	CF34-8C5B1
Registered Owner:	Wells Fargo Bank Northwest NA Trustee	Rated Power:	13790 Lbs thrust
Operator:	PSA Airlines Inc.	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:	US Airways Express	Operator Designator Code:	VNAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CLT, 748 ft msl	Distance from Accident Site:	
Observation Time:	18:52 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Few / 1000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	168°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.98 inches Hg	Temperature/Dew Point:	25°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Charlotte, NC (CLT)	Type of Flight Plan Filed:	IFR
Destination:	Dulles, VA (IAD)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	Class B

Airport Information

Airport:	Charlotte-Douglas CLT	Runway Surface Type:	
Airport Elevation:	748 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	4 None	Aircraft Damage:	Substantial
Passenger Injuries:	60 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	64 None	Latitude, Longitude:	35.21389,-80.943054

Administrative Information

Investigator In Charge (IIC):	Schiada, Luke
Additional Participating Persons:	Mitzi Crouse; FAA/FSDO; Charlotte, NC
Original Publish Date:	May 6, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=68339

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).



Aviation Investigation Final Report

Location:	Charlotte, North Carolina	Accident Number:	NYC08LA234
Date & Time:	June 28, 2008, 18:15 Local	Registration:	N228PS
Aircraft:	Bombardier, Inc. CL-600-2B19	Aircraft Damage:	Substantial
Defining Event:	Ground handling event	Injuries:	48 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

A CRJ 200 had completed the pushback process and was waiting for taxi clearance. A CRJ 700 was being pushed back from another gate, with a wing walker stationed at the left wing. The wing walker was aware of the CRJ 200, and when the pushback commenced, he believed that the tugdriver was only going to pushback the airplane about 10 feet. As the tugdriver continued to push the airplane past 10 feet, the wing walker signaled the tugdriver to stop. Witnesses observed the wing walker signaling the tugdriver to stop as the tugdriver continued to push the airplane. The tail section of the CRJ 700 struck the tail section of the CRJ 200, which resulted in substantial damage to the empennages of both airplanes. Due to lightning in the vicinity of airport, ground crewmembers were not using headsets.

Probable Cause and Findings

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Findings

Personnel issues	Lack of communication - Ground crew
Personnel issues	Monitoring other person - Ground crew
Environmental issues	Lightning - Effect on operation

Factual Information

History of Flight

Standing	Ground handling event
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On June 28, 2008, about 1815 eastern daylight time, a Bombardier Inc. CL-600-2C10 (CRJ 700), N725PS, was being pushed back for taxi to takeoff, when it struck a standing Bombardier Inc. CL-600-2B19 (CRJ 200), N228PS, at the Charlotte-Douglas International Airport (CLT), Charlotte, North Carolina. Both airplanes were substantially damaged, and both flights were operated by PSA Airlines Inc., doing business as US Airways Express. There were no injuries to the 2 flight crewmembers, 2 flight attendants, and 60 passengers on board the CRJ 700, or the 2 flight crewmembers, 1 flight attendant, and 45 passengers on board the CRJ 200. Visual meteorological conditions prevailed, and instrument flight rules flight plans were filed for both flights, which were conducted under the provisions of 14 Code of Federal Regulations (CFR) Part 121.

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Two other ground crewmembers stated that they observed the wing walker signaling the tugdriver to stop as the tugdriver continued to push the airplane. One of the ground crewmembers, who was working at gate E14, ran toward the tugdriver and tried to get his attention. He stated that the tugdriver was focused on the cockpit of the airplane and was directing the starting of the airplane's No. 2 engine.

The tugdriver stated that he began the pushback as normal and gave the flight crew the signal to start the No. 2 engine. He was not aware that anything was wrong until he observed the ground crewmember from gate E14.

Pilot Information

Certificate:	Airline transport	Age:	26, 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:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	February 29, 2008
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	March 23, 2008
Flight Time:	1595 hours (Total, all aircraft), 87 hours (Pilot In Command, all aircraft), 122 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft)		

Co-pilot Information

Certificate:	Commercial	Age:	25, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	November 4, 2007
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	November 2, 2007
Flight Time:	430 hours (Total, all aircraft), 207 hours (Last 90 days, all aircraft), 46 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bombardier, Inc.	Registration:	N228PS
Model/Series:	CL-600-2B19	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	7897
Landing Gear Type:	Retractable - Tricycle	Seats:	54
Date/Type of Last Inspection:	June 26, 2008 Continuous airworthiness	Certified Max Gross Wt.:	53250 lbs
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:	10544 Hrs at time of accident	Engine Manufacturer:	GE
ELT:	Installed, not activated	Engine Model/Series:	CF34-3B1
Registered Owner:	Wells Fargo Bank Northwest NA Trustee	Rated Power:	8729 Lbs thrust
Operator:	PSA AIRLINES INC	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:	US Airways Express	Operator Designator Code:	VNAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CLT, 748 ft msl	Distance from Accident Site:	
Observation Time:	18:52 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Few / 1000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	168°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.98 inches Hg	Temperature/Dew Point:	25°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Charlotte, NC (CLT)	Type of Flight Plan Filed:	IFR
Destination:	Fayetteville, NC (FAY)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	Class B

Airport Information

Airport:	Charlotte-Douglas CLT	Runway Surface Type:	
Airport Elevation:	748 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Substantial
Passenger Injuries:	45 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	48 None	Latitude, Longitude:	35.21389,-80.943054

Administrative Information

Investigator In Charge (IIC):	Schiada, Luke
Additional Participating Persons:	Mitzi Crouse; FAA/FSDO; Charlotte, NC
Original Publish Date:	May 6, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=68339

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