



National Transportation Safety Board Aviation Accident Final Report

Location:	Flushing, NY	Accident Number:	NYC03FA039
Date & Time:	01/19/2003, 0715 EST	Registration:	N550NW
Aircraft:	Boeing 757-251	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Serious, 6 Minor, 1 None
Flight Conducted Under:	Part 121: Air Carrier - Scheduled		

Analysis

The Boeing 757 was parked at the gate with passengers aboard when an Airbus that was being taxied struck the Boeing. The Airbus was being taxied to a gate by maintenance technicians. The taxiing mechanic reported that he activated the parking brake and waited for ground personnel and a jet way operator to arrive. After the ground personnel arrived he released the parking brake. The airplane did not move and he advanced the throttles out of their idle detents "a couple of inches, about halfway." The airplane began to move at a "fairly decent speed," and he realized the throttles were still out of the idle detent position. He pulled the throttles back and applied brakes; however, the airplane did not slow and continued until it struck the jet way. Review of the flight data recorder revealed that about 12 seconds after the parking brake was released, the thrust lever angles for both engines were increased to about 17 degrees for about 9 seconds, before they were returned to the idle position. During that time, the engines N1 and N2 speeds increased to about 71, and 85 percent, respectively. The taxiing mechanic stated he was qualified to taxi the Airbus and had taxied the airplane regularly as part of his normal work duties. Review of his training records revealed he had received approximately 5 hours of initial Airbus taxi on-the-job training. However, he did not possess an authorization to taxi the A319. Examination of airplane's brake-steering control unit, and the electronic control units from each engine, did not reveal any evidence of a system failure, which would have contributed to the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Maintenance personnel failure to maintain aircraft control as a result of excessive throttle input.

Findings

Occurrence #1: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: STANDING - ENGINE(S) NOT OPERATING

Findings

1. OBJECT - AIRCRAFT PARKED/STANDING
2. (C) THROTTLE/POWER CONTROL - EXCESSIVE - COMPANY MAINTENANCE PERSONNEL
3. OBJECT - AIRPORT FACILITY
4. (C) TAXISPEED - HIGH - COMPANY MAINTENANCE PERSONNEL

Factual Information

History of Flight

On January 19, 2003, about 0715 eastern standard time, a Boeing 757-251, N550NW, was substantially damaged while parked at a gate, when it was struck by an Airbus A319 being taxied by maintenance technicians at LaGuardia Airport, Flushing, New York. Both airplanes were operated by Northwest Airlines, Inc (NWA). The certificated airline transport pilot on the Boeing was not injured. The two maintenance technicians on the Airbus, and four ground crew members sustained minor injuries. One customer service agent was seriously injured. Visual meteorological conditions prevailed, and an instrument flight rules flight plan had been filed for the flight scheduled for a 0800 departure to Minneapolis, Minnesota. The scheduled passenger flight was conducted under 14 CFR Part 121.

The Boeing was parked at gate 9. The first officer was in the terminal building, while the captain was in the cockpit preparing the airplane for departure. In a written statement, the captain said he heard the sound of aircraft engines at a "higher thrust level" and observed the Airbus approaching gate 10 at a "higher than normal rate of speed." He further stated, it was immediately apparent that the Airbus would not be able to stop at a normal parking location.

The Airbus struck the concrete support column of the jetway, and the left wing contacted the right side of the Boeing. The nose gear sheared off the Airbus, and the right side of the Boeing sustained a 6-foot long, 2-foot wide gash, just aft of the R1 door.

During an interview, the taxi mechanic-in-charge of the Airbus, who was seated in the left seat, stated he utilized the airplane checklists. After starting the auxiliary power unit, both engines, and performing a brake check, he taxied from a maintenance area to the gate area. When he arrived in the vicinity of gate 10, he activated the parking brake and waited for ground personnel and a jetway operator to arrive. After the ground personnel arrived he released the parking brake. The airplane did not move and he advanced the throttles out of their idle detents, "a couple of inches, about halfway." The airplane began to move at a "fairly decent speed," and he realized the throttles were still out of the idle detent position. He retarded the throttles and applied brakes; however, the airplane did not slow and continued until it struck the jetway. The mechanic estimated that the airplane was about halfway down the parking line when he pulled back the throttles.

During an interview, the mechanic seated in the right seat, stated he was checking the right wing clearance when the airplane began to move toward the gate. He told the taxiing mechanic to apply the brakes, and observed that the throttles were out of the idle detents. He pulled the throttles back, and the airplane struck the jetway shortly thereafter. He did not apply the brakes because the "impact happened so fast." He also did not recall feeling the sensation of braking action.

Other maintenance technicians and ground support personnel stated that they heard the sound of engines spooling up, and observed the airplane moving "fast," toward the gate.

The accident occurred during the hours of daylight approximately 40 degrees, 46 minutes north latitude, and 73 degrees, 52 minutes west longitude.

PERSONNEL INFORMATION

Taxi Mechanic-in-Charge

The taxiing mechanic was hired by NWA on February 9, 1998. On the date of the accident, he was scheduled to work from 2330 until 0730. The taxiing mechanic stated he was qualified to taxi the Boeing 727, Boeing 757, and the A319/320. He was not certain if he was current.

Review of the taxiing mechanic's training records revealed that he was qualified to taxi Boeing 727 and 757 airplanes. He had received approximately 5 hours of initial A319 taxi on-the-job training (OJT). However, he had not attended an A319/A320 taxi training class and did not possess an authorization to taxi the A319. The mechanic stated that he was not certain the last time he taxied the Airbus; however, he had taxied the airplane regularly as part of his normal work duties.

Taxi Assistant Mechanic

The taxi assistant mechanic seated in the right seat was hired by NWA on October 26, 1991. On the date of the accident, he was scheduled to work from 2330 until 0730.

Review of the taxi assistant mechanic's training records revealed he was qualified and current to taxi the A319/A320. The mechanic stated he regularly taxied the Airbus and other aircraft on a daily basis as part of his normal duties. He was also qualified to taxi McDonnell Douglas DC-9, and Boeing 757 airplanes.

FLIGHT RECORDERS

The Airbus was equipped with an Allied Signal cockpit voice recorder (CVR) and a Fairchild solid state flight data recorder (FDR), which were retained for further examination.

CVR

A CVR group was convened on January 28, 2003. The CVR group reviewed the CVR recording and prepared a transcript of the final 14 minutes.

FDR

Review of the flight data recorder for the time period surrounding the accident revealed that about 12 seconds after the parking brake was released, the thrust lever angles for both engines were increased to about 17 degrees for about 9 seconds, before they were returned to the idle position. During that time, the engines N1 and N2 speeds increased to about 71, and 85 percent, respectively. Examination of the data contained on the FDR was consistent with the airplane's air data inertial reference units (ADIRU) not being "aligned" prior to the accident, and therefore an additional 11 parameters, including ground speed were not recorded.

Review of the Airbus A319/A320 Taxi and Engine Run-Up checklist, revealed that item 6 of the Aircraft Power Up checklist called for "ADIRS...Align."

TESTS AND RESEARCH

Examination of airplane's brake-steering control unit, and the electronic control units from each engine, did not reveal any evidence of a system failure, which would have contributed to the accident.

ADDITIONAL INFORMATION

Toxicology

Post accident drug and alcohol testing conducted on both mechanics was negative.

Ramp Examination

After visually examining the ramp area, an FAA inspector stated that the area sloped upward as the terrain reached the accident and adjacent gates. The taxi mechanic-in-charge reported that he was aware that the ground was slightly inclined, and he had taxied to that particular gate on other occasions. A NWA survey of the lead-in line to gate 10, which measured 122-feet-long, revealed a .25 percent slope. The lead-in line to gate 9 measured 162-feet-long, and contained a .77 percent slope.

The taxi mechanic-in-charge reported that "ninety-eight to ninety-nine percent of the time" ground personnel were already in position to park the airplane as he arrived at the gate, and he would normally taxi without stopping. The assistant taxi mechanic stated that he had to stop and wait for ground personnel to be in position to park an airplane, about one-third of the time.

NWA Taxi Policy

Both mechanics reported that there was normally no discussion between mechanics regarding who should be the taxiing mechanic-in-charge. At the time of the accident, NWA mechanic taxi procedures outlined in section 02-05-03 of the General Engineering and Maintenance Manual (GEMM) required the taxi mechanic-in-charge (left seat) to be properly trained, qualified and current on the applicable fleet type. The taxi assistant (right seat) was required to be run/taxi qualified on any company fleet type.

After the accident, NWA added a challenge-response protocol to the run-taxi checklist to confirm taxi qualifications. NWA run/taxi qualified personnel were also required to successfully complete a new web-based training module to remain run/taxi qualified. In addition, NWA flight operations conducted a random sampling of ground taxi information from A320 ADIRU cards that document ground speed, engine speed and thrust lever movement and have utilized the information to revise their taxi policy and training.

Pilot Information

Certificate:	Airline Transport	Age:	53, Male
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last Medical Exam:	09/12/2002
Occupational Pilot:		Last Flight Review or Equivalent:	03/07/2002
Flight Time:	13233 hours (Total, all aircraft), 1205 hours (Total, this make and model), 13199 hours (Pilot In Command, all aircraft), 219 hours (Last 90 days, all aircraft), 79 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Boeing	Registration:	N550NW
Model/Series:	757-251	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	26497
Landing Gear Type:	Retractable - Tricycle	Seats:	194
Date/Type of Last Inspection:	06/19/2001, Continuous Airworthiness	Certified Max Gross Wt.:	228500 lbs
Time Since Last Inspection:	5188 Hours	Engines:	2 Turbo Fan
Airframe Total Time:	5188 Hours	Engine Manufacturer:	Pratt & Whitney
ELT:	Not installed	Engine Model/Series:	PW 2037
Registered Owner:	NORTHWEST AIRLINES INC	Rated Power:	37500 lbs
Operator:	NORTHWEST AIRLINES INC	Air Carrier Operating Certificate:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	NWAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	LGA, 22 ft msl	Observation Time:	0651 EST
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Few / 15000 ft agl	Temperature/Dew Point:	-7° C / -13° C
Lowest Ceiling:	Broken / 25000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	5 knots, 230°	Visibility (RVR):	
Altimeter Setting:	29.92 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Flushing, NY (LGA)	Type of Flight Plan Filed:	IFR
Destination:	Minneapolis, MN (MSP)	Type of Clearance:	None
Departure Time:	EST	Type of Airspace:	Class B

Airport Information

Airport:	LA GUARDIA (LGA)	Runway Surface Type:	Unknown
Airport Elevation:	22 ft	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	Unknown
Runway Length/Width:		VFR Approach/Landing:	Unknown

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	1 Serious, 6 Minor	Aircraft Explosion:	None
Total Injuries:	1 Serious, 6 Minor, 1 None	Latitude, Longitude:	40.777222, -73.872500

Administrative Information

Investigator In Charge (IIC):	Luke Schiada	Adopted Date:	04/28/2004
Additional Participating Persons:	T.C. Chan; Garden City, NY Patrick Schmitz; St. Paul, MN Gus Zervas; Jamaica, NY		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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