



National Transportation Safety Board Aviation Accident Final Report

Location:	Jamaica, NY	Accident Number:	DCA15FA004A
Date & Time:	10/05/2014, 1852 EDT	Registration:	N572RP
Aircraft:	EMBRAER EMB 145LR	Aircraft Damage:	Substantial
Defining Event:	Ground collision	Injuries:	48 None
Flight Conducted Under:	Part 121: Air Carrier - Scheduled		

Analysis

The EMB-145 flight crew was instructed to taxi on taxiway A and hold short of taxiway Q. Upon reaching taxiway Q, the flight crew discussed the taxiway orientation and signage but incorrectly identified the start of taxiway Q and instead of holding short proceeded through the intersection onto taxiway Q before coming to a stop.

Approximately two minutes later, as the A340 was taxiing north on taxiway A, the A340 flight crew was aware of the proximity of the EMB-145 and discussed whether they had adequate clearance to continue. The A340 first officer stated that they were too close and advised the captain to stop. However, the A340 captain believed that there was enough clearance and continued on taxiway A striking the tail of the EMB-145 with the left wing of the A340.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The A340 captain's failure to maintain adequate clearance between his wing and the tail of the EMB-145.

Findings

Personnel issues	Decision making/judgment - Pilot of other aircraft (Cause)
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Factual Information

HISTORY OF FLIGHT

On October 5, 2014, about 1852 eastern daylight time, at John F. Kennedy International Airport (JFK), Jamaica, New York, Jordanian Airlines flight 261 (RJA 261), an Airbus A340, registration JY-AID, while taxiing northwest bound on taxiway A, struck the vertical stabilizer of Chautauqua flight 6087 (CHQ 6087), an EMB-145, N572RP, which was stationary on taxiway Q. The EMB-145 sustained substantial damage and the A340 sustained minor damage. There were no injuries to the 180 passengers and crewmembers on board RJA 261 or the 48 passengers and crewmembers on board CHQ 6087. RJA 261 was operating under the provisions of 14 Code of Federal Regulations (CFR) Part 129 and CHQ 6087 was operating under the provisions of 14 CFR Part 121.

After landing on runway 22L at about 1837, RJA 261 was instructed by the tower controller (TC) to taxi via taxiway J and hold short of runway 22R.

During the landing roll at 1843:22 CHQ 6087 was instructed by the TC to exit runway 22R on taxiway J and to continue on taxiway A to the ramp. CHQ 6087 was taxiing northwest bound (clockwise) on taxiway A. The crew contacted company operations and were advised that they would need to hold to allow other aircraft to exit the ramp at taxiway LL.

At 1845:18, after confirming with CHQ 6087 they needed to wait for entry to the terminal ramp at LL taxiway, the JFK ground controller instructed them to hold their position.

At 1845:45, the ground controller (GC) instructed CHQ 6087 to continue on taxiways A and Q and hold short of taxiway PA and at 1845:58 the ground controller amended the clearance and instructed CHQ 6087 to taxi on A and to hold short of taxiway Q. The first officer (FO) read back the hold short instructions on ground frequency.

At 1847:08, the TC instructed RJA 261 to cross runway 22R at taxiway J, proceed on taxiway A and contact ground control.

At 1847:56, RJA 261 crew contacted ground control and were instructed by the controller to taxi "Alpha to the ramp" and the RJA 261 crew read back the instruction and taxied northwest on taxiway A.

From 1848:17, until 1848:59 the crew of CHQ 6087 discussed their hold short instructions and the identification of taxiway Q.

At about 1849:10, CHQ 6087 stopped and held position on taxiway Quebec between taxiway A and taxiway B, facing northwest.

According to RJA flight crew statements, the crew visually identified CHQ 6087 and discussed whether they had enough space to taxi past them. The RJA relief pilot, seated in the flight deck jumpseat, stated that the FO advised the Captain (CA) "the Delta aircraft is so close & there is no space."

From 1851:09 until 1851:24 the RJA crew discussed their taxi route and proximity to the CHQ 6087 airplane. The RJA 261 FO repeatedly stated "...too close...too close" and with urgency stated "...very, very close." And the RJA 261 CA stated at 1851:24 "from my side, I see, I see."

According to the RJA FO statement, he advised the CA to stop and motioned for the relief pilot to look out the left window to verify clearance. According to the relief pilot's statement, the FO

had advised the CA to stop but the CA said that from his side it looked like they would clear the airplane. The relief pilot stood up to look out the window but they had already passed CHQ 6087.

About 1851:32, the left wing of RJA 261 struck the tail of CHQ 6087.

At 1852:01, the CA of CHQ 6087 contacted JFK ground and advised they had been hit by the Royal Jordanian aircraft.

After both crews confirmed there were no injuries and coordinated visual inspections from ground crew, they each taxied to their respective gates and deplaned passengers.

INJURIES TO PERSONS

There were no injuries to the passengers or crewmembers in either airplane.

DAMAGE TO AIRPLANE

The Royal Jordanian Airways A340 sustained minor damage to the number 6 and number 7 slats on the left wing.

The Chautauqua EMB-145 sustained substantial damage to the vertical stabilizer, rudder, elevator assembly, servo tab assembly, and the tail boom. The right hand elevator assembly and servo tabs received impact damage to the trailing edge. The vertical stabilizer was twisted counterclockwise from normal position and the right side of the horizontal stabilizer was pushed into the vertical stabilizer rupturing the skin. The remaining skin on the right hand side of the vertical stabilizer exhibited signs of wrinkling. The spar, ribs, and stringers of the vertical stabilizer were cracked and / or bent. Rudder I and II showed signs of skin wrinkling externally and the tail boom and fairing were damaged beyond repair.

PERSONNEL INFORMATION

The CHQ 6087 captain, age 38, reported approximately 8,385 hours total time, including about 5,450 hours as pilot-in-command and 7,250 hours in the EMB-145. He held a valid Federal Aviation Administration (FAA) Airline Transport Pilot (ATP) certificate with type rating for EMB-145 and a current FAA first-class medical certificate with a limitation that he must wear corrective lenses.

The CHQ 6087 first officer, 40 years old, reported approximately 6,661 hours total flight time and about 5,611 hours in the EMB-145. He held a valid FAA ATP certificate and an FAA first-class medical certificate with a limitation requiring that he have available glasses for near vision.

The RJA 261 captain, age 63, reported approximately 21,038 hours total time including 16,198 hours pilot-in-command time and 5,067 hours in the A340. The captain held a valid Airline Transport certificate issued by The Hashemite Kingdom of Jordan Civil Aviation Regulatory Commission with type rating for A-330 and A-340, and a current medical certificate with a limitation requiring that he "have available corrective spectacles for near vision and carry a spare set."

The RJA 261 first officer, age 28, reported approximately 5,134 hours total time and 502 hours in the A-340. He held a valid Airline Transport Certificate issued by The Hashemite Kingdom of Jordan Civil Aviation Regulatory Commission with a type rating for A-330, A-340, E175, E195, and a current medical certificate with a limitation that stated he "shall wear corrective lenses for distance vision and carry spare set of spectacles."

The RJA 261 relief captain occupied the flight deck jump seat at the time of the accident.

AIRCRAFT INFORMATION

CHQ6087, registration N572RP, manufacturer serial number 145828, is an Embraer EMB-145LR equipped with two Rolls Royce AE3007A1P Turbofan engines. The company reported the airplane had logged approximately 22,975 total hours on the airframe. The airplane was 98 feet long, with a wing span of 65 feet 9 inches, and the height of the tail was 22 feet 2 inches. Recorded data and airline records indicated no relevant maintenance issues with the airplane. At the time of the accident the estimated weight was 27,492 pounds.

RJA261, registration JY-AID, manufacturer serial number 022, is an Airbus A340-212 equipped with four GE / SNECMA CFM56-5C turbofan engines. The company reported that the airplane had logged approximately 76,256 total hours on the airframe. The A340-212 was 195 feet long with a wingspan of 198 feet and a maximum gross weight of 578,000 pounds. Recorded data and airline records indicated no relevant maintenance issues with the airplane.

METEOROLOGICAL INFORMATION

The JFK surface observation at 1851 EDT reported wind from 280 degrees at 10 knots, visibility 10 miles, few clouds at 5,000 feet, temperature 14 degrees Celsius, dew point temperature 2 degrees Celsius, and altimeter setting 29.91 inches of mercury.

AERODROME INFORMATION

The John F. Kennedy International Airport (JFK) is located in the borough of Queens about 13 miles southeast of the city of New York, New York. The airport has 8 runways for commercial and general aviation. The airport taxiway system includes two parallel taxiways, taxiway A and taxiway B that circles the terminal complex. Taxiway A is the inner taxiway and is generally used for inbound traffic taxiing in a clockwise direction. Taxiway B is the outer taxiway which is generally used for out bound traffic taxiing in a counterclockwise direction. Taxiway A and B are 75 feet wide with 25 foot shoulders and 25 foot erosion pavement. The taxiways have numerous connecting taxiways between them and to access the terminal ramp.

The intersection of taxiway Alpha and Quebec is a "Y-type" intersection where taxiing northwest on A through the intersection and continuing northwest becomes taxiway Q and a right turn of greater than 25 degrees is required to remain on taxiway A.

FLIGHT RECORDERS

The CHQ6087 cockpit voice recorder (CVR), a Honeywell 6022, serial number 06732, was

downloaded at the NTSB Vehicle Recorder Laboratory. The CVR contained about 30 minutes of recording on a four channel audio file and about 2 hours of recording on a two channel audio file. The quality of audio on the two channel file was characterized as excellent and the recording included events from the approach and landing until after they arrived at the gate.

The RJA 261 CVR, a Honeywell 6022, serial number 13019, was downloaded at the NTSB Vehicle Recorder Laboratory. The CVR contained about 30 minutes of recording on a four channel audio file and about 2 hours of recording on a two channel audio file. One of these channels included mixed audio panel content and the quality of the recording was characterized as excellent. The other channel contained cockpit area microphone audio and the quality of this audio was characterized as good. The recording was in a mix of English and Arabic. Portions of the Arabic discourse were idiomatically translated to English.

History of Flight

Taxi	Ground collision (Defining event)
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Pilot Information

Certificate:	Airline Transport	Age:	38, Male
Airplane Rating(s):	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 With Waivers/Limitations	Last Medical Exam:	08/20/2014
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	07/21/2014
Flight Time:	(Estimated) 8385 hours (Total, all aircraft), 7275 hours (Total, this make and model), 209 hours (Last 90 days, all aircraft), 66 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Co-Pilot Information

Certificate:	Airline Transport	Age:	40, Male
Airplane Rating(s):	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 Medical Exam:	09/10/2014
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	09/09/2014
Flight Time:	(Estimated) 6661 hours (Total, all aircraft), 5611 hours (Total, this make and model), 260 hours (Last 90 days, all aircraft), 81 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	EMBRAER	Registration:	N572RP
Model/Series:	EMB 145LR LR	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	14500828
Landing Gear Type:	Tricycle	Seats:	
Date/Type of Last Inspection:	10/04/2014, Continuous Airworthiness	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2 Turbo Fan
Airframe Total Time:	22975.5 Hours	Engine Manufacturer:	ROLLS-ROYCE
ELT:	Installed, not activated	Engine Model/Series:	AE 3007A1P
Registered Owner:	CHAUTAUQUA AIRLINES INC	Rated Power:	0 hp
Operator:	CHAUTAUQUA AIRLINES INC	Air Carrier Operating Certificate:	Flag carrier (121)
Operator Does Business As:	Delta Connection	Operator Designator Code:	CHQA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	KJFK, 14 ft msl	Observation Time:	1851 EDT
Distance from Accident Site:		Direction from Accident Site:	
Lowest Cloud Condition:	Few / 5000 ft agl	Temperature/Dew Point:	14° C / 2° C
Lowest Ceiling:		Visibility	10 Miles
Wind Speed/Gusts, Direction:	10 knots, 280°	Visibility (RVR):	
Altimeter Setting:	29.91 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Charleston, SC (CHS)	Type of Flight Plan Filed:	IFR
Destination:	Jamaica, NY (JFK)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	

Airport Information

Airport:	John F Kennedy International A (JFK)	Runway Surface Type:	N/A
Airport Elevation:	14 ft	Runway Surface Condition:	Unknown
Runway Used:	N/A	IFR Approach:	Unknown
Runway Length/Width:		VFR Approach/Landing:	Unknown

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:	40.640000, -73.778611 (est)

Administrative Information

Investigator In Charge (IIC):	David Helson	Adopted Date:	08/24/2016
Additional Participating Persons:			
Publish Date:	08/24/2016		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=90212		

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