



Aviation Investigation Factual Report

Location:	Raleigh, North Carolina	Accident Number:	DCA16CA041
Date & Time:	January 3, 2016, 16:30 Local	Registration:	N643RW
Aircraft:	Embraer ERJ 170 100 SE	Aircraft Damage:	None
Defining Event:	Turbulence encounter	Injuries:	1 Serious, 71 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Pilot Information

Certificate:	Airline transport	Age:	34, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
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:	July 6, 2015
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 24, 2015
Flight Time:	8534 hours (Total, all aircraft), 6239 hours (Total, this make and model)		

Co-pilot Information

Certificate:	Airline transport	Age:	35, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
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 31, 2015
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 15, 2015
Flight Time:	(Estimated) 8300 hours (Total, all aircraft), 1300 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Embraer	Registration:	N643RW
Model/Series:	ERJ 170 100 SE 100SE	Aircraft Category:	Airplane
Year of Manufacture:	2005	Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	17000060
Landing Gear Type:	Tricycle	Seats:	74
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:		Engine Manufacturer:	GE
ELT:		Engine Model/Series:	CF34
Registered Owner:	SHUTTLE AMERICA CORP	Rated Power:	
Operator:	SHUTTLE AMERICA CORP	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	UHLA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KRDU	Distance from Accident Site:	40 Nautical Miles
Observation Time:	15:51 Local	Direction from Accident Site:	160°
Lowest Cloud Condition:	Few / 15000 ft AGL	Visibility	
Lowest Ceiling:	Broken / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	7 knots / None	Turbulence Type Forecast/Actual:	/ Convective
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/ Moderate
Altimeter Setting:	29.92 inches Hg	Temperature/Dew Point:	6°C / 1°C
Precipitation and Obscuration:			
Departure Point:	Palm Beach, FL (KPBI)	Type of Flight Plan Filed:	IFR
Destination:	Newark, NJ (KEWR)	Type of Clearance:	IFR
Departure Time:	15:00 Local	Type of Airspace:	Class A

Wreckage and Impact Information

Crew Injuries:	1 Serious, 3 None	Aircraft Damage:	None
Passenger Injuries:	68 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious, 71 None	Latitude, Longitude:	35.877498,-78.787498(est)

Administrative Information

Investigator In Charge (IIC): Helson, David

Additional Participating Persons:

Report Date: August 24, 2016

Last Revision Date:

Investigation Class: [Class](#)

Note: This accident report documents the factual circumstances of this accident as described to the NTSB.

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=92535>

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](#).