



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Honolulu, Hawaii	Accident Number:	DCA19CA088
Date & Time:	February 27, 2019, 13:30 Local	Registration:	N771AN
Aircraft:	Boeing 777	Aircraft Damage:	None
Defining Event:	Turbulence encounter	Injuries:	1 Serious, 1 Minor, 217 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

On February 27, 2019, about 1338 Hawaii standard time, American Airlines flight 123, N771AN, a Boeing B777-200, encountered clear air turbulence during initial descent to Honolulu International Airport (PHNL), Honolulu, Hawaii. Of the 219 passengers and crew onboard, one flight attendant received serious injuries and one received minor injuries. The airplane was not damaged. The regularly scheduled domestic passenger flight was operating under the provisions of Title 14 *Code of Federal Regulations* Part 121 from Dallas/Fort Worth International Airport (KDFW), Dallas, Texas, to PHNL.

The captain was the pilot flying and the first officer was monitoring. The flight had been unremarkable, with a smooth ride while cruising at FL380, in good visual meteorological conditions (VMC). The flight crew stated that about 15 mins before decent they checked the weather with Honolulu Control Facility (HCF) and was informed of turbulence "light to moderate all alts". The captain called the purser and informed him of the expected turbulence and to prepare for the arrival early by stowing the carts and securing the cabin. The seat belt sign was on. About 15 minutes later, they began their initial descent and encountered moderate to severe clear air turbulence about FL310, which lasted about 10 to 15 seconds.

The ride smoothed out at about FL290, and the flight crew then received a call from the cabin, indicating that two flight attendants in the aft galley had been injured. After landing both injured flight attendants were transported to a hospital where one was diagnosed with a fractured vertebra.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

the airplanes encounter with clear air turbulence.

Findings

Environmental issues	Clear air turbulence - Effect on personnel
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Factual Information

History of Flight

Enroute-descent	Turbulence encounter (Defining event)
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Pilot Information

Certificate:	Airline transport	Age:	61,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
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 30, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 25, 2018
Flight Time:	13476 hours (Total, all aircraft), 1383 hours (Total, this make and model)		

Co-pilot Information

Certificate:	Airline transport	Age:	64,Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	5-point
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 30, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	September 13, 2018
Flight Time:	17623 hours (Total, all aircraft), 1573 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	Registration:	N771AN
Model/Series:	777 223	Aircraft Category:	Airplane
Year of Manufacture:	1999	Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	29579
Landing Gear Type:	Retractable - Tricycle	Seats:	
Date/Type of Last Inspection:	February 26, 2019 Continuous airworthiness	Certified Max Gross Wt.:	545004 lbs
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:	80857 Hrs	Engine Manufacturer:	Rolls-Royce
ELT:	C126 installed, not activated	Engine Model/Series:	Trent 892
Registered Owner:		Rated Power:	
Operator:		Operating Certificate(s) Held:	Flag carrier (121)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	Dallas/Fort Wor, TX (KDFW)	Type of Flight Plan Filed:	IFR
Destination:	Honolulu, HI (PHNL)	Type of Clearance:	IFR
Departure Time:	09:30 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Serious, 1 Minor, 10 None	Aircraft Damage:	None
Passenger Injuries:	207 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 Minor, 217 None	Latitude, Longitude:	21.318611,-157.430831

Administrative Information

Investigator In Charge (IIC):	Lovell, John		
Additional Participating Persons:			
Original Publish Date:	March 1, 2022	Investigation Class:	4
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=99042		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).