



National Transportation Safety Board Aviation Accident Final Report

Location:	Culebra, PR	Accident Number:	ERA14LA007
Date & Time:	10/06/2013, 0603 AST	Registration:	N909GD
Aircraft:	BRITTEN-NORMAN BN-2A-8	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

The commercial, instrument-rated pilot of the multiengine airplane was conducting a newspaper delivery flight in night visual meteorological conditions. After two uneventful legs, the pilot departed on the third leg without incident. Radar data indicated that, after takeoff, the airplane flew over open water at an altitude of about 100 to 200 ft toward the destination airport and then climbed to 2,400 ft. Shortly thereafter, the pilot performed a 360-degree left turn, followed by a 360-degree right turn while the airplane maintained an altitude of about 2,400 ft, before continuing toward the destination airport. Less than 2 minutes later, the airplane began a rapid descending left turn and then collided with water. The wreckage was subsequently located on the sea floor near the airplane's last radar target. Both wings, the cabin, cockpit, and nose section were destroyed by impact forces. The wreckage was not recovered, which precluded its examination for preimpact malfunctions.

The airplane had been operated for about 25 hours since its most recent inspection, which was performed about 3 weeks before the accident. The pilot had accumulated about 1,650 hours of total flight experience, which included about 1,100 hours in the accident airplane make and model. Although the pilot conducted most of his flights during the day, he regularly operated flights in night conditions.

The pilot's autopsy did not identify any findings of natural disease significant enough to have contributed to the accident. In addition, although toxicological testing detected ethanol in the pilot's cavity blood, it likely resulted from postmortem production.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain airplane control for reasons that could not be determined because the wreckage was not recovered.

Findings

Aircraft	Performance/control parameters - Not attained/maintained (Cause)
Personnel issues	Aircraft control - Pilot (Cause)
Not determined	Not determined - Unknown/Not determined (Cause)

Factual Information

On October 6, 2013, about 0603 Atlantic standard time, a Britten-Norman BN-2A-8, N909GD, operated by Air Charter Inc., doing business as Air Flamenco, was substantially damaged when it impacted water about 7 miles southwest of the Benjamin Rivera Noriega Airport (TJCP), Culebra, Puerto Rico. The commercial pilot was fatally injured. Visual meteorological conditions prevailed and no flight plan had been filed for the flight that departed the Antonio Rivera Rodriguez Airport (TJVQ), Vieques, Puerto Rico, about 0555. The on-demand air taxi cargo flight was conducted under the provisions of Title 14 Code of Federal Regulations Part 135.

According to a Federal Aviation Administration (FAA) inspector, the pilot originally departed from Culebra about 0500, and flew to Ceiba, Puerto Rico, to pick up a load of newspapers. He then flew to Vieques without incident, and was returning to Culebra at the time of the accident. After the airplane became overdue, a search was conducted by the operator and U.S. Coast Guard personnel. The pilot, small fragments of the fuselage, and the nose gear were subsequently recovered from the water near an area containing a fuel/oil slick.

According to radar data provided by the FAA, after takeoff from TJVQ, the airplane turned to the northeast toward TJCP, and flew over the water at an altitude of about 100 to 200 feet mean sea level, before climbing to an altitude of 2,400 feet. About 0559:49, the airplane made a 360 degree left turn, followed by a 360 right turn while maintaining an altitude of about 2,400 feet, before continuing on a northeast heading at 0601:09. At 0602:53, the airplane began a rapid descending left turn and radar contact was lost at 0603:07, at an altitude of 1,000 feet.

The wreckage was subsequently located on the sea floor, at a depth of about 85 feet, in the vicinity of the airplane's last radar target, about 12 miles northeast of TJVQ. The airplane came to rest upright, however both wings, the cabin, cockpit, and nose section were destroyed by impact forces. The empennage was intact and displayed impact damage to the outboard leading edge corner of the left horizontal stabilizer. Both engines were located with their respective propellers intact and attached. The wreckage was not recovered, which precluded its examination for preimpact malfunctions.

The airplane was manufactured in 1971 and powered by two Lycoming O-540-E4C5 engines, equipped Hartzell HC-C2YK-2CUF propeller assemblies. At the time of the accident, the airplane had been operated for about 22,600 hours. Review of maintenance records revealed that the airplane's most recent 100-hour inspection was performed on September 19, 2013, at a total time of about 22,575 hours. At that time, the left and right engines had been operated for about 1,450, and about 560 hours since overhaul; respectively, and the left and right propellers had been operated for about 1,465, and about 1,155 hours since overhaul; respectively.

The pilot held a commercial pilot certificate, with ratings for airplane multiengine land, airplane single-engine land, and instrument airplane. His most recent FAA first-class medical certificate was issued on January 23, 2013. At that time, he reported a total flight experience of 1,200 hours, which included 500 hours during the previous 6 months.

According to company records, the pilot was hired during April 2012, as a Britten-Norman BN-2A pilot-in-command. Review of flight records by an FAA inspector revealed that at the time of the accident, the pilot had accumulated about 1,650 hours of total flight experience, which

included about 1,100 hours in the same make and model as the accident airplane, of which about 130 hours were accumulated during the 90 days that preceded the accident. While the majority of the pilot's flights were conducted during the day, the pilot regularly operated flights in night lighting conditions. His most recent flight review was conducted on April 10, 2013, in the same make and model as the accident airplane.

Roosevelt Roads Naval Station (TJNR) was located about 15 miles west-southwest of the accident site, at an elevation of 36 feet. At 0555, the reported weather at TJNR included calm winds, a visibility of 10 statute miles, clear skies, temperature 25 degrees Celsius (C), dew point 24 degrees C, and an altimeter of 29.92 inches of mercury.

Astronomical data obtained from the United States Naval Observatory revealed the beginning of civil twilight was 0556, with Sunrise at 0616. At the time of the accident, the Sun was 3.5 degrees below the horizon at an azimuth of 94 degrees. Moonrise occurred at 0739 and was more than 15 degrees below the horizon, the phase of the Moon was a waxing crescent with 3 percent of the disk illuminated.

According to the pilot's autopsy, performed by the Instituto de Ciencias Forenses in San Juan, Puerto Rico, the pilot's cause of death was severe trauma to the body sustained in an accident. In addition, the pathologist noted an enlarged heart, an enlarged spleen, and a fatty liver.

Toxicology testing performed by the FAA's Bioaeronautical Research Laboratory identified 0.027 gm/dl of ethanol in the pilot's cavity blood, but did not detect any ethanol in muscle or brain tissue, and no tested for drugs were identified. Toxicology testing performed through the Instituto de Ciencias Forenses did not identify any ethanol or any other alcohols, and did not identify any tested for drugs.

History of Flight

Enroute	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial	Age:	36, Male
Airplane Rating(s):	Multi-engine Land; Single-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:	Yes
Medical Certification:	Class 1 With Waivers/Limitations	Last FAA Medical Exam:	01/23/2013
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	04/10/2013
Flight Time:	(Estimated) 1650 hours (Total, all aircraft), 1100 hours (Total, this make and model), 130 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BRITTEN-NORMAN	Registration:	N909GD
Model/Series:	BN-2A-8	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	239
Landing Gear Type:	Tricycle	Seats:	10
Date/Type of Last Inspection:	09/19/2013, AAIP	Certified Max Gross Wt.:	6601 lbs
Time Since Last Inspection:	25 Hours	Engines:	2 Reciprocating
Airframe Total Time:	22575 Hours as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-540-E4C5
Registered Owner:	AIR CHARTER INC DBA	Rated Power:	260 hp
Operator:	AIR CHARTER INC DBA	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:	Air Flamenco	Operator Designator Code:	UOIA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night
Observation Facility, Elevation:	TJNR, 36 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	0553 AST	Direction from Accident Site:	265°
Lowest Cloud Condition:	Clear / 1800 ft agl	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.92 inches Hg	Temperature/Dew Point:	25° C / 24° C
Precipitation and Obscuration:	Mist; No Obscuration		
Departure Point:	Vieques, PR (TJVQ)	Type of Flight Plan Filed:	None
Destination:	Culebra, PR	Type of Clearance:	None
Departure Time:	0545 EDT	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	Unknown
Ground Injuries:	N/A	Aircraft Explosion:	Unknown
Total Injuries:	1 Fatal	Latitude, Longitude:	18.250000, -65.383333 (est)

Administrative Information

Investigator In Charge (IIC):	Luke Schiada	Report Date:	03/02/2016
Additional Participating Persons:	Radames Naveira; FAA/FSDO; San Juan, PR Mike Childers; Lycoming Engines; Williamsport, PA		
Publish Date:	03/02/2016		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=88247		

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](#).