



Aviation Investigation Final Report

Location:	Pinehurst, Georgia	Accident Number:	ERA09LA258
Date & Time:	April 23, 2009, 10:00 Local	Registration:	N4789Q
Aircraft:	Cessna A188B	Aircraft Damage:	Substantial
Defining Event:	Runway excursion	Injuries:	1 Fatal
Flight Conducted Under:	Part 137: Agricultural		

Analysis

After spraying for mosquitoes for approximately 2 hours, the pilot returned for landing. The airplane approached the north runway, a 2,600-foot-long, 100-foot-wide, turf runway. During the approach, the airplane banked left onto final approach and the engine revved to high rpm. The airplane touched down long, toward the left side of the runway. The airplane traveled off the left side of the runway, impacted bushes, and came to rest inverted. Examination of the wreckage did not reveal any preimpact mechanical malfunctions and fuel was noted throughout the fuel system. The wreckage was righted, the engine was started, and it ran continuously to 2,500 rpm. The pilot had accumulated about 15,000 hours of total flight experience. Although the autopsy report noted the cause of death as blunt force trauma, the report also indicated that examination of the pilot's heart revealed a markedly enlarged (but not thickened) heart, consistent with dilated cardiomyopathy, a condition frequently associated with sudden cardiac death. There was no indication that the pilot was aware of the condition, and a relationship between the condition and the accident could not be conclusively established. Another pilot reported that the wind was from the west at 5 to 7 mph at the time of the accident.

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 aircraft control for undetermined reasons.

Findings

Not determined

(general) - Unknown/Not determined

Factual Information

History of Flight

Landing	Loss of control on ground
Landing	Runway excursion (Defining event)

On April 23, 2009, about 1000 eastern daylight time, a Cessna A188B, N4789Q, operated by A & C Ag Aviation Inc., was substantially damaged while landing at a private airstrip near Pinehurst, Georgia. The certificated commercial pilot was killed. Visual meteorological conditions prevailed and no flight plan was filed for the aerial application flight conducted under the provisions of 14 Code of Federal Regulations Part 137. The flight originated from the private airstrip about 0800.

A Federal Aviation Administration (FAA) inspector stated that after spraying for mosquitoes, the pilot returned for landing. The airplane approached the north runway, a 2,600-foot-long, 100-foot-wide, turf runway. The airplane touched down long, toward the left side of the runway. The airplane traveled off the left side of the runway, impacted bushes, and came to rest inverted. The pilot was wearing harnesses and a helmet, but was found deceased at the scene.

A witness, who was flying in the area, knew the accident pilot. The witness stated that the accident pilot was on a left downwind leg for the north runway, and "waved his wings" at the witness's airplane. About 1 minute later, the witness heard the accident airplane engine rev to high rpm and the accident airplane made a "hard" left turn onto final approach. The witness thought that the engine rev and hard turn were uncharacteristic of the accident pilot, as he usually approached very "steady." The witness lost sight of the accident airplane on final approach, but thought that the pilot must have been experiencing some sort of difficulty to be flying in the manner that he was. The witness further stated that the wind was from the west at 5 to 7 mph at the time of the accident.

The single-seat, low-wing, fixed-gear airplane, serial number 18802531T, was manufactured in 1976. It was powered by a Continental Motors IO-520, 300-horsepower engine. Review of the airplane's engine logbook revealed that an annual inspection was completed on March 28, 2009, at a total airframe time of 10,477 hours. At the time of the inspection, the engine had accumulated 1,402 hours of operation since major overhaul.

Examination of the wreckage by the FAA inspector did not reveal any preimpact mechanical malfunctions. Fuel was present in both fuel tanks and some had leaked out while the airplane was inverted. The wreckage was righted, and 5 gallons of fuel was added to the left wing fuel tank. The engine was then started and ran continuously to 2,500 rpm.

The pilot, age 73, held a commercial pilot certificate with ratings for airplane single-engine land

and airplane multiengine land. His most recent second-class medical certificate was issued on January 19, 2009. At that time, the pilot reported a total flight experience of 15,000 hours. The pilot also indicated “No” to all items under “Medical History,” including specifically “Heart or vascular trouble.” The pilot’s spouse indicated she was not aware of any personal or family history of heart disease for the pilot.

An autopsy was performed on the pilot by the State of Georgia Bureau of Investigation, Forensic Sciences Division, on April 29, 2009. The autopsy report noted the cause of death as “blunt force trauma to the neck.” The report also noted, “The heart weighs 570 grams...The left ventricular wall and the muscular interventricular septum are each 1.3 cm thick. The right ventricular wall thickness is 0.4 cm. ...”

Toxicological testing was performed on the pilot by the FAA Bioaeronautical Science Research Laboratory, Oklahoma City, Oklahoma. The results were negative for drugs and alcohol.

The reported weather at an airport located about 30 miles southwest of the accident site, at 0953, included few clouds at 1,300 feet, visibility 7 miles, and wind from 170 degrees at 6 knots.

Pilot Information

Certificate:	Commercial	Age:	73, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	January 19, 2009
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	20000 hours (Total, all aircraft), 5000 hours (Total, this make and model), 75 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N4789Q
Model/Series:	A188B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	18802531T
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 28, 2009 Annual	Certified Max Gross Wt.:	4200 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	10477 Hrs as of last inspection	Engine Manufacturer:	CONT MOTOR
ELT:	Not installed	Engine Model/Series:	IO-520-D
Registered Owner:	A & C Ag Aviation Inc.	Rated Power:	300 Horsepower
Operator:	A & C Ag Aviation Inc.	Operating Certificate(s) Held:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	ABY,190 ft msl	Distance from Accident Site:	30 Nautical Miles
Observation Time:	09:53 Local	Direction from Accident Site:	200°
Lowest Cloud Condition:	Few / 1300 ft AGL	Visibility	7 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	21°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Pinehurst, GA (NONE)	Type of Flight Plan Filed:	None
Destination:	Pinehurst, GA (NONE)	Type of Clearance:	None
Departure Time:	08:00 Local	Type of Airspace:	

Airport Information

Airport:	Private Airstrip NONE	Runway Surface Type:	Grass/turf
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	36	IFR Approach:	None
Runway Length/Width:	2600 ft / 100 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	32.20639,-83.786392(est)

Administrative Information

Investigator In Charge (IIC):	Gretz, Robert
Additional Participating Persons:	Jim Payne; FAA/FSDO; Atlanta, GA Jan R Smith; Cessna Aircraft Company; Wichita, KS
Original Publish Date:	April 22, 2010
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=73712

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](#).