



National Transportation Safety Board Aviation Accident Final Report

Location:	MUNFORD, AL	Accident Number:	ATL01FA036
Date & Time:	02/13/2001, 1840 CST	Registration:	N5AY
Aircraft:	Cessna 421	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	5 Fatal
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The pilot and passengers were on a instrument flight returning home. When they were within range of the destination airport, the controller cleared the flight for an instrument approach. Moment later the pilot canceled his instrument flight plan and told the controller that he was below the weather. Low clouds, reduced visibility and fog existed at the destination airport at the time of the accident. The airplane collided with a river bank as the pilot maneuvered for the visual approach. The post-crash examination of the airplane failed to disclose a mechanical problem.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot continued visual flight into instrument weather conditions that resulted in the inflight collision with a river bank. Factors were reduced visibility and dark night.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: APPROACH

Findings

1. (F) WEATHER CONDITION - FOG
2. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND
3. (F) LIGHT CONDITION - DARK NIGHT
4. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: APPROACH

Findings

5. (F) TERRAIN CONDITION - DIRT BANK/RISING EMBANKMENT

Factual Information

HISTORY OF FLIGHT

On February 13, 2001, at 1840 central standard time, a Cessna 421, N5AY, owned and operated by a private operator, collided with the southeast bank of Choccolocco Creek near Munford, Alabama, while maneuvering for a visual approach and landing to the Talladega Airport in Talladega, Alabama. The business flight was operated under the provisions of Title 14 CFR Part 91 with an instrument flight plan filed. At the time of the accident the instrument flight plan had been canceled. Instrument meteorological conditions prevailed at the time of the accident. The airplane was destroyed, and the pilot and four passengers were fatally injured. The flight departed Hamilton, Ohio, at 1557.

The pilot and passengers were returning to Talladega, Alabama, after a business meeting in Ohio. The pilot filed an IFR flight plan to Anniston, Alabama, before leaving Hamilton, Ohio. While en route at 1557 hours, air traffic control (ATC) advised the pilot of N5AY that the airplane's transponder was not working. ATC requested position reporting from N5AY during the flight.

At 1816:25, Birmingham Approach Control received N5AY as a non-radar handoff from Atlanta Center, eight miles northeast of Gadsden, Alabama. At 1817:44, the pilot of N5AY radioed Birmingham Approach to report descending from seven thousand two hundred to six thousand. At 1820:04, the pilot advised the controller of intentions for the ILS approach for runway 5 at Anniston, Alabama. The pilot was issued radar vectors and instructed to join the seven-mile arc. At 1825:04, Birmingham Approach instructed N5AY to descend to 4,000 feet. At 1830:06, Birmingham Approach stated, "N5AY, as soon as you're established on the seven-mile arc, descend and maintain three thousand until passing Clark intersection, and you're cleared for the ILS five approach to Anniston."

At 1830:18, the pilot of N5AY replied, "Uh, roger, understand we're descending to three thousand at this time and cleared for the ILS five approach." At 1834:11, the pilot canceled the instrument flight plan and was asked by the controller if the airplane was below the weather. The pilot replied, "Uh, that's affirmative, and, uh, we're going to turn back to Talladega, that's where our intended place was, we just filed Anniston because they had an ILS." At 1834:30, radar service was terminated.

At 1842, local residents in the immediate vicinity of the accident site heard what was described as a "loud boom." A witness saw what he described as a "large fire," and immediately telephoned 911. Another witness who heard the accident went with a friend to the location of the fire and found the downed airplane.

PERSONNEL INFORMATION

The pilot held a commercial pilot certificate with an instrument rating, and a multi-engine rating limited to visual flight rules flights only. The pilot had a valid third-class medical dated October 11, 2000, with corrective glasses limitations. All five occupants on board the airplane worked for a carpet manufacturing company.

AIRCRAFT INFORMATION

The Cessna 421, N5AY, was owned and operated by the commercial pilot. N5AY was a twin-engine airplane powered by two Continental GTSIO-520-D engines. The aircraft logbooks

showed that the last annual inspection was completed on February 2, 2001.

METEOROLOGICAL INFORMATION

At 1521, the pilot received a routine weather briefing from Dayton Flight Service Station for an IFR flight to Anniston, Alabama. The Anniston airport 1817 surface observation reported 2 miles visibility, 200 feet overcast, wind 070 degrees at 6 knots. The Anniston terminal aerodrome forecast issued at 1730 for the period between 1730 and 2200 hours reported 1 1/2 miles visibility, mist, 400 foot overcast ceiling; temporarily between 1800 and 2200 hours, 1/2 mile visibility, fog, 100 overcast ceiling. Evening civil twilight ended at 1753.

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site disclosed that airplane wreckage debris was scattered over an area approximately 150 long and 25 feet wide. The aircraft wreckage site was located 5.43 nautical miles east Talladega Airport. Wreckage debris was oriented perpendicular to a berm that was oriented on a 240-degree magnetic heading. The main wreckage rested at the waterline of Choccolocco Creek. The airplane was broken into several pieces and was submerged or embedded into the bank of the creek.

Examination of the cockpit revealed damage to the cockpit flight instruments and cockpit switches. Examination of the airspeed indicator revealed 110 knots. Examination of the Vertical speed indicator indicated a 1000 foot per minute decent. Examination of the left tachometer needle indicated 2100 rpm. All other instruments were damaged.

Examination of the wing assembly revealed that the left and right wing aileron flight control surfaces were destroyed. The right out board flap separated from the wing. The right inboard flap was connected with two actuating rods. The left inboard and outboard flaps were attached and both actuating rods were attached.

Examination of the landing gear revealed the right main landing gear was down and locked. The left main gear was extended, but was not in the locked position. The nose gear was extended. The landing gear actuator bellcrank was in the retracted position.

Examination of the empennage section revealed that it was attached to the tailcone. The left horizontal stabilizer leading edge exhibited some leading edge damage. The left elevator showed buckling along the trailing edge span. The right horizontal stabilizer appeared undamaged. The right elevator was not connected to the horizontal stabilizer at the out board hinge. Examination of the 4 elevator cables showed that they were attached to the aft elevator bellcrank. Movement of the elevator actuated the aft elevator bellcrank. Examination of the vertical stabilizer showed a semi-circular dent above the fuselage. The rudder and trim tab assemblies were attached to the vertical stabilizer. The rudder cables were attached to the rudder horn and the rudder cables were also attached at the rudder tubes.

Examination of the engines reveal that both engines separated from the airplane and were lodged in the river bank. Examination of the left engine revealed the fuel pump coupling intact. The fuel pump rotated by hand. Examination of the left engine fuel screen revealed that the screen was clean and wet with fuel. The left engine crankshaft was rotated 360 degrees. Both magnetos for the left engine had been damaged.

Examination of the right engine revealed the fuel pump coupling intact. The fuel pump rotated by hand. Examination of the right engine fuel screen revealed that the screen was clean and wet with fuel. Examination of the right engine revealed that all the pistons were normal and

both magnetos sparked. Left and right engines both showed valve train continuity.

Both propellers were separated from the engines. Both propellers showed chord-wise damage and twist to blade tips. Examination of the vacuum pumps drive couplings were intact. All other accessories were damaged in the impact. The wreckage examination failed to disclose any mechanical or component failure. The pilot did not report any mechanical problems prior to the accident.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot's postmortem examination was performed at the department of Forensic Science in Birmingham, Alabama. The forensic toxicology was performed by the FAA Toxicology and Accident Research Laboratory in Oklahoma City, Oklahoma. The toxicology examination was negative for ethanol and drugs. The pilot had a history of myocardial infarction, angina pectoris, and coronary artery disease that required angioplasties and coronary artery bypass surgery.

ADDITIONAL INFORMATION

The airplane wreckage was released to the insurance adjuster for the owner of the airplane.

Pilot Information

Certificate:	Commercial	Age:	59, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):		Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	Yes
Medical Certification:	Class 3 With Waivers/Limitations	Last FAA Medical Exam:	10/11/2000
Occupational Pilot:		Last Flight Review or Equivalent:	08/09/2000
Flight Time:	2000 hours (Total, all aircraft), 29 hours (Total, this make and model), 415 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N5AY
Model/Series:	421	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	421-0133
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	02/02/2001, Annual	Certified Max Gross Wt.:	6800 lbs
Time Since Last Inspection:	4 Hours	Engines:	2 Reciprocating
Airframe Total Time:	4887 Hours as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	GTSIO-520D
Registered Owner:	DONALD ROBERTSON	Rated Power:	375 hp
Operator:	DONALD ROBERTSON	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night
Observation Facility, Elevation:	ANB, 612 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	0053 UTC	Direction from Accident Site:	75°
Lowest Cloud Condition:	Scattered / 200 ft agl	Visibility	4 Miles
Lowest Ceiling:	Broken / 800 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	50°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.28 inches Hg	Temperature/Dew Point:	11°C / 10°C
Precipitation and Obscuration:			
Departure Point:	HAMILTON, OH (HAO)	Type of Flight Plan Filed:	IFR
Destination:	TALLADEGA, AL (ASN)	Type of Clearance:	IFR
Departure Time:	1557 CST	Type of Airspace:	Class E

Airport Information

Airport:	TALLADEGA, AL (ASN)	Runway Surface Type:	Asphalt
Airport Elevation:	528 ft	Runway Surface Condition:	Rough; Vegetation; Wet
Runway Used:	3	IFR Approach:	Visual
Runway Length/Width:	6002 ft / 100 ft	VFR Approach/Landing:	Straight-in

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	4 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	On-Ground
Total Injuries:	5 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	PHILLIP POWELL	Report Date:	08/28/2002
Additional Participating Persons:	STEPHEN BLANSETT; BIRMINGHAM, AL		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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