
		NTSB ID: ATL03FA134		Aircraft Registration Number: N4289B	
		Occurrence Date: 08/31/2003		Most Critical Injury: Fatal	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Kingsport		State TN	Zip Code 37613	Local Time 1656	Time Zone EDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:			
Aircraft Information Summary					
Aircraft Manufacturer Beech		Model/Series BE-35		Type of Aircraft Airplane	
Revenue Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
<p>HISTORY OF FLIGHT</p> <p>On August 31, 2003, at 1656 Eastern Daylight time, a Beech BE-35, N4289B, registered to a private owner, operating as a 14 CFR Part 91 instructional flight, collided with the ground while maneuvering in the vicinity of Kingsport, Tennessee. Visual meteorological conditions prevailed and no flight plan was filed. The airplane was destroyed. The airline transport rated certified flight instructor and student pilot were fatally injured. The flight originated from Tri Cities Regional Airport, Blountville, Tennessee, on August 31, 2003, at 1607.</p> <p>Review of communications between N4289E and Tri Cities Tower revealed the pilot departed and remained in closed traffic for runway 23 at Tri Cities Airport. The pilot made 3 takeoffs and one low approach to runway 23, and was instructed by the tower that the active runway was changed to-runway 05. The pilot made one touch and go to runway 05. The pilot informed the control tower he was on left downwind for runway 5 for a full stop landing. The pilot was cleared for landing and acknowledged the clearance. There was no other recorded communication with the pilot. The tower operator attempted radio contact with the pilot without success. The airplane was located by law enforcement at 1713.</p> <p>A witness stated he was located in a backyard when he heard an airplane approaching his location at about 1700. He looked up and observed an airplane at tree top-level. "The nose of the airplane was pitched up like he was trying to clear the trees. The engine was missing like it was starving for fuel." The airplane was observed to make a steep right turn estimated at a bank greater than 45-degrees, and he could see the bottom of the airplane. The airplane disappeared from view behind a tree line followed by a thud sound. He and his wife got in their truck and drove towards the crash site and they observed an airplane with its tail sticking up in the air. They continued towards the crash site and observed one victim who had been ejected from the airplane. Another victim was in the wreckage. They telephoned the 911 operator and reported the crash to emergency personnel.</p> <p>PERSONNEL INFORMATION</p> <p>Review of information on file with the FAA Airman's Certification Division, Oklahoma City, Oklahoma, revealed the pilot was issued an airline transport pilot certificate on October 6, 2000, with ratings for airplane multiengine engine land/airline transport pilot, rotorcraft helicopter/airline transport pilot, and airplane single engine land/commercial pilot. The pilot was issued a flight engineer certificate on August 17, 1998, with ratings for turbo jet powered aircraft. The pilot was issued a certified flight instructor certificate on October 20, 2002, with ratings for airplane single and multiengine land and rotorcraft-helicopter. The pilot held a first class medical issued on March 6, 2003 with no limitations. The pilot logged 1.5 hours as a flight</p>					
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	Occurrence Type: Accident

Narrative (Continued)

instructor on August 25, 2003, in the student pilot's logbook. There were no other Beech BE-35 entries found in the pilot's or the student's logbook. The last recorded entry in the pilot's logbook was on October 15, 2001, in an SF 340 airplane. The pilots total flight time in all aircraft is 7,094.5 hours with 1.5 hours flown in the last 30 and 90 days.

Review of information on file with the FAA Airman's Certification Division, Oklahoma City, Oklahoma, revealed the student pilot was issued a student pilot certificate on April 10, 2003. No endorsements had been signed off on the certificate. Review of the student pilot's logbook revealed he had 17.1 total flight hours. All flights were dual. The student pilot had recorded 7.4 dual hours in the Beech BE-35. The student pilot's last recorded flight in the BE-35 was on August 25, 2003. The student pilot had flown 3 hours in the last 30 and 90 days. The student pilot held a third class medical issued on April 10, 2003, with the limitation "must possess corrective spectacles for near vision while exercising privileges of this certificate."

AIRCRAFT INFORMATION

Review of aircraft maintenance records revealed an FAA holder with inspection authority conducted the last recorded annual inspection in August 2003. No date was entered on the logbook entry. The airplane had accumulated 3.1 hours since the annual inspection. The inspector annotated in the propeller logbook on August 03, at tachometer time 3,121 hours that the engine/prop has been inspected in accordance with a 100-hour annual inspection and was determined to be in an airworthy condition and the time since major overhaul was 0.0 hours. The airplane was flown to Tri Cities Regional Airport on August 23, 2003 with 45 minutes enroute. The airplane was flown on August 25, 2003 for 1.5 hours. The airplane was flown for 49 minutes on the accident flight. The total airframe hours at the time of the accident was 5,290.8 hours.

Review of refueling records obtained from Tri City Aviation revealed N4289B was topped off on August 25, 2003, with 18 gallons of 100 low lead fuel. A Tri City Aviation mechanic stated he conducted a ground run up on N4289B on August 28, 2003. The engine run lasted 5 minutes.

METEOROLOGICAL INFORMATION

The Tri Cities Regional Airport, Blountville, Tennessee, 1653 surface weather observation was: scattered clouds at 3,500, 7,000, and 10,000 feet, visibility 9 miles, temperature 82 degrees Fahrenheit, dew point temperature 73 degrees Fahrenheit, wind 350-degrees at 7 knots, and altimeter 30.19. In remarks, towering cumulus clouds north to northeast.

WRECKAGE AND IMPACT INFORMATION

The wreckage was located in a pasture in the vicinity of Kingsport, Tennessee, 3 miles south southwest of Tri Cities Regional Airport. Blountville, Tennessee.

Examination of the crash site revealed the airplane collided with the ground nose down on a heading of 180-degrees magnetic. A left and right wing leading edge impact ground scar was present on the ground. Browning of vegetation was present in front of the right wing extending 39 feet and 32 feet wide in front of the airplane. The engine and propeller assembly was embedded in the ground about one foot below the surface of the ground and the engine was displaced to the right. One propeller blade had separated from the propeller blade hub. Leading edge gouging, chordwise scarring and aft torsional bending was present on the propeller blade. The remaining propeller blade and propeller hub received impact damage. Chordwise scarring and forward bending was present on the propeller blade. The nose landing gear was extended and separated from the airframe.

The cabin area was compressed aft to the leading edge of the forward spar. The flight control cables were intact from the control column aft to the center bell crank. The fuel selector was on the right main fuel tank. The baggage compartment was compressed aft to the aft bulkhead.

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The right wing was compressed aft. Accordion crushing was present on the leading edge of the right wing extending outboard from the wing root to the separated aux tip fuel tank. The aux tip tank was contaminated with debris. The right main fuel tank was ruptured and browning of vegetation was present in front of the right main fuel tank. The right main landing gear was extended and the flaps were extended 15-degrees or the approach position. The control cables were intact from the center bell crank extending outboard to the wing bell crank. One cable broke and the remaining cable broke at the bell crank clevis.

The empennage was in the vertical up-right position and folded over to the right. The remaining empennage was intact 88-inches aft of the baggage compartment stringer. The left and right ruddervators were not damaged. The control cables were intact from the center bell crank below the cabin floor aft to the ruddervator mixing mechanism. The ruddervator push-rods were intact from the mixing mechanism aft to the ruddervators.

The left wing was accelerated forward. Accordion crushing was present on the leading edge of the left wing extending outboard from the wing root to the wing tip. The aux tip fuel tank was separated in half and was contaminated. The left wing main fuel tank was ruptured. No browning of vegetation was present in the vicinity of the left main fuel tank. The left main landing gear was extended and the wing flaps were extended at the 15-degrees approach position. The control cables were intact from the center bell crank extending outboard to the wing bell crank.

A partial disassembly and examination of the engine and accessories did not reveal any anomalies. Thumb compression and suction was obtained on all cylinders when the crankshaft was rotated. Continuity was confirmed to the valve and gear train by rotating the propeller by hand. The left and right magnetos were removed and tested. Ignition spark were observed on all ignition towers of both magnetos when turned by a power drill. The engine driven fuel pump was submerged in water. The pump was turned with a power drill and produced a stream of water. The exhaust and induction system received impact damage. The ignition harness was damaged. All spark plugs were removed and exhibited worn out normal deposits when compared to the Champion Check A Plug card. The cowl flaps, and carburetor heat were destroyed. The carburetor received impact damage and no fuel was present. The engine oil tank and cooler received impact damage. The oil filter canister was cut open and no contaminants were observed. The engine cylinders were intact with impact damage to the cylinder fins, pushrods and tubes. The vacuum pump received impact damage and the drive coupling rotated freely when rotated by hand. The propeller governor received impact damage and the drive coupling was fractured.

MEDICAL AND PATHOLOGICAL INFORMATION

A Forensic Pathologist from Johnson City North East Tennessee conducted a postmortem examination of the airline transport pilot on September 2, 2003. The cause of death was multiple blunt force traumatic injuries. The Forensic Toxicology Research Section, Federal Aviation Administration, Oklahoma City, Oklahoma, performed postmortem toxicology of specimens from the pilot. The results were negative for carbon monoxide, cyanide, and ethanol. Sertraline 0.04 (ug/ml), a depressive disorder drug was detected in the blood and liver.

A Forensic Pathologist from Johnson City North East Tennessee conducted a postmortem examination of the student pilot on September 2, 2003. The cause of death was "multiple blunt force traumatic injuries." The Forensic Toxicology Research Section, Federal Aviation Administration, Oklahoma City, Oklahoma, performed postmortem toxicology of specimens from the student pilot. The results were negative for ethanol. Carbon monoxide and cyanide testing was not performed. Disphenhydramine an antihistamine, and metoprolol prescribed for high blood pressure was present in the kidney and liver.

TEST AND RESEARCH

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The Beechcraft Pilot's Operating Handbook states on page 5-18 in Section V Performance, STALL SPEEDS-POWER IDLE that the airplane will stall at 54 knots, flaps down at 3,000 pounds. The airplane will stall at 50 knots, flaps down at 2,200 pounds.

The left and right main fuel tank capacity is 20 gallons per side with 17 gallons of useable fuel in each main fuel tank. The left and right aux tip fuel tanks were labeled in the logbook as inoperative. The left and right main fuel tanks were topped off on August 25, 2003. A mechanic performed an engine ground run on August 28, 2003, which lasted 5 minutes. The airplane flew 49 minutes on the accident flight. The flight profile consisted of traffic pattern work with 4 takeoffs, 3 landings, one low approach and the accident impact. Review of Section V, Performance, page 5-43 showed 25 minutes of flight time would have been at takeoff and climb fuel flow and 25 minutes would have been at cruise fuel flow establishing a fuel consumption rate of 15.5 gallons per hour. The engine run up before the flight would have used 1.6 gallons of fuel. The 49-minute accident flight would have consumed 14 gallons of fuel and the maintenance ground run up would have consumed .8 gallons of fuel. The total fuel consumption was 16.4 gallons.

ADDITIONAL INFORMATION

The airplane logbooks were retained by the FAA Flight Standards District Office No.3 at Nashville, Tennessee. The airline transport pilot's logbook was released to his wife on October 2, 2003. The student pilot's logbook was released to his wife on October 5, 2003. The airplane wreckage was released to Atlanta Air Recovery on March 19, 2004.

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		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used	Runway Length	Runway Width
Runway Surface Type: Unknown					
Runway Surface Condition: Unknown					
Approach/Arrival Flown: NONE					
VFR Approach/Landing: None					
Aircraft Information					
Aircraft Manufacturer Beech		Model/Series BE-35		Serial Number D4302	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Retractable - Tricycle					
Amateur Built Acft? No		Number of Seats: 4	Certified Max Gross Wt. 3000 LBS		Number of Engines: 1
Engine Type: Reciprocating		Engine Manufacturer: Continental		Model/Series: E225-8	Rated Power: 225 LBS
- Aircraft Inspection Information					
Type of Last Inspection Annual		Date of Last Inspection	Time Since Last Inspection 3 Hours		Airframe Total Time 5291 Hours
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type Yes /		ELT Operated? No	ELT Aided in Locating Accident Site? No		
Owner/Operator Information					
Registered Aircraft Owner Samuel P. Swett		Street Address 201 Westside Drive			
		City Vilas		State NC	Zip Code 28692
Operator of Aircraft Samuel P. Swett		Street Address 201 Westside Drive			
		City Vilas		State NC	Zip Code 28692
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held: None					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Instructional					

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First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 39
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Sex: M	Seat Occupied: Left	Occupational Pilot? Civilian Pilot	Certificate Number: On File
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Certificate(s): Airline Transport; Flight Instructor; Commercial

Airplane Rating(s): Multi-engine Land; Single-engine Land

Rotorcraft/Glider/LTA: Helicopter

Instrument Rating(s): Airplane; Helicopter

Instructor Rating(s): Airplane Multi-engine; Airplane Single-engine; Helicopter

Current Biennial Flight Review?

Medical Cert.: Class 1	Medical Cert. Status: None	Date of Last Medical Exam: 03/2003
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	7094	1	1865	3156	954	338	77	2051		
Pilot In Command(PIC)	4644	1	1662	991		148	2	1873		
Instructor	1508	1	1502	5	168	23	21			
Instruction Received										
Last 90 Days	1	1	1							
Last 30 Days	1	1	1							
Last 24 Hours										

Seatbelt Used? Yes	Shoulder Harness Used? No	Toxicology Performed? Yes	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: None

Departure Point Blountville	State TN	Airport Identifier TRI	Departure Time 1607	Time Zone EDT
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Destination Local Flight	State	Airport Identifier	
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Type of Clearance: None

Type of Airspace: Class C

Weather Information

Source of Wx Information:

No record of briefing

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Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
TRI	1653	EDT	1519 Ft. MSL	3 NM	260 Deg. Mag.

Sky/Lowest Cloud Condition: Scattered	3500 Ft. AGL	Condition of Light: Day
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Lowest Ceiling: None	Ft. AGL	Visibility: 9	SM	Altimeter: 30.19	"Hg
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Temperature: 28 °C	Dew Point: 23 °C	Weather Conditions at Accident Site: Visual Conditions
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Wind Direction: 350	Wind Speed: 7	Wind Gusts:
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Visibility (RVR):	Ft.	Visibility (RVV)	SM
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Precip and/or Obscuration:

Accident Information

Aircraft Damage: Destroyed	Aircraft Fire: None	Aircraft Explosion: None
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- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot	1				1
Second Pilot					
Student Pilot	1				1
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -	2				2
Other Ground					
- GRAND TOTAL -	2				2

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Administrative Information

Investigator-In-Charge (IIC)

Carrol A. Smith

Additional Persons Participating in This Accident/Incident Investigation:

Pamela K Charles
Nashville FSDO-03
Nashville, TN

Albert Butler
Teledyne Continental Motors, Inc.
Bay Saint Louis, MS