Aviation Investigation Final Report

Location:	Pomona, New Jersey	**Accident Number:**	IAD03FA045
Date & Time:	April 11, 2003, 16:25 Local	**Registration:**	N256PR
Aircraft:	Beech A36	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot attempted two ILS approaches, during which the controller made numerous attempts to assist the pilot in intercepting the localizer. The controller instructed the pilot to climb twice when he was below the glideslope, and also made numerous repeated transmissions to obtain pilot acknowledgement of navigational instructions. During the second approach, when the pilot passed through the localizer and continued eastbound, the controller initiated a surveillance approach by providing step-down altitudes and headings to the pilot. The pilot was cleared to land, and instructed to report the runway in sight. The pilot acknowledged the clearance; however, no further transmissions were received by the pilot. Radar data indicated the last recorded position of the airplane was 1.3 nautical miles west northwest of the runway, at 300 feet. Examination of the airplane revealed no mechanical malfunctions. Interviews with family members and friends of the pilot, revealed he had received his instrument rating through a week-long school, within the past year, and had "not accumulated much instrument flight time" since then.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to follow instrument approach procedures. Factors in the accident included the pilot's lack of recent instrument experience and the instrument weather conditions.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: APPROACH

Findings
1. (C) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT IN COMMAND
2. (F) LACK OF RECENT INSTRUMENT TIME - PILOT IN COMMAND
3. (F) WEATHER CONDITION - LOW CEILING

Factual Information

HISTORY OF FLIGHT

On April 11, 2003, at 1625 eastern daylight time, a Beech A36, N256PR, was destroyed when it impacted trees during an approach to Atlantic City International Airport (ACY), Atlantic, City, New Jersey. The certificated private pilot was fatally injured. Instrument meteorological conditions prevailed for the flight which originated at the Columbia Metropolitan Airport (CAE), Columbia, South Carolina, at 1437. An instrument flight rules (IFR) flight plan was filed for the personal flight which was conducted under 14 CFR Part 91.

A review of Air Traffic Control (ATC) information revealed that the pilot attempted two ILS Approaches to runway 13 at ACY. During the first approach, the controller made numerous attempts to assist the pilot in intercepting the localizer, by issuing vectors, and instructing him twice to climb, when he was below the glideslope. The controller also made numerous repeated transmissions to obtain pilot acknowledgment of navigational assistance instructions.

At 1601, the controller stated, "november six papa romeo climb and maintain one thousand six hundred climb and maintain one thousand six hundred i show you about a mile from the outer marker you should cross the outer marker at one thousand six hundred."

The pilot acknowledged the instructions; however, radar data indicated the airplane passed the outer marker at an altitude of 1,000 feet.

At 1602, the controller asked the pilot if he had plenty of fuel on board and if he would like a surveillance approach to runway 13. The pilot responded, "I have plenty of fuel roger." The controller then issued missed approach vectors to the pilot, instructing him to climb and turn southbound.

For the following 11 minutes, the controller issued vectors to the pilot for a second approach, and at 1614, the controller asked the pilot if he would like a surveillance approach or if he would like to try the ILS approach again. The pilot responded, "let's let's try the i l s cause i'm set up pretty much ready to go on it."

At 1615:03, the controller stated "okay if you need the surveillance at all we're all set up and ready for it ah you can expect vectors for the i l s to runway one three."

For the following four minutes, the controller provided vectors to the pilot to join the ILS and made repeated attempts to assist the pilot in establishing the airplane on course.

During the intercept, the pilot passed through the localizer and continued on an eastbound heading. The controller then elected to initiate a surveillance approach by providing vectors, and instructed the pilot to contact the final approach controller. Four transmissions were necessary for the pilot to read back the correct final approach control frequency.

The pilot contacted the final approach controller and received a step-down altitude and a heading. When the airplane was 2.5 nautical miles from the approach end of runway 13, at an assigned altitude of 1,000 feet, it began to divert to the south. The controller advised the pilot to correct his heading; however, no response was received.

At 1624:28, the controller issued the next assigned step-down altitude of 700 feet, and again issued vectors to correct the pilot's heading. The controller cleared the pilot to land on runway 13, and instructed the pilot to report when he had the runway in sight.

The pilot responded, "six papa romeo roger."

At 1624:55, radar data indicated that the airplane appeared to level off at an altitude of 300 feet, on an approximate heading of 145 degrees, for about 20 seconds.

At 1625:04, the controller informed the pilot he was right course, and asked him if he had the airport in sight.

No further transmissions were received from the pilot.

The last radar contact was 1.3 nautical miles west northwest of runway 13, at 300 feet.

According to radar data, the estimated groundspeed during the final 3 miles of the approach was 72 knots, and the vertical rate of descent was about 650 fpm, until the level off at 300 feet.

The accident occurred during the hours of daylight, at 39 degrees, 28 minutes north, 74 degrees, 36 minutes west.

PERSONNEL INFORMATION

The pilot held a private pilot certificate with ratings for airplane single engine land and instrument airplane. His most recent Federal Aviation Administration (FAA) third class medical certificate was issued on November 19, 2002.

The pilot's logbook was not located. However, according to his most recent insurance renewal, dated December 23, 2002, he had accumulated 1,773 hours of total flight experience, 365 were in make and model, and 24 of which were in the preceding 90 days. His most recent biennial flight review (BFR) was completed on April 26, 2001.

Interviews with family members and friends of the pilot, revealed he had received his

instrument rating through a week-long school, within the past year, and had "not accumulated much instrument flight time" since then.

AIRCRAFT INFORMATION

The airplane logbooks were not located. However, according to the mechanic who worked on the airplane, the last annual inspection was completed on November 20, 2002.

According to fuel records provided by a fixed base operator (FBO) in Columbia, South Carolina, the airplane was last refueled on the day of the accident, at 1255, with 41 gallons of aviation fuel.

METEOROLOGICAL INFORMATION

Weather reported at Atlantic City, at 1554, included winds from 030 degrees at 15 knots, gusting to 21 knots, 1 mile visibility with mist, an overcast cloud layer at 300 feet, temperature 44 degrees Fahrenheit, dew point 44 degrees Fahrenheit, and a barometric pressure of 29.64 inches Hg.

AIDS TO NAVIGATION

The inbound course for the ILS Runway 13 approach was 128 degrees magnetic. The minimum glideslope crossing altitude at NADDA intersection, was 1,519 feet msl. NADDA was located 4.3 nautical miles from the approach end of runway 13. The decision altitude for the approach was 275 feet msl, and the touchdown zone elevation was 75 feet.

WRECKAGE AND IMPACT INFORMATION

The accident site was located about 1 mile from the approach end of runway 13, in a wooded area, at an elevation of 105 feet. The wreckage path was oriented along a heading of 010 degrees magnetic and extended approximately 55 feet to the main wreckage. The initial impact point was a tree strike, at a height of about 30 feet on a 40-foot tree. White paint chips were located at the base of the tree, and the outboard portion of the left wing, including the wingtip and the left aileron, were located along the wreckage path. Branches and sections of trees of varying diameters, cut at 45-degree angles with black paint transfers, were also located along the wreckage path.

The fuselage was oriented on a heading of 250 degrees magnetic, and was consumed by a post-crash fire. Both wings were attached to the fuselage at the frame, and sustained relatively little impact damage. The left main landing gear was in the extended position, and the position of the right landing gear could not be determined due to the fire damage.

The fuel selector, located in the cockpit area, was observed in the "left" position. The fuel tanks were compromised; however, both fuel tank caps remained secured on the tanks.

All flight controls, with the exception of the left aileron, remained secured to their respective attachment points. Flight control continuity was confirmed from the cockpit to all flight control surfaces. A measurement of the left flap actuator indicated that the left flap was in the retracted position, and a measurement of the right flap actuator could not be determined due to fire damage.

The engine was separated from the airframe and came to rest partially inverted near the cockpit area. The propeller remained attached to the engine, and examination of all four propeller blades revealed S-bending and chordwise scratching.

When the propeller was rotated manually, thumb compression was obtained on all cylinders and valve train continuity was confirmed.

Both magnetos were fire damaged and unable to be tested for spark. All 6 top spark plugs were removed. The number 2, number 4, and number 6 plugs were oil soaked, due to the final positioning of the engine. The number 1, number 3, and number 5 spark plug electrodes were light gray in color.

The engine was equipped with an engine-driven pressure pump and a standby engine-driven pressure pump. Both were separated from the engine and their cases observed partially melted. Examination of both pumps revealed their rotors and vanes were fractured. The vacuum pump drives on both pumps were observed melted.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by the Office of the Chief Medical Examiner, Atlantic County, New Jersey.

The FAA Toxicology Accident Research Laboratory, Oklahoma City, Oklahoma, performed toxicological testing on the pilot.

ADDITIONAL INFORMATION

The airplane was released on April 16, 2003, to a representative of the owner's insurance company.

Pilot Information

Certificate:	Private	**Age:**	68,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Unknown
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 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	November 19, 2002
Occupational Pilot:		**Last Flight Review or Equivalent:**	April 26, 2001
Flight Time:	1773 hours (Total, all aircraft), 365 hours (Total, this make and model), 24 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N256PR
Model/Series:	A36	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	E-470
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	November 20, 2002 Annual	**Certified Max Gross Wt.:**	3650 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-520
Registered Owner:	Ray's Aviation Inc.	**Rated Power:**	285 Horsepower
Operator:	Raymond Elam	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	ACY,75 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	15:54 Local	**Direction from Accident Site:**	300°
Lowest Cloud Condition:		**Visibility**	1 miles
Lowest Ceiling:	Broken / 300 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	15 knots / 21 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	30°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.63 inches Hg	**Temperature/Dew Point:**	7°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Columbia, SC (CAE)	**Type of Flight Plan Filed:**	IFR
Destination:	Pomona, NJ (ACY)	**Type of Clearance:**	IFR
Departure Time:	14:37 Local	**Type of Airspace:**	Class C

Airport Information

Airport:	Atlantic City International ACY	**Runway Surface Type:**	Asphalt
Airport Elevation:	75 ft msl	**Runway Surface Condition:**	Unknown
Runway Used:	13	**IFR Approach:**	ILS
Runway Length/Width:	9999 ft / 180 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	39.466667,-74.6025

Administrative Information

Investigator In Charge (IIC):	Andrews, Jill
Additional Participating Persons:	Jim Dornak; FAA/FSDO; Philadelphia, PA Kris Wetherell; Teledyne Continental Motors; Vernon, CT Paul Yoos; Raytheon Aircraft Company; Wichita, KS
Original Publish Date:	April 28, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=56799