



# Aviation Investigation Final Report

<b>Location:</b>	HANCOCK, Massachusetts	<b>Accident Number:</b>	NYC97FA173
<b>Date &amp; Time:</b>	August 28, 1997, 22:00 Local	<b>Registration:</b>	N40AB
<b>Aircraft:</b>	Piper PA-34-200T	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

After a 4 hour night cross-country flight, the airplane was observed on radar at 7,500 feet, 50 miles west of the pilot's destination. It was on a ground track of 109 degrees, at a ground speed of 167 knots. The ATC facility was not in communication with or expecting the airplane. The airplane began a descent, and maintained a 109 degree ground track, at 169 knots. The last radar sweep displayed the airplane level at 1,900 feet MSL, on the track of 109 degrees, at 149 knots. The airplane struck a 2,100 foot ridge line in level flight, at 1,800 feet MSL. The destination airport was 105 degrees and 4.2 miles east of the impact site. The cloud coverage was about 2,200 feet MSL. Examination revealed no preimpact failure of the airframe or engines. The pilot had a recent history of high blood sugar and was on medication to control it. There was no record of a flight plan or flight following with air traffic control.

## 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 adequate terrain clearance and the proper altitude. Contributing was mountainous terrain.

## Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: APPROACH

Findings

1. LIGHT CONDITION - DARK NIGHT
2. WEATHER CONDITION - CLOUDS
3. TERRAIN CONDITION - MOUNTAINOUS/HILLY
4. CLEARANCE - INADEQUATE - PILOT IN COMMAND
5. PROPER ALTITUDE - NOT MAINTAINED - PILOT IN COMMAND

## Factual Information

### HISTORY OF FLIGHT

On August 28, 1997, about 2200 eastern daylight time, a Piper PA-34-200T, N40AB, was destroyed when it collided with mountainous terrain while descending to land at the Pittsfield Municipal Airport (PSF), Pittsfield, Massachusetts. The certificated private pilot was fatally injured. Night visual meteorological conditions prevailed for the business flight that originated from the Merrill C. Meigs Airport (CGX), Chicago, Illinois, about 1800. No flight plan had been filed for the flight conducted under 14 CFR Part 91.

A co-worker stated he had been a passenger onboard the airplane from North Carolina to CGX, on August 27, 1997, and that the flight was direct and uneventful. It was conducted without communications with air traffic control, and under visual conditions. There was no record of a flight plan on file for that flight.

The pilot then attended meetings the evening of August 27, and during the day on August 28, when he departed for CGX about 1600 central daylight time. His company's chief executive officer stated that the pilot had called home and indicated that he expected to arrive at PSF, about 2300 eastern daylight time.

According to air traffic control (ATC) recorded radar data from Albany, New York, a target was observed south of Albany, at 7,500 feet, in an easterly direction. The ATC facility was not in communication with, or expecting the target. At 2147, the target was last observed west of PSF, at 1,900 feet, at a ground speed of 149 knots, on a track of 109 degrees.

According to the New York State Police, witnesses reported hearing airplane engine sounds, followed by the sounds of an impact, about 2200. They also reported that the weather was foggy with mist.

The wreckage was discovered about 1100, August 29, 1997. It was found on a wooded slope about 1,800 feet above mean sea level, on the west side of a 2,100 foot ridgeline. The accident occurred during the hours of darkness approximately 42 degrees, 26 minutes north latitude, and 73 degrees, 23 minutes west longitude.

### PERSONNEL INFORMATION

The pilot held a private pilot certificate with ratings for airplane single and multiengine land, and instrument airplane. His most recent Federal Aviation Administration (FAA) Third Class Medical Certificate was issued on January 24, 1996.

A review of the pilot's log book revealed that he had accumulated an estimated 2,930 hours of total flight experience, of which 2,400 hours were in make and model. The pilot's last flight review was in the accident airplane on July 30, 1995.

According to a physician, the pilot reported excessive urination and thirst during April 1997. Tests confirmed that the pilot had a high blood sugar level (300), and the pilot was placed on a diet where he lost about 20 pounds. The blood sugar level remained high (130 to 150), and the physician prescribed Glucophage, 500 mg. The physician stated that a blood sugar greater than 500 could cause thinking problems and tiredness.

Examination of personal baggage in the airplane revealed that it contained the following:

- One drug bottle, "Glucophage 500 mg, tablet M-J, quantity 60, org date 7/14/97, refill:4, Dr. Sullivan, William M."
- Glucometer Elite, test strip (24)
- One box B D Ultra-Fine Lancet (finger prick)

#### METEOROLOGICAL INFORMATION

The weather reported by the PSF Automated Surface Observing System (ASOS), at 2305, included: winds calm, visibility 5 miles with mist, ceiling 1,000 broken, 11,000 overcast, temperature 17 degrees centigrade, dew point 16 degrees centigrade, and an altimeter setting of 29.84. At 2308, the ASOS also reported the ceiling was variable from 700 feet to 1,300 feet.

#### WRECKAGE AND IMPACT INFORMATION

The wreckage was examined on August 30, 1997, and all major components of the airplane were accounted for at the accident site, including the nose section and forward baggage compartment door.

A swath was cut into the trees about 35 feet wide, level with the horizon, and on a magnetic direction of 105 degrees. The path through the trees was measured to be about 150 feet, and terminated where the airplane impacted a 40 degree angle slope. Pieces of cut tree limbs were observed along the path through the trees, with the ends cut clean at approximately 45 degree angles.

The main fuselage and cabin area were extensively burned. The left and right wings were separated from the fuselage and fragmented along the cut tree path. Sections of the ailerons, flaps, and wing tips were also fragmented along the wreckage debris path with their respective wings. None of the separated or fragmented pieces displayed smoke, soot, or fire damage. Examination of the wings revealed that the speed brake components were extended upward from the wings. The wing sheet metal was compressed against the speed brake components

and no vertical scratching was observed on the metal components.

Aileron control cable continuity was established from the pilot's controls to the center wing sections. Control cable continuity was also established from the pilot's controls to the elevator and rudder.

The propellers of both engines were separated from their respective crankshafts. The propeller blades of both engines displayed chordwise twisting, scratching, and bending.

The left and right engines were intact. The left engine was fire damaged, while the right engine was not. The spark plugs of both engines were of the massive electrode type and all plugs were light gray in color. Impact damage was observed to the number 6 cylinder of the right engine.

The landing gear had been in the retracted position during the collision with the trees. Examination of the cockpit area produced no useful information due to impact damage.

#### MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot on September 1, 1997, by Dr. M. Mednick of the Medical Examiners Office, Springfield, Massachusetts.

The toxicological testing report from the FAA Toxicology Accident Research Laboratory, Oklahoma City, Oklahoma, revealed negative for drugs.

#### ADDITIONAL INFORMATION

**Airport Data:** The PSF Airport had a field elevation of 1,194 feet mean sea level (MSL). When the 1,000 foot broken cloud condition at PSF was added to the field elevation, it placed the bottom of the cloud layer at approximately 2,200 feet. A fix from the accident site to PSF was about 105 degrees and 4.2 miles.

**Radar Data:** A printout of recorded radar data was provided by the Albany ATC Facility. The data revealed that at 2130, a target at 7,500 feet, was about 50 nautical miles west of Pittsfield, Massachusetts. The target's average ground speed was 167 knots, and it was tracking a course of 109 degrees magnetic.

About 2135, the target began a descent below 7,500 feet. It maintained a ground track of 109 degrees, and had an average ground speed of 169 knots. The target leveled off at 3,000 feet, at 2143:30, about 12 miles west of PSF for about 30 seconds, and then continued descending. The target continued on a ground track of 109 degrees at an average ground speed of 150 knots. At 2146:48, the target reached 1,900 feet, where it leveled off.

The last target return was at 2147:06. The target remained at 1,900 feet on a ground track of

109 degrees, at an average ground speed of 149 knots.

Previous Flight Observations: The passenger that flew with the pilot from North Carolina to CGX on August 27, 1997, reported that the pilot had kept the airplane's autopilot engaged during the entire flight. The autopilot was disengaged when the airplane was "close in" to Meigs. The passenger also reported that when they were close to the airport, the pilot informed the passenger that he would feel a "bump" when the pilot deployed the speed brakes. The passenger felt the bump and noticed the speed brakes sticking up from the wing. After the pilot extended the speed brakes, he lowered the landing gear.

The airplane wreckage was released on August 31, 1997, to Kevin Olsen, a representative of the owner's insurance company.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	53, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	January 24, 1996
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2930 hours (Total, all aircraft), 2400 hours (Total, this make and model), 2780 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N40AB
<b>Model/Series:</b>	PA-34-200T PA-34-200T	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	347570316
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	February 28, 1997 Annual	<b>Certified Max Gross Wt.:</b>	4570 lbs
<b>Time Since Last Inspection:</b>	60 Hrs	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	3650 Hrs	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	TSIO-360
<b>Registered Owner:</b>	STEPHEN W. BLAIR	<b>Rated Power:</b>	225 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Night/dark
<b>Observation Facility, Elevation:</b>	PSF ,1194 ft msl	<b>Distance from Accident Site:</b>	4 Nautical Miles
<b>Observation Time:</b>	23:05 Local	<b>Direction from Accident Site:</b>	105°
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	5 miles
<b>Lowest Ceiling:</b>	Broken / 1000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	16°C / 16°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	CHICAGO , IL (CGX )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	PITTSFIELD , MA (PSF )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	PITTSFIELD MUNICIPAL PSF	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	1194 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	



## Administrative Information

<b>Investigator In Charge (IIC):</b>	Pearce, Robert
<b>Additional Participating Persons:</b>	STEVEN RACICOT; WINDSOR LOCKS , CT GEORGE M HOLLINGSWORTH; MOBILE , AL RICHARD BUNKER; BOSTON , MA
<b>Original Publish Date:</b>	February 15, 2000
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=39284">https://data.nts.gov/Docket?ProjectID=39284</a>

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