



Aviation Investigation Final Report

Location:	BAPTISTOWN, New Jersey	Accident Number:	NYC97FA172
Date & Time:	August 29, 1997, 12:45 Local	Registration:	N5464Y
Aircraft:	Piper PA-23-250	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation		

Analysis

The pilot was performing a postmaintenance evaluation flight with two recently overhauled engines and propellers. Witnesses observed the airplane at a low altitude, with the engines operating at high power. One witness, a pilot, reported that the speed was 'fast and not near a stall or Vmc.' The airplane was observed to roll right and descended into a wooded area. The fuselage and wings were fragmented. Cut wood and impact marks corresponding to both engines were found at the accident site. A check of the airplane failed to reveal a mechanical failure or malfunction. A review of logbooks revealed no recent maintenance to the flight control system. A check with the pilot's doctors revealed no outstanding medical problems.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: failure of the pilot to maintain control of the airplane for undetermined reason(s), while operating it at low altitude.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

1. LOW ALTITUDE FLIGHT/MANEUVER - PERFORMED - PILOT IN COMMAND
2. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On August 29, 1997, about 1245 eastern daylight time, a Piper PA-23-250, N5464Y, was destroyed when it struck the ground in Baptistown, New Jersey. The certificated commercial pilot was fatally injured. Visual meteorological conditions prevailed for the post maintenance evaluation flight that had departed from Alexandria Field, Pittstown, New Jersey, about 1230. No flight plan had been filed for the flight that was conducted under 14 CFR Part 91.

The pilot was flying the airplane for the owner, following the overhaul of both engines and propellers. The pilot had departed about 1030, from Sky Manor Airport, Pittstown, New Jersey, where the overhauled components had been reinstalled. The airplane was then observed to land at Alexandria Airport, about 1100. The pilot discussed the airplane condition with a mechanic, which included the pilot's observation that the left engine was running hot, but that it was controllable with mixture and cowl flap. The pilot then took the cowling off the left engine and the mechanic looked at it. The mechanic reported that he observed a small oil leak. The pilot replaced the engine cowling, and the mechanic departed the airport before the departure of the airplane. The mechanic reported that he heard the airplane overfly his home, about 1230, and the engines sounded smooth.

The airplane was next observed over Frenchtown, New Jersey, operating between 2,500 feet, and 3,000 feet.

About 1245, the airplane was observed by several witnesses in the vicinity of Baptistown. They reported the airplane was moving fast, and at a low altitude, in an easterly direction. One witness reported that he observed the airplane flying low with the engines operating at high power. The airplane then rolled right and descended into the trees. Other witnesses saw the airplane as it descended into the trees. All witnesses were consistent that the engines were operating and sounded smooth. One witness, a pilot, reported that the speed was "fast and not near a stall or Vmc."

The accident occurred during the hours of daylight at 40 degrees, 31 minutes, 37 seconds North Latitude, and 74 degrees, 59 minutes, 47 seconds West Longitude.

PERSONNEL INFORMATION

The pilot held a commercial pilot certificate with ratings for airplane single engine and multi-engine land, single engine sea, and instrument airplane. In addition, he held a flight instructor certificate for airplane single and multiengine, and instrument airplane. He was issued a Federal Aviation Administration (FAA) 2nd class airman medical certificate on May 1, 1997,

with a limitation of, "Holder shall possess corrective glasses for near vision,"

The pilot's flight logbook was not recovered. Based upon FAA and insurance company records, the pilot's total time was estimated to be about 13,000 hours, of which 3,500 hours was in multi-engine airplanes. He had more than 100 hours in the Piper PA-23-250.

According to his most recent FAA medical certificate application dated April 30, 1997, he had flown 100 hours in the preceding 6 months.

WRECKAGE AND IMPACT INFORMATION

The airplane was examined at the accident site on August 29 through August 31, 1997. The airplane impacted in a wooded area about 2 1/2 miles southwest of the Pittstown, Airport. The examination revealed that broken tree branches and scrape marks on the sides of trees were aligned on a descending angle of 55 degrees. The first items found on the ground were from the right wing, followed by the nose, and then the left wing. The roof, rudder and vertical stabilizer of the airplane were found on one side of the tree over 12 inches in diameter, while the lower fuselage was found on the other side of the tree.

A slash of cut wood which measured over 13 inches long, and about 8 inches wide was found at the base of a tree. Slashes and cut wood which measured over 8 inches in diameter was found about 20 feet up from the ground on the same tree.

All primary flight control surfaces were recovered at the site. The rudder, ailerons, and wings flaps had separated from their mating surfaces. Flight control continuity was verified to the rudder. The up elevator control cable was fractured with puffed ends about 3 inches from the forward attach point, at a pulley. The down elevator cable was intact. The aileron control cables were separated with puffed ends. All breaks in control cables occurred at other than cable attach points.

The elevator trim was found with 5 threads showing on the bottom of the jackscrew. This corresponded to a elevator trailing edge tab down position of 1.1 degrees

Fuselage side panels were separated from the airplane. The main cabin door was identified with the door lock in the latched position. Both wings were fragmented and the fuel tanks ruptured. No fuel was found in the tanks.

The flap extension cylinder was extended beyond its maximum allowable length. Damage to the flaps, which had separated from the wings, was consistent with the flaps retracted at impact. The hydraulic system had been compromised with broken hydraulic lines on the extension cylinder.

The right engine propeller blades and hub had separated from the engine behind the propeller flange, similar to a torsional shear, and were found about 3 feet down in the ground. Both

blades were bent rearward, with the outboard 14 inches of one blade broken off and not recovered.

The left propeller blades had separated from the propeller hub, while the hub remained attached to the engine. The propeller blades were between 1 and 2 feet into the ground. One of the propeller blades exhibited "S" curves along its length.

Both engines had received impact damage. Examination of the spark plugs from both engines revealed the electrodes were not damaged, and gray in color. The suction oil screen on both engines was free of debris.

The left engine was rotated and compression was felt in all cylinders. The right magneto produced spark. The left magneto was not identified.

The right engine could not be rotated. The left magneto produced spark. The right magneto was not identified.

Fuel was found in the left engine fuel control unit, but not the right engine fuel control unit.

MEDICAL AND PATHOLOGICAL INFORMATION

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

An autopsy was conducted on the pilot on August 30, 1997, by Anthony D'Aguilo, MD, Deputy Medical Examiner, for Hunterdon County, New Jersey.

ADDITIONAL INFORMATION

A review of the pilot's medical history, as listed on his FAA Airman medical applications, revealed he was not receiving medical treatment.

A check with two doctors who had treated the pilot revealed he was not currently being treated by them, and they had no outstanding medical concerns.

A witness at Pittstown airport described the pilot as normally talkative, and noted that he was quiet, like he had something on his mind that morning. The mechanic who talked to the pilot at Alexandria airport described the pilot as in good spirits and upbeat.

A check of Service Difficulty Reports (SDRs) related to the flight control system for the Piper PA-23-250, failed to find anything related to uncommanded rolls.

A check of Piper PA-23-250 accidents from the NTSB database did not reveal any accidents where the airplane had an uncommanded roll at high-speed flight.

Examination of the airplane maintenance logbooks revealed that the last documented maintenance on the flight controls was performed on February 1, 1996, 81 hours prior to the accident, and consisted of adjustment of the cable tension for the elevator and rudder.

The last documented work on the aileron system was conducted on December 31, 1994, 243 hours prior to the accident, when the flight controls were rebalanced after the airplane was painted.

The accident flight was the first flight following an annual inspection.

When the Safety Board completed the on-scene investigation, no person had been located who would take custody of the airplane. The New Jersey State Police were notified, and the Safety Board departed the site on August 31, 1997.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	72, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	May 1, 1997
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	13000 hours (Total, all aircraft), 100 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N5464Y
Model/Series:	PA-23-250 PA-23-250	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	27-2552
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	August 25, 1997 Annual	Certified Max Gross Wt.:	5200 lbs
Time Since Last Inspection:	1 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	6067 Hrs	Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	IO-540-C4B5
Registered Owner:	SALVATIRE V. LENTINE	Rated Power:	250 Horsepower
Operator:	WILLIAM SLACK	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	ABE ,394 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	12:51 Local	Direction from Accident Site:	290°
Lowest Cloud Condition:	Scattered / 4200 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / 14 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	24°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	PITTSTOWN , NJ (N85)	Type of Flight Plan Filed:	None
Destination:	(N40)	Type of Clearance:	None
Departure Time:	12:30 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Hancock, Robert
Additional Participating Persons:	JAMES WOHLHUETER; ALLENTOWN , PA MORGAN BROWN; ALLENTOWN , PA EDWARD ROGALSKI; WILLIAMSPORT , PA GREG MC DONOUGH; TRENTON , NJ
Original Publish Date:	December 31, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=39283

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](#).