



Aviation Investigation Final Report

Location:	FARGO, Georgia	Accident Number:	MIA98FA155
Date & Time:	May 7, 1998, 18:40 Local	Registration:	N4BN
Aircraft:	Piper PA-23-250	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses observed the airplane start its takeoff roll on a heading of 150 degrees, on a grass runway 2,200 feet long. About 800 feet from the start of the takeoff roll the airplane became airborne about 8 feet off the ground, then went nose and left wing low into the runway where the left propeller struck the grass surface. Twenty propeller slash marks were found in the grass surface at the point in the runway where the witnesses saw the propeller strike the ground. The airplane then took off, climbed about 50 feet above the ground, turned left, struck trees, impacted the ground and caught fire. According to a witnesses, the airplane had taxied to the takeoff point and the pilot did an engine run up. At this point the witness said, '...[the] aircraft's engine seemed to sputter (one), he took off from the [north] end. The aircraft took off, but didn't seem to climb. The aircraft settled back down, propeller started hitting [the] ground, then aircraft got airborne again, made it over oak tree (note cross wind from pilot's right side). Struck pine tree and [I] saw fire ball.' Witnesses described the winds as gusty and a direct crosswind from the right side of the runway to the left side, with occasional shifts in the wind from the northwest. The reported winds about 40 miles west of the crash site were: winds from 220 degrees at 14 knots. Both engines were partially disassembled and no discrepancies were found. Examination of runway 15 revealed 20 propeller slash marks were found on the left side of the runway, on a heading of 150 degrees, and were measured at a total distance of 453 feet, 3 inches. The distances between the first and second slash marks was 2 feet. The distances between last two slash marks was 61 feet. It was determined that the ground speed of the airplane between the first slash mark and the second slash mark was 101.9 miles per hour.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

the left engine propeller blades struck the runway surface during takeoff, resulting in the pilot losing control of the airplane, and subsequently impacting with trees.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) PROPELLER SYSTEM/ACCESSORIES, BLADE - BLADE STRIKE
2. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. WEATHER CONDITION - CROSSWIND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: CLIMB

Findings

4. OBJECT - TREE(S)

Factual Information

HISTORY OF FLIGHT

On May 7, 1998, about 1840 eastern daylight time, a Piper PA-23-250, N4BN, registered to a private owner, crashed during takeoff, near Fargo, Georgia, while on a Title 14 CFR Part 91 personal flight. Visual meteorological conditions prevailed at the time and no flight plan was filed. The airplane was destroyed, and the private-rated pilot was fatally injured. The flight was originating at the time, and was en route to Crystal River, Florida.

Witnesses observed the airplane start the takeoff roll on a heading of 150 degrees, on a grass runway 2,200 feet long, and 200 feet wide. About 800 feet from the start of the takeoff roll the airplane became airborne about 8 feet off the ground, then went nose and left wing low into the runway where the left propeller struck the grass surface. Twenty propeller slash marks were found in the grass surface at the point in the runway where the witnesses saw the propeller strike the ground. The airplane then took off, climbed about 50 feet above the ground, turned left, struck trees, impacted the ground and caught fire.

According to a witness, who reported he had some aviation background, the airplane taxied to the takeoff point and the pilot did an engine run up. At this point the witness said, "...[the] aircraft's engine seemed to sputter (one), he took off from the [north] end. The aircraft took off but didn't seem to climb. The aircraft settled back down, propeller started hitting [the] ground, then aircraft got airborne again, made it over oak tree (note cross wind from pilot's right side). Struck pine tree and [I] saw fire ball."

The accident occurred during the hours of daylight about 30 degrees, 41 minutes north, and 082 degrees, 34 minutes west.

PERSONNEL INFORMATION

Information on the pilot is contained in this report on page 3, under First Pilot Information. The pilot's personal logbook showing his flight hours was not found. It was reported that his logbook was destroyed in the postcrash fire.

METEOROLOGICAL INFORMATION

Visual meteorological conditions prevailed at the time of the accident. Meteorological information is contained in this report on page 3, under Weather Information.

Witnesses described the winds as gusty and a direct crosswind from the right side of the runway to the left side, with occasional shifts in the wind from the northwest. The reported

winds at Valdosta, Georgia, about 40 miles west of the crash site were: winds from 220 degrees at 14 knots.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot, on May 8, 1998, at The Georgia State Crime Laboratory, Atlanta, Georgia, by Dr. Mark A. Koponen.

Toxicological tests were conducted at the Federal Aviation Administration, Research Laboratory, Oklahoma City, Oklahoma, and revealed, "no ethanol or drugs."

WRECKAGE AND IMPACT INFORMATION

The airplane impacted in a wooded area located less than 1/4 mile east of runway 15. The area of impact was level with 80-to 90-foot-tall pine trees surrounding the area. Several trees west of the impact area displayed impact damage. Freshly cut branches were found on the ground between the trees and the final impact point. There were several private homes in the area and none were damaged.

About 50 yards east of the broken trees an electric power line, that ran to a security light, was broken, and was reported to have been struck by the airplane. The ground east of the power line was covered with pine needles and grass. This area was burned about 60 feet around the crash site. The ground fire completely consumed the airplane, rendering most of the switches and instruments unreadable.

Examinations of the wreckage revealed that the fuel selectors were found positioned on the inboard tanks, and the cross feed was found in the "OFF" position. The flap mechanism was destroyed, but the indicator showed that the flaps were set in the 1/4 flap takeoff position. It was determined that the elevator and rudder trim settings were found in the neutral position. All three landing gears were found in transit and unlocked. Control continuity was confirmed to all the flight controls.

Both engines were visually examined at the crash site, and revealed that the engines displayed extensive fire damage to the accessory section, which precluded extensive examination of the right engine's accessories. The engines were removed from the crash site, and taken to a local shop for a more detailed examination. Examination of the left engine's, left magneto, revealed that the magneto produced spark when rotated. Examination of the spark plugs on both engines did not reveal any discrepancies. Inspection of the fuel injection system revealed several droplets of water were found within the line from the flow divider to the No. 4 nozzle, on the right engine. A trace of water was found at the No. 2 nozzle. There was a breach in the injector lines down stream of the servo. Both engines were partially disassembled and no discrepancies were found.

Examination of the left propeller revealed that both blades remained in the hub, and

displayed damage to the leading edge of blades. The blade identified as E18974, was bent aft about 90 degrees at a position about 1/3 the span and was twisted in the direction of rotation. The blade identified as E18991, was bent aft about 20 degrees at a position about 2/3 the span and was twisted in the direction of rotation.

Examination of the right propeller revealed that both blades remained in the hub. The blade identified as the first blade, was bent about 5 degrees at a position about mid-span. The blade identified as the second blade, was bent about 90 degrees at a position about 1/4 the span and was twisted in the direction of rotation. The right propeller appeared to be in the feathered position.

ADDITIONAL INFORMATION

Examination of runway 15 revealed that the turf runway was also used as fairway for a golf course. About 800 feet from the point that witnesses said they saw the airplane start its takeoff roll, propeller slash marks were found on the left side of the runway. The slash marks were found on a heading of 150 degrees, 20 marks were found, and were measured at a total distance of 453 feet, 3 inches. The distances between the first and second slash marks was 2 feet. The distances between the last two slash marks was 61 feet. Using the formula; Ground speed equals, propeller speed (rpm), times distance between cuts, times number blades, divided by 101 (feet), or $GS = \frac{2575 \text{ (takeoff rpm)} \times 2 \text{ feet} \times 2 \text{ Blades}}{101 \text{ feet}}$, it was determined that the ground speed of the airplane between the first slash mark and the second slash mark was 101.9 miles per hour.

The aircraft wreckage was released to Mr. W.M. Oettmeier, brother of the owner, on May 8, 1998.

Pilot Information

Certificate:	Private	Age:	68, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
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:	December 29, 1997
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	3500 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N4BN
Model/Series:	PA-23-250 PA-23-250	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	27-7654026
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	October 7, 1997 Annual	Certified Max Gross Wt.:	5200 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	6528 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	IO-540-C4B5
Registered Owner:	BERT OETTMEIR	Rated Power:	250 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:	FLORIDA ENERGY SERVICES INC	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	VLD	Distance from Accident Site:	40 Nautical Miles
Observation Time:	17:50 Local	Direction from Accident Site:	270°
Lowest Cloud Condition:	Scattered / 2000 ft AGL	Visibility	8 miles
Lowest Ceiling:	Broken / 3000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	14 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	26°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(GA25)	Type of Flight Plan Filed:	None
Destination:	CRYSTAL RIVER , FL (X31)	Type of Clearance:	None
Departure Time:	18:40 Local	Type of Airspace:	

Airport Information

Airport:	FARGO GA25	Runway Surface Type:	Grass/turf
Airport Elevation:	118 ft msl	Runway Surface Condition:	Dry
Runway Used:	15	IFR Approach:	None
Runway Length/Width:	2200 ft / 200 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:	30.679702,-82.559249(est)

Administrative Information

Investigator In Charge (IIC):	Yurman, Alan
Additional Participating Persons:	GEORGE JONES; ATLANTA , GA MICHAEL MCCLURE; ARLINGTON , TX EDWARD ROGALSKI; BELLEVIEW , FL
Original Publish Date:	February 16, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=38397

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](#).