Aviation Investigation Final Report

Location:	Blairsville, Georgia	**Accident Number:**	ERA22FA014
Date & Time:	October 13, 2021, 08:16 Local	**Registration:**	N9126P
Aircraft:	Piper PA-24-260	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot arrived at the airport for an instrument flight rules (IFR), cross-country flight to find a low ceiling and thick fog conditions prevailing. He waited for the weather to improve; however, he elected to depart when the ceiling was 200 ft and the visibility was ¼ mile in fog. The published departure procedure required a climb in visual conditions to cross the airport at or above 4,500 ft before continuing on course. Flight track data indicated that, immediately after takeoff, the pilot commenced a left turn to the northwest followed by a reverse turn to the right before the data ended. The airplane impacted trees and the bank of a lake, descending at a 22° angle to the ground. The airplane was destroyed, and the pilot was fatally injured. Witnesses reported that the area around the accident site was enshrouded in thick fog at the time of the accident. The pilot most likely entered instrument meteorological conditions (IMC) immediately after takeoff, experienced spatial disorientation, and lost control of the airplane. An examination of the wreckage revealed no evidence of a preexisting mechanical failure or anomaly.

Probable Cause and Findings

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

The pilot's decision to commence the flight in low IFR weather conditions, and making immediate turns after takeoff in IMC, resulting in spatial disorientation and a loss of airplane control.

Findings

Aircraft	Altitude - Not attained/maintained
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Fog - Decision related to condition
Personnel issues	Spatial disorientation - Pilot

Factual Information

History of Flight

Initial climb	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On October 13, 2021, at 0816 eastern daylight time, a Piper PA-24-260, N9126P, was destroyed when it was involved in an accident at Blairsville, Georgia. The private pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The instrument-rated pilot, who owned the airplane, filed an IFR flight plan from Blairsville Airport (DZJ) to Sebring Regional Airport (SEF), Sebring, Florida. At 0806, the pilot contacted air traffic control (ATC) and requested an IFR clearance from DZJ to SEF. A clearance void time of 0820 was issued, with instructions to contact Atlanta Center if not airborne by 0820, and to advise no later than 0825 of intentions. The pilot did not report airborne, and a search for the airplane was initiated. The DZJ airport manager subsequently called ATC to report that an airplane had crashed near DZJ.

According to automatic dependent surveillance – broadcast (ADS-B) data, the pilot took off on runway 8 about 0815 and immediately commenced a left turn to the northwest to a heading of about 300°, at which point the airplane began a right turn before the ADS-B data ended. The airplane impacted trees and terrain on a heading of 090° about 1.5 nautical miles north of the departure end of runway 8. ADS-B data revealed that the airplane reached an altitude of about 540 ft above the ground before the data ended.

The airport manager at DZJ reported that the pilot flew the airplane in the local traffic pattern the day before the accident; this was his normal procedure when he was preparing for a trip. He purchased about 29 gallons of fuel before the flight. The pilot had planned on a departure time of 0600; however, he could not see down the runway due to visible moisture, so he waited for the weather to improve. The pilot was in “very good spirits” before the flight.

A witness was outside his residence at the time of the accident and heard the airplane fly over. He recalled that it was so foggy, “you could hardly see the trees around you.” The airplane came over his house very low and close, but he could not see the airplane. He reported that the engine was running loud; it was not missing or sputtering. He heard the engine running all the way to impact. He heard two “pops” and believed they were the sounds of the airplane striking the trees, then a loud noise when the airplane hit the ground.

A second witness was at his residence working outside when he heard the airplane go by. He could not see the airplane due to the fog. The engine “went off and came back on,” then he

heard the crash. He stated that it was so foggy you could hardly see the lake. He then called 911.

Pilot Information

Certificate:	Private	**Age:**	71,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	BasicMed Without waivers/limitations	**Last FAA Medical Exam:**	July 14, 2017
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	March 13, 2021
Flight Time:	1271 hours (Total, all aircraft), 27 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N9126P
Model/Series:	PA-24-260	**Aircraft Category:**	Airplane
Year of Manufacture:	1966	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-4605
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	May 27, 2021 Annual	**Certified Max Gross Wt.:**	3100 lbs
Time Since Last Inspection:	44 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3392 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	C126 installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-540-E4A5
Registered Owner:	On file	**Rated Power:**	260 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KDZJ,1909 ft msl	**Distance from Accident Site:**	2 Nautical Miles
Observation Time:	08:15 Local	**Direction from Accident Site:**	164°
Lowest Cloud Condition:		**Visibility**	0.25 miles
Lowest Ceiling:	Overcast / 200 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	100°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.16 inches Hg	**Temperature/Dew Point:**	14°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Blairsville, GA	**Type of Flight Plan Filed:**	IFR
Destination:	Sebring, FL (SEF)	**Type of Clearance:**	IFR
Departure Time:		**Type of Airspace:**	Class G

According to the National Weather Service Surface Analysis Chart, a warm front stretched from Kansas eastward through Tennessee and Kentucky. A high-pressure system was located just south of the accident site in northwestern Georgia. The accident site was located south of the warm front in an area of light and variable surface winds.

Station models around the accident site depicted temperature-dew point spreads of 2°F or less, mostly cloudy skies, mist, and sky obscured noted at several of the station models.

The Atlanta Air Route Traffic Control Center (ARTCC) Center Weather Service Unit (CWSU) was responsible for the region around the accident site. Center Weather Advisory (CWA) 102, issued at 0727 and valid through the time of the accident, warned of patchy low IFR (LIFR) ceilings and visibilities in fog and mist with conditions expected to improve by 1000.

AIRMET advisory Sierra was valid at the time of the accident and forecast IFR conditions through 1100.

The Graphical Forecasts for Aviation (GFA) products issued before the accident flight indicated LIFR surface visibilities in fog, and a calm surface wind. The GFA cloud forecast applicable to the accident region indicated cirrus clouds above the accident site and lower cloud cover in northwestern Georgia and southeastern Tennessee.

The pilot requested and received weather information through ForeFlight at 0757. This information included the valid AIRMETs, PIREPs, GFA, and METARs.

Takeoff minimums and obstacle departure procedures for DZJ (an uncontrolled airport) required pilots to climb in visual conditions to cross the airport at or above 4,500 ft msl before proceeding on course. Weather minimums for the climb in visual conditions were 2,700 ft ceiling and 3 miles visibility. The DZJ weather at 0815 included a ceiling of 200 ft overcast with ¼ mile visibility in fog.

Airport Information

Airport:	BLAIRSVILLE DZJ	**Runway Surface Type:**	Asphalt
Airport Elevation:	1907 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	08/26	**IFR Approach:**	None
Runway Length/Width:	5004 ft / 100 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	34.88107,-83.99402(est)

The airplane struck tree tops before colliding with terrain on the banks of Nottely Lake. The wreckage debris field was about 265 ft long and about 30 ft wide. The measured descent angle from the tree breaks to the initial impact crater was 22°. An examination of the accident site and wreckage revealed that all major structural components of the airplane were accounted for. There was no fire.

The fuselage and cabin areas were found inverted. The fuselage wreckage was fragmented and destroyed by impact forces. The front seats were separated from their seat tracks and from the main wreckage. Impact damage to the nose landing gear was to the extent that the preaccident position could not be determined. Primary flight control cable continuity was established from the cockpit to the control surfaces.

The left wing was broken near the wing root and folded over onto the right wing. The left main landing gear was found in the retracted position; impact damage to the wing prevented the landing gear from extending from the wheel well. The left flap remained attached to the wing;

the preaccident position of the left flap could not be determined due to impact damage. The fuel cells were separated from the wing and shredded; no residual fuel was noted.

The right wing exhibited impact damage consistent with multiple tree strikes. The right main landing gear was found in the extended position. The right flap was torn and separated chordwise; its preaccident position could not be determined due to impact damage. The fuel cells were torn and shredded; no residual fuel was noted.

The engine was examined at the wreckage storage facility. The Nos. 2 and 4 cylinder heads had impact damage. Impact damage was also noted on the induction tubing, exhaust tubing, exhaust mufflers, and oil sump. The carburetor was fractured and separated.

The engine was suspended from a lift to facilitate further examination. The engine was rotated manually; compression and suction were attained on all six cylinders. A lighted borescope was used to examine the interior of the cylinders; no anomalies were noted. Both magnetos produced spark at all towers when rotated by hand. The oil suction screen and paper oil filter element were free of metallic debris. The vacuum pump remained attached to the engine. Internal examination of the pump revealed no anomalies.

The propeller remained attached to the engine crankshaft flange. One propeller blade was bent aft about 30° about mid-span. That blade exhibited leading edge gouges, chord-wise scoring, and longitudinal twisting toward the blade face. The other blade was turned about 90° in the hub and curved aft about 30°. That blade exhibited leading and trailing edge gouges, chord-wise scoring, and longitudinal twisting toward the blade face.

The airplane was equipped with a JPI EDM 700 engine monitor. The unit was forwarded to the National Transportation Safety Board Vehicle Recorders Laboratory for examination and download of the data. The unit was damaged; however, the engineer was able to recover some data. The last recorded segment of flight was about 15 minutes in duration and did not appear to be data from the accident flight, nor was it an entire flight beginning with engine start.

Examination of the engine and propeller did not reveal evidence of a mechanical malfunction or anomaly that would have precluded normal operation.

Medical and Pathological Information

According to the autopsy report from the Division of Forensic Sciences, Georgia Bureau of Investigation, the cause of death of the pilot was multiple generalized blunt force injuries and the manner of death was accident.

Toxicology testing performed by the Federal Aviation Administration (FAA) Forensic Sciences Laboratory detected ethanol in the pilot's liver tissue at 0.013 grams per hectogram (gm/hg); ethanol was not detected in his muscle tissue. The high blood pressure medication amlodipine was detected in his liver and muscle tissue; this medication is generally considered non-impairing.

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	John Pless; FAA/FSDO; Atlanta, GA Jon Hirsch; Piper Aircraft; Vero Beach, FL Mike Childers; Lycoming Engines; Williamsport, PA
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Investigation Class:	Class 3
Note:	
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