



Aviation Investigation Preliminary Report

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| Location: | Whitesville, KY | Accident Number: | ERA23FA380 |
| Date & Time: | September 27, 2023, 22:49 Local | Registration: | N3079M |
| Aircraft: | Piper PA28 | Injuries: | 2 Fatal |
| Flight Conducted Under: | Part 91: General aviation - Instructional | | |

On September 27, 2023, about 2249 central daylight time, a Piper PA-28-161, N3079M, was destroyed when it was involved in an accident near Whitesville, Kentucky. The flight instructor and student pilot were fatally injured. The airplane was operated by Eagle Flight Academy as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

According to the operator and the student pilot's regular flight instructor, the accident instructor and student pilot were on the return portion of a night cross-country flight, and it was their first time flying together. Automatic Dependent Surveillance – Broadcast (ADS-B) data indicated that the airplane departed Bowling Green-Woodhurst Airport (BWG), Bowling Green, Kentucky, around 2155. The airplane climbed to 4,500 ft msl and proceeded on a northwesterly course toward Owensboro/Daviess County Regional Airport (OWB), Owensboro, Kentucky, on a visual flight rules flight plan.

A post to the flight instructor's social media account at 2215 (about 34 minutes before the accident) depicted an annotated image from a mobile-device-based aviation navigation tool. The image depicted the airplane's current position northwest of Bowling Green, Kentucky, along with the planned route of flight to OWB. Weather radar imagery was also displayed in the image, which had been annotated with a circle around the flight track and nearby weather radar returns. Figure 1 shows an excerpted screen capture from the flight instructor's social media post.



Figure 1 - Screen capture of a post to the flight instructor's social media account. Note the airplane's current position (blue airplane icon), the planned route of flight (magenta line), the depicted weather radar imagery, and entire area circled in red.

According to preliminary air traffic control (ATC) voice communications, the pilot contacted ATC at 2244 and the controller advised the pilot of heavy to extreme precipitation at the airplane's nine o'clock position. ADS-B data showed that the airplane continued its northwesterly course and about two minutes later, the flight instructor requested an instrument flight rules (IFR) clearance. The controller issued the clearance and provided an easterly vector to assist the flight in getting out of the weather. The flight instructor stated to the controller that the airplane was "getting blown around like crazy," and the airplane's flight track showed a turn to the northwest followed by a right circling turn. The controller reiterated the heading of 090°, and the flight instructor responded that they were in "pretty extreme turbulence." The flight track showed a continuing right descending turn, and no further communications were received from the flight instructor. The airplane's last ADS-B position, at 2249, was at an altitude of 2,200 ft and about 1,000 ft northwest of the wreckage debris field, which spanned 25 acres in a hilly, densely wooded area.

All major components of the airplane, except for the left portion of the stabilator, were located in the debris field. The fuselage was separated aft of the rear seat, and the forward fuselage, including the cockpit, engine, and right wing, were located together in the most westerly portion of the debris field. The left wing, with aileron attached, was separated from the fuselage, and was located about 800 ft east of the forward fuselage. The flap was separated from the wing and located in the debris field. The right wing remained attached to the forward fuselage and was upside down with aileron and flap attached. The empennage with vertical stabilizer intact was located over a ridge about 200 ft north of the forward fuselage. The rudder was torn diagonally from top to bottom, with the lower portion remaining attached to the vertical stabilizer and the upper portion separated and located near the empennage in the debris field. The stabilator was torn chordwise just outboard of the hinges. The right side of the stabilator was located about 1,500 ft away from the forward fuselage in the most eastern edge of the debris field.

The wreckage was recovered to a salvage facility for further examination. The left wing's interior ribs exhibited signatures consistent with the aileron bellcrank having been pulled from its mount and drawn through the wing to the inboard end. The aileron bellcrank was broken with the balance cable arm remaining attached to the balance cable. The balance cable was continuous to the right wing. The remainder of the bellcrank was not located. The right wing aileron cables remained attached to the bellcrank and the bellcrank remained attached to the wing.

Examination of the engine revealed that the fixed-pitch propeller remained attached to the crankshaft propeller flange, and both propeller blades appeared straight. The engine displayed impact damage. The starter ring gear was impact fractured into several pieces, and the alternator was attached to the front of the engine by one bolt. The carburetor was impact separated at the bowl. Suction and compression were observed on all cylinders when the propeller was rotated by hand. Valvetrain continuity was confirmed throughout the engine and all rocker arms moved when the crankshaft was rotated. No anomalies were noted during examination of the engine cylinders with a lighted borescope. Both magnetos were tightly installed, and once removed and rotated using an electric drill, spark was produced at each ignition lead point. Liquid consistent in odor and color with 100LL aviation fuel drained from the boost pump when the filter cover was removed. Examination of the engine did not reveal any preaccident anomalies or malfunctions that would have precluded normal operation.

Aircraft and Owner/Operator Information

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| Aircraft Make: | Piper | Registration: | N3079M |
| Model/Series: | PA28 161 | Aircraft Category: | Airplane |
| Amateur Built: | | | |
| Operator: | On file | Operating Certificate(s) Held: | None |
| Operator Designator Code: | | | |

Meteorological Information and Flight Plan

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| Conditions at Accident Site: | IMC | Condition of Light: | Night |
| Observation Facility, Elevation: | OWB,403 ft msl | Observation Time: | 22:52 Local |
| Distance from Accident Site: | 15 Nautical Miles | Temperature/Dew Point: | 19°C /16°C |
| Lowest Cloud Condition: | Few / 2500 ft AGL | Wind Speed/Gusts, Direction: | 5 knots / 20 knots, 180° |
| Lowest Ceiling: | Broken / 5500 ft AGL | Visibility: | 10 miles |
| Altimeter Setting: | 30 inches Hg | Type of Flight Plan Filed: | VFR |
| Departure Point: | Bowling Green, KY (BWG) | Destination: | Owensburg, KY (OWB) |

Wreckage and Impact Information

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|----------------------------|---------|-----------------------------|----------------------|
| Crew Injuries: | 2 Fatal | Aircraft Damage: | Destroyed |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 2 Fatal | Latitude, Longitude: | 37.634366,-86.890423 |

Administrative Information

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| Investigator In Charge (IIC): | Spencer, Lynn |
| Additional Participating Persons: | Jonathon Hirsch; Piper Aircraft; Vero Beach, FL Stephen Travis; FAA/FSDO; Louisville, KY David Harsanyi; Lycoming Engines; Williamsport, PA |
| Investigation Class: | Class 3 |
| Note: | |