



Aviation Investigation Preliminary Report

Location:	Harlan, KY	Accident Number:	ERA23FA048
Date & Time:	November 3, 2022, 10:09 Local	Registration:	N84R
Aircraft:	Beech A36	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

On November 3, 2022, about 1009 eastern daylight time, a Beech A36 airplane, N84R, was destroyed when it impacted terrain at the Tucker-Guthrie Memorial Airport (I35) Harlan, Kentucky. The private pilot was fatally injured. The airplane was operated by the pilot as a personal flight conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91.

Review of preliminary Automatic Dependent Surveillance – Broadcast (ADS-B) data found that the airplane departed from Knoxville Downtown Island Airport (DKX), Knoxville, Tennessee, at 0932. The flight track continued northeast, and the airplane arrived into the I35 airport area about 1000. Subsequently, the flight track showed the airplane fly a tight left airport traffic pattern for runway 8. A total of three approaches were flown towards runway 8, with the final approach track ending at 1009:54 about .10 nautical mile from the runway 8 threshold.

Review of archived audio recordings of the I35 common traffic advisory frequency from LiveATC.net found that as the pilot entered the traffic pattern area he stated, “Harlan tucker guthrie bonanza 84 romeo is two and a half to the west will circle for landing Harlan Tucker Guthrie.” There were no further radio communications recorded. Figure 1 depicts the ADS-B flight track recorded around the I35 traffic pattern.

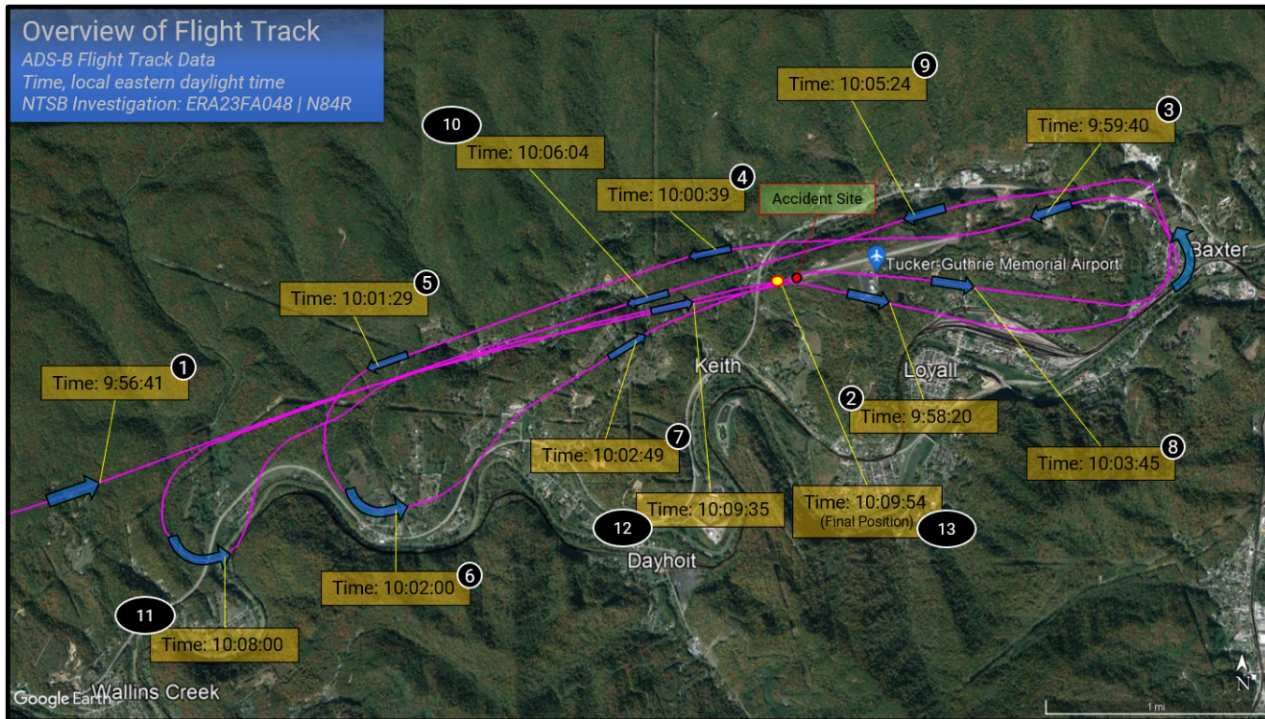


Figure 1: Overview of the flight track around the I35 airport

According to a pilot-rated witness that was at the I35 airport terminal, he heard what he believed to be the accident airplane complete two approaches to runway 8 about 1000. The witness never saw the airplane due to the visibility being severely restricted by morning fog. He characterized that the first approach seemed to be high, and the second approach sounded “really low”. For both passes the witness reported that the engine noise was a steady piston engine sound, with no noticeable change in power.

After the second pass, the engine sound became more distant, and he did not hear the accident airplane again, nor did he hear any sort of boom or the accident airplane’s eventual impact with terrain.

At the time of the accident, airport surveillance video showed fog that restricted visibility to about 175 ft.

The airplane impacted a ravine and steep rock wall about 50 ft below and 375 ft before the runway 8 threshold. All major portions of the airframe were located, and a post-crash fire consumed a majority of the cockpit, fuselage, and portions of the left wing. Figure 3 depicts a drone image showing the view of the final approach to runway 8 and the disposition of the wreckage.

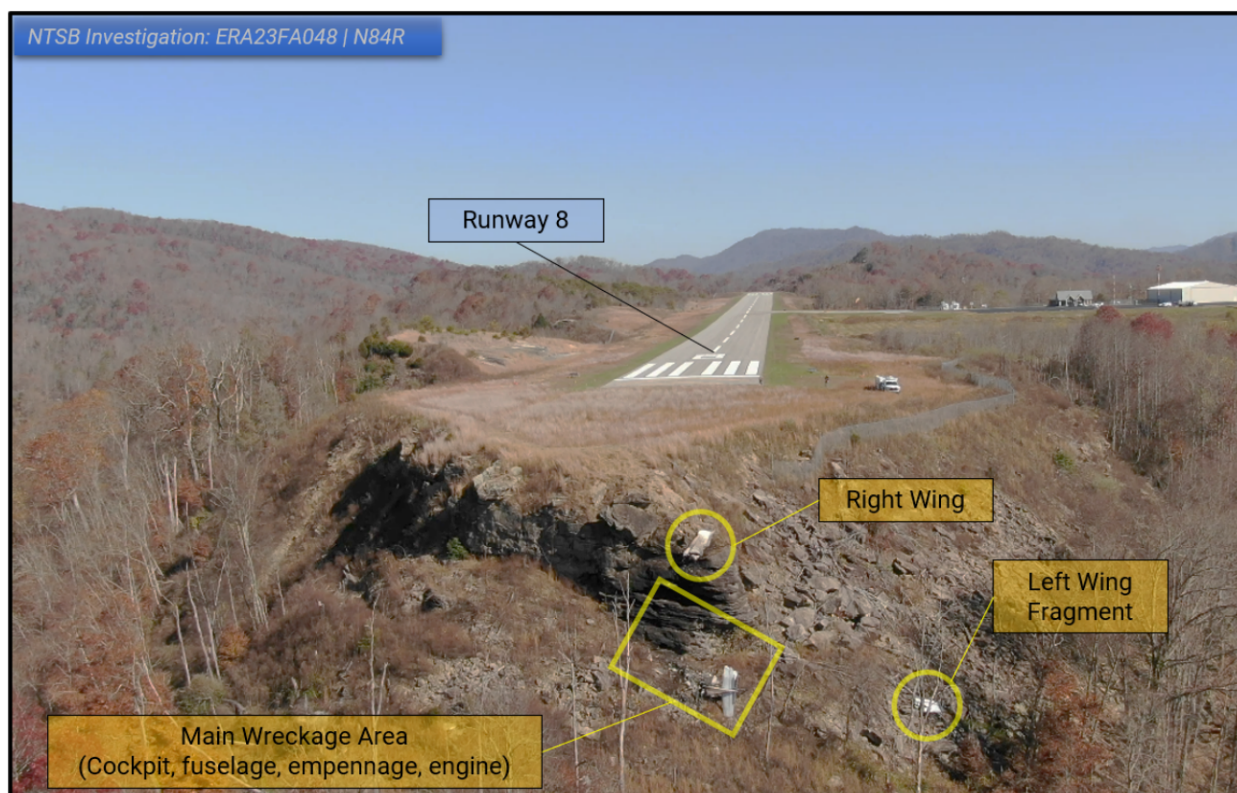


Figure 2: Drone image providing an overview of the approach to runway 8 and the disposition of the wreckage (Photo Courtesy of Kentucky State Police)

Flight control cable continuity was established from the elevator, rudder, and elevator trim tabs to the fire damaged forward cabin area. The left and right aileron control cable ends were identified in the forward cabin area and traced to the outboard wing areas where they were separated in tensile overload. Due to the impact and fire damage, the position of the flaps, landing gear, and fuel selector could not be determined.

The cockpit, switches, levers, and flight instruments were all severely damaged or entirely consumed by fire. It was not possible to obtain any instrument reading from the recovered instrumentation. The attitude indicator was disassembled, and its gyro and housing exhibited rotational scoring.

The engine had separated from its mount and the airframe. A large fracture hole was observed at the right forward area of the engine crankcase which was consistent with impact related damage. All propeller blades had separated from the propeller hub. Only one propeller blade was recovered at the accident site. The blade exhibited tip curling and leading edge gouging. All top spark plugs and lower Nos. 1, 3, and 5 spark plugs when compared to the Champion Check-A-Plug chart, exhibited a worn out, normal to severe condition.

The oil filter when removed and examined displayed no evidence of debris or metal contaminants. Both magnetos produced spark when rotated by hand. The fuel manifold was

safety wired and remained partially attached to the engine. When disassembled, its fuel filter screen was clear of debris and the manifold smelled of aviation gas. The engine could not be rotated by hand.

The vacuum pump remained attached to the engine accessory section. When the pump was partially disassembled, its gears were intact, and the unit appeared normal.

According to Federal Aviation Administration (FAA) airman records, the pilot held a private pilot certificate with ratings for airplane single-engine land and instrument airplane. He was issued a 3rd class medical certificate on November 9, 2015, where he reported a total flight time of 2,315 hours. He subsequently completed the FAA Basic Medical course on April 12, 2021.

According to preliminary FAA air traffic control (ATC) records, there was no known communication between the pilot and ATC, nor was there any flight plan opened or on-file for the accident flight.

At the time of the accident, a Notice to Air Mission (NOTAM) was in effect noting that all airport lighting was unserviceable (out of service).

The wreckage was retained for further examination.

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N84R
Model/Series:	A36	Aircraft Category:	Airplane
Amateur Built:			
Operator:	On file	Operating Certificate(s) Held:	None
Operator Designator Code:			

Meteorological Information and Flight Plan

Conditions at Accident Site:	IMC	Condition of Light:	Day
Observation Facility, Elevation:	I35,1552 ft msl	Observation Time:	10:15 Local
Distance from Accident Site:	0 Nautical Miles	Temperature/Dew Point:	8°C /8°C
Lowest Cloud Condition:	200 ft AGL	Wind Speed/Gusts, Direction:	/ ,
Lowest Ceiling:	Overcast / 200 ft AGL	Visibility:	0 miles
Altimeter Setting:	30.37 inches Hg	Type of Flight Plan Filed:	None
Departure Point:	Knoxville, TN (DKX)	Destination:	Harlan, KY (I35)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	On-ground
Total Injuries:	1 Fatal	Latitude, Longitude:	36.857933,-83.365427

Administrative Information

Investigator In Charge (IIC):	Gerhardt, Adam
Additional Participating Persons:	Sean B. Smith; FAA; Louisville, KY Peter J. Basile; Textron Aviation; Wichita, KS
Note:	