



Aviation Investigation Final Report

Location:	Frankfort, Kentucky	Accident Number:	ERA23LA363
Date & Time:	September 4, 2023, 10:31 Local	Registration:	N1WN
Aircraft:	Beech A36	Aircraft Damage:	Substantial
Defining Event:	Unknown or undetermined	Injuries:	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot and his passengers were at cruise flight when the engine stopped producing power and the propeller continued to windmill. The pilot performed a forced landing to an airport; however, when he realized that the airplane would not reach the runway he landed with the landing gear retracted on airport property, resulting in substantial damage to the airplane. The engine had accumulated fewer than 30 hours since factory overhaul.

Postaccident examination revealed that the inboard fuel vent lines were obstructed by insect nests; however, the engine ran at idle power settings during the postaccident engine test run. The engine was not tested at higher power settings due to the crankshaft being bent. Although it is possible that the obstructed fuel vents reduced fuel flow to the engine at higher power settings, the postaccident examination of the engine did not reveal evidence of preimpact malfunctions or failures that would have precluded normal operation; thus, the reason for the loss of engine power could not be determined.

Probable Cause and Findings

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

A total loss of engine power for reasons that could not be determined.

Findings

Not determined	(general) - Unknown/Not determined
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Factual Information

History of Flight

Enroute-cruise	Unknown or undetermined (Defining event)
Enroute-cruise	Off-field or emergency landing

On September 4, 2023, at 1031 eastern daylight time, a Beech A36, N1WN, was substantially damaged when it was involved in an accident near Frankfort, Kentucky. The pilot and three passengers were not injured. The flight was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot stated that he had performed a preflight inspection with no anomalies noted before departing Gary/Chicago International Airport (GYG), Gary, Indiana with his passengers for a flight to Greenwood County Airport (GRD), Greenwood, South Carolina. He began the flight with full fuel tanks and the fuel selector set to the right fuel tank. He flew for about an hour before switching to the left fuel tank. About 30-40 minutes later, while in cruise flight at 7,000 ft mean sea level, the engine stopped producing power and the propeller continued to windmill. The pilot disengaged the autopilot, advanced the throttle, and established best glide speed. He declared the emergency to air traffic control who advised him that the nearest airport was Capital City Airport (FFT), Frankfort, Kentucky, about 8 nm ahead. The pilot took no further remedial actions to restore engine power. When he realized that the airplane would not reach the runway at FFT, he landed with the landing gear retracted on airport property, where the airplane slid across a taxiway, struck a taxiway light, and came to rest in the grass.

Postaccident examination of the airplane revealed that the fuselage sustained lateral scraping and gouging along the belly skin, which was wrinkled aft of the firewall. The left wing was damaged consistent with ground contact. The engine mount structure was bent upward about 3°.

Postaccident examination of the fuel strainer screen and fuel strainer bowl revealed they were free from debris. Both wing fuel tanks were intact and contained fuel, with the fuel tank caps seated in place. The fuel was tested with water finding paste and was free from contamination. All fuel screens were free of obstructions. Although the inboard fuel vent tubes were obstructed by insect nests, air was passed through the remainder of the fuel vent system with no restriction to airflow noted, and testing of the fuel boost pump revealed that fuel flow was not restricted even with the restricted vent. All spark plugs showed normal wear when compared to a Champion Aerospace Aviation Check-A-Plug chart. Borescope examination of the cylinders revealed no anomalies. Thumb compression was achieved on all cylinders when the propeller was rotated by hand.

The impact-damaged propeller was replaced with a serviceable one and the ignition switch was bypassed since the ignition key was not present for the examination. The engine was started using the airplane's battery, which had retained its charge since the accident. The engine idled at 700 rpm. The right magneto was disconnected, and the engine was started on the left magneto only and ran normally. The right magneto was reconnected, and the left magneto was disconnected, and the engine was started on the right magneto only and ran normally. The crankshaft was slightly bent and produced vibration, so the engine was not operated above idle.

Examination of the airframe and engine revealed no evidence of any preimpact mechanical malfunctions or failures that would have precluded normal operation of the airplane.

The airplane was equipped with an engine data monitor; however, no data was recovered from the engine data monitor since the data recording was a user configurable option on the device and was not configured to record any data. Review of maintenance logbooks revealed that the engine had accumulated less than 30 hours since factory overhaul.

Pilot Information

Certificate:	Private	Age:	55, Male
Airplane Rating(s):	Single-engine sea	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:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	January 6, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 21, 2022
Flight Time:	1200 hours (Total, all aircraft), 850 hours (Total, this make and model), 1100 hours (Pilot In Command, all aircraft), 28 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Passenger Information

Certificate:	Age:	Female
Airplane Rating(s):	Seat Occupied:	Right
Other Aircraft Rating(s):	Restraint Used:	3-point
Instrument Rating(s):	Second Pilot Present:	No
Instructor Rating(s):	Toxicology Performed:	
Medical Certification:	Last FAA Medical Exam:	
Occupational Pilot: No	Last Flight Review or Equivalent:	
Flight Time:		

Passenger Information

Certificate:	Age:	Male
Airplane Rating(s):	Seat Occupied:	Left
Other Aircraft Rating(s):	Restraint Used:	3-point
Instrument Rating(s):	Second Pilot Present:	No
Instructor Rating(s):	Toxicology Performed:	
Medical Certification:	Last FAA Medical Exam:	
Occupational Pilot: No	Last Flight Review or Equivalent:	
Flight Time:		

Passenger Information

Certificate:	Age:	Female
Airplane Rating(s):	Seat Occupied:	Right
Other Aircraft Rating(s):	Restraint Used:	3-point
Instrument Rating(s):	Second Pilot Present:	No
Instructor Rating(s):	Toxicology Performed:	
Medical Certification:	Last FAA Medical Exam:	
Occupational Pilot: No	Last Flight Review or Equivalent:	
Flight Time:		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N1WN
Model/Series:	A36	Aircraft Category:	Airplane
Year of Manufacture:	1991	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	E-2681
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	January 13, 2023 Continuous airworthiness	Certified Max Gross Wt.:	3850 lbs
Time Since Last Inspection:	6 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1935 Hrs as of last inspection	Engine Manufacturer:	CONT MOTOR
ELT:	C91A installed, activated, did not aid in locating accident	Engine Model/Series:	IO-550 B1F
Registered Owner:	On file	Rated Power:	300 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	FFT,777 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	10:53 Local	Direction from Accident Site:	284°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	Unknown / Unknown
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	28°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Gary, IN (GYY)	Type of Flight Plan Filed:	IFR
Destination:	Greenwood, SC (GRD)	Type of Clearance:	IFR
Departure Time:	07:52 Local	Type of Airspace:	Class E

Airport Information

Airport:	Captial City Airport FFT	Runway Surface Type:	
Airport Elevation:	812 ft msl	Runway Surface Condition:	Vegetation
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	38.184158,-84.899539

Administrative Information

Investigator In Charge (IIC):	Spencer, Lynn
Additional Participating Persons:	George Whittington; FAA/FSDO; Louisville, KY Casey Love; Textron Aviation; Wichita, KS Chuck Cook; Continental Aerospace Technologies; Mobile, AL
Original Publish Date:	July 17, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=193003

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](#).