



Aviation Investigation Final Report

Location:	Harrison, Arkansas	Accident Number:	CEN23LA066
Date & Time:	December 19, 2022, 15:05 Local	Registration:	N8137P
Aircraft:	Beech A36	Aircraft Damage:	Substantial
Defining Event:	Unknown or undetermined	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported the airplane was topped off with fuel before the flight. He reported that the flight was normal, and he switched fuel tanks when he reached the initial approach fix for the instrument approach. The pilot then canceled his instrument clearance and continued a visual approach to the airport that was normal until he was on short final when the engine stopped producing power. The pilot stated he made one attempt to restore the engine power, which included switching fuel tanks. Unable to restore engine power, the pilot performed a forced landing to a field about one mile short of the runway. During the forced landing the airplane's fuselage was substantially damaged and a postimpact fire ensued, consuming a majority of the fuselage.

A postaccident examination of the engine revealed the engine had been exposed to the postimpact fire. Valvetrain continuity was established throughout the engine. The magnetos and spark plugs were functionally tested and performed normally. The cylinders were examined with a borescope and showed signs of normal wear. The engine fuel components were examined and appeared clear of debris. The remainder of the airplane's fuel system could not be tested due to the postimpact fire. All of the metal propeller blades had chordwise scratches observed on the cambered side as well as nicks and gouges on the leading edges indicative of the propeller producing some amount of power at impact. The engine examination did not reveal any malfunction or failure that would have precluded normal operation of the engine; therefore, the cause of the reported 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 loss of engine power for reasons that could not be determined.

Findings

Aircraft	(general) - Unknown/Not determined
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Factual Information

History of Flight

Approach	Unknown or undetermined (Defining event)
Post-impact	Fire/smoke (post-impact)

On December 19, 2022, about 1505 central standard time, a Beech A36 airplane, N8137P, was substantially damaged when it was involved in an accident near Harrison, Arkansas. The pilot and passenger were not injured. The airplane was operated under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a personal flight.

The pilot reported the airplane was topped off with fuel before departure. He reported that the flight was normal, and he switched fuel tanks when he reached the initial approach fix for the RNAV 18 approach at the Boone County Airport (HRO), Harrison, Arkansas. He stated that he canceled his instrument clearance as he had visual contact with the airport and the approach to the airport was normal until he was on short final, when the engine stopped producing power. The pilot stated he made one attempt to restore the engine power, which included switching fuel tanks. Unable to restore engine power, the pilot performed a forced landing to a field about one mile short of the runway. During the forced landing the airplane's fuselage was substantially damaged and a postimpact fire ensued, consuming a majority of the fuselage.

The airplane was transported to a secure facility for further examination. The engine was examined, and it exhibited signs of exposure to the postimpact fire. All 12 spark plugs were removed, bench tested, and all operated normally. The rocker box covers and engine-driven fuel pump were removed. The propeller was rotated by hand and thumb compression, valvetrain continuity, and crankshaft continuity to the accessories were all established. The cylinders were inspected using a borescope and were unremarkable. Both magnetos were removed and operated using a powered drill. The ignition harness suffered thermal damage and could not be tested. The fuel flow divider was inspected and found unremarkable. All the fuel nozzles were clear of debris. The fuel-air mixture unit was examined. All arms remained connected to the unit and the throttle arm moved freely. The fuel screen was removed and clean of debris. All the metal propeller blades had chordwise scratches observed on the cambered side as well as nicks and gouges on the leading edges.

Due to the postimpact fire, the airplane's fuel system could not be thoroughly examined.

Pilot Information

Certificate:	Private	Age:	44, Male
Airplane Rating(s):	Single-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:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	November 15, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N8137P
Model/Series:	A36	Aircraft Category:	Airplane
Year of Manufacture:	1991	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	E-2653
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	January 12, 2022 Annual	Certified Max Gross Wt.:	3650 lbs
Time Since Last Inspection:	12 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	5018 Hrs as of last inspection	Engine Manufacturer:	CONT MOTOR
ELT:	Installed	Engine Model/Series:	IO-550-B
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:	KHRO,1385 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	15:53 Local	Direction from Accident Site:	198°
Lowest Cloud Condition:		Visibility	
Lowest Ceiling:	Overcast / 5000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	110°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.21 inches Hg	Temperature/Dew Point:	3°C / -8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Kansas City, MO (KCMJ)	Type of Flight Plan Filed:	IFR
Destination:	Harrison, AR (KHRO)	Type of Clearance:	IFR
Departure Time:	13:39 Local	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	Unknown
Total Injuries:	2 None	Latitude, Longitude:	36.278243,-93.152444(est)

Administrative Information

Investigator In Charge (IIC):	Aguilera, Jason
Additional Participating Persons:	Danny Brickey; FAA Little Rock FSDO; Little Rock, AR
Original Publish Date:	March 28, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=106479

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](#).