



Aviation Investigation Final Report

Location:	Huntingdon, Tennessee	Accident Number:	ANC18LA013
Date & Time:	December 2, 2017, 13:30 Local	Registration:	N9730F
Aircraft:	Cessna 172R	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that shortly after takeoff and during the initial climb, about midfield of the departure runway, the engine lost total power. Unable to land on the remaining runway, he executed a 90° left turn and selected a grass field as an off-airport landing site. During the forced landing, the nose landing gear collapsed, and the airplane sustained substantial damage to the fuselage.

A postaccident examination and engine test run revealed no evidence of preimpact mechanical malfunctions or failures that would have precluded normal operation.

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 because a postaccident engine examination and testing revealed no preimpact mechanical malfunctions or failures that would have precluded normal operation.

Findings

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

History of Flight

Initial climb	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Landing gear collapse

On December 2, 2017, about 1330 central standard time, a Cessna 172 airplane, N9730F, sustained substantial damage during a forced landing following a total loss of engine power shortly after takeoff from Carroll County Airport (KHZD), Huntingdon, Tennessee. The airplane was registered to a private individual and operated by the pilot as a visual flight rules flight under the provisions of 14 *Code of Federal Regulations* Part 91 when the accident occurred. The private pilot was not injured. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that after completing the preflight inspection and the before takeoff checklist, he departed runway 01 from KHZD. Shortly after takeoff, during the initial climb, about midfield of the departure runway the engine lost all power. Unable to land on the remaining runway, he executed a 90° left turn, and selected a grass field as an off-airport landing site. During the forced landing the nose gear collapsed, and the airplane sustained substantial damage to the fuselage.

On January 9, 2018 the engine while still mounted on the accident airplane's airframe was operated under the direction of the NTSB IIC. The engine started normally without hesitation or stumbling in the observed RPM. The engine was not run at full power due to impact damage to the airframe sustained during the accident, but it was operated at various idle power settings and up to about 2000 rpm. During the engine test the magnetos were checked, and a drop of about 50 rpm was noted for both the left and right magnetos. No anomalies were noted that would have prevented normal operation and the production of rated horsepower.

The closest weather reporting facility was Carroll County Airport (KHZD), Huntingdon, Tennessee. At 1335, a METAR from KHZD was reporting, in part: wind calm; visibility, 10 statute miles; clouds and sky condition, clear; temperature, 64 °F; dew point 18° F; altimeter, 30.12 inches of mercury.

Pilot Information

Certificate:	Private	Age:	28,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:	
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	August 16, 2016
Occupational Pilot:	No	Last Flight Review or Equivalent:	September 19, 2017
Flight Time:	129.1 hours (Total, all aircraft), 118.6 hours (Total, this make and model), 98.9 hours (Pilot In Command, all aircraft), 15.1 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N9730F
Model/Series:	172R R	Aircraft Category:	Airplane
Year of Manufacture:	1997	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17280032
Landing Gear Type:	Tricycle	Seats:	
Date/Type of Last Inspection:	July 5, 2017 Annual	Certified Max Gross Wt.:	2299 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3822 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	C91A installed, not activated	Engine Model/Series:	IO360 SER A&C
Registered Owner:	On file	Rated Power:	160 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:	KHZD	Distance from Accident Site:	
Observation Time:	19:35 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.12 inches Hg	Temperature/Dew Point:	18°C / -8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Huntingdon, TN (HZD)	Type of Flight Plan Filed:	None
Destination:	Huntingdon, TN (HZD)	Type of Clearance:	None
Departure Time:	13:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	CARROLL COUNTY HZD	Runway Surface Type:	Asphalt
Airport Elevation:	496 ft msl	Runway Surface Condition:	Dry
Runway Used:	01	IFR Approach:	None
Runway Length/Width:	5507 ft / 100 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	36.089168,-88.463333(est)

Administrative Information

Investigator In Charge (IIC): Banning, David

Additional Participating Persons:

Original Publish Date: May 28, 2020

Last Revision Date:

Investigation Class: [Class](#)

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=96480>

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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](#).