



Aviation Investigation Final Report

Location:	Wildwood, Arkansas	Accident Number:	CEN22LA012
Date & Time:	October 8, 2021, 13:25 Local	Registration:	N677JD
Aircraft:	Stinson 108	Aircraft Damage:	Substantial
Defining Event:	Unknown or undetermined	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that after leveling off from a descent and applying power, the engine began to lose power intermittently. Shortly thereafter, the engine lost all power and could not be restored. During a forced landing, the airplane impacted a tree, resulting in substantial damage to the fuselage and left wing. About 10 minutes before the descent, the pilot switched from the right fuel tank to the left fuel tank, which contained about 13 gallons of fuel.

Although a postaccident examination revealed a worn piston and cylinder, no mechanical malfunctions or anomalies were discovered that would have precluded normal operation. Fuel was available to the engine as evidenced by the injector pump function, no air obstructions were noted, and both magnetos produced bright blue spark when tested.

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

Maneuvering	Unknown or undetermined (Defining event)
Maneuvering	Loss of engine power (total)

On October 8, 2021, about 1325 central daylight time, a Stinson 108 airplane, N677JD, sustained substantial damage when it was involved in an accident near Wildwood, Arkansas. The pilot sustained serious injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal cross-country flight.

The pilot reported that after he leveled from a descent and increased throttle, the engine “began to cough and cut out intermittently.” Shortly thereafter, the engine lost all power, and the propeller began to windmill. He immediately verified the mixture was full rich, applied the carburetor heat, and checked the magnetos, but could not restore engine power. He stated that about 10 minutes before the loss of engine power, he had switched from the right fuel tank to the left fuel tank, which had about 13 gallons of fuel remaining. The pilot executed a forced, power-off landing to a golf course, and the airplane impacted a tree, which resulted in substantial damage to the fuselage and left wing.

During a postaccident examination of the Franklin 6A4-150-B3 engine, fuel was ejected from the carburetor when the butterfly valve was manipulated. The top spark plug from the No. 2 cylinder was bright white, consistent with exposure to high heat, and the No. 5 cylinder and piston contained evidence of oil present past the cylinder rings. Both magnetos were removed and tested using a hand drill with all terminals producing bright blue spark. No obstructions were noted within the air induction system and the examination revealed no pre-impact mechanical malfunctions or anomalies that would have precluded normal operation.

Pilot Information

Certificate:	Private	Age:	18, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	July 27, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	November 12, 2020
Flight Time:	131 hours (Total, all aircraft), 95.4 hours (Total, this make and model), 44.5 hours (Pilot In Command, all aircraft), 20.8 hours (Last 90 days, all aircraft), 8.8 hours (Last 30 days, all aircraft), 2.4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Stinson	Registration:	N677JD
Model/Series:	108	Aircraft Category:	Airplane
Year of Manufacture:	1946	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	108-416
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	February 5, 2021 Annual	Certified Max Gross Wt.:	2150 lbs
Time Since Last Inspection:	27.4 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2154.3 Hrs as of last inspection	Engine Manufacturer:	Franklin
ELT:	C91 installed, activated, did not aid in locating accident	Engine Model/Series:	6A4-150-B3
Registered Owner:	On file	Rated Power:	150 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:	KLRF,311 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	12:56 Local	Direction from Accident Site:	213°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	31°C / 15°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Arkadelphia, AR	Type of Flight Plan Filed:	None
Destination:	Searcy, AR	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	35.017152,-92.070303

Administrative Information

Investigator In Charge (IIC):	Williams, David
Additional Participating Persons:	Andrew Finne; FAA; Little Rock, AR
Original Publish Date:	March 22, 2023
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=104081

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