



Aviation Investigation Final Report

Location:	Hurst, Illinois	Accident Number:	CEN22LA361
Date & Time:	August 3, 2022, 10:10 Local	Registration:	N255CP
Aircraft:	Vans RV-10	Aircraft Damage:	Substantial
Defining Event:	Unknown or undetermined	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Flight test		

Analysis

About a year before the accident, the pilot replaced the carburetor as a troubleshooting effort because the airplane had sustained previous loss of engine power events that he attributed to carburetor icing. About two weeks before the accident, the pilot completed an annual inspection and engine condition inspection. Before the post-maintenance test flight, he completed an engine ground run with no anomalies noted.

After takeoff, he climbed the airplane to 8,100 ft above ground level (agl), flew for a few minutes and confirmed that all instruments showed normal indications. The pilot reduced engine power and started a slow descent to 2,600 ft agl. When he leveled the airplane and advanced the throttle the engine ran rough, so he applied carburetor heat and turned on the fuel boost pump, but the engine roughness did not improve.

The pilot maneuvered for an emergency landing and landed hard in a bean field. The airplane sustained substantial damage to the engine mounts and fuselage. After the accident, the left fuel tank contained 9 gallons of fuel and the right tank contained about 19 gallons of fuel. The carburetor bowl also contained fuel. The pilot stated that the airplane had not been flown for about a year and that the fuel in the fuel tanks at the time of the accident was the same fuel from a year ago.

Neither the engine nor the airplane was made available for a detailed examination. The recorded engine data did not reveal a reason for the loss of engine power. It is possible that the loss of engine power was due to carburetor icing that could not be completely alleviated with the use of carburetor heat. 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 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)
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On August 3, 2022, about 1010 central daylight time, a Vans RV-10 airplane, N255CP, was substantially damaged when it was involved in an accident near Hurst, Illinois. The pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 post-maintenance test flight.

The pilot, who was also the airplane owner, reported that he finished an annual inspection and engine condition inspection about two weeks earlier, on July 20, 2022, and intended to complete a test flight before the airplane was sold. He completed an extensive engine ground run with no anomalies noted. After takeoff, he climbed the airplane to 8,500 ft mean sea level (msl) (about 8,100 ft agl), flew for a few minutes and confirmed that all instruments showed normal indications. He reduced engine power and started a slow descent to 3,000 ft msl (2,600 ft agl). When he leveled the airplane and advanced the throttle, “the engine started running rough,” so he applied carburetor heat and turned on the fuel boost pump, but the engine roughness did not improve. He maneuvered for an emergency landing but was unable to glide to the nearby grass strip. The airplane landed hard in a bean field and came to rest upright. The pilot stated that after the accident, the left fuel tank contained 9 gallons of fuel and the right tank contained about 19 gallons of fuel. The carburetor bowl also contained fuel.

The responding Federal Aviation Administration (FAA) inspectors reported that the airplane sustained substantial damage to the engine mounts and fuselage. Before the FAA was notified of the accident and could examine the airplane, the pilot had already recovered the airplane to a hangar, removed the engine cowling, drained the fuel tanks, checked the carburetor bowl, and pulled the ignition leads and spark plugs.

The FAA inspectors interviewed the pilot, who stated that he could not remember exactly when the engine stopped running, but that the propeller stopped rotating about 300 ft agl and that he did not shut down the engine. The pilot stated that the airplane had not been flown for about a year and that the fuel in the fuel tanks was the fuel that had been in it when it was flown last. A new carburetor was installed in June 2021, because the pilot previously had similar engine issues that resulted in a loss of power. The pilot thought the engine issues were due to carburetor icing.

The airplane was equipped with a Dynon electronic flight instrument system (EFIS) and its recorded data was provided for the investigation by the pilot.

The airplane was operating in an environment conducive for carburetor icing at glide and cruise power.

The airplane was not made available for a detailed examination and the pilot did not submit the National Transportation Safety Board Pilot/Operator Aircraft Accident/Incident Report Form 6120.1.

Pilot Information

Certificate:	Private	Age:	84,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	November 8, 2016
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Vans	Registration:	N255CP
Model/Series:	RV-10	Aircraft Category:	Airplane
Year of Manufacture:	2014	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	40485
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	July 20, 2022 Annual	Certified Max Gross Wt.:	2700 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	77.8 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	O-540-A1C5
Registered Owner:	SIERRA PAPA DELTA LLC	Rated Power:	250 Horsepower
Operator:	SIERRA PAPA DELTA LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KMDH, 401 ft msl	Distance from Accident Site:	6 Nautical Miles
Observation Time:	10:52 Local	Direction from Accident Site:	230°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	14 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	31°C / 25°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Carbondale, IL (KMDH)	Type of Flight Plan Filed:	None
Destination:	Carbondale, IL (KMDH)	Type of Clearance:	VFR
Departure Time:	10:15 Local	Type of Airspace:	Class G

Airport Information

Airport:	Dury Estates Airpark IL71	Runway Surface Type:	
Airport Elevation:		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:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	37.81808,-89.152368

Administrative Information

Investigator In Charge (IIC):	Lindberg, Joshua
Additional Participating Persons:	Nick Loftus; Federal Aviation Administration; Springfield, IL Justin Skelton; Federal Aviation Administration; Springfield, IL
Original Publish Date:	April 11, 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=105668

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](#).