



# Aviation Investigation Final Report

<b>Location:</b>	Jasper, Georgia	<b>Accident Number:</b>	ERA24LA158
<b>Date &amp; Time:</b>	March 29, 2024, 11:41 Local	<b>Registration:</b>	N387E
<b>Aircraft:</b>	JMMT LLC VANS RV9A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel starvation	<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Flight test		

## Analysis

The purpose of the flight was for the private pilot/builder of the experimental amateur-built airplane to complete the second flight of the phase one flight testing. The pilot planned to remain near the airport and obtain engine performance data. The pilot reported that after a normal takeoff, he maneuvered in the area and observed normal engine performance, and he then descended to return to the airport traffic pattern.

The pilot reported that while approaching a left downwind for landing, he observed the engine rpm decline and the Electronic Flight Instrument System (EFIS) timer announced, "change fuel tank." The pilot engaged the fuel boost pump and switched from the left to right fuel tank, which was followed by a complete loss of engine power. The pilot elected to land in a field, and during the landing roll, the left wing struck a utility pole. The fuselage and left wing sustained substantial damage.

Examination of the engine found no evidence of preimpact mechanical malfunction or failure that would have precluded normal operation and fuel was found in the right tank after the accident. During examination of the fuel system and selector, the right tank fuel line b-nut exhibited low torque, which could have resulted in a total loss of power due to fuel starvation. Although it is possible that the loose B-nut at the fuel selector allowed air into the fuel line when the pilot switched to the right fuel tank, due to the impact damage sustained to other areas of the fuel lines, and lack of recorded data from the multifunction display, the reason for the fuel starvation could not be determined.

## Probable Cause and Findings

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

The total loss of engine power due to fuel starvation for reasons that could not be determined due to impact-related damage.

## Findings

Aircraft	Fuel - Unknown/Not determined
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# Factual Information

## History of Flight

Prior to flight	Aircraft inspection event
Enroute-descent	Fuel starvation (Defining event)
Landing	Collision with terr/obj (non-CFIT)

On March 29, 2024, about 1141 eastern daylight time, an experimental amateur-built Vans RV9A airplane, N387E, was substantially damaged when it was involved in an accident near Pickens County Airport (JZP), Jasper, Georgia. The private pilot sustained serious injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 test flight.

A part-owner/builder of the airplane stated that the the accident flight was the second flight during the phase one flight testing and the airplane had accumulated about one hour of total time. The accident pilot, who was also a builder of the airplane stated that the purpose was to remain near the JZP airport and obtain engine performance data. The pilot reported that after a normal takeoff, he maintained 4,000 ft mean sea level near the airport to observe engine performance. The observations were unremarkable, and he then descended to return to the airport traffic pattern.

The pilot reported that while approaching a left downwind for runway 34, he observed engine rpm decline and the EFIS timer announced, “change fuel tank.” The pilot subsequently engaged the fuel boost pump and switched from the left to right fuel tank, which was followed by a complete loss of engine power. The pilot elected to land in a field, and during the landing the left wing struck a utility pole. The pilot recalled that the boost pump remained running after the forced landing, and he subsequently shut the pump off.

According to the part-owner and builder of the airplane, who was monitoring the test flight operations from the ground, the preflight was normal and the pilot radioed to him after about 15 minutes of flying that everything was proceeding normally. After hearing an emergency locator transmitter (ELT) sound over the radio, he was able to locate the accident site within a few minutes. He observed that the fuel selector was selected to the right tank and during recovery operations, about 2.5 gallons of fuel was drained from the right wing, with additional fuel in the grass surrounding the accident site.

According to a Federal Aviation Administration (FAA) inspector who examined the airplane at the accident site, the airplane impacted the utility pole and the left wing was partially separated from the fuselage. The left wing and fuselage sustained substantial damage.

Examination of the airplane and engine found that the fuel strainer contained about 4 ounces of clean fuel. The mechanical fuel pump was tested and found operational. The fuel vent in the right wing tank was clear and vented normally. The inspector removed the fuel selector and discovered that the right fuel tank line "B" nut (located at the fuel selector) exhibited low torque. There was no evidence of fuel staining or leaking around the fuel selector. The fuel line from the fuel selector to the engine was dislodged from impact damage.

An engine test run was attempted. Due to impact damage, the starter would only partially engage; however, the engine exhibited continuity and the Nos. 1 and 4 cylinders fired during the test.

Review of the carburetor icing probability chart found that the engine was not at risk for icing during the flight.

The airplane was equipped with an Advanced Flight Systems AF-5600 multifunction display. Data was downloaded from the device; however, the files contained no flight data.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	82, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	BasicMed With waivers/limitations	<b>Last FAA Medical Exam:</b>	April 26, 2023
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	June 17, 2022
<b>Flight Time:</b>	863 hours (Total, all aircraft), 2 hours (Total, this make and model), 2 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	JMMT LLC	<b>Registration:</b>	N387E
<b>Model/Series:</b>	VANS RV9A NO SERIES	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2024	<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	90387
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	January 24, 2024 Condition	<b>Certified Max Gross Wt.:</b>	1750 lbs
<b>Time Since Last Inspection:</b>	1 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1 Hrs	<b>Engine Manufacturer:</b>	Lycoming Experimental Rebuilt
<b>ELT:</b>	C91A installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	O-320
<b>Registered Owner:</b>	JMMT LLC	<b>Rated Power:</b>	160 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	CNI,1221 ft msl	<b>Distance from Accident Site:</b>	10 Nautical Miles
<b>Observation Time:</b>	11:35 Local	<b>Direction from Accident Site:</b>	157°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots / None	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	310°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.24 inches Hg	<b>Temperature/Dew Point:</b>	16°C / -3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Jasper, GA	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Jasper, GA	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Pickens County Airport JZP	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1535 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	16/34	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5000 ft / 100 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Serious	<b>Latitude, Longitude:</b>	34.468555,-84.495474(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gerhardt, Adam
<b>Additional Participating Persons:</b>	Mike Jones; FAA/FSDO; Atlanta, GA
<b>Original Publish Date:</b>	January 16, 2025
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=194008">https://data.nts.gov/Docket?ProjectID=194008</a>

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](#).