Aviation Investigation Final Report

Location:	White Plains, Alabama	**Accident Number:**	CEN20FA009
Date & Time:	October 20, 2019, 11:30 Local	**Registration:**	N249BW
Aircraft:	Vans RV-8	**Aircraft Damage:**	Destroyed
Defining Event:	Unknown or undetermined	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot departed on a cross-country flight. The flight track data terminated over 50 miles before the accident site, but showed the airplane flying at an altitude about 1,050 ft mean sea level (msl). The airplane impacted remote, mountainous terrain at an elevation about 1,700 ft msl and was destroyed. A review of weather information from a nearby airport indicated cloud ceilings about 1,600 ft msl, and an AIRMET for instrument flight rules conditions was valid for the area of the accident site at the time of the accident. Based on the loss of flight track data sources and the weather data, it is likely the pilot was flying at a lower altitude to avoid the low ceilings present on the route of flight. There was no record of the pilot obtaining preflight weather information from an access-controlled source.

Examination revealed there were no preimpact mechanical malfunctions or failures with the airframe or engine that would have precluded normal operation.

An autopsy revealed an area of stenosis in one cerebral artery, which put the pilot at increased risk for a stroke; however, there was no evidence in the autopsy that he experienced a stroke. In addition, the area of fibrosis (scarring) on the pilot's heart had the potential to cause an arrhythmia, which could cause sudden palpitations or fainting. There was no evidence in the pilot's medical records of any such event occurring in the past, but the evidence available was insufficient to indicate whether pilot incapacitation due to a medical event may have contributed to the accident.

The reason for the impact with terrain could not be determined based on the available evidence.

Probable Cause and Findings

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

Impact with terrain for reasons that could not be determined based on the available information.

Findings

Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Enroute	Low altitude operation/event
Enroute	Unknown or undetermined (Defining event)

On October 20, 2019, about 1130 central daylight time, an experimental Vans RV-8 airplane, N249BW, was destroyed when it was involved in an accident near White Plains, Alabama. The airline transport pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to a family member, the pilot was flying from Northwest Alabama Regional Airport (MSL), Muscle Shoals, Alabama, to Big T Airport (64GA), Senoia, Georgia, following a family visit. The family member reported that the pilot planned a direct flight to 64GA with no intermediate stops. After not hearing from the pilot by mid-afternoon, concerned family members contacted the Federal Aviation Administration (FAA) and the U.S. Air Force Rescue Coordination Center. A search was initiated for the missing airplane and the wreckage was located about 2230 by first responders in remote, mountainous terrain.

The airplane was equipped with Automatic Dependent Surveillance-Broadcast (ADS-B), and ADS-B data was provided by the FAA for the accident flight. The airplane departed MSL about 0950 and traveled southeast for about 63 miles, where ADS-B data terminated at about 1011, about 66 miles northwest of the accident site at an indicated mode C altitude of 1,300 feet above mean sea level (msl). Additional track data continued for about 13 additional miles until the track data terminated about 1015, about 53 miles northwest of the accident at an indicated mode C altitude of 1,050 ft msl.

Pilot Information

Certificate:	Airline transport; Flight engineer	**Age:**	70,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	4-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	September 7, 2017
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 13177 hours (Total, all aircraft)		

The pilot was a retired airline captain and held an experimental aircraft repairman certificate for the accident airplane. The pilot's flight logs were not available for review and his experience in the accident airplane could not be determined.

The pilot's FAA second-class medical certificate expired on September 30, 2019; the pilot had completed the requirements for operation under BasicMed on September 25, 2019.

Aircraft and Owner/Operator Information

Aircraft Make:	Vans	**Registration:**	N249BW
Model/Series:	RV-8 NO SERIES	**Aircraft Category:**	Airplane
Year of Manufacture:	2010	**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	82872
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	October 3, 2018 Condition	**Certified Max Gross Wt.:**	1800 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	310.9 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming Engines
ELT:	C91A installed, not activated	**Engine Model/Series:**	IO-360-A1B6
Registered Owner:	Woodland Bend Of The River, Inc.	**Rated Power:**	200 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

The airplane was built by the pilot from a kit. A review of the airplane's maintenance records revealed no evidence of any uncorrected mechanical discrepancies with the airframe and engine.

According to FAA Advisory Circular 90-109A, Transition to Unfamiliar Aircraft, Vans RV-8 airplanes are classified as, "high-inertia and/or low-drag" with "light control forces and/or rapid airplane response."

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KANB,600 ft msl	**Distance from Accident Site:**	12 Nautical Miles
Observation Time:	11:02 Local	**Direction from Accident Site:**	214°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Overcast / 1000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:		**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.97 inches Hg	**Temperature/Dew Point:**	17°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Muscle Shoals, AL (MSL)	**Type of Flight Plan Filed:**	None
Destination:	Senoia, GA (64GA)	**Type of Clearance:**	Unknown
Departure Time:	10:00 Local	**Type of Airspace:**	Class G

No air traffic control services were provided during the flight. There was no record of the pilot having requested or received a weather briefing from the FAA-contract Automated Flight Service Station provider, Leidos, or from ForeFlight. What weather information the pilot may have reviewed before departure could not be determined.

Recorded weather information from an airport about 12 nautical miles south-southeast of the accident site indicated an overcast ceiling about 1,600 ft msl. An AIRMET for instrument flight rules conditions was active for the area of the accident site at the time of the accident.

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	33.749721,-85.723335(est)

The airplane came to rest on a heading of 123° on a 50° incline in heavily wooded terrain on a north-to-south oriented mountain ridge at an elevation about 1,700 ft msl. The debris field was about 30 ft wide.

From the initial tree impact point, about 75 ft high, to the initial ground impact point, various portions of the left and right wing were scattered to where the empennage came to rest, about 34 ft from the initial ground impact point. The initial tree impact point to the initial ground impact point was 193 ft. All major structural components were accounted for at the accident site and flight control continuity was established. The two wing fuel tanks were breached and the onboard fuel level at the time of the impact was undetermined. There was no evidence of a bird strike.

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

Medical and Pathological Information

According to the autopsy performed by the Alabama Department of Forensic Sciences, the cause of death was multiple blunt-force trauma, and the manner of death was accident. The right posterior cerebral artery showed 60-70% atherosclerotic stenosis, but the brain tissue showed no areas of acute or chronic scarring. Although visual inspection of the heart was unremarkable, the microscopic evaluation of the right ventricle showed mild to moderate interstitial and replacement fibrosis, which the pathologist found concerning for arrhythmogenic right ventricular cardiomyopathy.

Toxicology testing performed by the FAA's Forensic Sciences Laboratory identified only rosuvastatin, a cholesterol lowering drug, in the pilot's blood and urine.

Records from the pilot's primary care physician for the three years before the accident indicated longstanding high cholesterol and intermittent treatment for hypertension. At his last visit with his physician, one month before the accident, the pilot was being treated for high blood pressure with lisinopril and for high cholesterol with rosuvastatin. Neither of these drugs are considered impairing. The pilot underwent a stress test via his cardiologist in the preceding year, which was negative. The pilot had some microscopichematuria (blood in his urine) which was thought to be due to kidney stones that were in his kidney and were not moving.

Administrative Information

Investigator In Charge (IIC):	Hodges, Michael
Additional Participating Persons:	George Castleberry; FAA Alabama & NW Florida FSDO; Birmingham, AL Michael Childers; Lycoming Engines; Williamsport, PA
Original Publish Date:	August 26, 2021
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=100456