



# Aviation Investigation Final Report

---

<b>Location:</b>	Chandler, Texas	<b>Accident Number:</b>	CEN23FA016
<b>Date &amp; Time:</b>	October 21, 2022, 14:30 Local	<b>Registration:</b>	N86GV
<b>Aircraft:</b>	VANS AIRCRAFT INC RV-12	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

---

## Analysis

The pilot departed the airport for an unknown destination. ADS-B data captured the accident flight as it departed from the runway and climbed to about 5,500 ft mean sea level (msl). It then entered a descending right turn with increasing speed and impacted shallow water on the bank of a lake.

Examination of the airframe and engine did not reveal any preimpact anomalies that would have precluded normal operation. A gear marking in the engine case was consistent with the engine producing power at the time of the accident.

The pilot had a documented history of angioplasty and hypertension, and toxicological evidence indicated he had used medications consistent with treating cardiovascular disease. He likely was at increased risk of a sudden impairing or incapacitating cardiovascular event. An autopsy was conducted on the pilot; however, due to the condition of the remains, a thorough examination could not be conducted. It could not be determined if an impairing condition or natural disease contributed to the accident.

Some, or all, of the ethanol detected by toxicological testing may have been from postmortem production; however, the limited results also do not exclude the possibility of ethanol consumption or related impairment. Additionally, the pilot's toxicology results indicate that he had used multiple medications (including hydrocodone, citalopram, zolpidem, gabapentin, and amitriptyline) that are potentially impairing and/or potentially indicative of other medical conditions (such as depression, chronic pain, or medication-treated diabetes) that could have impairing effects on performance.

The airplane's descending right turn, along with the near-vertical impact signatures, were consistent with an inflight loss of control from which the pilot was unable to recover.

## Probable Cause and Findings

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

The loss of control inflight for reasons that could not be determined.

### Findings

<b>Aircraft</b>	(general) - Unknown/Not determined
-----------------	------------------------------------

## Factual Information

### History of Flight

<b>Enroute-climb to cruise</b>	Loss of control in flight (Defining event)
--------------------------------	--

On October 21, 2022, about 1430 central daylight time, a Vans RV-12 airplane, N86GV, was substantially damaged when it was involved in an accident near Chandler, Texas. The pilot was fatally injured. The airplane was operated under the provisions of Title 14 *Code of Federal Regulations (CFR)* Part 91 as a personal flight.

Before the flight, ADS-B data captured the airplane as it flew from the area of Round Rock, Texas, towards the Tyler Pounds Regional Airport (TYR), Tyler, Texas. At the airport, the pilot added 3.9 gallons of fuel to the airplane to be fully fueled.

ADS-B data captured the accident flight as it departed from runway 22 at TYR about 1423 for an unknown destination. The data showed the airplane climbed to about 5,500 ft msl and entered a descending right turn with increasing speed.

The airplane impacted shallow water on a bank of Lake Palestine.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	79, 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>	Unknown
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	None	<b>Last FAA Medical Exam:</b>	August 12, 1999
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	June 28, 2022
<b>Flight Time:</b>	(Estimated) 800 hours (Total, all aircraft)		

According to Federal Aviation Administration (FAA) records, the pilot's last FAA medical certificate was issued on August 12, 1999, and was not valid after 2001. Under the provisions of Title 14 *CFR* 61.23, the pilot was operating the light sport airplane using his driver's license.

A complete pilot logbook was not recovered for the pilot. In 2018, the pilot submitted flight experience of 1,717 total hours to his insurance carrier. In 1999, on the pilot's last application for an FAA medical certificate, he reported his total flight experience of 800 hours.

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	VANS AIRCRAFT INC	<b>Registration:</b>	N86GV
<b>Model/Series:</b>	RV-12	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2013	<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental light sport (Special)	<b>Serial Number:</b>	120384
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	August 26, 2022 Condition	<b>Certified Max Gross Wt.:</b>	1320 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	203.1 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>		<b>Engine Model/Series:</b>	912ULS
<b>Registered Owner:</b>	BLACKWELL JIMMIE A	<b>Rated Power:</b>	100 Horsepower
<b>Operator:</b>	BLACKWELL JIMMIE A	<b>Operating Certificate(s) Held:</b>	None

According to records on file with the FAA, the pilot purchased the airplane in August, 2021.

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KTYR,551 ft msl	<b>Distance from Accident Site:</b>	7 Nautical Miles
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	42°
<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>	11 knots / 18 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	210°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.89 inches Hg	<b>Temperature/Dew Point:</b>	30°C / 12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Tyler, TX (KTYR)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	14:24 Local	<b>Type of Airspace:</b>	Class E

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<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 Fatal	<b>Latitude, Longitude:</b>	32.265383,-95.497824(est)

Impact signatures were consistent with a near-vertical impact. The engine was separated from the airframe during recovery from the lake.

Examination of the airframe revealed nearly symmetrical accordion crushing on both wings. The engine compartment was crushed rearward toward the cockpit and wing spar. Buckling and crushing was noted along the empennage.

All primary flight controls were accounted for at the accident site. The left aileron was partially torn near the outboard hinge. The right aileron remained attached to the right wing. The rudder remained attached to the vertical stabilizer. The stabilator was crushed and deformed. Flight control continuity could not be established due to the extent of the impact damage.

An examination of the engine did not detect any preimpact anomalies. Disassembly of the gearbox indicated that a gear within the gearbox had made contact with the crankcase, which resulted in a rotational smearing of metal.

## **Medical and Pathological Information**

---

An autopsy was conducted by American Forensics, Mesquite, Texas, as authorized by the Justice of the Peace, Henderson County, Texas. Due to the condition of the pilot's remains, a thorough autopsy to evaluate for natural disease could not be performed. The autopsy ruled the cause of death to be extensive blunt force trauma. The manner of death was ruled an accident.

Toxicology testing performed by the FAA's Forensic Sciences Laboratory identified ethanol at 0.054 g/dL in one blood specimen and 0.022 g/dL in another blood specimen, at 0.049 g/hg in kidney tissue, and at 0.075 g/hg in muscle tissue. Hydrocodone and its metabolites dihydrocodeine and hydromorphone were detected in blood and liver tissue. Citalopram and its metabolite n-desmethylcitalopram was detected in blood and lung tissue. Zolpidem and gabapentin were detected in blood and liver tissue, as were amitriptyline and its metabolite nortriptyline. Glipizide, atorvastatin, valsartan, carvedilol, and clopidogrel also were detected in blood and liver tissue. Tamsulosin was detected in liver tissue. Sildenafil was detected in blood. The samples submitted for testing were marked putrefied.

Of the substances identified in toxicology testing, there were several medications which would have required a Special Issuance or were completely unacceptable for use by pilots. By FAA medical standards, the side effects, alone and combined, posed a hazard to flight safety and may have contributed to the accident.

A review of the pilot's medical history revealed that he did not hold an FAA medical certificate at the time of the accident. The pilot's prior Authorization for Special Issuance of Medical Certification for a history of angina, angioplasty, and medication-controlled hypertension had expired.

## **Additional Information**

---

Several people interacted with the pilot before his departure; none reported any unusual behavior.

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Aguilera, Jason
<b>Additional Participating Persons:</b>	Daniel Monte; FAA FSDO; Irving, TX
<b>Original Publish Date:</b>	October 3, 2024
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=106174">https://data.nts.gov/Docket?ProjectID=106174</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](#).