



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Big Pine Key, Florida	Accident Number:	ERA22LA142
Date & Time:	February 27, 2022, 09:58 Local	Registration:	N123RR
Aircraft:	VANS AIRCRAFT INC RV-12IS	Aircraft Damage:	Destroyed
Defining Event:	Loss of control in flight	Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The sport pilot did not obtain a weather briefing before departing on a day visual flight rules cross-country flight over open water to an island airport along with a friend, who was flying a second airplane. The pilot of the second airplane reported that he had to descend from 6,500 ft mean sea level (msl) to 1,500 ft msl to remain below a broken cloud layer, diverted, and encouraged the accident pilot via radio several times to do the same. However, the accident pilot stated that he was descending from 6,500 ft msl to 4,500 ft msl and continuing to the original planned destination. No further communications were received from the accident pilot.

Automatic dependent surveillance-broadcast (ADS-B) data revealed that the airplane was in the vicinity of moderate precipitation, which had been forecast, when it entered a descending right spiral before the flight track ended. Only the airplane's vertical stabilizer and the right portion of the horizontal stabilizer were recovered after the accident. The pilot received his sport pilot certificate about one month before the accident. At that time, he reported a total flight experience of 88 hours; of which, 24 hours were as pilot-in-command and 0 hours were instrument experience. Given the pilot's limited overall experience and lack of instrument flight experience, it is likely that the pilot experienced spatial disorientation and lost control of the airplane after encountering limited visibility conditions in the moderate precipitation while flying over open water.

Probable Cause and Findings

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

The pilot's inadequate preflight and in-flight weather planning and his improper decision to continue visual flight rules flight into an area of limited visibility in moderate precipitation, which resulted in a loss of airplane control due to spatial disorientation.

Findings

Personnel issues	Spatial disorientation - Pilot
Personnel issues	Weather planning - Pilot
Personnel issues	Decision making/judgment - Pilot
Aircraft	Lateral/bank control - Not attained/maintained

Factual Information

History of Flight

Enroute-cruise	VFR encounter with IMC
Enroute-cruise	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On February 27, 2022, about 0958 eastern standard time, an experimental amateur-built Vans RV-12IS, N123RR, was destroyed when it was involved in an accident about 20 miles northwest of Big Pine Key, Florida. The sport pilot and passenger have not been located. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The airplane was reported overdue to the Federal Aviation Administration (FAA) on February 28, 2022, after the sport pilot did not report to work. The vertical stabilizer and right horizontal stabilizer were located by the US Coast Guard on March 4, 2022. As of the publication of this report, no other sections of the airplane have been located.

According to a friend of the sport pilot, who kept his airplane in an adjacent hangar, they planned to complete a flight of two to Key West, Florida (EYW). Prior to departure, the friend discussed using Everglades City, Florida (X01) in case they had to divert due to weather. Although they were cruising at 6,500 ft msl, the friend had to descend to 1,500 ft msl to remain below a broken cloud layer. He advised the sport pilot that he was diverting to Marathon, Florida (MTH) and encouraged him several times via radio to do the same; however, the sport pilot stated that he was descending from 6,500 ft msl to 4,500 ft msl and continuing to EYW. That was the last communication the friend received from the sport pilot. The friend added that the sport pilot usually checked weather via a ForeFlight app on his phone; however, review of flight service and ForeFlight records did not reveal any weather briefing for the accident flight.

The sport pilot was not in radio contact with air traffic control at the time of the accident. Automatic Dependent Surveillance-Broadcast (ADS-B) data revealed that the airplane was in the vicinity of moderate precipitation, which was forecast, at the end of the data (for more information, see Meteorologist Specialist’s Factual Report in the public docket for this investigation). During the last mile of track data, the airplane entered a descending right spiral.

The pilot and aircraft maintenance logbooks were not recovered. According to FAA records, the sport pilot received his pilot certificate on January 20, 2022. At that time, he reported a total flight experience of 88 hours; of which, 24 hours were as pilot-in-command and 0 hours were instrument experience.

Pilot Information

Certificate:	Sport Pilot	Age:	37,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Sport pilot	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	January 20, 2022
Flight Time:	88 hours (Total, all aircraft), 24 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	VANS AIRCRAFT INC	Registration:	N123RR
Model/Series:	RV-12IS	Aircraft Category:	Airplane
Year of Manufacture:	2020	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	121166
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1320 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Rotax
ELT:		Engine Model/Series:	912 IS
Registered Owner:	Thomas J Campana	Rated Power:	100 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:	NQX, 24 ft msl	Distance from Accident Site:	24 Nautical Miles
Observation Time:	09:53 Local	Direction from Accident Site:	222°
Lowest Cloud Condition:	Few / 2500 ft AGL	Visibility	5 miles
Lowest Ceiling:	Broken / 3500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots / None	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	10°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.17 inches Hg	Temperature/Dew Point:	24°C / 21°C
Precipitation and Obscuration:	Moderate - None - Mist		
Departure Point:	West Palm Beach, FL (LNA)	Type of Flight Plan Filed:	None
Destination:	Key West, FL (EYW)	Type of Clearance:	None
Departure Time:	08:41 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	24.9215,-81.5805(est)

Administrative Information

Investigator In Charge (IIC):	Gretz, Robert
Additional Participating Persons:	Juan Carlos Garcia; FAA/FSDO; Miramar, FL
Original Publish Date:	September 20, 2023
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=104722

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](#).