



# Aviation Investigation Final Report

|                                |                                      |                         |             |
|--------------------------------|--------------------------------------|-------------------------|-------------|
| <b>Location:</b>               | Warrenton, Virginia                  | <b>Accident Number:</b> | ERA22LA416  |
| <b>Date &amp; Time:</b>        | September 13, 2022, 17:00 Local      | <b>Registration:</b>    | N40WB       |
| <b>Aircraft:</b>               | WILLIAM L BELL VANS RV-7A            | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         | Unknown or undetermined              | <b>Injuries:</b>        | 1 None      |
| <b>Flight Conducted Under:</b> | Part 91: General aviation - Personal |                         |             |

## Analysis

The pilot reported that, while in cruise at 2,500 ft mean sea level during a cross-country flight, the engine started to “sputter and surge” followed rapidly by a total loss of power. The pilot completed the emergency checklist by switching fuel tanks, turning on the fuel boost pump, and richening the mixture, but was unsuccessful in his multiple attempts to regain power; he performed a forced landing to a pond due to the densely populated area around him. The airplane impacted the water left-wing-low and was substantially damaged. The wreckage was discarded before it could be further examined; therefore, 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 total loss of engine power for reasons that could not be determined because the airplane could not be examined.

## Findings

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



# Factual Information

## History of Flight

|                         |  |
|-------------------------|--|
| Enroute                 | Unknown or undetermined (Defining event) |
| Enroute                 | Off-field or emergency landing           |
| Landing-flare/touchdown | Collision with terr/obj (non-CFIT)       |

On September 13, 2022, about 1700 eastern daylight time, a Vans RV-7A, N40WB, sustained substantial damage when it was involved in an accident near Warrenton, Virginia. The commercial pilot was not injured. The airplane was being operated as a Title 14 Code of Federal Regulations Part 91 personal flight.

According to the pilot, who was also the owner of the airplane, he was in cruise flight at 2,500 ft mean sea level during a cross-country flight when the engine started to “sputter and surge,” followed rapidly by a total power loss. The pilot completed the emergency checklist by switching fuel tanks, turning on the fuel boost pump and adding full mixture, but was unsuccessful in his multiple attempts to regain power; he subsequently landed in a pond due to the otherwise densely populated area around him. The airplane impacted the water left-wing-low and cartwheeled before flipping over and coming to rest upside down.

Photographs of the wreckage confirmed substantial damage; both wings were crushed, and the airframe was buckled. The left fuel tank was full and the fuel selector was on the left tank.

A local towing company that did not specialize in aircraft recovery and salvage was asked by local authorities to recover the wreckage from the water and transport it to their yard. The wreckage was subsequently discarded before it could be examined.

## Pilot Information

|                                  |   |  |              |
|----------------------------------|---|--|--------------|
| <b>Certificate:</b>              | Commercial  | <b>Age:</b>                              | 43,Male      |
| <b>Airplane Rating(s):</b>       | Single-engine land  | <b>Seat Occupied:</b>                    | Left         |
| <b>Other Aircraft Rating(s):</b> | Helicopter  | <b>Restraint Used:</b>                   | 5-point      |
| <b>Instrument Rating(s):</b>     | Airplane; Helicopter  | <b>Second Pilot Present:</b>             | No           |
| <b>Instructor Rating(s):</b>     | None  | <b>Toxicology Performed:</b>             |              |
| <b>Medical Certification:</b>    | Class 3 Without waivers/limitations   | <b>Last FAA Medical Exam:</b>            | May 21, 2021 |
| <b>Occupational Pilot:</b>       | No  | <b>Last Flight Review or Equivalent:</b> | June 8, 2021 |
| <b>Flight Time:</b>              | (Estimated) 1449.7 hours (Total, all aircraft), 63.1 hours (Total, this make and model), 23.1 hours (Last 90 days, all aircraft), 21.7 hours (Last 30 days, all aircraft) |  |              |

## Aircraft and Owner/Operator Information

|                                      |                              |                                       |                 |
|--------------------------------------|------------------------------|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | WILLIAM L BELL               | <b>Registration:</b>                  | N40WB           |
| <b>Model/Series:</b>                 | VANS RV-7A                   | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          | 2021                         | <b>Amateur Built:</b>                 | Yes             |
| <b>Airworthiness Certificate:</b>    | Experimental (Special)       | <b>Serial Number:</b>                 | 71857           |
| <b>Landing Gear Type:</b>            | Tricycle                     | <b>Seats:</b>                         | 2               |
| <b>Date/Type of Last Inspection:</b> | August 7, 2022 Annual        | <b>Certified Max Gross Wt.:</b>       | 1800 lbs        |
| <b>Time Since Last Inspection:</b>   | 21.8 Hrs                     | <b>Engines:</b>                       | 1 Reciprocating |
| <b>Airframe Total Time:</b>          | 63.1 Hrs at time of accident | <b>Engine Manufacturer:</b>           | Lycoming        |
| <b>ELT:</b>                          | C126 installed               | <b>Engine Model/Series:</b>           | IO-360          |
| <b>Registered Owner:</b>             | On file                      | <b>Rated Power:</b>                   | 180 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> | HWY,338 ft msl                   | <b>Distance from Accident Site:</b>             | 9 Nautical Miles     |
| <b>Observation Time:</b>                | 17:15 Local                      | <b>Direction from Accident Site:</b>            | 186°                 |
| <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>                | 3 knots / None                   | <b>Turbulence Type<br/>Forecast/Actual:</b>     | None / None          |
| <b>Wind Direction:</b>                  | 240°                             | <b>Turbulence Severity<br/>Forecast/Actual:</b> | N/A / N/A            |
| <b>Altimeter Setting:</b>               | 29.82 inches Hg                  | <b>Temperature/Dew Point:</b>                   | 27°C / 11°C          |
| <b>Precipitation and Obscuration:</b>   | No Obscuration; No Precipitation |   |                      |
| <b>Departure Point:</b>                 | York, PA (THV)                   | <b>Type of Flight Plan Filed:</b>               | VFR/IFR              |
| <b>Destination:</b>                     | Fredericksburg, VA (EZF)         | <b>Type of Clearance:</b>                       | VFR flight following |
| <b>Departure Time:</b>                  | 16:30 Local                      | <b>Type of Airspace:</b>                        | Class B              |

## Wreckage and Impact Information

|                                |        |                                 |                   |
|--------------------------------|--------|---------------------------------|-------------------|
| <b>Crew Injuries:</b>          | 1 None | <b>Aircraft Damage:</b>         | Substantial       |
| <b>Passenger<br/>Injuries:</b> |        | <b>Aircraft Fire:</b>           | None              |
| <b>Ground Injuries:</b>        | N/A    | <b>Aircraft Explosion:</b>      | None              |
| <b>Total Injuries:</b>         | 1 None | <b>Latitude,<br/>Longitude:</b> | 38.74,-77.69(est) |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Mccarter, Lawrence  |
| <b>Additional Participating Persons:</b> | Cody Watson; FAA/FSDO; Washington DC, DC  |
| <b>Original Publish Date:</b>            | January 30, 2024  |
| <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=105935">https://data.nts.gov/Docket?ProjectID=105935</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](#).