



# Aviation Investigation Final Report

|                                |                                      |                         |             |
|--------------------------------|--------------------------------------|-------------------------|-------------|
| <b>Location:</b>               | Boulder, Colorado                    | <b>Accident Number:</b> | DCA21LA120  |
| <b>Date &amp; Time:</b>        | April 9, 2021, 20:58 Local           | <b>Registration:</b>    | N137RV      |
| <b>Aircraft:</b>               | VANS AIRCRAFT INC RV-7               | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         | Birdstrike                           | <b>Injuries:</b>        | 1 None      |
| <b>Flight Conducted Under:</b> | Part 91: General aviation - Business |                         |             |

## Analysis

According to the pilot, the flight was one leg of a trip to the Sun 'n Fun aviation event in Florida, at which he would be working in the manufacturer's company booth. The intended destination was Rocky Mountain Metropolitan Airport (KBJC), Broomfield, Colorado. The flight to the eastern Rocky Mountain area was uneventful, and the airplane was in cruise at 13,500 feet for terrain clearance. Shortly after beginning the descent the pilot reported hearing and feeling a loud impact sound and rushing air, immediately followed by a violent and sudden ripping apart of the plexiglass canopy. The pilot reported his headset and glasses were blown off.

The pilot reported he initially had difficulty controlling the airplane and reading the instruments, but regained control and successfully made an emergency landing at Boulder Airport (KBDU). Initial inspection of the damage to the canopy indicated a small half-round hole in the side of the canopy. Initially, it was suspected that the damage was possibly caused by a hard body object such as a small unmanned aircraft system (sUAS/drone). However, further examination indicated the hole was consistent with the headset cable location as it was blown free, and no foreign material was found in the airplane.

Although no foreign biological material was found, the location and altitude of the event was over remote mountainous terrain, indicating the collision was more likely a bird.

## Probable Cause and Findings

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

a bird strike.

## Findings

**Environmental issues**

Animal(s)/bird(s) - Effect on equipment

## Factual Information

### History of Flight

|                        |                             |
|------------------------|-----------------------------|
| <b>Enroute-descent</b> | Birdstrike (Defining event) |
|------------------------|-----------------------------|

### Pilot Information

|                                  |  |  |                   |
|----------------------------------|--|--|-------------------|
| <b>Certificate:</b>              | Private  | <b>Age:</b>                              | 53, 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>             |                   |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             |                   |
| <b>Medical Certification:</b>    | Class 3 With waivers/limitations   | <b>Last FAA Medical Exam:</b>            | September 9, 2020 |
| <b>Occupational Pilot:</b>       | No   | <b>Last Flight Review or Equivalent:</b> | January 19, 2021  |
| <b>Flight Time:</b>              | (Estimated) 1650 hours (Total, all aircraft), 80 hours (Total, this make and model), 1650 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft) |  |                   |

### Aircraft and Owner/Operator Information

|                                      |                              |                                       |          |
|--------------------------------------|------------------------------|---------------------------------------|----------|
| <b>Aircraft Make:</b>                | VANS AIRCRAFT INC            | <b>Registration:</b>                  | N137RV   |
| <b>Model/Series:</b>                 | RV-7                         | <b>Aircraft Category:</b>             | Airplane |
| <b>Year of Manufacture:</b>          | 2001                         | <b>Amateur Built:</b>                 |          |
| <b>Airworthiness Certificate:</b>    | Experimental (Special)       | <b>Serial Number:</b>                 | 1        |
| <b>Landing Gear Type:</b>            | Tricycle                     | <b>Seats:</b>                         | 2        |
| <b>Date/Type of Last Inspection:</b> | January 12, 2021 100 hour    | <b>Certified Max Gross Wt.:</b>       | 1800 lbs |
| <b>Time Since Last Inspection:</b>   |                              | <b>Engines:</b>                       | 1        |
| <b>Airframe Total Time:</b>          | 2528 Hrs at time of accident | <b>Engine Manufacturer:</b>           |          |
| <b>ELT:</b>                          | Installed, not activated     | <b>Engine Model/Series:</b>           |          |
| <b>Registered Owner:</b>             | Vans Aircraft Inc            | <b>Rated Power:</b>                   |          |
| <b>Operator:</b>                     | Vans Aircraft Inc            | <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>                  | Dusk              |
| <b>Observation Facility, Elevation:</b> | KBJC, 5288 ft msl                | <b>Distance from Accident Site:</b>         | 10 Nautical Miles |
| <b>Observation Time:</b>                | 20:00 Local                      | <b>Direction from Accident Site:</b>        | 80°               |
| <b>Lowest Cloud Condition:</b>          | Clear                            | <b>Visibility</b>                           |                   |
| <b>Lowest Ceiling:</b>                  |                                  | <b>Visibility (RVR):</b>                    |                   |
| <b>Wind Speed/Gusts:</b>                | /                                | <b>Turbulence Type Forecast/Actual:</b>     | /                 |
| <b>Wind Direction:</b>                  |                                  | <b>Turbulence Severity Forecast/Actual:</b> | /                 |
| <b>Altimeter Setting:</b>               |                                  | <b>Temperature/Dew Point:</b>               | -10°C / -3°C      |
| <b>Precipitation and Obscuration:</b>   | No Obscuration; No Precipitation |   |                   |
| <b>Departure Point:</b>                 | Nampa, ID (KMAN)                 | <b>Type of Flight Plan Filed:</b>           | None              |
| <b>Destination:</b>                     | Boulder, CO (KBJC)               | <b>Type of Clearance:</b>                   | VFR               |
| <b>Departure Time:</b>                  | 17:00 Local                      | <b>Type of Airspace:</b>                    | Class E           |

## Wreckage and Impact Information

|                            |        |                             |                      |
|----------------------------|--------|-----------------------------|----------------------|
| <b>Crew Injuries:</b>      | 1 None | <b>Aircraft Damage:</b>     | Substantial          |
| <b>Passenger Injuries:</b> |        | <b>Aircraft Fire:</b>       | None                 |
| <b>Ground Injuries:</b>    |        | <b>Aircraft Explosion:</b>  | None                 |
| <b>Total Injuries:</b>     | 1 None | <b>Latitude, Longitude:</b> | 39.9,-105.57194(est) |

## Administrative Information

**Investigator In Charge (IIC):** English, William

**Additional Participating Persons:**

**Original Publish Date:** January 6, 2022

**Last Revision Date:**

**Investigation Class:** [Class 4](#)

**Note:** The NTSB did not travel to the scene of this accident.

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=102920>

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