



# Aviation Investigation Final Report

|                                |                                      |                         |             |
|--------------------------------|--------------------------------------|-------------------------|-------------|
| <b>Location:</b>               | Cross City, Florida                  | <b>Accident Number:</b> | ERA23LA051  |
| <b>Date &amp; Time:</b>        | November 7, 2022, 15:35 Local        | <b>Registration:</b>    | N91RR       |
| <b>Aircraft:</b>               | PIPISTREL D O O VIRUS SW             | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         | Fuel exhaustion                      | <b>Injuries:</b>        | 2 None      |
| <b>Flight Conducted Under:</b> | Part 91: General aviation - Personal |                         |             |

## Analysis

The two pilots were conducting multiple cross-country flights the day of the accident with the purpose of building flight time as part of an air carrier pilot development program. The pilots departed for the fourth leg of the day and the left seat pilot was primarily flying for this leg. Both pilots reported that while enroute they noticed the fuel level was low. Subsequently, about 15 nautical miles from the destination, the engine lost all power. The left seat pilot reported that the right seat pilot took control of the airplane after the loss of power. About 600 feet above ground level (agl) the right seat pilot deployed the ballistic parachute recovery system when it became clear that they would not be able to glide to an airport. The impact with the ground resulted in substantial damage to the fuselage.

Post-accident inspection of the fuel system showed no fuel visible in either wing tank and no fuel visible in the inline fuel filters.

The left seat pilot reported that there were no preaccident mechanical malfunctions or failures of the airplane that would have precluded normal operation.

## Probable Cause and Findings

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

The pilots' inadequate preflight fuel planning and improper in-flight fuel management, which resulted in a total loss of engine power due to fuel exhaustion and subsequent deployment of the ballistic parachute recovery system.

## Findings

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|                         |                                  |
|-------------------------|----------------------------------|
| <b>Personnel issues</b> | Fuel planning - Pilot            |
| <b>Aircraft</b>         | Fuel - Fluid level               |
| <b>Personnel issues</b> | Decision making/judgment - Pilot |

## Factual Information

### History of Flight

|                          |                                  |
|--------------------------|----------------------------------|
| <b>Enroute-cruise</b>    | Fuel exhaustion (Defining event) |
| <b>Enroute-descent</b>   | Loss of engine power (total)     |
| <b>Emergency descent</b> | Off-field or emergency landing   |

### Pilot Information

|                                  |   |  |          |
|----------------------------------|---|--|----------|
| <b>Certificate:</b>              | Commercial; Flight instructor; Private  | <b>Age:</b>                              | 44, Male |
| <b>Airplane Rating(s):</b>       | Single-engine land; Multi-engine land   | <b>Seat Occupied:</b>                    | Right    |
| <b>Other Aircraft Rating(s):</b> | None  | <b>Restraint Used:</b>                   | 4-point  |
| <b>Instrument Rating(s):</b>     | Airplane  | <b>Second Pilot Present:</b>             | Yes      |
| <b>Instructor Rating(s):</b>     | Airplane single-engine; Instrument airplane   | <b>Toxicology Performed:</b>             |          |
| <b>Medical Certification:</b>    | Class 1   | <b>Last FAA Medical Exam:</b>            |          |
| <b>Occupational Pilot:</b>       | Yes   | <b>Last Flight Review or Equivalent:</b> |          |
| <b>Flight Time:</b>              | (Estimated) 1100 hours (Total, all aircraft), 70 hours (Total, this make and model), 70 hours (Last 90 days, all aircraft), 70 hours (Last 30 days, all aircraft) |  |          |

### Pilot Information

|                                  |  |  |                    |
|----------------------------------|--|--|--------------------|
| <b>Certificate:</b>              | Commercial; Private  | <b>Age:</b>                              | 27, Male           |
| <b>Airplane Rating(s):</b>       | Single-engine land; Multi-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>     | Airplane   | <b>Second Pilot Present:</b>             | Yes                |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             |                    |
| <b>Medical Certification:</b>    | Class 1 With waivers/limitations   | <b>Last FAA Medical Exam:</b>            | September 22, 2021 |
| <b>Occupational Pilot:</b>       | Yes  | <b>Last Flight Review or Equivalent:</b> | July 22, 2022      |
| <b>Flight Time:</b>              | (Estimated) 1240 hours (Total, all aircraft), 40 hours (Total, this make and model), 1000 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 55 hours (Last 30 days, all aircraft) |  |                    |

## Aircraft and Owner/Operator Information

|                                      |                               |                                       |                 |
|--------------------------------------|-------------------------------|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | PIPISTREL D O O               | <b>Registration:</b>                  | N91RR           |
| <b>Model/Series:</b>                 | VIRUS SW 121C                 | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          | 2022                          | <b>Amateur Built:</b>                 |                 |
| <b>Airworthiness Certificate:</b>    | Special light-sport (Special) | <b>Serial Number:</b>                 | VSWX121C0106    |
| <b>Landing Gear Type:</b>            | Tricycle                      | <b>Seats:</b>                         | 2               |
| <b>Date/Type of Last Inspection:</b> | November 4, 2022 Condition    | <b>Certified Max Gross Wt.:</b>       | 1212 lbs        |
| <b>Time Since Last Inspection:</b>   |                               | <b>Engines:</b>                       | 1 Reciprocating |
| <b>Airframe Total Time:</b>          | 123.1 Hrs at time of accident | <b>Engine Manufacturer:</b>           | Rotax           |
| <b>ELT:</b>                          | C126 installed, not activated | <b>Engine Model/Series:</b>           | 912 S3-01       |
| <b>Registered Owner:</b>             | MESA AIRLINES INC             | <b>Rated Power:</b>                   | 100 Horsepower  |
| <b>Operator:</b>                     | Right Rudder Aviation         | <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> | CTY,38 ft msl                    | <b>Distance from Accident Site:</b>         | 3 Nautical Miles |
| <b>Observation Time:</b>                | 15:35 Local                      | <b>Direction from Accident Site:</b>        | 110°             |
| <b>Lowest Cloud Condition:</b>          | Scattered / 5000 ft AGL          | <b>Visibility</b>                           | 10 miles         |
| <b>Lowest Ceiling:</b>                  |                                  | <b>Visibility (RVR):</b>                    |                  |
| <b>Wind Speed/Gusts:</b>                | 5 knots /                        | <b>Turbulence Type Forecast/Actual:</b>     | None / None      |
| <b>Wind Direction:</b>                  | 60°                              | <b>Turbulence Severity Forecast/Actual:</b> | N/A / N/A        |
| <b>Altimeter Setting:</b>               | 30.09 inches Hg                  | <b>Temperature/Dew Point:</b>               | 29°C / 17°C      |
| <b>Precipitation and Obscuration:</b>   | No Obscuration; No Precipitation |   |                  |
| <b>Departure Point:</b>                 | Quincy, FL (2J9)                 | <b>Type of Flight Plan Filed:</b>           | None             |
| <b>Destination:</b>                     | Cross City, FL                   | <b>Type of Clearance:</b>                   | None             |
| <b>Departure Time:</b>                  | 14:30 Local                      | <b>Type of Airspace:</b>                    | Class E          |

## Airport Information

|                             |                |                                  |                  |
|-----------------------------|----------------|----------------------------------|------------------|
| <b>Airport:</b>             | CROSS CITY CTY | <b>Runway Surface Type:</b>      |                  |
| <b>Airport Elevation:</b>   | 42 ft msl      | <b>Runway Surface Condition:</b> | Rough;Vegetation |
| <b>Runway Used:</b>         |                | <b>IFR Approach:</b>             | None             |
| <b>Runway Length/Width:</b> |                | <b>VFR Approach/Landing:</b>     | Straight-in      |

## Wreckage and Impact Information

|                            |        |                             |                          |
|----------------------------|--------|-----------------------------|--------------------------|
| <b>Crew Injuries:</b>      | 2 None | <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>     | 2 None | <b>Latitude, Longitude:</b> | 29.638847,-83.12325(est) |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Young, Joshua   |
| <b>Additional Participating Persons:</b> | Kevin David; FAA/FSDO; Tampa, FL  |
| <b>Original Publish Date:</b>            | January 18, 2023  |
| <b>Last Revision Date:</b>               |   |
| <b>Investigation Class:</b>              | <a href="#">Class 4</a>   |
| <b>Note:</b>                             | The NTSB did not travel to the scene of this accident.  |
| <b>Investigation Docket:</b>             | <a href="https://data.ntsb.gov/Docket?ProjectID=106259">https://data.ntsb.gov/Docket?ProjectID=106259</a> |

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