



Aviation Investigation Final Report

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|--------------------------------|---|-------------------------|-------------|
| Location: | Orange, Virginia | Accident Number: | ERA21LA128 |
| Date & Time: | February 8, 2021, 11:15 Local | Registration: | N841SP |
| Aircraft: | Cessna 172 | Aircraft Damage: | Substantial |
| Defining Event: | Hard landing | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Instructional | | |

Analysis

The solo student pilot reported that during landing while on a cross country flight, the airplane was high and fast on final approach. The approach was continued and after the first touchdown the airplane “ballooned back up only to porpoise.” After the multiple touchdowns, the student pilot was able to stop the airplane near the midpoint of the runway, where the airplane was shut down and towed to the ramp. Examination of the airplane revealed that the bounced landing resulted in substantial damage to the fuselage.

Probable Cause and Findings

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

The student pilot’s improper recovery from a bounced landing.

Findings

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| Aircraft | Landing flare - Not attained/maintained |
| Personnel issues | Aircraft control - Student/instructed pilot |

Factual Information

History of Flight

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| Landing | Hard landing (Defining event) |
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Student pilot Information

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| Certificate: | Student | Age: | 22,Female |
| Airplane Rating(s): | None | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | 3-point |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | |
| Medical Certification: | Class 3 Without waivers/limitations | Last FAA Medical Exam: | October 22, 2019 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | 68 hours (Total, all aircraft), 61 hours (Total, this make and model), 7 hours (Pilot In Command, all aircraft), 34 hours (Last 90 days, all aircraft), 19 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|-------------------------------|---------------------------------------|-----------------|
| Aircraft Make: | Cessna | Registration: | N841SP |
| Model/Series: | 172 S | Aircraft Category: | Airplane |
| Year of Manufacture: | 2001 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 172S8746 |
| Landing Gear Type: | Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | December 8, 2020 Annual | Certified Max Gross Wt.: | 2550 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 4962 Hrs at time of accident | Engine Manufacturer: | LYCOMING |
| ELT: | C91A installed, not activated | Engine Model/Series: | IO-360-L2A |
| Registered Owner: | RANDOLPH MACON ACADEMY | Rated Power: | 180 Horsepower |
| Operator: | RANDOLPH MACON ACADEMY | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | KOMH,469 ft msl | Distance from Accident Site: | 0 Nautical Miles |
| Observation Time: | 11:15 Local | Direction from Accident Site: | 238° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | None / None |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | N/A / N/A |
| Altimeter Setting: | 30.45 inches Hg | Temperature/Dew Point: | 0°C / -11°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Farmville, VA (FVX) | Type of Flight Plan Filed: | VFR |
| Destination: | Orange, VA | Type of Clearance: | VFR |
| Departure Time: | 10:45 Local | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|-------------------|----------------------------------|---------------------------|
| Airport: | ORANGE COUNTY OMH | Runway Surface Type: | Asphalt |
| Airport Elevation: | 464 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 08/26 | IFR Approach: | None |
| Runway Length/Width: | 3200 ft / 75 ft | VFR Approach/Landing: | Full stop;Traffic pattern |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|----------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | N/A | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 38.247194,-78.045611 |

Administrative Information

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| Investigator In Charge (IIC): | Gerhardt, Adam |
| Additional Participating Persons: | Richard M. Harness; FAA/ FSDO; Richmond, VA |
| Original Publish Date: | August 20, 2021 |
| Last Revision Date: | |
| Investigation Class: | Class 4 |
| Note: | The NTSB did not travel to the scene of this accident. |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=102621 |

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](#).