



# Aviation Investigation Final Report

|                                |   |                         |             |
|--------------------------------|---|-------------------------|-------------|
| <b>Location:</b>               | Delta, Utah                               | <b>Accident Number:</b> | GAA16CA496  |
| <b>Date &amp; Time:</b>        | August 30, 2016, 11:00 Local              | <b>Registration:</b>    | N734AV      |
| <b>Aircraft:</b>               | Cessna 172                                | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         | Hard landing                              | <b>Injuries:</b>        | 1 None      |
| <b>Flight Conducted Under:</b> | Part 91: General aviation - Instructional |                         |             |

## Analysis

According to the student pilot, following the first leg of his solo cross-country flight, he entered the traffic pattern to land on runway 17 "because other traffic was using runway 17 even though winds were 050° at 3 knots."

He reported that, as the airplane approached the runway, the airspeed was too high, and the airplane landed hard on the nosewheel and porpoised. He conceded, "I knew it was a hard landing, but did not hear the prop strike occur."

The student pilot departed the airport and accomplished two approaches and a landing at a third airport before returning to his home airport where he accomplished two approaches, a landing, and then taxied to parking.

The student pilot reported that he could have prevented the accident by performing a go-around when he realized that his approach speed was too high. The airplane sustained substantial damage to the firewall.

The student pilot reported that there were no mechanical malfunctions or anomalies with the engine or airframe that would have prevented normal operation.

## Probable Cause and Findings

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

The student pilot's improper landing flare, which resulted in a hard, porpoised landing.

## Findings

|                             |   |
|-----------------------------|---|
| <b>Personnel issues</b>     | Aircraft control - Student/instructed pilot |
| <b>Aircraft</b>             | Landing flare - Not attained/maintained     |
| <b>Environmental issues</b> | Tailwind - Effect on equipment              |

## Factual Information

### History of Flight

|                                |                                |
|--------------------------------|--------------------------------|
| <b>Landing-flare/touchdown</b> | Hard landing (Defining event)  |
| <b>Landing-flare/touchdown</b> | Attempted remediation/recovery |
| <b>Landing-flare/touchdown</b> | Abnormal runway contact        |

### Student pilot Information

|                                  |   |  |                   |
|----------------------------------|---|--|-------------------|
| <b>Certificate:</b>              | Student   | <b>Age:</b>                              | 26,Male           |
| <b>Airplane Rating(s):</b>       | None  | <b>Seat Occupied:</b>                    | Left              |
| <b>Other Aircraft Rating(s):</b> | None  | <b>Restraint Used:</b>                   |                   |
| <b>Instrument Rating(s):</b>     | None  | <b>Second Pilot Present:</b>             | No                |
| <b>Instructor Rating(s):</b>     | None  | <b>Toxicology Performed:</b>             | No                |
| <b>Medical Certification:</b>    | Class 2 With waivers/limitations  | <b>Last FAA Medical Exam:</b>            | December 15, 2015 |
| <b>Occupational Pilot:</b>       | No  | <b>Last Flight Review or Equivalent:</b> |                   |
| <b>Flight Time:</b>              | (Estimated) 54.4 hours (Total, all aircraft), 37 hours (Total, this make and model), 11.1 hours (Pilot In Command, all aircraft), 28.8 hours (Last 90 days, all aircraft), 25.5 hours (Last 30 days, all aircraft), 1.5 hours (Last 24 hours, all aircraft) |  |                   |

## Aircraft and Owner/Operator Information

|                                      |                                   |                                       |                    |
|--------------------------------------|-----------------------------------|---------------------------------------|--------------------|
| <b>Aircraft Make:</b>                | Cessna                            | <b>Registration:</b>                  | N734AV             |
| <b>Model/Series:</b>                 | 172 N                             | <b>Aircraft Category:</b>             | Airplane           |
| <b>Year of Manufacture:</b>          | 1977                              | <b>Amateur Built:</b>                 |                    |
| <b>Airworthiness Certificate:</b>    | Normal                            | <b>Serial Number:</b>                 | 17268710           |
| <b>Landing Gear Type:</b>            | Tricycle                          | <b>Seats:</b>                         | 4                  |
| <b>Date/Type of Last Inspection:</b> | August 19, 2016 Annual            | <b>Certified Max Gross Wt.:</b>       | 2300 lbs           |
| <b>Time Since Last Inspection:</b>   |                                   | <b>Engines:</b>                       | 1 Reciprocating    |
| <b>Airframe Total Time:</b>          | 11227.7 Hrs as of last inspection | <b>Engine Manufacturer:</b>           | LYCOMING           |
| <b>ELT:</b>                          | C91A installed, not activated     | <b>Engine Model/Series:</b>           | O-360-A4M          |
| <b>Registered Owner:</b>             |                                   | <b>Rated Power:</b>                   | 180 Horsepower     |
| <b>Operator:</b>                     |                                   | <b>Operating Certificate(s) Held:</b> | Pilot school (141) |

## Meteorological Information and Flight Plan

|   |                  |   |                  |
|---|------------------|---|------------------|
| <b>Conditions at Accident Site:</b>     | Visual (VMC)     | <b>Condition of Light:</b>                  | Day              |
| <b>Observation Facility, Elevation:</b> | KU24,4639 ft msl | <b>Distance from Accident Site:</b>         | 5 Nautical Miles |
| <b>Observation Time:</b>                |                  | <b>Direction from Accident Site:</b>        | 228°             |
| <b>Lowest Cloud Condition:</b>          |                  | <b>Visibility</b>                           | 10 miles         |
| <b>Lowest Ceiling:</b>                  |                  | <b>Visibility (RVR):</b>                    |                  |
| <b>Wind Speed/Gusts:</b>                | 3 knots /        | <b>Turbulence Type Forecast/Actual:</b>     | / None           |
| <b>Wind Direction:</b>                  | 50°              | <b>Turbulence Severity Forecast/Actual:</b> | / N/A            |
| <b>Altimeter Setting:</b>               | 30.15 inches Hg  | <b>Temperature/Dew Point:</b>               | 13°C / -1°C      |
| <b>Precipitation and Obscuration:</b>   |                  |   |                  |
| <b>Departure Point:</b>                 | Delta, UT (DTA ) | <b>Type of Flight Plan Filed:</b>           | None             |
| <b>Destination:</b>                     | Delta, UT (DTA ) | <b>Type of Clearance:</b>                   | None             |
| <b>Departure Time:</b>                  | 09:30 Local      | <b>Type of Airspace:</b>                    | Class G          |

## Airport Information

|                             |                 |                                  |                             |
|-----------------------------|-----------------|----------------------------------|-----------------------------|
| <b>Airport:</b>             | DELTA MUNI DTA  | <b>Runway Surface Type:</b>      | Asphalt                     |
| <b>Airport Elevation:</b>   | 4759 ft msl     | <b>Runway Surface Condition:</b> |                             |
| <b>Runway Used:</b>         | 17              | <b>IFR Approach:</b>             | None                        |
| <b>Runway Length/Width:</b> | 5502 ft / 75 ft | <b>VFR Approach/Landing:</b>     | Stop and go;Traffic pattern |

## 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>    | N/A    | <b>Aircraft Explosion:</b>  | None                      |
| <b>Total Injuries:</b>     | 1 None | <b>Latitude, Longitude:</b> | 39.383609,-112.50222(est) |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Hicks, Michael  |
| <b>Additional Participating Persons:</b> | Michael Mower; FAA; Cedar City , UT   |
| <b>Original Publish Date:</b>            | April 10, 2017  |
| <b>Note:</b>                             | This accident report documents the factual circumstances of this accident as described to the NTSB.   |
| <b>Investigation Docket:</b>             | <a href="https://data.nts.gov/Docket?ProjectID=94050">https://data.nts.gov/Docket?ProjectID=94050</a> |

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