



# Aviation Investigation Final Report

|                                |   |                         |             |
|--------------------------------|---|-------------------------|-------------|
| <b>Location:</b>               | GRAND ISLAND, Nebraska                        | <b>Accident Number:</b> | CHI95LA089  |
| <b>Date &amp; Time:</b>        | February 14, 1995, 19:30 Local                | <b>Registration:</b>    | N4092C      |
| <b>Aircraft:</b>               | CESSNA T310R                                  | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         |   | <b>Injuries:</b>        | 4 None      |
| <b>Flight Conducted Under:</b> | Part 135: Air taxi & commuter - Non-scheduled |                         |             |

## Analysis

THE PILOT FLEW A LOCALIZER/BACKCOURSE WHICH RESULTED IN A MISSED APPROACH. HE STATED HE PICKED UP A LIGHT BUILD-UP OF ICE DURING THE APPROACH BUT IT MELTED WHEN HE REACHED AN ALTITUDE OF 5,000 FEET PRIOR TO STARTING THE NEXT APPROACH. HE STATED THAT THE NEXT APPROACH WAS NORMAL UNTIL LANDING WHEN THE AIRPLANE TOUCHED DOWN HARD. THE AIRPLANE HAD 1/2' TO 3/4' OF ICE ON THE LEADING EDGE OF THE WINGS. THE PILOT STATED HE DID NOT ACTIVATE THE DEICE BOOTS DURING THE APPROACH AND THAT HE SHOULD HAVE CARRIED EXTRA SPEED DURING THE LANDING.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's failure to deploy the deicing boots during the approach and the failure to maintain aircraft control during the landing. A factor related to the accident was the existing icing conditions.

## Findings

Occurrence #1: HARD LANDING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

1. (F) WEATHER CONDITION - ICING CONDITIONS

2. (C) ANTI-ICE/DEICE SYSTEM - NOT DEPLOYED - PILOT IN COMMAND
3. AIRFRAME - ICE
4. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

## Factual Information

On February 14, 1995, at 1930 central standard time, a Cessna 310, N4092C, registered to Miller Flying Service, was substantially damaged during a hard landing on runway 35 at the Central Nebraska Regional Airport, Grand Island, Nebraska. Instrument meteorological conditions prevailed and an IFR flight plan was filed. The pilot was not injured. The flight originated from Sterling, Colorado, on February 14, 1995, at 1730 mountain standard time. The pilot stated he first flew the localizer/backcourse approach to runway 17. This resulted in a missed approach. The pilot stated that the airplane picked up a light ice built-up during the approach but it melted off immediately once he reached 5,000 feet as the cloud tops were at 4,800 feet.

The pilot then elected to fly the ILS 35. He stated he stayed at 5,000 feet until established on the localizer, then descended to 4,000 feet prior to flying the localizer. The pilot continued to report that the approach was normal until he began his landing flare at which point the "...nose of the aircraft failed to raise and the rate of descent was still too fast." The pilot stated he added power and the nose of the airplane came up but it was too late and a hard landing resulted. The pilot stated there was 1/2" to 3/4" of ice on the leading edge of the both wings.

In the Recommendation section of the NTSB Form 6120.1/2 completed by the pilot he stated he should have carried more power during the landing and he should have cycled the deice boots between the final approach fix and landing.

The operator of the airplane holds a CFR 14 Part 135 On-Demand Air Taxi Certificate. This flight was conducted under that certificate; however, the pilot was not listed on the certificate. The pilot reported on the NTSB Form 6120.1/2 that there were no passengers on the airplane. However, the IFR flight plan he filed indicated 4 people on board. During a subsequent conversation with a Federal Aviation Administration Inspector the pilot stated that there were in fact 3 passengers on board.

The pilot received a weather briefing prior to the flight. During this briefing, he was informed of an Airmet for icing.

## Pilot Information

|                                  |  |  |                |
|----------------------------------|--|--|----------------|
| <b>Certificate:</b>              | Commercial   | <b>Age:</b>                              | 35, 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>                   |                |
| <b>Instrument Rating(s):</b>     | Airplane   | <b>Second Pilot Present:</b>             | No             |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             | No             |
| <b>Medical Certification:</b>    | Class 2 Valid Medical-w/ waivers/lim   | <b>Last FAA Medical Exam:</b>            | March 30, 1994 |
| <b>Occupational Pilot:</b>       | UNK  | <b>Last Flight Review or Equivalent:</b> |                |
| <b>Flight Time:</b>              | 1216 hours (Total, all aircraft), 115 hours (Total, this make and model), 1154 hours (Pilot In Command, all aircraft), 64 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft) |  |                |

## Aircraft and Owner/Operator Information

|                                      |  |                                       |                          |
|--------------------------------------|--|---------------------------------------|--------------------------|
| <b>Aircraft Make:</b>                | CESSNA                                     | <b>Registration:</b>                  | N4092C                   |
| <b>Model/Series:</b>                 | T310R T310R                                | <b>Aircraft Category:</b>             | Airplane                 |
| <b>Year of Manufacture:</b>          |  | <b>Amateur Built:</b>                 |                          |
| <b>Airworthiness Certificate:</b>    | Normal                                     | <b>Serial Number:</b>                 | 1369                     |
| <b>Landing Gear Type:</b>            | Retractable - Tricycle                     | <b>Seats:</b>                         | 5                        |
| <b>Date/Type of Last Inspection:</b> | February 10, 1995 Continuous airworthiness | <b>Certified Max Gross Wt.:</b>       | 5500 lbs                 |
| <b>Time Since Last Inspection:</b>   | 4 Hrs                                      | <b>Engines:</b>                       | 2 Reciprocating          |
| <b>Airframe Total Time:</b>          | 2664 Hrs                                   | <b>Engine Manufacturer:</b>           | CONTINENTAL              |
| <b>ELT:</b>                          | Installed, not activated                   | <b>Engine Model/Series:</b>           | TSIO-520-B               |
| <b>Registered Owner:</b>             | MILLER FLYING SERVICE                      | <b>Rated Power:</b>                   | 285 Horsepower           |
| <b>Operator:</b>                     |  | <b>Operating Certificate(s) Held:</b> | On-demand air taxi (135) |
| <b>Operator Does Business As:</b>    |  | <b>Operator Designator Code:</b>      |                          |

## Meteorological Information and Flight Plan

|   |                       |   |             |
|---|-----------------------|---|-------------|
| <b>Conditions at Accident Site:</b>     | Instrument (IMC)      | <b>Condition of Light:</b>                  | Day         |
| <b>Observation Facility, Elevation:</b> | GRI ,1846 ft msl      | <b>Distance from Accident Site:</b>         |             |
| <b>Observation Time:</b>                | 19:36 Local           | <b>Direction from Accident Site:</b>        |             |
| <b>Lowest Cloud Condition:</b>          | Unknown               | <b>Visibility</b>                           | 1 miles     |
| <b>Lowest Ceiling:</b>                  | Overcast / 300 ft AGL | <b>Visibility (RVR):</b>                    |             |
| <b>Wind Speed/Gusts:</b>                | 16 knots / None       | <b>Turbulence Type Forecast/Actual:</b>     | /           |
| <b>Wind Direction:</b>                  | 160°                  | <b>Turbulence Severity Forecast/Actual:</b> | /           |
| <b>Altimeter Setting:</b>               | 29 inches Hg          | <b>Temperature/Dew Point:</b>               | -2°C / -2°C |
| <b>Precipitation and Obscuration:</b>   | N/A - None - Fog      |   |             |
| <b>Departure Point:</b>                 | STERLING (STK)        | <b>Type of Flight Plan Filed:</b>           | IFR         |
| <b>Destination:</b>                     | (GRI)                 | <b>Type of Clearance:</b>                   | IFR         |
| <b>Departure Time:</b>                  | 17:30 Local           | <b>Type of Airspace:</b>                    | Class B     |

## Airport Information

|                             |                                  |                                  |           |
|-----------------------------|----------------------------------|----------------------------------|-----------|
| <b>Airport:</b>             | CENTRAL NEBRASKA REGIONAL<br>GRI | <b>Runway Surface Type:</b>      | Asphalt   |
| <b>Airport Elevation:</b>   | 1846 ft msl                      | <b>Runway Surface Condition:</b> | Ice       |
| <b>Runway Used:</b>         | 35                               | <b>IFR Approach:</b>             | ILS       |
| <b>Runway Length/Width:</b> | 7001 ft / 150 ft                 | <b>VFR Approach/Landing:</b>     | Full stop |

## Wreckage and Impact Information

|                            |        |                             |             |
|----------------------------|--------|-----------------------------|-------------|
| <b>Crew Injuries:</b>      | 1 None | <b>Aircraft Damage:</b>     | Substantial |
| <b>Passenger Injuries:</b> | 3 None | <b>Aircraft Fire:</b>       | None        |
| <b>Ground Injuries:</b>    | N/A    | <b>Aircraft Explosion:</b>  | None        |
| <b>Total Injuries:</b>     | 4 None | <b>Latitude, Longitude:</b> |             |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Sullivan, Pamela  |
| <b>Additional Participating Persons:</b> | HOWARD O WHEELLOCK; LINCOLN , NE  |
| <b>Original Publish Date:</b>            | July 31, 1995   |
| <b>Last Revision Date:</b>               |   |
| <b>Investigation Class:</b>              | <a href="#">Class</a>   |
| <b>Note:</b>                             |   |
| <b>Investigation Docket:</b>             | <a href="https://data.nts.gov/Docket?ProjectID=9839">https://data.nts.gov/Docket?ProjectID=9839</a> |

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