



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Tulsa, Oklahoma | Accident Number: | GAA18CA527 |
| Date & Time: | September 1, 2018, 14:45 Local | Registration: | N2303D |
| Aircraft: | Cessna 170 | Aircraft Damage: | Substantial |
| Defining Event: | Loss of control on ground | Injuries: | 2 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot of the tailwheel-equipped airplane reported that, during landing, a crosswind lifted the left wing, and the airplane drifted right. The right main landing gear encountered the grass on the right side of the runway, and the airplane subsequently nosed over and came to rest inverted.

The airplane sustained substantial damage to the left wing lift strut, right aileron, and the empennage.

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

The automated weather observation station located on the airport reported that, about 8 minutes after the accident, the wind was from 150° at 10 knots, gusting to 16 knots. The airplane landed on runway 19.

Probable Cause and Findings

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

The pilot's failure to maintain directional control during landing in gusting crosswind conditions.

Findings

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| Aircraft | Directional control - Not attained/maintained |
| Personnel issues | Aircraft control - Pilot |
| Environmental issues | Crosswind - Effect on operation |
| Environmental issues | Gusts - Effect on operation |

Factual Information

History of Flight

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|---------|--|
| Landing | Other weather encounter |
| Landing | Loss of control on ground (Defining event) |
| Landing | Nose over/nose down |

Pilot Information

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|---------------------------|----------------------------------|-----------------------------------|------------------|
| Certificate: | Private | Age: | 50,Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Unknown |
| Other Aircraft Rating(s): | None | Restraint Used: | Unknown |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 With waivers/limitations | Last FAA Medical Exam: | October 30, 2017 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | (Estimated) | | |

Aircraft and Owner/Operator Information

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|-------------------------------|--------------------------------|--------------------------------|-----------------|
| Aircraft Make: | Cessna | Registration: | N2303D |
| Model/Series: | 170 B | Aircraft Category: | Airplane |
| Year of Manufacture: | 1952 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 20455 |
| Landing Gear Type: | Tailwheel | Seats: | 4 |
| Date/Type of Last Inspection: | August 1, 2018 Annual | Certified Max Gross Wt.: | 2200 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 3922 Hrs as of last inspection | Engine Manufacturer: | Continental |
| ELT: | Installed, not activated | Engine Model/Series: | O-300 |
| Registered Owner: | | Rated Power: | 145 Horsepower |
| Operator: | On file | 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: | KRVS,638 ft msl | Distance from Accident Site: | 0 Nautical Miles |
| Observation Time: | 19:53 Local | Direction from Accident Site: | 64° |
| Lowest Cloud Condition: | Few / 4900 ft AGL | Visibility | 10 miles |
| Lowest Ceiling: | | Visibility (RVR): | |
| Wind Speed/Gusts: | 10 knots / 16 knots | Turbulence Type Forecast/Actual: | None / None |
| Wind Direction: | 150° | Turbulence Severity Forecast/Actual: | N/A / N/A |
| Altimeter Setting: | 29.93 inches Hg | Temperature/Dew Point: | 34°C / 21°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Sand Springs, OK (OWP) | Type of Flight Plan Filed: | None |
| Destination: | Tulsa, OK (RVS) | Type of Clearance: | VFR |
| Departure Time: | 14:35 Local | Type of Airspace: | Class D |

Airport Information

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|-----------------------------|----------------------------|----------------------------------|-----------|
| Airport: | RICHARD LLOYD JONES JR RVS | Runway Surface Type: | Asphalt |
| Airport Elevation: | 637 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 19R | IFR Approach: | None |
| Runway Length/Width: | 5102 ft / 100 ft | VFR Approach/Landing: | Full stop |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|---------------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | 1 None | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 2 None | Latitude, Longitude: | 36.038055,-95.986389(est) |

Administrative Information

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| Investigator In Charge (IIC): | Benhoff, Kathryn |
| Additional Participating Persons: | Thomas LaNou; FAA; Oklahoma City, OK |
| Original Publish Date: | March 18, 2019 |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=98231 |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).