



Aviation Investigation Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Knoxville, Tennessee | Accident Number: | GAA20CA043 |
| Date & Time: | October 18, 2019, 13:00 Local | Registration: | N801PZ |
| Aircraft: | Zenair ZENITH 801 | Aircraft Damage: | Substantial |
| Defining Event: | Hard landing | Injuries: | 2 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that, during a power-off 180° approach, he noticed the airplane was "drifting" and would not reach the intended touchdown point. He added power to correct and then reduced the power to idle to resume the approach. On short final, the airplane encountered a "wind shift or gust" and developed a high sink rate. He applied power and lowered the nose, but the airplane landed hard. The airplane sustained substantial damage to the fuselage. The pilot reported that there were no preaccident mechanical failures or malfunctions with 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 pilot's failure to maintain a proper descent rate during the approach and his improper landing flare, which resulted in a hard landing.

Findings

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| Aircraft | Landing flare - Not attained/maintained |
| Personnel issues | Aircraft control - Pilot |
| Aircraft | Descent rate - Not attained/maintained |
| Environmental issues | Variable wind - Effect on operation |

Factual Information

History of Flight

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| Landing-flare/touchdown | Hard landing (Defining event) |
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Pilot Information

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| Certificate: | Private | Age: | 47, Male |
| Airplane Rating(s): | Single-engine land; Multi-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | 5-point |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | BasicMed | Last FAA Medical Exam: | April 23, 2019 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | September 30, 2019 |
| Flight Time: | (Estimated) 350 hours (Total, all aircraft), 199 hours (Total, this make and model), 306 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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| Aircraft Make: | Zenair | Registration: | N801PZ |
| Model/Series: | ZENITH 801 No Series | Aircraft Category: | Airplane |
| Year of Manufacture: | 2017 | Amateur Built: | Yes |
| Airworthiness Certificate: | Experimental (Special) | Serial Number: | 8-4758 |
| Landing Gear Type: | Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | June 16, 2019 Condition | Certified Max Gross Wt.: | 2200 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 180 Hrs at time of accident | Engine Manufacturer: | Aerosport Power |
| ELT: | C126 installed, not activated | Engine Model/Series: | IO-375-B2BEMS |
| Registered Owner: | On file | Rated Power: | 195 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: | KDKX,833 ft msl | Distance from Accident Site: | 0 Nautical Miles |
| Observation Time: | 16:55 Local | Direction from Accident Site: | 66° |
| Lowest Cloud Condition: | | Visibility | 10 miles |
| Lowest Ceiling: | | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | None / None |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | N/A / N/A |
| Altimeter Setting: | 30.06 inches Hg | Temperature/Dew Point: | 17°C / 6°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Knoxville, TN (TN98) | Type of Flight Plan Filed: | None |
| Destination: | Knoxville, TN (DKX) | Type of Clearance: | None |
| Departure Time: | 12:30 Local | Type of Airspace: | Class E |

Airport Information

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| Airport: | KNOXVILLE DOWNTOWN ISLAND DKX | Runway Surface Type: | Asphalt |
| Airport Elevation: | 833 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 08 | IFR Approach: | None |
| Runway Length/Width: | 3499 ft / 75 ft | VFR Approach/Landing: | Full stop;Simulated forced landing |

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: | 35.963054,-83.876663(est) |

Administrative Information

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| Investigator In Charge (IIC): | Benhoff, Kathryn |
| Additional Participating Persons: | Rocky Davidson; FAA; Nashville, TN |
| Original Publish Date: | May 21, 2020 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=100478 |

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