



Aviation Investigation Final Report

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| Location: | Terre Haute, Indiana | Accident Number: | GAA19CA330 |
| Date & Time: | June 7, 2019, 15:45 Local | Registration: | N227TJ |
| Aircraft: | Diamond DA20 | Aircraft Damage: | Substantial |
| Defining Event: | Loss of control in flight | Injuries: | 2 None |
| Flight Conducted Under: | Part 91: General aviation - Instructional | | |

Analysis

The flight instructor reported that, while the student pilot was practicing crosswind landings with the instructor shadowing on the flight controls, he emphasized the importance of maintaining crosswind correction and suggested beginning the landing flare closer to the runway. The student flared too early, and the airplane ballooned. The airplane drifted left in a "nose high, low airspeed situation." The instructor called for a go-around and attempted to take control. The student maintained a "very strong grip" on the control stick, and the instructor was unable to make any significant control inputs. The airplane landed and skidded off the left side of the runway and impacted runway lights.

The airplane sustained substantial damage to the left wing and the fuselage.

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

The airport's automated weather observation station reported that, about 8 minutes after the accident, the wind was from 080° at 11 knots, gusting to 19 knots. The student landed the airplane on runway 05.

Probable Cause and Findings

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

The student pilot's failure to maintain the runway heading and to relinquish the flight controls to the flight instructor when told to do so while landing in gusting, crosswind conditions, which resulted in a runway excursion and impact with runway lighting.

Findings

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| Personnel issues | Lack of action - Student/instructed pilot |
| Personnel issues | Aircraft control - Student/instructed pilot |
| Aircraft | Heading/course - Not attained/maintained |
| Environmental issues | Runway/taxi/approach light - Effect on operation |
| Environmental issues | Crosswind - Effect on operation |
| Environmental issues | Gusts - Effect on operation |

Factual Information

History of Flight

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| Landing | Loss of control in flight (Defining event) |
| Landing | Miscellaneous/other |
| Landing | Runway excursion |
| Landing | Collision with terr/obj (non-CFIT) |

Flight instructor Information

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|----------------------------------|--|--|-------------------|
| Certificate: | Commercial; Flight instructor | Age: | 22, Male |
| Airplane Rating(s): | Single-engine land; Multi-engine land | Seat Occupied: | Right |
| Other Aircraft Rating(s): | None | Restraint Used: | 3-point |
| Instrument Rating(s): | Airplane | Second Pilot Present: | Yes |
| Instructor Rating(s): | Airplane single-engine | Toxicology Performed: | No |
| Medical Certification: | Class 1 Without waivers/limitations | Last FAA Medical Exam: | June 28, 2018 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | February 16, 2019 |
| Flight Time: | (Estimated) 440 hours (Total, all aircraft), 150 hours (Total, this make and model), 350 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

Student pilot Information

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|----------------------------------|--|--|------------------|
| Certificate: | Student | Age: | 20, Male |
| Airplane Rating(s): | None | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | 4-point |
| Instrument Rating(s): | None | Second Pilot Present: | Yes |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 1 Without waivers/limitations | Last FAA Medical Exam: | January 15, 2019 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | (Estimated) 35 hours (Total, all aircraft), 35 hours (Total, this make and model), 2 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|----------------------------------|---------------------------------------|--------------------|
| Aircraft Make: | Diamond | Registration: | N227TJ |
| Model/Series: | DA20 C1 | Aircraft Category: | Airplane |
| Year of Manufacture: | 2005 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | C0324 |
| Landing Gear Type: | Tricycle | Seats: | 2 |
| Date/Type of Last Inspection: | June 6, 2019 Annual | Certified Max Gross Wt.: | 1764 lbs |
| Time Since Last Inspection: | | Engines: | Reciprocating |
| Airframe Total Time: | 2814.6 Hrs as of last inspection | Engine Manufacturer: | Continental |
| ELT: | Installed, not activated | Engine Model/Series: | IO-240 |
| Registered Owner: | Indiana State University | Rated Power: | 125 Horsepower |
| Operator: | Indiana State University | Operating Certificate(s) Held: | Pilot school (141) |

Meteorological Information and Flight Plan

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| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | HUF,575 ft msl | Distance from Accident Site: | 1 Nautical Miles |
| Observation Time: | 17:53 Local | Direction from Accident Site: | 73° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 11 knots / 19 knots | Turbulence Type Forecast/Actual: | None / None |
| Wind Direction: | 80° | Turbulence Severity Forecast/Actual: | N/A / N/A |
| Altimeter Setting: | 29.85 inches Hg | Temperature/Dew Point: | 28°C / 16°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Terre Haute, IN (HUF) | Type of Flight Plan Filed: | None |
| Destination: | Terre Haute, IN (HUF) | Type of Clearance: | VFR flight following |
| Departure Time: | 14:00 Local | Type of Airspace: | Class D |

Airport Information

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|-----------------------------|----------------------|----------------------------------|---------------------------|
| Airport: | TERRE HAUTE RGNL HUF | Runway Surface Type: | Asphalt |
| Airport Elevation: | 589 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 05 | IFR Approach: | None |
| Runway Length/Width: | 9020 ft / 150 ft | VFR Approach/Landing: | Full stop;Traffic pattern |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|---------------------------|
| Crew Injuries: | 2 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 2 None | Latitude, Longitude: | 39.445835,-87.317222(est) |

Administrative Information

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| Investigator In Charge (IIC): | Benhoff, Kathryn |
| Additional Participating Persons: | Daniel M Keen; FAA; Indianapolis, IN |
| Original Publish Date: | November 6, 2019 |
| 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=99598 |

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](#).