



National Transportation Safety Board Aviation Accident Final Report

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| Location: | FRIENDLY, MD | Accident Number: | IAD00LA061 |
| Date & Time: | 07/01/2000, 1130 EDT | Registration: | N1688F |
| Aircraft: | Cessna 172H | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 None |

Flight Conducted Under: Part 91: General Aviation - Instructional

Analysis

The student pilot departed on his first solo flight, completed a traffic pattern and returned for landing on Runway 06. He reported that on short final for the runway, an encounter with a gust of wind resulted in his loss of runway alignment and a hard landing with a 'side load' on the landing gear. A bystander noticed wrinkling of the airplane's skin as the airplane taxied and a subsequent examination of the airplane revealed substantial damage to the airframe. The student pilot reported that there were no mechanical deficiencies with the airplane. The winds reported at the time of the accident were from 010 degrees at 5 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the student pilot's inadequate compensation for winds that resulted in his failure to maintain runway alignment and a hard landing.

Findings

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

Findings

1. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND
2. LANDING GEAR, NOSE GEAR ATTACH POINT - BENT
3. (C) PROPER ALIGNMENT - NOT OBTAINED/MAINTAINED - PILOT IN COMMAND

Factual Information

On July 1, 2000, at 1130 Eastern Daylight Time, a Cessna 172H, N1688F, was substantially damaged during landing at the Potomac Airfield (VKX), Friendly, Maryland. The student pilot was not injured. Visual meteorological conditions prevailed for the solo instructional flight that originated at VKX, approximately 1120. No flight plan was filed for the flight conducted under 14 CFR Part 91.

In a written statement, the student pilot said:

"...I embarked upon my first supervised solo flight... This was to be a set of three takeoffs, completions of the traffic pattern, and landings.

"On final in the first flight, as I cleared the houses at the end of the runway, an updraft seemed to push the tail of the plane up and the aircraft to the right. I corrected to put the airplane back on the centerline. However, the landing was somewhat hard and with a side load. The airplane bounced twice. Although it veered to the left of the runway, the plane did not enter the grass. A bystander noticed that the skin on the plane was dented.

In a written statement, the student pilot's flight instructor stated he supervised the flight from the ground. According to the flight instructor:

"The first take-off and pattern was performed very well. On his first approach to land, an updraft at the end of the runway pushed [the student] off of the centerline. While correcting for the centerline, [the student] ballooned above the runway, added power to compensate, but still landed with an extreme side load due to the correction to get back on centerline.

"Afterwards, [the student], thinking that he had only landed hard, began to taxi back for his second circuit. While taxiing, an observer pointed out a dent in the aircraft. The flight was discontinued immediately to survey the damage [to] the aircraft."

In a telephone interview, the student pilot stated there were no mechanical deficiencies with the airplane. He reported 39 hours of total flight experience, all of which was in the Cessna 172.

Weather reported at the Ronald Reagan Washington National Airport, 7 miles northwest of Potomac Airfield was scattered clouds at 7,000 feet with winds from 010 degrees at 5 knots.

Pilot Information

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| Certificate: | Student | Age: | 33, Male |
| Airplane Rating(s): | None | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | Seatbelt, Shoulder harness |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 Valid Medical--w/ waivers/lim. | Last FAA Medical Exam: | |
| Occupational Pilot: | | Last Flight Review or Equivalent: | |
| Flight Time: | 36 hours (Total, all aircraft), 36 hours (Total, this make and model), 6 hours (Last 90 days, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|----------------------------|---------------------------------------|-----------------|
| Aircraft Make: | Cessna | Registration: | N1688F |
| Model/Series: | 172H 172H | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | No |
| Airworthiness Certificate: | Normal | Serial Number: | 17255083 |
| Landing Gear Type: | Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | 06/14/2000, Annual | Certified Max Gross Wt.: | 2300 lbs |
| Time Since Last Inspection: | 27 Hours | Engines: | 1 Reciprocating |
| Airframe Total Time: | 4985 Hours | Engine Manufacturer: | Continental |
| ELT: | Installed, not activated | Engine Model/Series: | O-300-D |
| Registered Owner: | JOHN PARIS | Rated Power: | 145 hp |
| Operator: | JOHN PARIS | Operating Certificate(s) Held: | None |
| Operator Does Business As: | ATC FLIGHT TRAINING CENTER | Operator Designator Code: | |

Meteorological Information and Flight Plan

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|----------------------------------|-------------------------|---|-------------------|
| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Day |
| Observation Facility, Elevation: | DCA, 16 ft msl | Distance from Accident Site: | 15 Nautical Miles |
| Observation Time: | 1151 EDT | Direction from Accident Site: | 340° |
| Lowest Cloud Condition: | Scattered / 7000 ft agl | Visibility | 10 Miles |
| Lowest Ceiling: | None / 0 ft agl | Visibility (RVR): | 0 ft |
| Wind Speed/Gusts: | 5 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 10° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | 28° C / 13° C |
| Precipitation and Obscuration: | | | |
| Departure Point: | (VKX) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 1120 EDT | Type of Airspace: | Class G |

Airport Information

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|----------------------|------------------------|---------------------------|----------------------------|
| Airport: | POTOMAC AIRFIELD (VKX) | Runway Surface Type: | Asphalt |
| Airport Elevation: | 303 ft | Runway Surface Condition: | Dry |
| Runway Used: | 6 | IFR Approach: | None |
| Runway Length/Width: | 2665 ft / 40 ft | VFR Approach/Landing: | Full Stop; Traffic Pattern |

Wreckage and Impact Information

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

Administrative Information

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|-----------------------------------|--|--------------|------------|
| Investigator In Charge (IIC): | BRIAN C RAYNER | Report Date: | 12/04/2001 |
| Additional Participating Persons: | MARY PAT BAXTER; WASHINGTON, DC | | |
| Publish Date: | | | |
| Investigation Docket: | NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ . | | |

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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](#).