



Aviation Investigation Final Report

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|--------------------------------|---|-------------------------|-------------|
| Location: | Seattle, Washington | Accident Number: | SEA01LA081 |
| Date & Time: | April 30, 2001, 13:30 Local | Registration: | N6781L |
| Aircraft: | de Havilland DHC-2 | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 2 None |
| Flight Conducted Under: | Part 91: General aviation - Instructional | | |

Analysis

The left seat pilot, who was undergoing training, accompanied by the right seat pilot (both pilots were instructors), taxied the floatplane out for departure. The aircraft was turned into the wind and takeoff power was beginning to be applied when the aircraft's right wing was picked up by a wind gust. The aircraft momentarily became airborne, pivoted and impacted the water slowly nosing over. A cold front was passing through the Puget Sound area shortly before the accident and strong, gusty winds out of the south were recorded at all Puget Sound stations in the area near the time of the accident. The pilot reported that the wind at the time of the accident was from 150 degrees at 25 knots with gusts to 43 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The high wind conditions encountered as the aircraft began its takeoff roll. Contributing factors were the variable and gusty wind conditions.

Findings

Occurrence #1: NOSE OVER
Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) WEATHER CONDITION - HIGH WIND
2. (F) WEATHER CONDITION - GUSTS
3. (F) WEATHER CONDITION - VARIABLE WIND

Factual Information

HISTORY OF FLIGHT

On April 30, 2001, approximately 1330 Pacific daylight time, a DeHavilland DHC-2 floatplane, N6781L, registered to and being operated by Kenmore Air Harbor, Inc., and being flown by two commercial pilots employed by the operator, was substantially damaged when the aircraft nosed over during taxi for takeoff at the north end of Lake Union, Seattle, Washington. Both pilots were uninjured. Visual meteorological conditions with strong, gusty winds prevailed and no flight plan had been filed. The flight, which was instructional in nature, was operated under 14 CFR 91, and departed the Kenmore Seaplane Base, Lake Union, Seattle, Washington, approximately 1245. The flight was destined for Kenmore's Lake Washington Seaplane Base at the north end of Lake Washington, Seattle, Washington.

The pilot occupying the left seat reported that he was on a training flight with the right seat pilot in preparation for conducting Part 135 operations with the operator. He stated that the aircraft was turned into the wind at the north end of Lake Union in preparation for takeoff, and that full power was just beginning to be applied. A gust of wind picked up the right wing and the aircraft rapidly pivoted, became airborne and then impacted the water in a nose down attitude. The aircraft then nosed back up, decelerated and slowly nosed over to an inverted position during which the two pilots egressed.

A cold front was passing through the Puget Sound area shortly before the accident and strong, gusty winds out of the south were recorded at all Puget Sound stations in the area near the time of the accident. The winds at specific times were reported as follows:

Boeing Field 1253PDT 180 degrees at 12 knots gusting to 22 knots
Seattle International 1256PDT 200 degrees at 17 knots gusting to 23 knots
Renton Municipal 1253PDT 170 degrees at 14 knots gusting to 24 knots
Paine Field (Everett) 1253PDT 170 degrees at 21 knots gusting to 32 knots

Peak winds of 35 knots were recorded in the early afternoon at both Everett and Seattle. The pilot reported that the wind at the time of the accident was from 150 degrees at 25 knots with gusts to 43 knots.

Flight instructor Information

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| Certificate: | Commercial; Flight instructor | Age: | 41, Male |
| Airplane Rating(s): | Single-engine land; Single-engine sea | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | Airplane | Second Pilot Present: | Yes |
| Instructor Rating(s): | Airplane single-engine | Toxicology Performed: | No |
| Medical Certification: | Class 1 Valid Medical—no waivers/lim. | Last FAA Medical Exam: | October 16, 2000 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | March 20, 2000 |
| Flight Time: | 684 hours (Total, all aircraft), 10 hours (Total, this make and model), 573 hours (Pilot In Command, all aircraft), 44 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 1 hour (Last 24 hours, all aircraft) | | |

Check pilot Information

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|----------------------------------|--|--|---------------|
| Certificate: | Commercial; Flight instructor | Age: | 32, Male |
| Airplane Rating(s): | Single-engine land; Single-engine sea; Multi-engine land | Seat Occupied: | Right |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | Airplane | Second Pilot Present: | Yes |
| Instructor Rating(s): | Airplane single-engine | Toxicology Performed: | No |
| Medical Certification: | Class 2 Valid Medical—no waivers/lim. | Last FAA Medical Exam: | June 27, 2000 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | May 18, 2000 |
| Flight Time: | 5260 hours (Total, all aircraft), 3500 hours (Total, this make and model), 5100 hours (Pilot In Command, all aircraft), 115 hours (Last 90 days, all aircraft), 59 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|-------------------------------|---------------------------------------|--------------------------|
| Aircraft Make: | de Havilland | Registration: | N6781L |
| Model/Series: | DHC-2 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 788 |
| Landing Gear Type: | Float | Seats: | 8 |
| Date/Type of Last Inspection: | April 27, 2001 100 hour | Certified Max Gross Wt.: | 5370 lbs |
| Time Since Last Inspection: | 12 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 16470 Hrs at time of accident | Engine Manufacturer: | P&W |
| ELT: | Installed, not activated | Engine Model/Series: | R-985 |
| Registered Owner: | Kenmore Air Harbor, Inc. | Rated Power: | 450 Horsepower |
| Operator: | | Operating Certificate(s) Held: | On-demand air taxi (135) |
| Operator Does Business As: | | Operator Designator Code: | GJRA |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | BFI, 18 ft msl | Distance from Accident Site: | 6 Nautical Miles |
| Observation Time: | 12:53 Local | Direction from Accident Site: | 158° |
| Lowest Cloud Condition: | Few / 2300 ft AGL | Visibility | 10 miles |
| Lowest Ceiling: | Broken / 3800 ft AGL | Visibility (RVR): | |
| Wind Speed/Gusts: | 12 knots / 22 knots | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 180° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29.86 inches Hg | Temperature/Dew Point: | 12°C / 9°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Seattle, WA (WA57) | Type of Flight Plan Filed: | Company VFR |
| Destination: | Seattle, WA (S60) | Type of Clearance: | None |
| Departure Time: | 12:45 Local | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|---------------------------------|----------------------------------|--------------|
| Airport: | Lake Union Air Service SPB WA57 | Runway Surface Type: | Water |
| Airport Elevation: | | Runway Surface Condition: | Water-choppy |
| Runway Used: | | IFR Approach: | Unknown |
| Runway Length/Width: | | VFR Approach/Landing: | Unknown |

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: | 47.629199,-122.319335(est) |

Administrative Information

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|--|---|
| Investigator In Charge (IIC): | Mccreary, Steven |
| Additional Participating Persons: | Terry Butler-Stoddard; FAA Flight Standards District Office; Renton, WA |
| Original Publish Date: | August 26, 2003 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | The NTSB traveled to the scene of this accident. |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=52185 |

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](#).