



Aviation Investigation Final Report

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|--------------------------------|---|-------------------------|-------------|
| Location: | ANCHORAGE, Alaska | Accident Number: | ANC87FA043 |
| Date & Time: | March 7, 1987, 15:30 Local | Registration: | N6140C |
| Aircraft: | Bell 47G-2 | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 2 None |
| Flight Conducted Under: | Part 91: General aviation - Instructional | | |

Analysis

A FLIGHT INSTRUCTOR AND HIS COMMERCIAL ROTORCRAFT STUDENT WERE PRACTICING QUICK STOPS TO A HOVER AT LOW ALTITUDE OVER A SNOW COVERED NON-MAINTAINED AIRSTRIP. THE STUDENT, A COMMERCIALY RATED FIXED WING PILOT, HAD SUCCESSFULLY COMPLETED THREE QUICK STOPS, BUT STRUCK THE TAIL ROTOR ON THE RUNWAY SURFACE ON HIS FOURTH ATTEMPT CAUSING THE TAIL ROTOR TO SEPARATE FROM THE AIRCRAFT. THE FLIGHT INSTRUCTOR TOOK THE CONTROLS AND MADE AN EMERGENCY LANDING. THE HELICOPTER LANDED HARD AND ROLLED ONTO ITS RIGHT SIDE. THE HELICOPTER WAS SUBSTANTIALLY DAMAGED, BUT NEITHER PILOT WAS INJURED.

Probable Cause and Findings

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

Findings

Occurrence #1: ABRUPT MANEUVER
Phase of Operation: HOVER

Findings

1. (F) PROCEDURES/DIRECTIVES - NOT FOLLOWED - DUAL STUDENT
2. (F) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT IN COMMAND(CFI)

3. (C) AIRCRAFT HANDLING - NOT MAINTAINED - PILOT IN COMMAND(CFI)
4. (C) ALTITUDE - IMPROPER - PILOT IN COMMAND(CFI)
5. (C) MANEUVER - IMPROPER - PILOT IN COMMAND(CFI)

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: HOVER

Factual Information

Pilot Information

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|----------------------------------|---|--|-------------------|
| Certificate: | Airline transport; Commercial; Flight instructor | Age: | 57, Male |
| Airplane Rating(s): | Single-engine land; Single-engine sea; Multi-engine land | Seat Occupied: | Right |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | |
| Instrument Rating(s): | Airplane | Second Pilot Present: | Yes |
| Instructor Rating(s): | Airplane multi-engine; Airplane single-engine; Helicopter | Toxicology Performed: | No |
| Medical Certification: | Class 1 Valid Medical-w/ waivers/lim | Last FAA Medical Exam: | February 25, 1987 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | |
| Flight Time: | 31000 hours (Total, all aircraft), 190 hours (Total, this make and model), 29000 hours (Pilot In Command, all aircraft), 230 hours (Last 90 days, all aircraft), 16 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|----------------------------|---------------------------------------|-----------------|
| Aircraft Make: | Bell | Registration: | N6140C |
| Model/Series: | 47G-2 47G-2 | Aircraft Category: | Helicopter |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 47 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 2 |
| Date/Type of Last Inspection: | May 15, 1986 100 hour | Certified Max Gross Wt.: | 2450 lbs |
| Time Since Last Inspection: | 83 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 8399 Hrs | Engine Manufacturer: | LYCOMING |
| ELT: | Installed, not activated | Engine Model/Series: | VO-435-B1A |
| Registered Owner: | WILBUR'S FLIGHT OPERATIONS | Rated Power: | 265 Horsepower |
| Operator: | | Operating Certificate(s) Held: | None |
| Operator Does Business As: | | Operator Designator Code: | |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|--------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | | Distance from Accident Site: | |
| Observation Time: | 15:00 Local | Direction from Accident Site: | |
| Lowest Cloud Condition: | Clear | Visibility | 50 miles |
| Lowest Ceiling: | Overcast / 9000 ft AGL | Visibility (RVR): | |
| Wind Speed/Gusts: | 8 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 350° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | -9°C / -13°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | ANCHORAGE , AK (MRI) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | VFR |
| Departure Time: | 14:15 Local | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|-----------------------|----------------------------------|------|
| Airport: | CAMPBELL AIRSTRIP CSR | Runway Surface Type: | Snow |
| Airport Elevation: | 286 ft msl | Runway Surface Condition: | Snow |
| Runway Used: | 2 | IFR Approach: | None |
| Runway Length/Width: | 5000 ft / 150 ft | VFR Approach/Landing: | None |

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: | 61.199352,-149.749496(est) |

Administrative Information

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|--|---|
| Investigator In Charge (IIC): | La belle, James |
| Additional Participating Persons: | JAMES MICHELANGELO; |
| Original Publish Date: | March 21, 1988 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=4771 |

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](#).