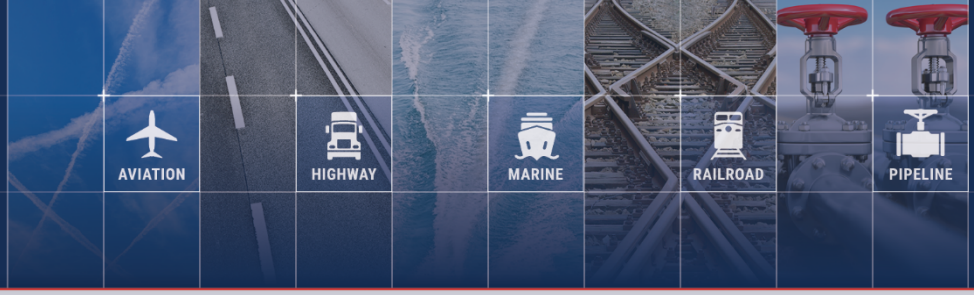


# Aviation Investigation Final Report

| | | | |
|---|---|---|---|
| **Location:** | Midway, Utah | **Accident Number:** | WPR23LA147 |
| **Date & Time:** | April 8, 2023, 12:00 Local | **Registration:** | N7530D |
| **Aircraft:** | ROBINSON HELICOPTER R22 BETA | **Aircraft Damage:** | Substantial |
| **Defining Event:** | Roll over | **Injuries:** | 2 None |
| **Flight Conducted Under:** | Part 91: General aviation - Instructional | | |

## Analysis

The flight instructor reported that during an instructional flight, he and his student were approaching a ridge line to conduct a practice pinnacle landing. The student pilot stated that as they were over the ridge line, the helicopter was struck by a wind gust, and it yawed to the right. He added left anti-torque pedal to correct the yaw, then the low RPM horn sounded, and the instructor took the flight controls. He lowered the collective and added forward cyclic to move away from terrain, however the helicopter landed hard in the snow and rolled onto its right side. The tail boom was substantially damaged. The instructor reported that there were no preaccident mechanical malfunctions or failures 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 aircraft control during a pinnacle landing that resulted in a hard landing and subsequent roll over.

## Findings

| | |
|---|---|
| **Personnel issues** | Aircraft control - Instructor/check pilot |
| **Aircraft** | Yaw control - Not attained/maintained |
| **Environmental issues** | Gusts - Contributed to outcome |

# Factual Information

## History of Flight

| | |
|---|---|
| **Maneuvering-low-alt flying** | Low altitude operation/event |
| **Landing** | Roll over (Defining event) |

## Pilot Information

| | | | |
|---|---|---|---|
| **Certificate:** | Private | **Age:** | 23,Male |
| **Airplane Rating(s):** | None | **Seat Occupied:** | Right |
| **Other Aircraft Rating(s):** | Helicopter | **Restraint Used:** | 3-point |
| **Instrument Rating(s):** | None | **Second Pilot Present:** | Yes |
| **Instructor Rating(s):** | None | **Toxicology Performed:** | |
| **Medical Certification:** | Class 1 Without waivers/limitations | **Last FAA Medical Exam:** | May 10, 2022 |
| **Occupational Pilot:** | No | **Last Flight Review or Equivalent:** | |
| **Flight Time:** | (Estimated) 96 hours (Total, all aircraft), 96 hours (Total, this make and model), 31 hours (Pilot In Command, all aircraft), 16 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

## Flight instructor Information

| | | | |
|---|---|---|---|
| **Certificate:** | Commercial; Flight engineer | **Age:** | 32,Male |
| **Airplane Rating(s):** | None | **Seat Occupied:** | Left |
| **Other Aircraft Rating(s):** | Helicopter | **Restraint Used:** | 3-point |
| **Instrument Rating(s):** | Helicopter | **Second Pilot Present:** | Yes |
| **Instructor Rating(s):** | Helicopter; Instrument helicopter | **Toxicology Performed:** | |
| **Medical Certification:** | Class 2 With waivers/limitations | **Last FAA Medical Exam:** | March 7, 2022 |
| **Occupational Pilot:** | Yes | **Last Flight Review or Equivalent:** | May 4, 2022 |
| **Flight Time:** | (Estimated) 554 hours (Total, all aircraft), 421 hours (Total, this make and model), 436 hours (Pilot In Command, all aircraft), 125 hours (Last 90 days, all aircraft), 19 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

## Aircraft and Owner/Operator Information

| | | | |
|---|---|---|---|
| **Aircraft Make:** | ROBINSON HELICOPTER | **Registration:** | N7530D |
| **Model/Series:** | R22 BETA | **Aircraft Category:** | Helicopter |
| **Year of Manufacture:** | 2004 | **Amateur Built:** | |
| **Airworthiness Certificate:** | Normal | **Serial Number:** | 3619 |
| **Landing Gear Type:** | None; Skid | **Seats:** | 2 |
| **Date/Type of Last Inspection:** | January 10, 2023 Annual | **Certified Max Gross Wt.:** | 1370 lbs |
| **Time Since Last Inspection:** | | **Engines:** | 1 Reciprocating |
| **Airframe Total Time:** | 8819.6 Hrs at time of accident | **Engine Manufacturer:** | Lycoming |
| **ELT:** | C91A installed, not activated | **Engine Model/Series:** | O-360-J2A |
| **Registered Owner:** | UTAH STATE UNIVERSITY | **Rated Power:** | 145 Horsepower |
| **Operator:** | UTAH STATE UNIVERSITY | **Operating Certificate(s) Held:** | Pilot school (141) |

## Meteorological Information and Flight Plan

| | | | |
|---|---|---|---|
| **Conditions at Accident Site:** | Visual (VMC) | **Condition of Light:** | Day |
| **Observation Facility, Elevation:** | KU42,4603 ft msl | **Distance from Accident Site:** | 24 Nautical Miles |
| **Observation Time:** | 11:55 Local | **Direction from Accident Site:** | 277° |
| **Lowest Cloud Condition:** | Clear | **Visibility** | 10 miles |
| **Lowest Ceiling:** | None | **Visibility (RVR):** | |
| **Wind Speed/Gusts:** | 9 knots / | **Turbulence Type Forecast/Actual:** | / None |
| **Wind Direction:** | 160° | **Turbulence Severity Forecast/Actual:** | / N/A |
| **Altimeter Setting:** | 30.09 inches Hg | **Temperature/Dew Point:** | 16°C / -2°C |
| **Precipitation and Obscuration:** | No Obscuration; No Precipitation | | |
| **Departure Point:** | Ogden, UT (KOGD) | **Type of Flight Plan Filed:** | None |
| **Destination:** | Heber City, UT (KHCR) | **Type of Clearance:** | None |
| **Departure Time:** | 11:00 Local | **Type of Airspace:** | Class G |

## Wreckage and Impact Information

| | | | |
|---|---|---|---|
| **Crew Injuries:** | 2 None | **Aircraft Damage:** | Substantial |
| **Passenger Injuries:** | | **Aircraft Fire:** | None |
| **Ground Injuries:** | | **Aircraft Explosion:** | None |
| **Total Injuries:** | 2 None | **Latitude, Longitude:** | 40.570703,-111.47659(est) |

## Administrative Information

| | |
|---|---|
| **Investigator In Charge (IIC):** | Blocher, Kristyn |
| **Additional Participating Persons:** | Gordon Behunin; Federal Aviation Administration; Salt Lake City, UT |
| **Original Publish Date:** | July 7, 2023 |
| **Last Revision Date:** | |
| **Investigation Class:** | Class 4 |
| **Note:** | The NTSB did not travel to the scene of this accident. |
| **Investigation Docket:** | https://data.ntsb.gov/Docket?ProjectID=107030 |