



Aviation Investigation Final Report

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|--------------------------------|----------------------------------|-------------------------|-------------|
| Location: | Draper, Utah | Accident Number: | GAA15CA258 |
| Date & Time: | September 9, 2015, 10:40 Local | Registration: | N253HP |
| Aircraft: | Airbus AS350 | Aircraft Damage: | Substantial |
| Defining Event: | External load event (Rotorcraft) | Injuries: | 2 None |
| Flight Conducted Under: | Public aircraft | | |

Analysis

The pilot reported that he and a tactical flight officer were conducting a high altitude rescue mission in "remote and nearly vertical" terrain with a public use helicopter, by doing a one-skid recovery. The purpose of this mission was to recover a fallen hiker.

A member of the three person ground recovery team had secured himself to a rescue rope that was anchored to the steep terrain above the plane-of-rotation of the main rotor system blades. Once the helicopter's right skid landed on a rock outcrop, the ground recovery team approached the helicopter to begin the loading process. During the approach to the helicopter, the rescue rope came in contact with a main rotor blade.

The pilot reported that the helicopter then, "rotated abruptly to the left and began to shake violently." The helicopter impacted terrain, the pilot regained control, and he then made an emergency landing at a lower altitude. He reported that upon applying power to land, the helicopter "began to shake violently again until touching down and reducing collective pitch." A postflight inspection revealed substantial damage to the main rotor system, the tail boom, and the empennage.

The pilot reported there were no pre-impact mechanical failures or malfunctions with the airframe or engine 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 ground recovery team member's failure to secure a rescue rope during the helicopter loading process in steep terrain, resulting in the rope fouling the helicopter's main rotor system.

Findings

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| Personnel issues | Use of equip/system - Emergency services personnel |
| Aircraft | Main rotor head system - Damaged/degraded |
| Aircraft | Main rotor control - Damaged/degraded |
| Environmental issues | Ground equipment - Effect on operation |

Factual Information

History of Flight

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|--------------------------|---|
| Maneuvering-hover | External load event (Rotorcraft) (Defining event) |
| Emergency descent | Loss of control in flight |
| Emergency descent | Collision with terr/obj (non-CFIT) |

Pilot Information

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|----------------------------------|---|--|----------------|
| Certificate: | Airline transport | Age: | 54 |
| Airplane Rating(s): | Single-engine land; Multi-engine land | Seat Occupied: | Right |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | 4-point |
| Instrument Rating(s): | Airplane; Helicopter | Second Pilot Present: | No |
| Instructor Rating(s): | Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter | Toxicology Performed: | No |
| Medical Certification: | Class 1 Without waivers/limitations | Last FAA Medical Exam: | March 12, 2015 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | June 1, 2015 |
| Flight Time: | (Estimated) 5000 hours (Total, all aircraft), 3000 hours (Total, this make and model) | | |

Other flight crew Information

| | | | |
|----------------------------------|-----------|--|---------|
| Certificate: | None | Age: | |
| Airplane Rating(s): | None | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | 4-point |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | None None | Last FAA Medical Exam: | |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|-------------------------------|---------------------------------------|----------------|
| Aircraft Make: | Airbus | Registration: | N253HP |
| Model/Series: | AS350 B3 | Aircraft Category: | Helicopter |
| Year of Manufacture: | 2013 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 7533 |
| Landing Gear Type: | High skid | Seats: | 6 |
| Date/Type of Last Inspection: | August 3, 2015 100 hour | Certified Max Gross Wt.: | 5225 lbs |
| Time Since Last Inspection: | | Engines: | 1 Turbo shaft |
| Airframe Total Time: | 834.3 Hrs at time of accident | Engine Manufacturer: | Turbomeca |
| ELT: | C126 installed, not activated | Engine Model/Series: | Arriel 2D |
| Registered Owner: | On file | Rated Power: | 860 Horsepower |
| Operator: | On file | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|-------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | KSLC, 4225 ft msl | Distance from Accident Site: | 18 Nautical Miles |
| Observation Time: | 16:53 Local | Direction from Accident Site: | 327° |
| Lowest Cloud Condition: | Few / 6000 ft AGL | Visibility | 10 miles |
| Lowest Ceiling: | | Visibility (RVR): | |
| Wind Speed/Gusts: | 4 knots / | Turbulence Type Forecast/Actual: | / None |
| Wind Direction: | 140° | Turbulence Severity Forecast/Actual: | / N/A |
| Altimeter Setting: | 30.18 inches Hg | Temperature/Dew Point: | 22°C / -1°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | SALT LAKE CITY, UT (SLC) | Type of Flight Plan Filed: | Company VFR |
| Destination: | SALT LAKE CITY, UT (SLC) | Type of Clearance: | VFR |
| Departure Time: | 08:30 Local | Type of Airspace: | Class G |

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: | 40.52639,-111.754997(est) |

Administrative Information

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| Investigator In Charge (IIC): | Hodges, Michael |
| Additional Participating Persons: | Jeff Guzzetti; FAA Accident Investigation Division (AVP-100); Washington, DC |
| Original Publish Date: | January 15, 2016 |
| 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=91979 |

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