



National Transportation Safety Board Aviation Accident Final Report

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|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Willows, CA | Accident Number: | WPR14CA363 |
| Date & Time: | 09/02/2014, 1300 PDT | Registration: | N516PJ |
| Aircraft: | HUGHES 369D | Aircraft Damage: | Substantial |
| Defining Event: | Miscellaneous/other | Injuries: | 1 Serious |
| Flight Conducted Under: | Part 91: General Aviation - Business | | |

Analysis

While in cruise flight an unsecured jacket departed the helicopter through an open window. The tail rotor drive shaft sheared as a result of the jacket's contact with the tail rotors. The pilot subsequently initiated a forced landing to an orchard where during landing, the main rotors struck and separated the tailboom. The pilot reported no preimpact mechanical malfunctions or failures with the helicopter 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 adequately secure cargo (a jacket), which resulted in the jacket exiting the cabin compartment and colliding with the tail rotor during cruise flight.

Findings

Aircraft

Personnel issues Incomplete action - Pilot (Cause)

Environmental issues Tree(s) - Contributed to outcome

Debris/dirt/foreign object - Effect on equipment (Cause)

Factual Information

History of Flight

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|---------|---|
| Enroute | Miscellaneous/other (Defining event) Loss of control in flight |
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Pilot Information

| | | | |
|---------------------------|--|-----------------------------------|------------|
| Certificate: | Commercial | Age: | 67 |
| Airplane Rating(s): | Single-engine Land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | |
| Instrument Rating(s): | Airplane; Helicopter | Second Pilot Present: | No |
| Instructor Rating(s): | Airplane Single-engine; Helicopter | Toxicology Performed: | No |
| Medical Certification: | Class 2 With Waivers/Limitations | Last Medical Exam: | 01/01/2014 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | |
| Flight Time: | 22100 hours (Total, all aircraft), 6495 hours (Total, this make and model), 19005 hours (Pilot In Command, all aircraft), 140 hours (Last 90 days, all aircraft), 46 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|-------------------------------|-------------------------------|------------------------------------|--|
| Aircraft Manufacturer: | HUGHES | Registration: | N516PJ |
| Model/Series: | 369D | Aircraft Category: | Helicopter |
| Year of Manufacture: | | Amateur Built: | No |
| Airworthiness Certificate: | Normal | Serial Number: | 1188D |
| Landing Gear Type: | High Skid | Seats: | |
| Date/Type of Last Inspection: | 08/22/2014, 100 Hour | Certified Max Gross Wt.: | 3000 lbs |
| Time Since Last Inspection: | | Engines: | 1 Turbo Shaft |
| Airframe Total Time: | 9258 Hours | Engine Manufacturer: | Rolls Royce/Allison |
| ELT: | C91A installed, not activated | Engine Model/Series: | 250-C20B |
| Registered Owner: | PJ HELICOPTERS INC | Rated Power: | 420 hp |
| Operator: | PJ HELICOPTERS INC | Air Carrier Operating Certificate: | Rotorcraft External Load (133); On-demand Air Taxi (135) |

Meteorological Information and Flight Plan

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|----------------------------------|----------------------------------|------------------------------|-------------------|
| Observation Facility, Elevation: | KCIC, 238 ft msl | Observation Time: | 1955 UTC |
| Distance from Accident Site: | 25 Nautical Miles | Condition of Light: | Day |
| Direction from Accident Site: | 48° | Conditions at Accident Site: | Visual Conditions |
| Lowest Cloud Condition: | Clear | Temperature/Dew Point: | 33°C / 8°C |
| Lowest Ceiling: | None | Visibility | 10 Miles |
| Wind Speed/Gusts, Direction: | 10 knots, 180° | Visibility (RVR): | |
| Altimeter Setting: | 29.76 inches Hg | Visibility (RVV): | |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | WILLOWS, CA (WLW) | Type of Flight Plan Filed: | Company VFR |
| Destination: | WILLOWS, CA (WLW) | Type of Clearance: | None |
| Departure Time: | 1255 PDT | Type of Airspace: | |

Airport Information

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|----------------------|----------------------------|---------------------------|----------------|
| Airport: | WILLOWS-GLENN COUNTY (WLW) | Runway Surface Type: | N/A |
| Airport Elevation: | 141 ft | Runway Surface Condition: | Vegetation |
| Runway Used: | N/A | IFR Approach: | None |
| Runway Length/Width: | | VFR Approach/Landing: | Forced Landing |

Wreckage and Impact Information

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

Administrative Information

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|-----------------------------------|---|---------------|------------|
| Investigator In Charge (IIC): | Patrick H Jones | Adopted Date: | 10/27/2014 |
| Additional Participating Persons: | Brian L Allen; Federal Aviation Administration; Sacramento, CA | | |
| Publish Date: | 10/07/2015 | | |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. | | |
| Investigation Docket: | http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=90007 | | |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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.