



# Aviation Investigation Final Report

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<b>Location:</b>	Willows, California	<b>Accident Number:</b>	WPR14CA363
<b>Date &amp; Time:</b>	September 2, 2014, 13:00 Local	<b>Registration:</b>	N516PJ
<b>Aircraft:</b>	Hughes 369D	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Miscellaneous/other	<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation		

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## 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

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<b>Aircraft</b>	(general) - Incorrect use/operation
<b>Personnel issues</b>	Incomplete action - Pilot
<b>Environmental issues</b>	Tree(s) - Contributed to outcome
<b>Environmental issues</b>	Debris/dirt/foreign object - Effect on equipment

## Factual Information

### History of Flight

<b>Enroute</b>	Miscellaneous/other (Defining event)
<b>Enroute</b>	Loss of control in flight

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	67
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane single-engine; Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	January 1, 2014
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	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

<b>Aircraft Make:</b>	Hughes	<b>Registration:</b>	N516PJ
<b>Model/Series:</b>	369D	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	1982	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	1188D
<b>Landing Gear Type:</b>	High skid	<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>	August 22, 2014 100 hour	<b>Certified Max Gross Wt.:</b>	3000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>	9258 Hrs at time of accident	<b>Engine Manufacturer:</b>	Rolls Royce/Allison
<b>ELT:</b>	C91A installed, not activated	<b>Engine Model/Series:</b>	250-C20B
<b>Registered Owner:</b>	PJ HELICOPTERS INC	<b>Rated Power:</b>	420 Horsepower
<b>Operator:</b>	PJ HELICOPTERS INC	<b>Operating Certificate(s) Held:</b>	Rotorcraft external load (133), On-demand air taxi (135)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KCIC,238 ft msl	<b>Distance from Accident Site:</b>	25 Nautical Miles
<b>Observation Time:</b>	19:55 Local	<b>Direction from Accident Site:</b>	48°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.76 inches Hg	<b>Temperature/Dew Point:</b>	33°C / 8°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	WILLOWS, CA (WLW )	<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>	WILLOWS, CA (WLW )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:55 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	WILLOWS-GLENN COUNTY WLW	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	141 ft msl	<b>Runway Surface Condition:</b>	Vegetation
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Serious	<b>Latitude, Longitude:</b>	39.524166,-122.249168(est)

## Administrative Information

**Investigator In Charge (IIC):** Jones, Patrick

**Additional Participating Persons:** Brian L Allen; Federal Aviation Administration; Sacramento, CA

**Original Publish Date:** October 27, 2014

**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=90007>

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