



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Philomath, Oregon	<b>Accident Number:</b>	LAX08CA185
<b>Date &amp; Time:</b>	June 16, 2008, 18:30 Local	<b>Registration:</b>	N4000Y
<b>Aircraft:</b>	Robinson R-22 Beta	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	2 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The flight instructor reported that he was flying an instructional cross-country flight with a student. They stopped for fuel at an airport near sea level and were returning to their home base. When they departed, the wind was from 300 degrees at 16 knots, gusting to 20 knots. They decided to do a pinnacle landing to a 4,060-foot mountain. As the student approached the peak for landing, a downdraft was encountered. The main rotor disk low rpm indicators activated, and the flight instructor took the controls and attempted to salvage the situation. The helicopter's landing skid impacted terrain, and the aircraft rolled twice down the mountain. The flight instructor and student exited with minor injuries.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The student pilot's failure to maintain rotor rpm during a pinnacle approach and the flight instructor's delayed remedial action and inadequate supervision of the flight. Contributing to the accident was the downdraft weather condition.

## Findings

<b>Environmental issues</b>	Downdraft - Contributed to outcome
<b>Aircraft</b>	Prop/rotor parameters - Not attained/maintained
<b>Personnel issues</b>	Delayed action - Instructor/check pilot
<b>Personnel issues</b>	Monitoring other person - Instructor/check pilot
<b>Environmental issues</b>	Mountainous/hilly terrain - Not specified

## Factual Information

### History of Flight

<b>Approach-VFR pattern final</b>	Loss of control in flight (Defining event)
<b>Uncontrolled descent</b>	Collision with terr/obj (non-CFIT)

### Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	22, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Helicopter; Instrument helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2	<b>Last FAA Medical Exam:</b>	December 1, 2007
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1230 hours (Total, all aircraft), 1215 hours (Total, this make and model), 150 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

### Student pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	23, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2	<b>Last FAA Medical Exam:</b>	March 1, 2006
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	115 hours (Total, all aircraft), 115 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Robinson	<b>Registration:</b>	N4000Y
<b>Model/Series:</b>	R-22 Beta	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	1367
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>		<b>Certified Max Gross Wt.:</b>	1370 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>		<b>Engine Model/Series:</b>	O-320
<b>Registered Owner:</b>	Hillsboro Aviation Inc.	<b>Rated Power:</b>	160 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	CVO	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	18:35 Local	<b>Direction from Accident Site:</b>	
<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>	16 knots / 20 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	300°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.06 inches Hg	<b>Temperature/Dew Point:</b>	20°C / 8°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Corvallis, OR (CVO )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Troutdale, OR (TTD )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:10 Local	<b>Type of Airspace:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 Minor	<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>	2 Minor	<b>Latitude, Longitude:</b>	44.503887,-123.551391

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Struhsaker, James
<b>Additional Participating Persons:</b>	Federal Aviation Administration; Portland, OR
<b>Original Publish Date:</b>	July 30, 2008
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=68244">https://data.nts.gov/Docket?ProjectID=68244</a>

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