



# National Transportation Safety Board Aviation Accident Data Summary

<b>Location:</b>	Bountiful, UT	<b>Accident Number:</b>	WPR09CA105
<b>Date &amp; Time:</b>	02/01/2009, 1200 MST	<b>Registration:</b>	N944U
<b>Aircraft:</b>	ROBINSON HELICOPTER COMPANY R44 II	<b>Injuries:</b>	1 Minor, 3 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Analysis

While en route to her destination, the pilot elected to fly the helicopter up a canyon toward rising terrain. Soon after making a low pass over a ridge above 8,000 feet mean sea level, the pilot increased collective in order to climb over upcoming higher terrain. As the collective was increased, the rotor rpm started to drop. The pilot immediately increased throttle, reversed course to fly downhill, and lowered the collective. During the turn, the helicopter encountered a quartering tailwind and began to settle toward the snow-covered down-sloping terrain. Soon thereafter the helicopter contacted the terrain, bounced back into the air, and a main rotor blade severed the tail boom. The helicopter rotated 180 degrees, impacted the terrain, and rolled over. According to the pilot there was no evidence of an engine power loss or any anomaly with the flight control system.

## Flight Events

Maneuvering-low-alt flying - Low altitude operation/event

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper decision to fly at low altitude while maneuvering in mountainous terrain in a canyon and inadvertently exceeding the climb capability of the helicopter. Contributing to the accident were a high density altitude, mountainous terrain, and a tailwind encountered during the attempted course reversal.

## Findings

Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Climb rate-Capability exceeded - C

Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C  
Environmental issues-Physical environment-Terrain-Mountainous/hilly terrain-Effect on operation - F

Environmental issues-Conditions/weather/phenomena-Wind-Tailwind-Effect on equipment - F  
Environmental issues-Conditions/weather/phenomena-Temp/humidity/pressure-High density altitude-Effect on equipment - F

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	21
<b>Airplane Rating(s):</b>	None	<b>Instrument Rating(s):</b>	Helicopter
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Instructor Rating(s):</b>	Helicopter
<b>Flight Time:</b>	524 hours (Total, all aircraft), 101 hours (Total, this make and model), 433 hours (Pilot In Command, all aircraft), 194 hours (Last 90 days, all aircraft), 63 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	ROBINSON HELICOPTER COMPANY	<b>Registration:</b>	N944U
<b>Model/Series:</b>	R44 II	<b>Engines:</b>	1 Reciprocating
<b>Operator:</b>	UPPER LIMIT AVIATION	<b>Engine Manufacturer:</b>	LYCOMING
<b>Air Carrier Operating Certificate:</b>	None	<b>Engine Model/Series:</b>	IO-540-AE1A5
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>		<b>Weather Information Source:</b>	Pilot
<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Lowest Ceiling:</b>	None
<b>Condition of Light:</b>	Day	<b>Wind Speed/Gusts, Direction:</b>	, Variable
<b>Temperature:</b>		<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	SALT LAKE CITY, UT (kslc)	<b>Destination:</b>	MORGAN, UT (42u)

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Minor, 2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Orrin K Anderson	<b>Adopted Date:</b>	04/15/2009
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.		
<b>Investigation Docket:</b>	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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