



# Aviation Investigation Final Report

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<b>Location:</b>	Salt Lake City, Utah	<b>Accident Number:</b>	WPR22LA157
<b>Date &amp; Time:</b>	April 16, 2022, 13:30 Local	<b>Registration:</b>	N3297Q
<b>Aircraft:</b>	ROBINSON HELICOPTER COMPANY R44 II	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Dynamic rollover	<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

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## Analysis

The flight instructor of the helicopter reported that, while conducting hover training about five ft above ground level, with the student pilot at the flight control, the helicopter began drifting to the right and the right skid contacted the ground. The helicopter subsequently exceeded the critical roll angle and experienced a dynamic rollover to the right. The helicopter sustained substantial damage to the tailboom. The flight instructor reported that there were no preaccident mechanical failures or malfunctions 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 student pilot’s failure to maintain lateral control and terrain clearance while hovering, and the flight instructor’s delayed remedial action which resulted in a dynamic rollover.

## Findings

<b>Aircraft</b>	Lateral/bank control - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Student/instructed pilot
<b>Personnel issues</b>	Delayed action - Instructor/check pilot
<b>Aircraft</b>	Altitude - Not attained/maintained

## Factual Information

### History of Flight

<b>Maneuvering-hover</b>	Dynamic rollover (Defining event)
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### Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor; Military	<b>Age:</b>	43, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter; Instrument helicopter	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	March 28, 2022
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	February 9, 2022
<b>Flight Time:</b>	(Estimated) 1384 hours (Total, all aircraft), 75 hours (Total, this make and model), 1349.5 hours (Pilot In Command, all aircraft), 180 hours (Last 90 days, all aircraft), 127.6 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

### Student pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	42, Female
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	None	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 3.6 hours (Total, all aircraft), 0.5 hours (Total, this make and model), 3.6 hours (Last 90 days, all aircraft), 3.6 hours (Last 30 days, all aircraft)		

## Passenger Information

<b>Certificate:</b>		<b>Age:</b>	Male
<b>Airplane Rating(s):</b>		<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>		<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>		<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	ROBINSON HELICOPTER COMPANY	<b>Registration:</b>	N3297Q
<b>Model/Series:</b>	R44 II	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	None	<b>Serial Number:</b>	10178
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	March 24, 2022 100 hour	<b>Certified Max Gross Wt.:</b>	2500 lbs
<b>Time Since Last Inspection:</b>	19.9 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4195.9 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	10-540-AE1A5
<b>Registered Owner:</b>	UTAH HELICOPTER LLC	<b>Rated Power:</b>	260 Horsepower
<b>Operator:</b>	UTAH HELICOPTER LLC	<b>Operating Certificate(s) Held:</b>	Pilot school (141)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KU42,4603 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	13:35 Local	<b>Direction from Accident Site:</b>	189°
<b>Lowest Cloud Condition:</b>		<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 10000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots / 17 knots	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	230°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.77 inches Hg	<b>Temperature/Dew Point:</b>	17°C / 5°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Salt Lake City, UT	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Salt Lake City, UT	<b>Type of Clearance:</b>	VFR;None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	South Valley Regional Airport U42	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	4606 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 None	<b>Latitude, Longitude:</b>	40.619556,-111.99288(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gutierrez, Eric
<b>Additional Participating Persons:</b>	Paula A. Behrend; Federal Aviation Administration; Salt Lake City, UT
<b>Original Publish Date:</b>	July 20, 2022
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=104961">https://data.ntsb.gov/Docket?ProjectID=104961</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).