



# Aviation Investigation Final Report

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<b>Location:</b>	Phoenix, Arizona	<b>Accident Number:</b>	WPR22LA146
<b>Date &amp; Time:</b>	April 6, 2022, 20:10 Local	<b>Registration:</b>	N19VH
<b>Aircraft:</b>	ROBINSON HELICOPTER COMPANY R22	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Dynamic rollover	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

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## Analysis

The pilot in the helicopter reported that, during a night solo training flight, the helicopter was on the ground with the throttle rolled on and full collective friction applied when he used a flashlight to view the Hobbs meter. Unbeknownst to him, the collective crept up, the helicopter rolled to the right and dynamically rolled over. The helicopter sustained substantial damage to the horizontal stabilizer, and the main rotor system. The pilot reported that there were no preaccident mechanical failures or malfunctions with the helicopter that would have precluded normal flight 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 maintain helicopter control while on the ground when his attention was diverted, which resulted in a dynamic rollover.

## Findings

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<b>Personnel issues</b>	Attention - Pilot
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	(general) - Unintentional use/operation
<b>Aircraft</b>	Pitch control - Not attained/maintained

## Factual Information

### History of Flight

<b>Taxi-to runway</b>	Loss of control on ground
<b>Standing</b>	Dynamic rollover (Defining event)

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	26, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	July 9, 2021
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	December 21, 2021
<b>Flight Time:</b>	(Estimated) 177 hours (Total, all aircraft), 177 hours (Total, this make and model), 92 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	ROBINSON HELICOPTER COMPANY	<b>Registration:</b>	N19VH
<b>Model/Series:</b>	R22 Beta II	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	2004	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	3528
<b>Landing Gear Type:</b>	None; Skid	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	March 29, 2022 100 hour	<b>Certified Max Gross Wt.:</b>	1370 lbs
<b>Time Since Last Inspection:</b>	30 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	15042 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	O-360
<b>Registered Owner:</b>	DELTA LEASING INC DBA	<b>Rated Power:</b>	131 Horsepower
<b>Operator:</b>	Quantum Helicopters	<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>	Night
<b>Observation Facility, Elevation:</b>	KIWA,1382 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	20:25 Local	<b>Direction from Accident Site:</b>	231°
<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 / 15 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	70°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.02 inches Hg	<b>Temperature/Dew Point:</b>	28°C / -9°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Chandler, AZ (CHD)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Phoenix, AZ	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	19:40 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	Phoenix-Mesa Gateway Airport IWA	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	1384 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>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	33.307824,-111.65545(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hicks, Michael
<b>Additional Participating Persons:</b>	Frank Waterhouse; FAA; Scottsdale, AZ
<b>Original Publish Date:</b>	July 13, 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=104908">https://data.ntsb.gov/Docket?ProjectID=104908</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](#).