



Aviation Investigation Final Report

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

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

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

Factual Information

History of Flight

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

Pilot Information

Certificate:	Private	Age:	26, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	July 9, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	December 21, 2021
Flight Time:	(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

Aircraft Make:	ROBINSON HELICOPTER COMPANY	Registration:	N19VH
Model/Series:	R22 Beta II	Aircraft Category:	Helicopter
Year of Manufacture:	2004	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	3528
Landing Gear Type:	None; Skid	Seats:	2
Date/Type of Last Inspection:	March 29, 2022 100 hour	Certified Max Gross Wt.:	1370 lbs
Time Since Last Inspection:	30 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	15042 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-360
Registered Owner:	DELTA LEASING INC DBA	Rated Power:	131 Horsepower
Operator:	Quantum Helicopters	Operating Certificate(s) Held:	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	KIWA,1382 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	20:25 Local	Direction from Accident Site:	231°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / 15 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	28°C / -9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Chandler, AZ (CHD)	Type of Flight Plan Filed:	None
Destination:	Phoenix, AZ	Type of Clearance:	VFR
Departure Time:	19:40 Local	Type of Airspace:	Class D

Airport Information

Airport:	Phoenix-Mesa Gateway Airport IWA	Runway Surface Type:	
Airport Elevation:	1384 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	33.307824,-111.65545(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Michael
Additional Participating Persons:	Frank Waterhouse; FAA; Scottsdale, AZ
Original Publish Date:	July 13, 2022
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=104908

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](#).