



National Transportation Safety Board Aviation Accident Final Report

Location:	Phoenix, Arizona	Accident Number:	WPR21LA359
Date & Time:	September 30, 2021, 08:15 Local	Registration:	N74706
Aircraft:	ROBINSON HELICOPTER COMPANY R44 II	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The solo student pilot reported that, while making a clearing turn, the wind caught the tail and abruptly spun the helicopter. He applied corrective pedal inputs then raised the collective to avoid the ground and the helicopter began to rotate clockwise about the vertical axis and could not be corrected by application of left pedal. About 50 to 60 ft above the ground, he entered an autorotation where the helicopter landed hard and sustained substantial damage to the fuselage.

The student pilot 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 helicopter control while making a clearing turn which resulted in a hard landing.

Findings

Personnel issues	Aircraft control - Student/instructed pilot
Aircraft	Descent/approach/glide path - Not attained/maintained

Factual Information

History of Flight

Maneuvering-hover	Other weather encounter
Maneuvering-hover	Loss of control in flight (Defining event)
Maneuvering-hover	Attempted remediation/recovery
Landing	Hard landing

Pilot Information

Certificate:	Student	Age:	41, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	June 25, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	58.2 hours (Total, all aircraft), 58 hours (Total, this make and model), 8.7 hours (Pilot In Command, all aircraft), 58 hours (Last 90 days, all aircraft), 18.1 hours (Last 30 days, all aircraft), 0.6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER COMPANY	Registration:	N74706
Model/Series:	R44 II	Aircraft Category:	Helicopter
Year of Manufacture:	2006	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	11065
Landing Gear Type:	Skid	Seats:	4
Date/Type of Last Inspection:	July 21, 2021 100 hour	Certified Max Gross Wt.:	2500 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3444.7 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	IO-540-AE1A5
Registered Owner:		Rated Power:	300 Horsepower
Operator:		Operating Certificate(s) Held:	On-demand air taxi (135), Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KDVT, 1455 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	08:53 Local	Direction from Accident Site:	209°
Lowest Cloud Condition:	Clear	Visibility:	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	Unknown / Unknown
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	Unknown / Unknown
Altimeter Setting:	29.96 inches Hg	Temperature/Dew Point:	25° C / 12° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Scottsdale, AZ (SDL)	Type of Flight Plan Filed:	None
Destination:	Phoenix, AZ	Type of Clearance:	VFR
Departure Time:	07:45 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	33.756482,-112.03545

Administrative Information

Investigator In Charge (IIC):	Salazar, Fabian		
Additional Participating Persons:	Kevin Hanna; Federal Aviation Administration; Scottsdale, AZ		
Original Publish Date:	April 29, 2022	Investigation Class:	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=104030		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).