



National Transportation Safety Board Aviation Accident Final Report

Location:	Miamisburg, Ohio	Accident Number:	CEN22LA041
Date & Time:	November 19, 2021, 11:30 Local	Registration:	N221HG
Aircraft:	Robinson Helicopter R22 Beta	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The solo student pilot reported that, just after liftoff and in a low-altitude hover, the helicopter “swung” to the left. The student pilot reported that he “overcorrected” with right pedal and aft cyclic inputs. The helicopter began to spin, and the student pilot pulled up to keep from hitting the ground. The student pilot reported remembering hitting the ground and rolling the throttle off.

A security video showed that shortly after the helicopter lifted off into a low altitude hover it yawed left about 90° and descended before it moved aft and momentarily out of the camera’s view. When it reemerged, the helicopter was in a right spin and impacted the ramp in an upright attitude. The aft tail boom and tail rotor sustained substantial damage. The student pilot reported that there were no preaccident mechanical malfunctions or failures with the helicopter that would have precluded normal operation.

There was another small helicopter operating near the accident helicopter at the time of the accident, however it is unlikely that the rotor wash from the other helicopter would have precluded the student pilot’s ability to maintain control his helicopter.

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 control of the helicopter during a low-altitude hover shortly after liftoff.

Findings

Personnel issues

Aircraft control - Pilot

Aircraft

Yaw control - Not attained/maintained

Factual Information

History of Flight

Maneuvering-hover	Loss of control in flight (Defining event)
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Pilot Information

Certificate:	Student	Age:	44, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	May 4, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	48 hours (Total, all aircraft), 48 hours (Total, this make and model), 5 hours (Pilot In Command, all aircraft), 22 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Robinson Helicopter	Registration:	N221HG
Model/Series:	R22 Beta	Aircraft Category:	Helicopter
Year of Manufacture:	1992	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2197
Landing Gear Type:	High skid	Seats:	2
Date/Type of Last Inspection:	November 12, 2021 Annual	Certified Max Gross Wt.:	1370 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	6066.3 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-320-B2C
Registered Owner:		Rated Power:	124 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MGY, 957 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	11:53 Local	Direction from Accident Site:	350°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	10°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.53 inches Hg	Temperature/Dew Point:	4°C / -6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Miamisburg, OH (MGY)	Type of Flight Plan Filed:	VFR
Destination:	Miamisburg, OH	Type of Clearance:	None
Departure Time:	11:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	Dayton-Wright Brothers Airport MGY	Runway Surface Type:	
Airport Elevation:	957 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:	39.588972, -84.224861 (est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew		
Additional Participating Persons:	Paige E. Kakas; Federal Aviation Administration - Cincinnati FSDO ; Cincinnati, OH		
Original Publish Date:	June 22, 2022	Investigation Class:	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=104280		

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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](#).