



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Clarksville, Tennessee	Accident Number:	ERA23LA172
Date & Time:	March 29, 2023, 12:15 Local	Registration:	N242JL
Aircraft:	HELICOPTERES GUIMBAL CABRI G2	Aircraft Damage:	Substantial
Defining Event:	Dynamic rollover	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor of the helicopter reported that the student pilot was taking his second lesson, learning to hover over a grass area at the airport. The flight instructor was operating the collective and anti-torque pedals, while the student pilot was operating the cyclic. The student pilot made an abrupt rearward movement with the cyclic. The flight instructor increased throttle and raised the collected to gain height; however, the right rear skid contacted the ground, resulting in a dynamic rollover. The flight instructor added that there were no preimpact mechanical malfunctions with the helicopter and that in the future, he should initiate hover training at a higher height. Examination of the helicopter by a Federal Aviation Administration inspector revealed substantial damage to the main rotor blades, fuselage, and tailboom.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The flight instructor's inadequate remedial action following an abrupt control input by the student pilot, which resulted in abnormal contact with the ground and a dynamic rollover.

Findings

Personnel issues	Lack of action - Instructor/check pilot
Aircraft	Pitch control - Not attained/maintained

Factual Information

History of Flight

Maneuvering-hover	Dynamic rollover (Defining event)
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Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	40,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter; Instrument helicopter	Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	December 15, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	February 2, 2023
Flight Time:	320 hours (Total, all aircraft), 200 hours (Total, this make and model), 252 hours (Pilot In Command, all aircraft), 57 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Student	Age:	30,Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2 hours (Total, all aircraft), 2 hours (Total, this make and model), 0 hours (Pilot In Command, all aircraft), 2 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HELICOPTERES GUIMBAL	Registration:	N242JL
Model/Series:	CABRI G2	Aircraft Category:	Helicopter
Year of Manufacture:	2023	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1319
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	March 22, 2023 Annual	Certified Max Gross Wt.:	1543 lbs
Time Since Last Inspection:	10 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	24 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	C126 installed, not activated	Engine Model/Series:	O-360
Registered Owner:	ROTOR LEASING LLC	Rated Power:	180 Horsepower
Operator:	Austin Peay State University	Operating Certificate(s) Held:	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CKV,550 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	11:52 Local	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.31 inches Hg	Temperature/Dew Point:	13°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Clarksville, TN	Type of Flight Plan Filed:	None
Destination:	Clarksville, TN	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	Outlaw Field CKV	Runway Surface Type:	
Airport Elevation:	549 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	36.621861,-87.414944

Administrative Information

Investigator In Charge (IIC):	Gretz, Robert
Additional Participating Persons:	Mike Salas; FAA/FSDO; Nashville, TN
Original Publish Date:	June 29, 2023
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=106977

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](#).