



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Ronkonkoma, New York	<b>Accident Number:</b>	ERA24LA028
<b>Date &amp; Time:</b>	October 28, 2023, 09:46 Local	<b>Registration:</b>	N964SH
<b>Aircraft:</b>	ROBINSON HELICOPTER R22 BETA	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The flight instructor was teaching the student pilot to hover the helicopter about 5 ft above a grass area. The student pilot was having difficulty with over-controlling the helicopter and had been applying abrupt control inputs. The flight instructor was demonstrating the behavior of the helicopter with the application of collective control when the student pilot raised the collective control too hard, which resulted in the helicopter tilting right. The flight instructor attempted to correct, but the student pilot was holding the controls tightly and the helicopter's right skid contacted the ground, resulting in a dynamic rollover. The flight instructor reported that there were no preimpact mechanical malfunctions or failures of 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 abrupt control input and the flight instructor's inadequate remedial action, which resulted in a dynamic rollover.

## Findings

<b>Aircraft</b>	Lateral/bank control - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Student/instructed pilot
<b>Personnel issues</b>	(general) - Instructor/check pilot

## Factual Information

### History of Flight

Maneuvering-hover	Loss of control in flight (Defining event)
Maneuvering-hover	Dynamic rollover

### Flight instructor Information

Certificate:	Commercial; Flight instructor; Private	Age:	52,
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	May 23, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	August 16, 2023
Flight Time:	3800 hours (Total, all aircraft), 1300 hours (Total, this make and model), 3650 hours (Pilot In Command, all aircraft), 290 hours (Last 90 days, all aircraft), 90 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

### Student pilot Information

Certificate:	None	Age:	55,Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	5 hours (Total, all aircraft), 5 hours (Total, this make and model), 5 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

<b>Aircraft Make:</b>	ROBINSON HELICOPTER	<b>Registration:</b>	N964SH
<b>Model/Series:</b>	R22 BETA	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	2005	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	3941
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	July 14, 2023 100 hour	<b>Certified Max Gross Wt.:</b>	1350 lbs
<b>Time Since Last Inspection:</b>	85 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	6015 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	O-360-J2A
<b>Registered Owner:</b>	I1 AVIATION LLC	<b>Rated Power:</b>	145 Horsepower
<b>Operator:</b>	Flying Helicopters Made Easy	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	ISP, 98 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	09:39 Local	<b>Direction from Accident Site:</b>	0°
<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>	9 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	280°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 16°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Ronkonkoma, NY	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Ronkonkoma, NY	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class C

## Airport Information

<b>Airport:</b>	Long Island Mac Arthur Airport ISP	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	98 ft msl	<b>Runway Surface Condition:</b>	
<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>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	40.796136,-73.100665

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gretz, Robert
<b>Additional Participating Persons:</b>	Mark Burnett; FAA/FSDO; Farmingdale, NY
<b>Original Publish Date:</b>	December 13, 2023
<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.nts.gov/Docket?ProjectID=193332">https://data.nts.gov/Docket?ProjectID=193332</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](#).