



National Transportation Safety Board Aviation Accident Data Summary

Location:	Alexander City, AL	Accident Number:	ERA13LA045
Date & Time:	11/01/2012, 1546 CDT	Registration:	N231TM
Aircraft:	ROBINSON HELICOPTER COMPANY R22	Injuries:	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

After departure, the helicopter began to vibrate at an altitude of about 300 feet above ground level (agl). The pilot chose to return to the airport to perform a precautionary landing. The pilot initiated an autorotation about 100 feet agl at an airspeed of between 45 to 50 knots but could not control the helicopter. The pilot applied aft cyclic to flare the helicopter; however, it did not lose airspeed. The low rotor rpm aural warning activated during the maneuver, and the helicopter subsequently landed hard and rolled over on its right side. Postaccident examinations of the engine and airframe did not reveal any anomalies that would have caused the vibration the helicopter experienced after takeoff. If the pilot had initiated the autorotation sooner, she may have had adequate airspeed to establish the glide and a sufficient amount of rotor rpm to cushion the landing and retain positive control of the helicopter.

Flight Events

Initial climb - Unknown or undetermined
Emergency descent - Off-field or emergency landing
Autorotation - Hard landing

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's delayed decision to initiate an autorotation and her subsequent improper conduct of the autorotation, which resulted in a hard landing, after the helicopter started vibrating for reasons that could not be determined because postaccident examinations revealed no anomalies that would have precluded normal operation.

Findings

Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Landing flare-Not attained/maintained - C
Personnel issues-Action/decision-Action-Delayed action-Pilot - C
Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	39
Airplane Rating(s):	None	Instrument Rating(s):	None
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	Helicopter
Flight Time:	1165 hours (Total, all aircraft), 1165 hours (Total, this make and model), 994 hours (Pilot In Command, all aircraft), 163 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft), 9 hours (Last 24 hours, all aircraft)		

Other Flight Crew Information

Certificate:	Flight Instructor; Commercial	Age:	28
Airplane Rating(s):	None	Instrument Rating(s):	Helicopter
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	Helicopter; Instrument Helicopter
Flight Time:	300 hours (Total, all aircraft), 270 hours (Total, this make and model), 200 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	ROBINSON HELICOPTER COMPANY	Registration:	N231TM
Model/Series:	R22	Engines:	1 Reciprocating
Operator:	Helicopter Academy	Engine Manufacturer:	LYCOMING
Air Carrier Operating Certificate:	None	Engine Model/Series:	O-320-B2C
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	ALX, 686 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	None
Condition of Light:	Day	Wind Speed/Gusts, Direction:	7 knots/ 14 knots, 300°
Temperature:	21° C / -4° C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Alexander City, AL (ALX)	Destination:	Dawson, GA (K16J)

Airport Information

Airport:	Thomas C. Russel Field Airport (ALX)	Runway Surface Type:	
Runway Used:	N/A	Runway Surface Condition:	
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None

Administrative Information

Investigator In Charge (IIC): Jose Obregon

Adopted Date: 04/23/2014

Investigation Docket: <http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=85492>

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.