



Aviation Investigation Final Report

Location:	Marlboro, Massachusetts	Accident Number:	ERA11CA235
Date & Time:	April 10, 2011, 09:30 Local	Registration:	N791SH
Aircraft:	Robinson R22	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot stated that prior to departure for a solo cross-country flight, his flight instructor informed him he would notice extra aft weight when lifting off as this would be his first time flying the helicopter solo with full fuel tanks. The student pilot stated that as the helicopter became light on its skids, he felt it tilt aft, and corrected with the application of cyclic and anti-torque pedals. As he raised the collective and lifted off the ground, the helicopter turned to the right, and he immediately lowered the collective and set the helicopter back down. The helicopter's tail skid impacted the ground, and the helicopter sustained substantial damage to the vertical stabilizer. The student pilot stated there were no mechanical malfunctions or anomalies with the helicopter, and that the right turn may have been prevented by additional left anti-torque pedal application.

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 directional control during takeoff.

Findings

Aircraft	Directional control - Not attained/maintained
Personnel issues	Lack of action - Pilot
Personnel issues	Total experience w/ equipment - Pilot

Factual Information

History of Flight

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

Certificate:	Private	Age:	57,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	April 15, 2010
Occupational Pilot:	No	Last Flight Review or Equivalent:	April 14, 2011
Flight Time:	189 hours (Total, all aircraft), 30 hours (Total, this make and model), 75 hours (Pilot In Command, all aircraft), 19 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Robinson	Registration:	N791SH
Model/Series:	R22 Beta	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	3637
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	January 28, 2011 100 hour	Certified Max Gross Wt.:	1370 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4579 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-360-J2A
Registered Owner:	Matthew Spitzer	Rated Power:	180 Horsepower
Operator:	North Andover Flight Academy	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	BED,133 ft msl	Distance from Accident Site:	12 Nautical Miles
Observation Time:	09:56 Local	Direction from Accident Site:	78°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.13 inches Hg	Temperature/Dew Point:	12°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Marlboro, MA (9B1)	Type of Flight Plan Filed:	None
Destination:	Marlboro, MA (9B1)	Type of Clearance:	None
Departure Time:		Type of Airspace:	

Airport Information

Airport:	Marlboro Airport 9B1	Runway Surface Type:	
Airport Elevation:	285 ft msl	Runway Surface Condition:	
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:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	42.339168,-71.505279(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Steve Brown; FAA/FSDO; Boston, MA
Original Publish Date:	August 22, 2011
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=78825

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