



Aviation Investigation Final Report

Location:	Titusville, Florida	Accident Number:	MIA08CA202
Date & Time:	September 25, 2008, 11:15 Local	Registration:	N1901M
Aircraft:	Schweizer 269C-1	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor and student pilot were conducting flight maneuvers in a helicopter. During one of the maneuvers, the instructor simulated a forced-landing. The student pilot entered the helicopter into an autorotation. Upon reaching about 200 feet above the ground, the student pilot pulled aft cyclic and raised the collective. The main rotor rpm dropped rapidly and forward airspeed decreased. The instructor then took over the controls. The helicopter subsequently landed hard and the main rotor blades made contact with a tree and the helicopter's tail section before the helicopter came to rest on its right side.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The flight instructor's delayed remedial action during a simulated autorotation.

Findings

Personnel issues	Delayed action - Instructor/check pilot
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Factual Information

History of Flight

Maneuvering	Simulated/training event
Autorotation	Attempted remediation/recovery
Landing	Hard landing (Defining event)

The flight instructor of the Schweizer 269C-1 helicopter stated that he and the student pilot were performing maneuvers. The student pilot had just completed a maximum performance departure from a confined area, with a left turnout, leveling out at 600 feet above ground level (AGL). The instructor simulated a forced landing condition. The student pilot then entered a 180-degree autorotation to the left, while maintaining good rpm control and a 60-knot airspeed attitude. Upon reaching between 150 to 200 feet AGL in the descent of the autorotation, the student pilot pulled aft cyclic and raised the collective. The main rotor rpm dropped rapidly to approximately 380 rpm and the forward airspeed decreased. With immediate response of the instructor to the problem, the lack of altitude did not allow him to recover completely, but he did reduce the force of impact. After leveling the aircraft and cushioning the touchdown, the blades came in contact with a tree, forcing the helicopter onto its right side. Once the blades hit the tree, a blade then struck the tail, and the instructor immediately cut the throttle to idle position and instructed the student pilot to pull the fuel shutoff valve, shutting down the engine. The instructor and the student pilot exited the helicopter, and the student pilot received minor injuries.

Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	30, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	
Instructor Rating(s):	Helicopter; Instrument helicopter	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	May 14, 2008
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 19, 2007
Flight Time:	565 hours (Total, all aircraft), 505 hours (Total, this make and model), 507 hours (Pilot In Command, all aircraft), 119 hours (Last 90 days, all aircraft), 49 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Commercial	Age:	31, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	June 16, 2008
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 25, 2007
Flight Time:	513 hours (Total, all aircraft), 37 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Schweizer	Registration:	N1901M
Model/Series:	269C-1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	0266
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	September 8, 2008 Annual	Certified Max Gross Wt.:	2050 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1487 Hrs as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	HIO-360-G1A
Registered Owner:	BRISTOW ACADEMY INC	Rated Power:	180 Horsepower
Operator:	BRISTOW ACADEMY INC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KTIX,34 ft msl	Distance from Accident Site:	
Observation Time:	11:47 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	10°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.93 inches Hg	Temperature/Dew Point:	25°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Titusville, FL (TIX)	Type of Flight Plan Filed:	None
Destination:	Titusville, FL (TIX)	Type of Clearance:	None
Departure Time:	10:45 Local	Type of Airspace:	

Airport Information

Airport:	Space Coast Regional Airport TIX	Runway Surface Type:	
Airport Elevation:	34 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Simulated forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor, 1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 1 None	Latitude, Longitude:	28.533332,-80.900001(est)

Administrative Information

Investigator In Charge (IIC):	Obregon, Jose
Additional Participating Persons:	Cheryl King; FAA/FSDO; Orland, FL
Original Publish Date:	January 22, 2009
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=69004

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