



Aviation Investigation Final Report

Location:	Coldfoot, Alaska	Accident Number:	ANC14CA042
Date & Time:	June 18, 2014, 09:45 Local	Registration:	N74713
Aircraft:	ROBINSON HELICOPTER COMPANY R44 II	Aircraft Damage:	Substantial
Defining Event:	Settling with power/vortex ring state	Injuries:	3 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

The commercial helicopter pilot reported that the purpose of the flight was to transport two technicians to a remote site in an area of mountainous terrain. The pilot fueled the helicopter and flew approximately 30 minutes to a staging area. After loading the two passengers and their gear, he flew to the planned landing zone (LZ), in a narrow box-valley at about 2,550 feet MSL. The proposed LZ was evaluated while performing an out-of-ground-effect hover, but the pilot determined the LZ was unsuitable. A second LZ was evaluated using the same process and also found unsuitable.

While hovering out of ground effect, above a third potential LZ, the helicopter began to descend and the pilot added collective pitch to stop the descent. He said the low rotor annunciator horn then sounded and the helicopter continued to descend. In an attempt to avoid landing in an area of uneven terrain, the pilot said he opted to turn the helicopter to the right and downslope, while trying to override the engine governor to attain additional engine power. The helicopter's skids subsequently struck an area of uneven, down sloping terrain. During touchdown, the helicopter nosed down, pivoted to the left, and rolled onto its left side. The helicopter sustained substantial damage to the fuselage, tail boom and main rotor drive system. The pilot reported no preaccident mechanical anomalies with the helicopter that would have precluded normal operation.

The pilot characterized the down sloping wind conditions as light and variable.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain adequate main rotor rpm while maneuvering at a low altitude, which

resulted in an emergency landing on uneven terrain.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Prop/rotor parameters - Not attained/maintained
Environmental issues	Sloped/uneven terrain - Contributed to outcome

Factual Information

History of Flight

Maneuvering-hover	Settling with power/vortex ring state (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	46
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Helicopter; Instrument helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	April 24, 2014
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	May 13, 2014
Flight Time:	3700 hours (Total, all aircraft), 2700 hours (Total, this make and model), 3600 hours (Pilot In Command, all aircraft), 160 hours (Last 90 days, all aircraft), 110 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER COMPANY	Registration:	N74713
Model/Series:	R44 II Raven II	Aircraft Category:	Helicopter
Year of Manufacture:	2006	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	11220
Landing Gear Type:	N/A; Skid	Seats:	4
Date/Type of Last Inspection:	June 5, 2014 100 hour	Certified Max Gross Wt.:	2500 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3175 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	C126 installed, activated, did not aid in locating accident	Engine Model/Series:	IO-540 SER
Registered Owner:	QUICKSILVER AIR INC	Rated Power:	245 Horsepower
Operator:	QUICKSILVER AIR INC	Operating Certificate(s) Held:	On-demand air taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	PABT,643 ft msl	Distance from Accident Site:	83 Nautical Miles
Observation Time:	18:53 Local	Direction from Accident Site:	207°
Lowest Cloud Condition:	Few / 1600 ft AGL	Visibility	10 miles
Lowest Ceiling:	Overcast / 13000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	3 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.43 inches Hg	Temperature/Dew Point:	14°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	COLDFOOT, AK (CXF)	Type of Flight Plan Filed:	Company VFR
Destination:	Coldfoot, AK	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	67.769447,-149.748336(est)

Administrative Information

Investigator In Charge (IIC):	Shaver, Christopher
Additional Participating Persons:	Clark Miller; FAA Fairbanks FSDO; Fairbanks, AK
Original Publish Date:	August 14, 2014
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=89480

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