



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	GLENNALLEN, AK	<b>Accident Number:</b>	ANC99LA068
<b>Date &amp; Time:</b>	06/01/1999, 1800 AKD	<b>Registration:</b>	N1929T
<b>Aircraft:</b>	Robinson R22	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

The certificated commercial helicopter pilot reported that during a northerly departure from atop a 4,200 feet msl mountain, the rotor rpm dropped, and the low rotor warning horn sounded. He said that in an attempt to regain rotor rpm and arrest the decent, he rolled the throttle to the high position, increased collective pitch, and lowered the nose to gain airspeed. He said that the rotor rpm continued to decay, the helicopter impacted uneven terrain, and rolled over. The pilot stated: 'I just got into a downdraft on takeoff.' He added that there were no preaccident mechanical anomalies with the helicopter. The helicopter sustained substantial damage to the rotor system, and fuselage.

## 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 rotor RPM during takeoff. Factors associated with the accident were a downdraft, and uneven terrain.

## Findings

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Occurrence #1: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: TAKEOFF

### Findings

1. (F) WEATHER CONDITION - DOWNDRAFT
  2. (C) ROTOR RPM - NOT MAINTAINED - PILOT IN COMMAND
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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: TAKEOFF

### Findings

3. (F) TERRAIN CONDITION - ROUGH/UNEVEN
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Occurrence #3: ROLL OVER  
Phase of Operation: TAKEOFF

## Factual Information

On June 1, 1999, about 1800 Alaska daylight time, a skid equipped Robinson R22 helicopter, N1929T, sustained substantial damage during takeoff, about 35 miles west of Glennallen, Alaska. The helicopter was being operated under Title 14, CFR Part 135, when the accident occurred. The certificated commercial pilot, and the sole passenger aboard, were not injured. Visual meteorological conditions prevailed, and company flight following procedures were in effect. The flight originated about 0930 from a private airfield approximately 35 miles west of Glennallen.

During a telephone conversation with the National Transportation Safety Board investigator-in-charge on June 2, the pilot reported that he was conducting an on-demand charter flight for the State of Alaska, and that the passenger was a wildlife biologist employed by the State of Alaska. The pilot added that the purpose of this particular flight was to locate and retrieve electronic tracking collars that had been dropped by previously tagged moose. He said that the wildlife biologist had electronically tracked a collar located atop a 4,200 feet msl mountain. An uneventful landing and engine shutdown was made, and the biologist recovered the radio collar. The pilot stated that during a northerly departure, the rotor rpm dropped, and the low rotor warning horn sounded. He said that in an attempt to regain rotor rpm and arrest the descent, he rolled the throttle to the high position, increased collective pitch, and lowered the nose to gain airspeed. He said that the rotor rpm continued to decay, the helicopter impacted uneven terrain, and rolled over. The pilot stated: "I just got into a downdraft on takeoff." He added that there were no preaccident mechanical anomalies with the helicopter.

The helicopter sustained substantial damage to the rotor system, and fuselage.

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	38, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Shoulder harness
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Unknown	<b>Last FAA Medical Exam:</b>	04/16/1999
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2373 hours (Total, all aircraft), 1806 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Robinson	Registration:	N1929T
Model/Series:	R22 R22	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	1929M
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	05/01/1999, Annual	Certified Max Gross Wt.:	1370 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1811 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	O-320-B2C
Registered Owner:	JOSH JOHNSON	Rated Power:	160 hp
Operator:	JOSH JOHNSON	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:	ALASKA CHOPPER	Operator Designator Code:	OHQC

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	50 Miles
Lowest Ceiling:	Overcast / 10000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	9°C / -7°C
Precipitation and Obscuration:			
Departure Point:	, AK (3Z5)	Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	None
Departure Time:	0930 ADT	Type of Airspace:	Class G

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	

## Administrative Information

**Investigator In Charge (IIC):** CLINTON O JOHNSON **Report Date:** 06/22/2000

**Additional Participating Persons:** MICHAEL J YORKE (FAA); ANCHORAGE, AK

**Publish Date:**

**Investigation Docket:** NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at [pubinq@ntsb.gov](mailto:pubinq@ntsb.gov), or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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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. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).