



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	FAIRBANKS, AK	<b>Accident Number:</b>	ANC99LA040
<b>Date &amp; Time:</b>	04/01/1999, 1030 AST	<b>Registration:</b>	N8367F
<b>Aircraft:</b>	Robinson R-22	<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 helicopter pilot turned downwind at 30 feet above the ground. The winds were between 15 knots and 30 knots. The main rotor rpm decayed, and the pilot was unable to regain rpm by lowering the collective, disengaging the engine speed governor, and increasing the throttle. During the ensuing forced landing, the helicopter bounced and rolled onto its side. The pilot stated that he did not have tail rotor authority at the low rotor rpm when the helicopter bounced. The engine was operated on a test stand, and exceeded the minimum power requirements for a serviceable engine. No anomalies were noted with the engine, governor, or governor controller.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the pilot to maintain rotor rpm during a downwind turn. A factor in the accident was the inadequate altitude to recover from the loss of rotor rpm.

## Findings

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

### Findings

1. WEATHER CONDITION - TAILWIND
2. (C) ROTOR RPM - NOT MAINTAINED - PILOT IN COMMAND
3. (F) ALTITUDE - INADEQUATE - PILOT IN COMMAND

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Occurrence #2: FORCED LANDING  
Phase of Operation: EMERGENCY LANDING

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Occurrence #3: ROLL OVER  
Phase of Operation: EMERGENCY LANDING

### Findings

4. TAIL ROTOR EFFECTIVENESS - NOT AVAILABLE

## Factual Information

On April 1, 1999, about 1030 Alaska standard time, a Robinson R-22 helicopter, N8367F, sustained substantial damage during a forced landing about 38 miles south of Fairbanks, Alaska. The commercial pilot and sole passenger were not injured. The helicopter was operated by Chena River Aviation under 14 CFR Part 135, conducting wolf captures for the State of Alaska, Department of Fish and Game. The flight departed the Chena Marina Airport in Fairbanks at 0930. Visual meteorological conditions prevailed at the time of the accident, and a company VFR flight plan was filed.

The pilot told the NTSB investigator-in-charge (IIC) during a telephone interview on April 1, that he turned downwind in 15 knots to 30 knots of wind, at 30 feet above the ground to capture a wolf. He noticed the rotor and engine rpm decaying. He attempted to lower the collective, disengage the engine speed governor, and increase the throttle, but the rotor speed continued to decay. The pilot said the low rotor speed warning horn activated during his descent, and he made a forced landing to a clearing. The helicopter bounced, and rolled onto its side. He stated that he did not have tail rotor authority at the low rotor rpm when the helicopter bounced. The pilot estimated seven to ten gallons of fuel remained in the fuel tanks at the time of the accident.

The engine was examined and operated on a test stand at the Robinson Helicopter facility on May 3, 1999. The testing was observed by an NTSB investigator. No anomalies were noted with the governor motor, the governor controller, or the engine. The power level produced throughout the test exceeded the minimum specified by the manufacturer.

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	31, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	06/23/1998
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2900 hours (Total, all aircraft), 1550 hours (Total, this make and model), 2500 hours (Pilot In Command, all aircraft), 175 hours (Last 90 days, all aircraft), 56 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Robinson	Registration:	N8367F
Model/Series:	R-22 R-22	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	2816
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	03/24/1999, Annual	Certified Max Gross Wt.:	1370 lbs
Time Since Last Inspection:	21 Hours	Engines:	1 Reciprocating
Airframe Total Time:	654 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	HO-360-J2A
Registered Owner:	TROY L. CAMBIER	Rated Power:	180 hp
Operator:	CHENA RIVER AVIATION	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	E1RC

## 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	10 Miles
Lowest Ceiling:	Broken / 6000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	15 knots / 30 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-7° C
Precipitation and Obscuration:			
Departure Point:	, AK (AK28)	Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	None
Departure Time:	0930 AST	Type of Airspace:	Class G; Military Operation Area

## 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):** MATTHEW L THOMAS **Report Date:** 04/20/2000

**Additional Participating Persons:** DENNIS DELO(FAA FSDO); FAIRBANKS, 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](#).