



National Transportation Safety Board Aviation Accident Final Report

Location:	RIMROCK, WA	Accident Number:	SEA94LA094
Date & Time:	04/01/1994, 1240 PST	Registration:	N5211R
Aircraft:	HUGHES 369D	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor

Flight Conducted Under: Part 133: Rotorcraft Ext. Load

Analysis

THE PILOT WAS IN A HOVER AT 125 FEET AGL AND ZERO HORIZONTAL VELOCITY WHEN THE ENGINE QUIT. HE HAD BEEN CONDUCTING LOGGING OPERATIONS FOR APPROXIMATELY 40 MINUTES ON A 200 POUND FUEL LOAD. HE EXECUTED AN AUTOROTATION BUT LANDED HARD WITH THE HELICOPTER ROLLING OVER. THE PILOT REPORTED THAT HE RAN OUT OF FUEL WHILE IN THE HOVER. AUTOROTATION FROM 125 FEET AT ZERO AIRSPEED WAS OUTSIDE THE PARAMETERS OF THE AIRCRAFT'S 'HEIGHT - VELOCITY' DIAGRAM.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FUEL EXHAUSTION, THE PILOT IN COMMAND'S FAILURE TO REFUEL THE AIRCRAFT, AND THE INABILITY TO SUCCESSFULLY EXECUTE AN AUTO- ROTATION LANDING BECAUSE OF THE LOW ALTITUDE.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: HOVER

Findings

1. (C) FLUID,FUEL - EXHAUSTION
2. (C) REFUELING - NOT PERFORMED - PILOT IN COMMAND

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

Occurrence #3: HARD LANDING
Phase of Operation: LANDING

Findings

3. (C) AUTOROTATION - NOT POSSIBLE

Factual Information

On April 1, 1994, approximately 1240 hours Pacific standard time (pst), a Hughes 369D, N5211R, registered to Rex Bailes Corp., being operated by Chet Rasberry, Inc., and being flown by Timothy D. Lyons, a certificated commercial rotorcraft pilot, was substantially damaged during a forced landing following a total power loss while in a hover near Rimrock, Washington. The pilot sustained minor injuries. Visual meteorological conditions existed and no flight plan had been filed. The flight, which was concluding a long line operation, was to have been conducted in accordance with 14CFR133, and had departed approximately 1200 local time with 200 pounds of fuel.

The pilot reported that while in a hover, approximately 125 feet above ground, he experienced a loss of power. He executed an autorotation and a hard landing followed during which the helicopter rolled over. The pilot reported to the operator that he had run out of gas.

A representative of the manufacturer stated that autorotations conducted from a zero airspeed hover of 125 feet above ground were within the "dead man's curve" area of the aircraft's "Height - Velocity" diagram.

Pilot Information

Certificate:	Commercial	Age:	31, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	06/21/1993
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	1200 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HUGHES	Registration:	N5211R
Model/Series:	369D 369D	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	1161D
Landing Gear Type:	Skid	Seats:	1
Date/Type of Last Inspection:	01/20/1994, 100 Hour	Certified Max Gross Wt.:	3000 lbs
Time Since Last Inspection:	57 Hours	Engines:	1 Turbo Shaft
Airframe Total Time:	4230 Hours	Engine Manufacturer:	ALLISON
ELT:	Installed, not activated	Engine Model/Series:	250-C20B
Registered Owner:	REX BAILES CORP.	Rated Power:	420 hp
Operator:	CHET RASBERRY, INC.	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:	CRI HELICOPTERS	Operator Designator Code:	EEYL

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	YKM, 1095 ft msl	Distance from Accident Site:	80 Nautical Miles
Observation Time:	1250 PST	Direction from Accident Site:	24°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	60 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	19° C / 4° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1200 PST	Type of Airspace:	Class G

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC): STEVEN A MCCREARY, **Report Date:** 12/07/1994

Additional Participating Persons: DAVID LEHMAN; RENTON, WA

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, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).