



Aviation Investigation Final Report

Location:	ENTIAT, Washington	Accident Number:	SEA88FA176
Date & Time:	September 9, 1988, 19:10 Local	Registration:	CFAHY
Aircraft:	BELL 204B	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 133: Rotorcraft ext. load		

Analysis

THE ACFT WAS ON CONTRACT TO STATE OF WA AND WORKING TO SUPPRESS A FOREST FIRE USING A WATER BUCKET SUSPENDED ON A LONG LINE. THE ACFT HAD REFUELED AT A TEMPORARY HELIPORT AT ENTIAT, WA AND WAS ENROUTE TO THE WORK AREA 15 NM SW OF ENTIAT BUT DID NOT ARRIVE AT THE AREA. THE WRECKAGE WAS LOCATED ON THE EASTERN SLOPE OF STEEP MOUNTAINS. THERE WAS EVIDENCE OF INFLT MAIN ROTOR MAST FRACTURE AND ACFT BREAK-UP. WX DATA INDICATED STRONG GUSTY NW WINDS AND MOUNTAIN WAVE CONDITIONS IN THE AREA. EVIDENCE INDICATED THAT THE COPILOT WAS AT THE CONTROLS. THIS WAS THE COPILOTS FIRST FLT IN THE BH-204 AND HIS FIRST FLT FOR THIS COMPANY.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CLIMB

Findings

1. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. (F) WEATHER CONDITION - HIGH WIND

3. (F) WEATHER CONDITION - GUSTS
4. (F) WEATHER CONDITION - MOUNTAIN WAVE
5. (F) SUPERVISION - INADEQUATE - PILOT IN COMMAND
6. AIRCRAFT PERFORMANCE - EXCEEDED
7. (C) REMEDIAL ACTION - DELAYED - PILOT IN COMMAND
8. (C) ROTOR DRIVE SYSTEM,MAIN ROTOR MAST(DRIVE SHAFT) - FRACTURED
9. (C) CYCLIC - IMPROPER USE OF - COPILOT/SECOND PILOT
10. (F) LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT - COPILOT/SECOND PILOT
11. (F) CREW/GROUP COORDINATION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

Certificate:	Commercial	Age:	30,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	February 9, 1988
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	5850 hours (Total, all aircraft), 1446 hours (Total, this make and model), 162 hours (Last 90 days, all aircraft), 87 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	CFAHY
Model/Series:	204B 204B	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2069
Landing Gear Type:	Skid	Seats:	7
Date/Type of Last Inspection:	September 8, 1988 Unknown	Certified Max Gross Wt.:	9500 lbs
Time Since Last Inspection:	13 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	16885 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	T53-13B
Registered Owner:	VANCOUVER ISLAND HELIC., LTD	Rated Power:	1400 Horsepower
Operator:	VANCOUVER ISLAND HELICOPTERS	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	EAT ,1245 ft msl	Distance from Accident Site:	14 Nautical Miles
Observation Time:	18:45 Local	Direction from Accident Site:	140°
Lowest Cloud Condition:	Scattered / 15000 ft AGL	Visibility	30 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	18 knots / 23 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	20°C
Precipitation and Obscuration:	N/A - None - Smoke		
Departure Point:	ENTIAT	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	18:57 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	Dirt
Airport Elevation:		Runway Surface Condition:	Dry;Vegetation
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	47.79,-120.439849(est)

Administrative Information

Investigator In Charge (IIC): Mangum, Prentiss

Additional Participating Persons: MARION TILTON; SEATTLE , WA
MIKE LARSON; SEATTLE , WA
RICHARD NEWCOMBE; RICHMOND, CAN.
BILL STEELE; OLYMPIA , WA

Original Publish Date: September 19, 1989

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=40736>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).