 National Transportation Safety Board FACTUAL REPORT AVIATION	NTSB ID: SEA94LA030	Aircraft Registration Number: N91NW
	Occurrence Date: 11/12/1993	Most Critical Injury: Minor
	Occurrence Type: Accident	Investigated By: NTSB

Location/Time

Nearest City/Place NORTH BEND	State WA	Zip Code 98045	Local Time 1130	Time Zone PST	
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Airport Proximity: Off Airport/Airstrip	Distance From Landing Facility:
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Aircraft Information Summary

Aircraft Manufacturer HAWKINS & POWERS	Model/Series UH-1B /UH-1B	Type of Aircraft Helicopter
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Revenue Sightseeing Flight: No

Air Medical Transport Flight: No


Narrative


Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

On November 12, 1993, at 1130 Pacific standard time, a Hawkins and Powers UH-1B, N91NW, operated by Northwest Helicopters, impacted terrain 10 miles south of North Bend, Washington, during an emergency forced landing. There was no flight plan filed for the external load flight, conducted under 14 CFR 133 in visual meteorological conditions, that was on takeoff when the accident occurred. The commercial certificated pilot suffered minor injuries in the accident. The aircraft was substantially damaged. There was no fire.

The pilot reported he heard a loud growling/grinding noise from the rear of the aircraft, followed by a slow turn to the right, then a banging sound and a violent rotation to the right. After clearing the choker setters with the load, he jettisoned his external load of logs and attempted to fly the aircraft to a nearby clearcut. Recognizing that he had neither altitude nor airspeed to make it to the clearcut, he reduced power, jettisoned his long line, and executed a powered autorotation into the trees. The aircraft was substantially damaged when it impacted the trees and rough terrain.

The 42 degree intermediate gearbox was examined at the NTSB metallurgy laboratory. Fatigue cracks and overstress fractures were found in the input gear and mating fragments.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: SEA94LA030			
		Occurrence Date: 11/12/1993			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Approach/Arrival Flown: NONE					
VFR Approach/Landing: Forced Landing					
Aircraft Information					
Aircraft Manufacturer HAWKINS & POWERS		Model/Series UH-1B /UH-1B		Serial Number 62-1915	
Airworthiness Certificate(s): Restricted (Special)					
Landing Gear Type: Skid					
Amateur Built Acft? No	Number of Seats: 2	Certified Max Gross Wt. 8500 LBS	Number of Engines: 1		
Engine Type: Turbo Shaft	Engine Manufacturer: LYCOMING	Model/Series: T53-L11D	Rated Power: 1100 HP		
- Aircraft Inspection Information					
Type of Last Inspection 100 Hour	Date of Last Inspection 11/1993	Time Since Last Inspection 25 Hours	Airframe Total Time 10106 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type Yes /	ELT Operated? No	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner NORTHWEST HELICOPTERS, INC.		Street Address 7822 OLD HWY 99 SE			
		City OLYMPIA	State WA	Zip Code 98501	
Operator of Aircraft NORTHWEST HELICOPTERS, INC.		Street Address 7822 OLD HWY 99 SE			
		City OLYMPIA	State WA	Zip Code 98501	
Operator Does Business As:			Operator Designator Code: WYFL		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate: Aircraft External Load		
Regulation Flight Conducted Under: Part 133: Rotorcraft Ext. Load					
Type of Flight Operation Conducted: Other Work Use;Unknown; Unknown; Unknown					
FACTUAL REPORT - AVIATION					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: SEA94LA030
	Occurrence Date: 11/12/1993
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 42
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Sex: M	Seat Occupied: Left	Occupational Pilot? <input type="checkbox"/> Civilian Pilot <input type="checkbox"/>	Certificate Number: On File
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Certificate(s): **Commercial**

Airplane Rating(s): **Single-engine Land**

Rotorcraft/Glider/LTA: **Helicopter**

Instrument Rating(s): **Helicopter**

Instructor Rating(s): **None**

Current Biennial Flight Review?

Medical Cert.: Class 2	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 12/1992
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	11800	1500						11700		
Pilot In Command(PIC)										
Instructor										
Instruction Received										
Last 90 Days			350							
Last 30 Days										
Last 24 Hours			10							

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? No
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Flight Plan/Itinerary

Type of Flight Plan Filed: **None**

Departure Point Same as Accident/Incident Location	State	Airport Identifier	Departure Time 0800	Time Zone PST
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Destination Local Flight	State	Airport Identifier	
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Type of Clearance: **None**

Type of Airspace:

Weather Information

Source of Wx Information:

No record of briefing

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: SEA94LA030
	Occurrence Date: 11/12/1993
	Occurrence Type: Accident

Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
0000			0 Ft. MSL	0 NM	0 Deg. Mag.

Sky/Lowest Cloud Condition: Clear	0 Ft. AGL	Condition of Light: Day
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Lowest Ceiling: None	0 Ft. AGL	Visibility: 2 SM	Altimeter: "Hg
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Temperature: 16 °C	Dew Point: °C	Weather Conditions at Accident Site: Visual Conditions
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Wind Direction:	Wind Speed:	Wind Gusts:
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Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	
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Precip and/or Obscuration:

Accident Information

Aircraft Damage: Substantial	Aircraft Fire: None	Aircraft Explosion: None
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- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot			1		1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -			1		1
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	1		1

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: SEA94LA030

Occurrence Date: 11/12/1993

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

MICHAEL L. STOCKHILL

Additional Persons Participating in This Accident/Incident Investigation:

PRENTISS E MANGUM
SEATTLE, WA

CHUCK REYNOLDS
RENTON, WA