



National Transportation Safety Board Aviation Accident Final Report

Location:	HELPER, UT	Accident Number:	DEN00LA069
Date & Time:	04/01/2000, 1430 MST	Registration:	N50330
Aircraft:	Hawkins & Powers UH-1B	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 133: Rotorcraft Ext. Load		

Analysis

As the helicopter approached logging personnel with a 150 foot long line, the pilot heard a 'Shhhh' sound and was advised smoke was coming from the engine. He turned and proceeded down the mountain. The engine then 'quit.' The helicopter collided with heavily wooded steep terrain. The number 1 and 2 bearings were submitted for metallurgical examination. The metallurgical report stated that 'the most likely cause of [the] engine malfunction was degradation of the Position #1 bearing due to insufficient lubrication.' All other damage appeared to be 'secondary.' The accessory carrier assembly was oil flow tested and found to be 'acceptable,' albeit 'near the lower end of requirements.' Debris in the bearing oil strainer was believed to be 'coked oil and epoxy hardener, both unusual for this area of the engine.'

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Total failure of the number 1 bearing due to lack of lubrication, the oil flow being restricted by a foreign object (epoxy hardener). Factors were trees and the unavailability of suitable terrain for a forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: MANEUVERING

Findings

1. (C) ENGINE ASSEMBLY,BEARING - FAILURE,TOTAL
 2. (C) LUBRICATING SYSTEM - FLOW RESTRICTED
 3. (C) LUBRICATING SYSTEM,OIL FILTER/SCREEN - FOREIGN OBJECT
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Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - EMERGENCY

Findings

4. (F) OBJECT - TREE(S)
5. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On April 1, 2000, approximately 1430 mountain standard time, a Bell UH-1B, N50330, registered to and operated by Precision Air, LLC, of Provo, Utah, was destroyed when it collided with terrain while maneuvering 15 miles northwest of Price, Utah. The airline transport certificated pilot sustained minor injuries. Visual meteorological conditions prevailed, and no flight plan had been filed. The helicopter was being operated under Title 14 CFR Part 133. The flight originated at a nearby staging area at an undetermined time.

According to the pilot's accident report, he was logging with a 150 foot long line. As he approached ground personnel, he heard a "Shhhh" sound and was advised there was smoke coming from the engine. Seeing smoke on the left side of the helicopter, he turned and proceeded down the mountain. The engine then "quit." The terrain was wooded and steep, and he attempted to fly towards a clearing. He "pulled pitch" to clear trees. The rotor blades struck the trees and the helicopter fell into a snow bank.

The wreckage was moved to a sawmill in Price, Utah, where, on April 19, the Lycoming T53-L-13 turboshaft engine was given a preliminary examination by FAA inspectors and representatives from Honeywell. A more detailed examination followed at Precision Air's hangar in Provo, Utah. The number 1 and 2 bearings and the number 1 sealing nut were submitted to Honeywell's metallurgical laboratory in Phoenix, Arizona, for examination. According to its report, "the most likely cause of [the] engine malfunction was degradation of the Position #1 bearing due to insufficient lubrication." All other damage appeared to be "secondary." The accessory carrier assembly was oil flow tested and found to be "acceptable," albeit "near the lower end of requirements." Debris in the bearing oil strainer was believed to be "coked oil and epoxy hardener, both unusual for this area of the engine."

In a telephone interview, the pilot stated he had previously experienced a number 1 bearing failure in another, but similar, helicopter.

The operator was asked to submit the engine maintenance records but has gone out of business, and all attempts to contact him have been to no avail.

Pilot Information

Certificate:	Airline Transport	Age:	54, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	10/27/1999
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	12104 hours (Total, all aircraft), 6500 hours (Total, this make and model), 11180 hours (Pilot In Command, all aircraft), 158 hours (Last 90 days, all aircraft), 69 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hawkins & Powers	Registration:	N50330
Model/Series:	UH-1B UH-1B	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Restricted	Serial Number:	62-2078
Landing Gear Type:	Skid	Seats:	7
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	8500 lbs
Time Since Last Inspection:		Engines:	1 Turbo Shaft
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	T53-L-13
Registered Owner:	PRECISION AIR, LLC	Rated Power:	1250 hp
Operator:	PRECISION AIR, LLC	Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	P99L

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PVU, 4494 ft msl	Distance from Accident Site:	65 Nautical Miles
Observation Time:	1355 MDT	Direction from Accident Site:	290°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	11° C / -7° C
Precipitation and Obscuration:			
Departure Point:	HELPER, UT (NONE)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
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):	ARNOLD W SCOTT	Report Date:	03/02/2001
Additional Participating Persons:	LEW C OLSON; SALT LAKE CITY, UT		
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 pubinquiry@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](#).