



Aviation Investigation Final Report

Location:	YELLOW PINE, Idaho	Accident Number:	SEA99FA037
Date & Time:	February 28, 1999, 15:00 Local	Registration:	N2239
Aircraft:	Hiller UH-12E	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation - Aerial observation		

Analysis

The aircraft departed the airport for the second surveillance flight of the day. Shortly after departure, the pilot was contacted by a ground crew member and informed that a 55 gallon fuel barrel was knocked over during the helicopter's departure. The pilot elected to returned to the airport and inspect the helicopter for possible damage that may have occurred. The pilot made a normal approach to the airport and was established in a hover taxi, when the helicopter suddenly began to descend. The pilot stated that he increased up collective without a response. The pilot then pulled full up-collective, however the helicopter continued to descend. The helicopter impacted terrain in a slightly nose-low attitude. After contacting the ground, the pilot released the collective and the main rotor blades struck and severed the tail boom assembly. The helicopter canted to the left and partially rolled to one side. At the time of the accident, the helicopter was operating near gross weight at an elevation of 3,835 feet mean sea level (MSL).

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Altitude deviation during aerial taxi for undetermined reasons.

Findings

Occurrence #1: ALTITUDE DEVIATION, UNCONTROLLED
Phase of Operation: TAXI - AERIAL

Findings

1. REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: HARD LANDING

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On February 28, 1999, about 1330 mountain standard time, a Hiller UH-12E, N2239, registered to and operated by Valley Helicopter Service, was substantially damaged after it collided with terrain while landing at Taylor Ranch airstrip, located 28 nautical miles northeast of Yellow Pine, Idaho. A company visual meteorological conditions flight plan was filed for the 14CFR135 aerial observation flight. The commercial pilot and his two passengers were uninjured. The flight originated from Taylor Ranch approximately ten minutes prior to the accident.

The operator was contracted by the State of Idaho Department of Fish and Game, to survey for elk in the Frank Church Wilderness Area. Prior to the accident, the operator had completed 50 hours of the 70 hour survey contract.

The pilot, accompanied by two observers, departed the airport for the second surveillance flight of the day. Shortly after departure, the pilot was contacted by a ground crew member and informed that during the helicopter's departure, a 55 gallon fuel barrel was knocked over. It is not known if the helicopter made contact with the barrel or if it was blown over by the helicopter's rotor wash. The pilot elected to return to the airport and inspect the helicopter for possible damage that may have occurred. The pilot made a normal approach to the airport and was established in a hover taxi, about 20 feet above ground level (AGL), when the helicopter suddenly began to descend. The pilot stated that he increased up collective without a response. The pilot stated that he then pulled full up-collective, however the helicopter continued to descend and impacted terrain in a slightly nose-low attitude. The pilot stated the descent was similar to settling with power. After contacting the ground, the pilot released the collective and the main rotor blades struck and severed the tail boom assembly. The helicopter canted to the left and partially rolled to one side.

At the time of the accident, the helicopter was operating near gross weight at an elevation of 3,835 feet mean sea level (MSL). The pilot stated the engine was producing rated power and there were no indications of a powerplant failure. The weather at the accident site, as reported by the pilot, was temperature 50 degrees Fahrenheit, winds calm, and a visibility of 15 miles.

The aircraft wreckage was retrieved by personnel from Specialty Aircraft Services, Redmond, Oregon, and secured at their facility.

The wreckage was inspected by National Transportation Safety Board investigators after it was moved to storage. The main cabin area was intact, but sustained substantial impact damage. The left skid was partially collapsed. The tail boom was severed and leading edge damage was noted to the main rotor blades. Control continuity was established from the cyclic to the cyclic pylon assembly and from the collective to the control rotor assembly. Four

bolts that secure the ballast plate to the rotor assembly were found fractured. The assembly was removed and shipped to the National Transportation Safety Board materials lab for inspection. A Senior Metallurgist from the lab reported that the all four bolts displayed features that are consistent with overstress separation.

At the completion of the inspection, the rotor head and ballast assembly were released to Specialty Aircraft.

Pilot Information

Certificate:	Commercial	Age:	63, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	January 12, 1999
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	32000 hours (Total, all aircraft), 31074 hours (Pilot In Command, all aircraft), 250 hours (Last 90 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hiller	Registration:	N2239
Model/Series:	UH-12E UH-12E	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2233
Landing Gear Type:	Skid	Seats:	4
Date/Type of Last Inspection:	February 26, 1999 Annual	Certified Max Gross Wt.:	3100 lbs
Time Since Last Inspection:	51 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	7984 Hrs	Engine Manufacturer:	Allison
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	CAE 822690
Registered Owner:	JIM POPE	Rated Power:	320 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:	VALLEY HELICOPTER SERVICE	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	None
Departure Time:	14:50 Local	Type of Airspace:	Class G

Airport Information

Airport:	TAYLOR RANCH	Runway Surface Type:	Snow
Airport Elevation:	3835 ft msl	Runway Surface Condition:	Ice;Snow
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	Unknown
Ground Injuries:	N/A	Aircraft Explosion:	Unknown
Total Injuries:	3 None	Latitude, Longitude:	45.019893,-115.520523(est)

Administrative Information

Investigator In Charge (IIC):	Hogenson, Dennis
Additional Participating Persons:	BOB ROUNTREE; BOISE , ID LARRY BROSNON; BOISE , ID ORRIN K ANDERSON; SEATTLE , WA
Original Publish Date:	June 23, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=47409

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](#).