



Aviation Investigation Final Report

Location:	HEALDSBURG, California	Accident Number:	LAX96LA279
Date & Time:	July 19, 1996, 18:30 Local	Registration:	N124HA
Aircraft:	Hiller UH-12E	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot entered autorotation over unsuitable steep terrain and struck trees after observing split needles on the rotor/engine tachometer. The helicopter had a previous rotor-tach generator failure. The failure was attributed to a loose connection, and was allegedly repaired by the previous owner. The connection was found to produce intermittent and inaccurate instrument readings when the wire bundle was moved or flexed. The potting material within the electrical connector was found in poor condition.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the pilot to confirm a loss of power before entering autorotation after reading an erroneous instrument indication on the helicopter's dual tachometer. Factors in the accident were the erratic instrument, and maintenance personnel who failed to properly repair the system after the discrepancy was previously reported.

Findings

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

Findings

1. (F) MISC ROTORCRAFT, DUAL TACHOMETER - ERRATIC
2. (F) MAINTENANCE, SERVICE OF AIRCRAFT/EQUIPMENT - INADEQUATE - OTHER MAINTENANCE PERSONNEL

3. (F) ELECTRICAL SYSTEM,ELECTRIC WIRING - LOOSE PART/BOLT/NUT/CLAMP/ETC

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings

- 4. (C) ENGINE INSTRUMENT - NOT UNDERSTOOD - PILOT IN COMMAND
- 5. (F) AUTOROTATION - SELECTED - PILOT IN COMMAND
- 6. TERRAIN CONDITION - MOUNTAINOUS/HILLY
- 7. OBJECT - TREE(S)

Factual Information

On July 19, 1996, at 1830 hours Pacific daylight time, a Hiller UH-12E, N124HA, collided with trees after the pilot entered autorotation after reacting to an erroneous rotor/engine tachometer reading near Healdsburg, California. The helicopter was substantially damaged. The certificated private pilot and passenger were not injured. The helicopter was being operated as a personal flight by the pilot/owner when the accident occurred. The flight originated from a private ranch at 1825, and was destined for the Healdsburg Municipal Airport. Visual meteorological conditions prevailed at the time.

The pilot said he was flying at 1,400 feet msl and 70 knots when the needles on the rotor/engine tachometer instrument split. The engine decelerated to idle. The pilot entered an autorotation over unsuitable steep terrain and struck trees during the emergency descent.

According to the Federal Aviation Administration (FAA), the helicopter had a previous rotor-tach generator failure. The failure was attributed to a loose connection and was allegedly repaired by the previous owner.

The rotor-tach generator electrical connection was examined by an airframe and powerplant mechanic. The connection produced intermittent and inaccurate instrument readings when the wire bundle was moved or flexed. The mechanic attributed the erroneous instrument reading to the poor condition of potting material within the electrical connector.

There was no evidence of mechanical failure or malfunction found with the helicopter's powerplant after the accident.

The pilot indicated on his accident report his total aeronautical experience consisted of 485 hours, of which 157 were accrued in helicopters.

Pilot Information

Certificate:	Private	Age:	56, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	November 2, 1995
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	485 hours (Total, all aircraft), 150 hours (Total, this make and model), 374 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hiller	Registration:	N124HA
Model/Series:	UH-12E UH-12E	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	HA3024
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	February 1, 1996 Annual	Certified Max Gross Wt.:	1847 lbs
Time Since Last Inspection:	5 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	4700 Hrs	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-540 C2A
Registered Owner:	OREN J. WHITE	Rated Power:	305 Horsepower
Operator:		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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	270°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	27°C
Precipitation and Obscuration:			
Departure Point:	HEALDSBURG , CA	Type of Flight Plan Filed:	None
Destination:	HEALDSBURG , CA (031)	Type of Clearance:	None
Departure Time:	18:25 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	38.629318,-122.890426(est)

Administrative Information

Investigator In Charge (IIC):	Wilcox, Thomas
Additional Participating Persons:	RAY MURPHY; OAKLAND , CA
Original Publish Date:	August 25, 1997
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=29514

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