



Aviation Investigation Final Report

Location:	HUELO, Hawaii	Incident Number:	LAX94IA145
Date & Time:	February 28, 1994, 08:00 Local	Registration:	N5771L
Aircraft:	AEROSPATIALE AS-350D	Aircraft Damage:	Minor
Defining Event:		Injuries:	5 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled - Sightseeing		

Analysis

THE HELICOPTER EXPERIENCED AN ENGINE DECELERATION DURING A LOCAL SIGHTSEEING FLIGHT. THE PILOT ENTERED AN AUTOROTATION AND LANDED IN A CONFINED AREA SURROUNDED BY VEGETATION. A TREE STUMP PENETRATED THE LEFT LOWER SECTION OF THE HELICOPTER. THE WRECKAGE EXAMINATION AND POSTACCIDENT ENGINE RUN-UP REVEALED THE ENGINE WOULD NOT ACCELERATE MORE THAN 58 PERCENT AND THAT THE FUEL CONTROL UNIT LINE WAS LOOSE AND WAS LEAKING FUEL. THE OPERATOR REPLACED THE FUEL CONTROL UNIT 2 DAYS BEFORE THE ACCIDENT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: THE OPERATOR MAINTENANCE PERSONNEL'S INADEQUATE 100-HOUR INSPECTION. THE LOOSE FUEL CONTROL LINE FITTING, THE TREE STUMP, AND THE UNSUITABLE TERRAIN WERE FACTORS IN THIS ACCIDENT.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL
Phase of Operation: CRUISE

Findings

1. FUEL SYSTEM,FUEL CONTROL - FAILURE,TOTAL
2. (F) FUEL SYSTEM,LINE FITTING - LOOSE

3. (C) MAINTENANCE, 100-HOUR INSPECTION - INADEQUATE - COMPANY MAINTENANCE PERSONNEL

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. (F) OBJECT - TREE(S)

5. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On February 28, 1994, about 0800 hours Hawaii standard time, an Aerospatiale AS350-D, N5771L, experienced a loss of engine power and made an emergency landing Huelo, Maui, Hawaii. The pilot was conducting a visual flight rules (VFR) sightseeing flight in the local area under Title 14 CFR Part 135. The helicopter, operated by Papillon Helicopters Inc., sustained minor damage. Neither the certificated commercial pilot nor his four passengers sustained any injuries. Visual meteorological conditions prevailed. The flight originated at the Kahului Airport, Kahului, Maui, about 0745 hours.

In the accident report, the pilot said that about 12 minutes into the flight, at 8,000 feet mean sea level, the helicopter's main rotor rpm began to bleed off. The pilot was unable to maintain the altitude and elected to land in an unsuitable area at a zero airspeed touchdown.

A Federal Aviation Administration (FAA) airworthiness inspector, Honolulu Flight Standards District Office, conducted the on-scene investigation. He said that the pilot stated the helicopter experienced a loss of engine power (down to 58 percent engine power) and was unable to maintain normal main rotor rpm. The pilot entered an autorotation and during the landing, a tree stump penetrated the lower left fuselage section of the helicopter.

The FAA inspector examined the helicopter and could start the engine. The engine would only accelerate to 58 percent power. Further inspection revealed a fuel leak in the fuel line inlet of the fuel control unit.

The operator provided the National Transportation Safety Board excerpts of the pertinent maintenance and pilot records. The maintenance records examination revealed that the company's maintenance personnel completed the required annual inspection on October 17, 1993; the helicopter had accrued 8,178.6 hours at the time of the inspection. The engine had accrued 7,770.5 hours. The operator completed a 100-hour inspection on February 23, 1994; the helicopter and engine accrued 7.4 hours since the inspection at the time of the accident.

Safety Board investigators found an entry in the maintenance records that showed the fuel control unit was replaced on February 26, 1994. The maintenance records also showed that the operator's maintenance personnel performed a postreplacement engine run-up and found no leaks.

The operator told Safety Board investigators that he sent the fuel control unit to the manufacturer for examination. He said that the examination revealed no evidence of any preexisting malfunctions or failures.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	37, Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 15, 1993
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	2449 hours (Total, all aircraft), 1375 hours (Total, this make and model), 2418 hours (Pilot In Command, all aircraft), 291 hours (Last 90 days, all aircraft), 103 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AEROSPATIALE	Registration:	N5771L
Model/Series:	AS-350D AS-350D	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1343
Landing Gear Type:	Skid	Seats:	7
Date/Type of Last Inspection:	February 23, 1994 100 hour	Certified Max Gross Wt.:	4300 lbs
Time Since Last Inspection:	7 Hrs	Engines:	1 Turbo shaft
Airframe Total Time:	8556 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	LTS101-600A3
Registered Owner:	PAPILLON HELICOPTERS LTD.	Rated Power:	615 Horsepower
Operator:	PAPILLON HELICOPTERS INC.	Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:		Operator Designator Code:	ILNA

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:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	KAHULUI , HI (OGG)	Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	
Departure Time:	07:45 Local	Type of Airspace:	

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:	Minor
Passenger Injuries:	4 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	5 None	Latitude, Longitude:	20.869251,-156.450729(est)

Administrative Information

Investigator In Charge (IIC):	Erickson, Scott
Additional Participating Persons:	RONALD WILLIAMS; HONOLULU , HI
Original Publish Date:	December 7, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=28558

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](#).