National Transportation Safety Board
Aviation Accident Factual Report

Location:	POHNPEI, PO	**Accident Number:**	LAX99LA292
Date & Time:	09/01/1999, 1000	**Registration:**	N42054
Aircraft:	Hughes 369HS	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Aerial Observation		

HISTORY OF FLIGHT

On September 1, 1999, about 1000 hours local ship time, a Hughes 369HS, N42054, crashed into the Pacific Ocean about 600 miles south of Pohnpei, Federal States of Micronesia, under unknown circumstances. The helicopter, operated by Hoffman Helicopters, Inc., of Yona, Guam, was destroyed. The commercial pilot and non pilot-rated observer were fatally injured. The local aerial observation flight was conducted under the provisions of 14 CFR Part 91 and had originated from a fishing vessel about 0830. Visual meteorological conditions prevailed and no flight plan was filed.

The captain of the fishing vessel reported that the pilot and observer had been conducting tuna spotting operations. He had established radio communication with the pilot at the beginning of the accident flight and re-established communication approximately every 10 minutes. The last radio contact with the helicopter occurred at 0950. When the captain radioed the helicopter about 1000, he received no response. He then headed for the helicopter's last known position. The ship was approximately 30 miles away at that time, and took approximately 2 1/2 hours to reach the site. When the ship arrived at the site, the crewmembers found the helicopter floating upside-down. They located and recovered the helicopter's floats, pieces of the airframe, and the engine. They did not find any other components. Both occupants of the accident helicopter had their seat belts and shoulder harnesses fastened and secured. They also had life jackets on, but not inflated. The life raft was not inflated. The captain stated that neither occupant appeared to have survived the impact.

The captain took note of the weather conditions at the accident site. He stated that the winds were calm, the sky was clear with no ceiling, and visibility was 30 miles or greater. The sea was flat and clear.

The operator reported that the ship had departed from Guam on August 25, 1999. Since then, the pilot had flown three flights with a total of about 4 flight hours. The pilot also performed duties aboard the ship as the mechanic.

The captain and crew of the fishing vessel were interviewed through an interpreter. A copy of the interviews is appended to this file. None of the crew reported knowledge of any mechanical problems with the helicopter.

Research with various tuna spotting operators revealed that normal procedures for fish spotting involved launching the helicopter to search for any indication of fish. The pilot would look for logs or birds, or any object that would attract fish. If fish were spotted, the pilot would notify the captain, and the ship would head in that direction.

During the interview, the captain was asked whether the pilot had reported finding fish during the accident flight. The captain answered, "No." He stated that it was just a routine search. The captain further stated that he didn't notice any birds around the accident site.

The operator estimated that the helicopter had approximately 64 gallons of fuel on board when it departed the day of the accident. When the ship returned to Guam following the accident, the operator took a fuel sample from the ship's day tank and reported that it appeared normal. The original fuel sample, taken when the tanks were filled in Guam, was still in the fuel box on the ship's flight deck. The operator stated that it also appeared normal with no sediment or discoloration.

AIRCRAFT INFORMATION

The maintenance logbooks were reviewed. The helicopter had undergone an annual inspection in Guam on August 22, 1999, and had flown 4 hours since then. The airframe total time was recorded as 4,716 hours and the engine total time was 10,491 hours.

The records also indicated that the pilot/mechanic had not performed any maintenance to the helicopter since departing Guam.

CREW INFORMATION

According to the Federal Aviation Administration (FAA) airman certification database, the pilot held a commercial pilot certificate with airplane single engine land and rotorcraft-helicopter ratings. He held a flight instructor certificate for helicopters and an FAA first-class medical certificate, issued August 18, 1999. The FAA mechanic database revealed that the pilot also held a mechanic certificate with airframe and power plant ratings. The pilot was also licensed as a commercial helicopter pilot in New Zealand.

The operator indicated that the pilot had 8,276 hours of total flight time, including 7,827 hours in rotorcraft, and 650 hours in the accident make and model.

According to the operator, the observer was a citizen of Taiwan, and was not a rated pilot.

AIRCRAFT EXAMINATION

The engine was placed in a tub of diesel fuel to prevent further saltwater corrosion following recovery. The engine and airframe debris were then shipped to the Safety Board in Los Angeles, California. A teardown and examination of the engine was performed on December 2, 1999.

The engine evidenced external and internal damage consistent with the effects of saltwater corrosion. All connections for the oil supply, scavenge, and pneumatic lines were secure at their fittings. Fuel was present in the fuel lines. The top and bottom chip plugs were removed and inspected. They were both clean and absent of debris. Oil was present in the gearbox.

The compressor would not rotate and the case halves were opened for further inspection. There were small pieces of plastic and other debris present. Minor foreign object damage was evidenced on some of the blades, opposite the direction of rotation. There was no visual damage to the compressor bearings or spur adapter gearshaft assembly.

The turbine was removed and a visual inspection revealed no damage to the turbine wheels or nozzles. The turbine exhaust collector evidenced damage. The thermocouple harness was bent inward toward the turbine support. The horizontal and vertical fire shields were bent and dented.

All engine accessories were removed. There was no damage noted to the shaft or external housing.

The airframe debris was examined. The seat structures were still attached to the seat tracks. The lap belts and shoulder harnesses were intact and appeared to function properly. The helicopter was equipped for left-seat command. Dual controls were not installed.

Pilot Information

Certificate:	Flight Instructor; Commercial	**Age:**	45, Male
Airplane Rating(s):	Single-engine Land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	Helicopter	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	08/18/1999
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	8276 hours (Total, all aircraft), 650 hours (Total, this make and model), 100 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	**Registration:**	N42054
Model/Series:	369HS 369HS	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	520379S
Landing Gear Type:	Float; Skid	**Seats:**	2
Date/Type of Last Inspection:	08/22/1999, Annual	**Certified Max Gross Wt.:**	2550 lbs
Time Since Last Inspection:	4 Hours	**Engines:**	1 Turbo Shaft
Airframe Total Time:	4716 Hours	**Engine Manufacturer:**	Allison
ELT:		**Engine Model/Series:**	250-C20
Registered Owner:	HOFFMAN HELICOPTERS INC.	**Rated Power:**	375 hp
Operator:	HOFFMAN HELICOPTERS INC.	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	, 0 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	0000	**Direction from Accident Site:**	0°
Lowest Cloud Condition:	Clear / 0 ft agl	**Visibility**	30 Miles
Lowest Ceiling:	None / 0 ft agl	**Visibility (RVR):**	0 ft
Wind Speed/Gusts:	Calm /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	29°C
Precipitation and Obscuration:			
Departure Point:	FISHING VESSEL	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	0830	**Type of Airspace:**	Class E

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	NOELANI MARS
Additional Participating Persons:	GARY M SUOZZI; SAN FRANCISCO, CA MIKE WEBER; INDIANAPOLIS, IN
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 pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at http://dms.ntsb.gov/pubdms/.