Aviation Investigation Final Report

Location:	Las Piedras, Puerto Rico	**Accident Number:**	MIA07CA103
Date & Time:	May 29, 2007, 08:15 Local	**Registration:**	N63HD
Aircraft:	Hughes 269A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that he took off from his home airstrip, and during the initial climb at 350 feet and 55 mph, the engine quit. At the time there were power lines in front of him so he opted to make a left 90-degree auto rotation. The helicopter was landed hard causing damage to the tail boom of the helicopter. The passenger stated that about 40 seconds after takeoff, he heard a "pop pop" noise. The aircraft started a fast descent and impacted the ground. His injuries include a burst L1 vertebra. Examination of the helicopter was performed by an FAA airworthiness inspector, which revealed the engine was turned by hand without binding. The aircraft's spark plugs were in good condition and the fuel filter was clean and non-obstructed; fuel was noted in the filter. The flight controls were found to be free and moving. No anomalies with the aircraft or engine were reported by the FAA inspector. Inspection of the aircraft's logbooks revealed that the last annual inspection was performed on June 01,1997.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the non-certificated pilot to maintain a proper rate of descent during the autorotative landing following a reported loss of engine power for undetermined reasons, resulting in a hard landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CLIMB - TO CRUISE

Findings
1. (F) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
2. AUTOROTATION - INITIATED - PILOT IN COMMAND
3. LACK OF CERTIFICATION - PILOT IN COMMAND

Occurrence #3: HARD LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
4. (C) PROPER DESCENT RATE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

The non-certificated pilot stated he took off from his home and during the initial climb at 350 feet and 55 mph, the engine quit. At the time there were power lines in front of him so he opted to make a left 90-degree auto rotation. The helicopter was landed hard causing damage to the tail boom of the helicopter.

The passenger stated that about 40 seconds after takeoff, he heard a "pop pop" noise. The aircraft started a fast descent and impacted the ground. His injuries include a burst L1 vertebra.

Examination of the helicopter was performed by an FAA airworthiness inspector, which revealed the engine was turned by hand without binding. The aircraft's spark plugs were in good condition and the fuel filter was clean and non-obstructed; fuel was noted in the filter. The flight controls were found to be free and moving. No anomalies with the aircraft or engine were reported by the FAA inspector.

Inspection of the aircraft's logbooks revealed that the last annual inspection was performed on June 01,1997.

Pilot Information

Certificate:	None	**Age:**	57,Male
Airplane Rating(s):	None	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	98 hours (Total, all aircraft), 98 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	**Registration:**	N63HD
Model/Series:	269A	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	67-16906
Landing Gear Type:	Skid	**Seats:**	2
Date/Type of Last Inspection:	April 1, 1997 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:	65 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	98 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:		**Engine Model/Series:**	HIO-360 SER
Registered Owner:	Thunderbird Helicopters FLA	**Rated Power:**	
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	TJNR	**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 3000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.95 inches Hg	**Temperature/Dew Point:**	28°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LAS PIEDRAS, PR (PR07)	**Type of Flight Plan Filed:**	None
Destination:	Las Piedras, PR (PR07)	**Type of Clearance:**	None
Departure Time:	08:14 Local	**Type of Airspace:**	

Airport Information

Airport:	Boqueron PR07	**Runway Surface Type:**	
Airport Elevation:	373 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 1 Minor	**Latitude, Longitude:**	18.201665,-65.83889

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Joaquin Camacho; FAA Flight Standards District Office; San Juan, PR
Original Publish Date:	July 25, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=65873