



Aviation Investigation Final Report

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| 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

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|----------------------------------|---|--|----------|
| 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

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|--------------------------------------|-----------------------------|---------------------------------------|-----------------|
| 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: | H10-360 SER |
| Registered Owner: | Thunderbird Helicopters FLA | Rated Power: | |
| Operator: | | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|-------------|
| 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

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|-----------------------------|---------------|----------------------------------|----------------|
| 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

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|----------------------------|--------------------|-----------------------------|---------------------|
| 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

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|--|---|
| 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.nts.gov/Docket?ProjectID=65873 |

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](#).