



Aviation Investigation Final Report

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|--------------------------------|---|-------------------------|-------------|
| Location: | GREENWOOD, Mississippi | Accident Number: | MIA89LA204 |
| Date & Time: | July 21, 1989, 12:40 Local | Registration: | N47345 |
| Aircraft: | Texas Helicopter OH-13E/M74 | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Positioning | | |

Analysis

DURING CRUISE FLT, THE HELICOPTER WENT OUT OF CONTROL & BEGAN AN UNCOMMANDED DESCENT. THE CYCLIC & COLLECTIVE CONTROLS WERE NON-RESPONSIVE, BUT LEFT PEDAL WAS APPLIED BEFORE THE HELICOPTER CRASHED & IT CRASHED IN A TAIL LOW ATTITUDE. AN EXAM OF THE FLT CONTROLS REVEALED THAT ONE MAIN ROTOR BLADE PITCH CHANGE HORN HAD FAILED, AS WELL AS THE ATTACHING BOLTS FOR BOTH PITCH CHANGE HORNS. THERE WAS EVIDENCE THAT ONE OF THE BOLTS HAD FAILED, THEN THE OTHER FAILURES WERE FROM OVERLOAD.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF A MAIN ROTOR BLADE PITCH CHANGE HORN AND/OR ATTACHING BOLT(S).

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: CRUISE - NORMAL

Findings

1. (C) ROTORCRAFT FLIGHT CONTROL, PITCH CHANGE HORN - FAILURE, TOTAL

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: CRUISE

Findings

2. AIRCRAFT CONTROL - NOT POSSIBLE

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

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|----------------------------------|--|--|---------------|
| Certificate: | Commercial | Age: | 42, Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Front |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | |
| Instrument Rating(s): | Airplane; Helicopter | Second Pilot Present: | No |
| Instructor Rating(s): | | Toxicology Performed: | No |
| Medical Certification: | Class 2 Valid Medical--no waivers/lim. | Last FAA Medical Exam: | July 12, 1988 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | |
| Flight Time: | 11219 hours (Total, all aircraft), 2263 hours (Total, this make and model), 10833 hours (Pilot In Command, all aircraft), 130 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|-----------------------|---------------------------------------|-----------------|
| Aircraft Make: | Texas Helicopter | Registration: | N47345 |
| Model/Series: | OH-13E/M74 OH-13E/M74 | Aircraft Category: | Helicopter |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Restricted (Special) | Serial Number: | 76-002 |
| Landing Gear Type: | Skid | Seats: | 1 |
| Date/Type of Last Inspection: | June 21, 1989 Annual | Certified Max Gross Wt.: | 2750 lbs |
| Time Since Last Inspection: | 46 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 2696 Hrs | Engine Manufacturer: | LYCOMING |
| ELT: | Not installed | Engine Model/Series: | VO-435-AIF |
| Registered Owner: | TURNER, DANNY | Rated Power: | 260 Horsepower |
| Operator: | VALLEY AIR, INC. | Operating Certificate(s) Held: | |
| Operator Does Business As: | | Operator Designator Code: | |

Meteorological Information and Flight Plan

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|---|------------------------|---|------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | GWO ,155 ft msl | Distance from Accident Site: | 5 Nautical Miles |
| Observation Time: | 11:51 Local | Direction from Accident Site: | 128° |
| Lowest Cloud Condition: | Unknown | Visibility | 5 miles |
| Lowest Ceiling: | Overcast / 1500 ft AGL | Visibility (RVR): | |
| Wind Speed/Gusts: | 5 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 200° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29 inches Hg | Temperature/Dew Point: | 25°C / 19°C |
| Precipitation and Obscuration: | N/A - None - Haze | | |
| Departure Point: | GRENADA , MS (M42) | Type of Flight Plan Filed: | None |
| Destination: | IHA BENA , MS (522) | Type of Clearance: | None |
| Departure Time: | 00:00 Local | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|-------------|----------------------------------|--|
| Airport: | | Runway Surface Type: | |
| Airport Elevation: | 0 ft msl | Runway Surface Condition: | |
| Runway Used: | 0 | IFR Approach: | |
| Runway Length/Width: | 0 ft / 0 ft | VFR Approach/Landing: | |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|---------------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 33.509071,-90.190002(est) |

Administrative Information

Investigator In Charge (IIC): Monville, Timothy

Additional Participating Persons:

Original Publish Date: September 5, 1991

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=32467>

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](#).