

Aviation Investigation Final Report

| Location: | New Iberia, Louisiana | Accident Number: | FTW02LA216 |
|-------------------------|----------------------------|------------------|-------------|
| Date & Time: | July 18, 2002, 07:16 Local | Registration: | N99628 |
| Aircraft: | Bell TH-13T | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 None |
| Flight Conducted Under: | Part 137: Agricultural | | |

Analysis

After the pilot had finished spraying his load and was en route to the loading facility, he noticed that he had 15 gallons of fuel remaining. Approximately 1 minute later the helicopter experienced a complete loss of engine power. Subsequently, an autorotation was initiated over a sugar cane field. Prior to contacting the high vegatation, the pilot flared by adding full aft cyclic and up collective, resulting in the main rotor blades striking and severing the tail boom, the tail rotor separating, and the helicopter coming to rest in a upright position. There was no post-impact fire. The cause of the loss of power was not determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power for undetermined reasons. High vegetation was a factor.

Findings

Occurrence #1: LOSS OF ENGINE POWER Phase of Operation: CRUISE Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED

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

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER Phase of Operation: DESCENT - EMERGENCY

Findings 2. (F) TERRAIN CONDITION - HIGH VEGETATION

Factual Information

On July 18, 2002, approximately 0716 Central daylight time, a Bell TH-13T helicopter, N99628, sustained substantial damage when it impacted terrain following a complete loss of engine power while maneuvering near New Iberia, Louisiana. The helicopter was registered to and operated by Gentry Flying Service, Selma, Alabama. The commercial pilot, sole occupant of the helicopter, was not injured. The 14 CFR Part 137 aerial application flight departed a private airstrip at 0706, and no flight plan was filed.

In a telephone interview and in a written statement supplied to the NTSB investigator-in-charge, the pilot reported that at 0715 he noticed 15 gallons of fuel remaining. The pilot stated that he had just finished spraying his load and was returning to the loading facility when the helicopter experienced a complete loss of engine power. He then initiated an autorotation at 50 miles per hour over a sugar cane field. Prior to contacting the high vegetation, the pilot reported that he flared by adding full aft cyclic and up collective, which resulted in the main rotor blades striking the tail boom and sheering it off. Subsequently, the tail rotor separated and was found approximately 60 feet forward of where the helicopter came to rest in an upright position. The pilot reported that all cross tubes had been "yanked out," and the cabin was twisted to the left. Both the cyclic and collective were completely jammed, and the tail boom had been sheered off where it attaches to the center section. Two drag brace bolts, which hold the main rotor blades in place, were also sheered off. There was no post-impact fire.

The aircraft was moved from the accident site to the facilities at Coastal Helicopters, Panama City, Florida A certified airframe and powerplant mechanic who examined the engine reported no anomalies were detected which would have prevented normal operation.

| Pliot Information | | | |
|---------------------------|--|-----------------------------------|-------------------|
| Certificate: | Commercial | Age: | 52,Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 2 Valid Medicalw/ waivers/lim | Last FAA Medical Exam: | February 20, 2002 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | March 18, 2002 |
| Flight Time: | 8310 hours (Total, all aircraft), 116 hours (Total, this make and model), 8246 hours (Pilot In Command, all aircraft) | | |

Pilot Information

Aircraft and Owner/Operator Information

| Aircraft Make: | Bell | Registration: | N99628 |
|----------------------------------|-----------------------------------|-----------------------------------|-----------------|
| Model/Series: | TH-13T | Aircraft Category: | Helicopter |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Restricted (Special) | Serial Number: | 6715924 |
| Landing Gear Type: | Skid | Seats: | 1 |
| Date/Type of Last Inspection: | March 1, 2002 Annual | Certified Max Gross Wt.: | 2850 lbs |
| Time Since Last Inspection: | 15 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 12706.2 Hrs as of last inspection | Engine Manufacturer: | Lycoming |
| ELT: | Not installed | Engine Model/Series: | VO-435A1F |
| Registered Owner: | Gentry Flying Service | Rated Power: | 265 Horsepower |
| Operator: | | Operating Certificate(s) Held: | None |
| Operator Does Business As: | | Operator Designator Code: | GOTG |

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 | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29.92 inches Hg | Temperature/Dew Point: | 22°C / 5°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | New Iberia, LA | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 07:06 Local | Type of Airspace: | Class E |

Wreckage and Impact Information

| 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: | 30.06611,-91.797225 |

Administrative Information

| Investigator In Charge (IIC): | Little, Thomas | |
|--------------------------------------|---|--|
| Additional Participating Persons: | Tim Wells; Federal Aviation Administration; Baton Rouge, LA | |
| Original Publish Date: | April 15, 2003 | |
| Last Revision Date: | | |
| Investigation Class: | <u>Class</u> | |
| Note: | | |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=55296 | |

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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 <u>here</u>.