



National Transportation Safety Board Aviation Accident Final Report

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| Location: | BEAUMONT, TX | Accident Number: | FTW00LA023 |
| Date & Time: | 11/01/1999, 1630 CST | Registration: | N7833X |
| Aircraft: | Cessna 172B | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 2 None |

Flight Conducted Under: Part 91: General Aviation - Instructional

Analysis

The airplane's engine lost power as a result of fuel exhaustion, and during the ensuing forced landing the airplane struck trees. According to the flight instructor, he visually confirmed that each fuel tank was 1/2 full before departing on a local training flight. He estimated that he had approximately 2 hours of flying time, based on the quantity of fuel in the tanks. The flight departed, flew approximately one hour, and returned to the airport. The student was executing touch-and-go landings, and on the fourth takeoff/climb, as the airplane turned crosswind, the engine began to 'sputter.' The flight instructor assumed control of the airplane and aligned it with runway 13. After the airplane had overflowed 1/2 of the 3,601-foot runway, he advanced the throttle to see if the engine would respond. The engine responded, and he initiated a climb to set up for another landing. As the instructor turned the airplane back toward runway 31, the engine lost total power. The airplane came to rest 0.5 miles north of the approach end of runway 31. The FAA inspector, who examined the airplane, stated that both fuel tanks contained residual fuel only.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Fuel exhaustion as a result of the flight instructor's failure to refuel the airplane. A factor was the lack of suitable terrain for the forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) FLUID,FUEL - EXHAUSTION
2. (C) REFUELING - NOT PERFORMED - PILOT IN COMMAND(CFI)

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

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

3. OBJECT - TREE(S)
4. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On November 1, 1999, at 1630 central standard time, a Cessna 172B airplane, N7833X, was substantially damaged when it impacted trees and terrain during a forced landing near Beaumont, Texas. The certified flight instructor and student pilot were not injured. The airplane was registered to and operated by a private individual. Visual meteorological conditions prevailed for the 14 Code of Federal Regulations Part 91 instructional flight and a flight plan was not filed. The local flight originated from the Beaumont Municipal Airport, Beaumont, Texas, at 1500.

According to the flight instructor, he visually confirmed that each wing fuel tank was 1/2 full during the preflight inspection. He estimated that he had approximately 2 hours of flying time based on the quantity of fuel in the tanks. The airplane departed and flew approximately one hour before returning to the airport. The student was executing touch-and-go landings on runway 31, and during the fourth takeoff/climb, as the airplane turned cross-wind, the engine began to "sputter." The flight instructor assumed control of the airplane and turned the airplane toward runway 13. The airplane had overflown 1/2 the length of the 3,601-foot runway when the instructor advanced the throttle to see if the engine would respond. The engine responded, and the instructor initiated a climb, intending to initiate another approach. The instructor turned the airplane back toward runway 31, and simultaneously, the engine "sputtered" and lost total power. The instructor executed a forced landing to a field. While on short final to the field, the airplane's wings struck trees, and the airplane contacted the ground. The airplane came to rest upright, 0.5 miles from the approach end of runway 31. The instructor stated that he visually checked the fuel tanks after the accident, and there "appeared to be little fuel in both tanks."

The FAA inspector, who examined the airplane, reported that both wing spars were structurally damaged. He added that the fuel tanks contained "residual fuel only."

Pilot Information

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| Certificate: | Flight Instructor | Age: | , Male |
| Airplane Rating(s): | Multi-engine Land; Single-engine Land | Seat Occupied: | Right |
| Other Aircraft Rating(s): | None | Restraint Used: | Seatbelt |
| Instrument Rating(s): | Airplane | Second Pilot Present: | No |
| Instructor Rating(s): | Airplane Single-engine; Instrument Airplane | Toxicology Performed: | No |
| Medical Certification: | Class 1 Valid Medical--w/ waivers/lim. | Last FAA Medical Exam: | 01/29/1998 |
| Occupational Pilot: | | Last Flight Review or Equivalent: | |
| Flight Time: | 445 hours (Total, all aircraft), 146 hours (Total, this make and model), 345 hours (Pilot In Command, all aircraft), 207 hours (Last 90 days, all aircraft), 98 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|-------------------------------|--------------------------|--------------------------------|-----------------|
| Aircraft Make: | Cessna | Registration: | N7833X |
| Model/Series: | 172B 172B | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | No |
| Airworthiness Certificate: | Normal | Serial Number: | 17248333 |
| Landing Gear Type: | Tricycle | Seats: | 4 |
| Date/Type of Last Inspection: | 10/05/1999, Annual | Certified Max Gross Wt.: | 2300 lbs |
| Time Since Last Inspection: | 10 Hours | Engines: | 1 Reciprocating |
| Airframe Total Time: | 2290 Hours | Engine Manufacturer: | Continental |
| ELT: | Installed, not activated | Engine Model/Series: | O-300-D |
| Registered Owner: | DONALD LEWIS | Rated Power: | 145 hp |
| Operator: | DONALD LEWIS | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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|----------------------------------|-------------------------|--------------------------------------|-------------------|
| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Day |
| Observation Facility, Elevation: | BPT, 15 ft msl | Distance from Accident Site: | 12 Nautical Miles |
| Observation Time: | 1418 CST | Direction from Accident Site: | 170° |
| Lowest Cloud Condition: | Scattered / 4800 ft agl | Visibility | 20 Miles |
| Lowest Ceiling: | Broken / 5500 ft agl | Visibility (RVR): | 0 ft |
| Wind Speed/Gusts: | 12 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 360° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29 inches Hg | Temperature/Dew Point: | 21 °C / 11 °C |
| Precipitation and Obscuration: | | | |
| Departure Point: | (BMT) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | VFR |
| Departure Time: | 1500 CST | Type of Airspace: | Class D |

Airport Information

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|----------------------|--------------------------|---------------------------|--------------|
| Airport: | BEAUMONT MUNICIPAL (BMT) | Runway Surface Type: | Asphalt |
| Airport Elevation: | 32 ft | Runway Surface Condition: | Dry |
| Runway Used: | 31 | IFR Approach: | None |
| Runway Length/Width: | 3601 ft / 75 ft | VFR Approach/Landing: | Touch and Go |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|-------------|
| Crew Injuries: | 2 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | N/A | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 2 None | Latitude, Longitude: | |

Administrative Information

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|--|--|---------------------|------------|
| Investigator In Charge (IIC): | GEORGIA R SNYDER | Report Date: | 11/30/2000 |
| Additional Participating Persons: | JAMES R WATSON; HOUSTON, TX | | |
| Publish Date: | | | |
| 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.nts.gov/pubdms/ . | | |

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).