



Aviation Investigation Final Report

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| Location: | Andersonville, Georgia | Accident Number: | MIA07LA129 |
| Date & Time: | August 1, 2007, 11:30 Local | Registration: | N5721N |
| Aircraft: | Piper J3C-65 | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 2 Serious |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

According to an FAA inspector, he interviewed several witnesses who said that the pilot was giving airplane rides from his private grass airstrip. On the fifth and final airplane ride, during initial climb after takeoff, the engine stopped. The inspector said that witnesses told him that they saw the airplane turn about 180 degrees toward the departure runway, but it descended quickly and impacted the ground in a level attitude. The on scene examination revealed the presence of fuel, and no obvious anomalies. An examination was performed by the NTSB, and a representative from the engine manufacturer. During the examination, crash related damaged parts were replaced, and a club propeller was fitted. The engine was then test run. Initially, when fuel was added, the fuel poured from the carburetor, consistent with the needle valve having been stuck in the open position due to an obstruction. After tapping on the wall of the carburetor, the obstruction was cleared, and fuel stopped flowing out of the carburetor. The test run was then completed without further anomalies. A teardown examination of the carburetor revealed debris within the carburetor float bowl large enough to block the needle valve, or fuel metering orifice.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper decision to make a 180-degree turn at low altitude to return to the departure runway following a loss of engine power during takeoff-initial climb. A factor in the accident was contamination in the carburetor.

Findings

Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) FUEL SYSTEM,CARBURETOR - CONTAMINATION,OTHER THAN WATER

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: MANEUVERING - TURN TO REVERSE DIRECTION

Findings

2. ALTITUDE - LOW - PILOT IN COMMAND

3. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

4. STALL/MUSH - INADVERTENT - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

5. TERRAIN CONDITION - GROUND

Factual Information

On August 1, 2007, about 1130 eastern daylight time, a Piper J3C-65, N5721N, registered to and operated by a private individual as a Title 14 CFR Part 91 personal flight, crashed shortly after taking off from a private field in Andersonville, Georgia. Visual meteorological conditions prevailed, and no flight plan was filed. The private-rated pilot and one passenger received serious injuries, and the airplane incurred substantial damage. The flight was originating at the time of the accident.

An FAA inspector responded to the scene of the accident, and stated that he examined the wreckage and found fuel to be present in the airplane, but noted no obvious anomalies. He further stated that he interviewed several witnesses who said that the pilot was giving airplane rides to construction workers, who had been working on his house. According to the inspector, the witnesses said that the pilot was taking off and landing on his private landing strip, while giving the airplane rides, and he had given rides to four workers. In the process of giving the fifth and final airplane ride, during initial climb after takeoff, the airplane's engine ceased operating. He said that the witnesses said that they observed the airplane as it turned about 180 degrees in the direction of the runway from where it had just departed, but it descended quickly and impacted the ground in a level attitude.

A postcrash examination was performed by the NTSB, along with a representative of Teledyne Continental Motors. The examination revealed that several engine mounts had fractured during the impact, and that the carburetor had separated from its attach point to the engine manifold. In addition the oil sump had been crushed, and the propeller flange and propeller had been bent beyond the permissible limits of a test run.

During the course of the examination the engine was removed from the airframe, and parts which exhibited damage consistent with the damage having occurred during the accident, were replaced. The parts that were replaced include, the intake manifold, oil sump, and the propeller flange. In addition, a club propeller was fitted.

The engine was then given a test run, and initially during the test, when fuel was added, the fuel "poured from" the carburetor, consistent with the needle valve having been stuck in the open position due to an obstruction. After tapping on the side of the carburetor with a screwdriver handle, the obstruction was cleared, and fuel stopped flowing out of the carburetor. The test run was then completed with no other anomalies being noted.

A follow-on teardown examination of the carburetor revealed the presence of debris within the carburetor float bowl, of a size that was capable of blocking the needle valve, or fuel metering orifice.

Pilot Information

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| Certificate: | Private | Age: | 57, Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Front |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | Airplane | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 | Last FAA Medical Exam: | March 1, 2007 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | March 1, 2007 |
| Flight Time: | 209 hours (Total, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|------------------------------|---------------------------------------|----------------------|
| Aircraft Make: | Piper | Registration: | N5721N |
| Model/Series: | J3C-65 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 13550 |
| Landing Gear Type: | Tailwheel | Seats: | 2 |
| Date/Type of Last Inspection: | November 1, 2006 Annual | Certified Max Gross Wt.: | 1220 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | 1417 Hrs at time of accident | Engine Manufacturer: | Teledyne Continental |
| ELT: | Installed, not activated | Engine Model/Series: | A-65-8 |
| Registered Owner: | Charles W. Hodges | Rated Power: | 65 Horsepower |
| 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: | MCN | Distance from Accident Site: | |
| Observation Time: | 15:53 Local | Direction from Accident Site: | |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 4 knots / 0 knots | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 0° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29.97 inches Hg | Temperature/Dew Point: | 31°C / 20°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Andersonville, GA | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 11:30 Local | Type of Airspace: | |

Wreckage and Impact Information

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|----------------------------|-----------|-----------------------------|---------------------|
| Crew Injuries: | 1 Serious | Aircraft Damage: | Substantial |
| Passenger Injuries: | 1 Serious | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 2 Serious | Latitude, Longitude: | 32.196945,-84.14167 |

Administrative Information

Investigator In Charge (IIC): Lovell, John

Additional Participating Persons: Rick Hoy; FAA FSDO; Atlanta, GA

Original Publish Date: February 28, 2008

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=66407>

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](#).