



National Transportation Safety Board Aviation Accident Final Report

Location:	Andersonville, GA	Accident Number:	MIA07LA129
Date & Time:	08/01/2007, 1130 EDT	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

Certificate:	Private	Age:	57, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3	Last FAA Medical Exam:	03/01/2007
Occupational Pilot:		Last Flight Review or Equivalent:	03/01/2007
Flight Time:	209 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N5721N
Model/Series:	J3C-65	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	13550
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	11/01/2006, Annual	Certified Max Gross Wt.:	1220 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1417 Hours 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 hp
Operator:	Charles W. Hodges	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MCN	Distance from Accident Site:	
Observation Time:	1553 EDT	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	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:	29.98 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:	1130 EDT	Type of Airspace:	

Wreckage and Impact Information

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:	32.196944, -84.141667

Administrative Information

Investigator In Charge (IIC):	John W Lovell	Report Date:	02/28/2008
Additional Participating Persons:	Rick Hoy; FAA FSDO; Atlanta, GA		
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).