Aviation Investigation Final Report

Location:	Fort Gaines, Georgia	**Accident Number:**	ERA14FA455
Date & Time:	September 16, 2014, 11:40 Local	**Registration:**	N95480
Aircraft:	Piper J3C-65	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot/owner and a pilot-rated passenger were on the first leg of a short, cross-country flight and did not arrive at their destination. A search was initiated, and the wreckage was located a week later in a remote area of a river in about 10 to 15 ft of water. No witnesses to the accident were located. The pilot was found at the rear seat position, and the passenger was found still buckled into the front seat.

All major structural components of the airplane were accounted for at the accident site, and flight control continuity was confirmed to the cockpit controls. The engine was removed from the airframe and disassembled; it did not reveal any abnormalities that would have prevented normal operation. The cork-and-rod fuel quantity indicator was bent over and captured in the "empty" position; however, the fuel tank was breached, and the airplane was partially inverted in the water. Automated fueling records revealed that the pilot twice attempted to purchase fuel before the flight but only obtained 0.173 gallon. It could not be determined if the pilot obtained additional fuel from another source. The width of the river provided adequate room for a forced landing; however, the damage to the airframe and the occupants' injuries were consistent with an out-of-control condition at the time of impact.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to maintain airplane control during flight, which resulted in a collision with a river.

Findings

Aircraft	(general) - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Unknown	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On September 16, 2014, about 1140 eastern daylight time (EDT), a Piper J3C-65, N95480, collided with the Chattahoochee River near Fort Gaines, Georgia. The airline transport pilot and pilot-rated passenger were fatally injured and the airplane was substantially damaged. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Day, visual meteorological conditions prevailed for the flight, and no flight plan was filed. The flight originated from Headland Municipal Airport (0J6), Headland, Alabama about 1000 central daylight time (CDT) and was destined for Weedon Field (EUF), Eufaula, Alabama.

There were no known witnesses to the accident. The airplane was not equipped with a transponder and no radar or GPS data was found. After the flight did not arrive at its destination, a search and rescue operation was initiated. The wreckage was located on September 23, 2014, in a remote area of the Chattahoochee River in about 10 to 15 feet of water. The wreckage was recovered on September 24, 2014.

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor; Military	**Age:**	44
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Rear
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	July 23, 2014
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	February 14, 2013
Flight Time:	5700 hours (Total, all aircraft)		

Pilot-rated passenger Information

Certificate:	Airline transport; Commercial; Military	**Age:**	42
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	1600 hours (Total, all aircraft)		

The pilot, age 44, held an airline transport pilot (ATP) certificate with ratings for airplane single engine land, airplane multi-engine land, airplane single engine sea, rotorcraft-helicopter, and instrument helicopter. He was also a flight instructor with airplane single and multiengine, rotorcraft-helicopter, instrument airplane instrument-helicopter ratings. He reported a total flight experience of 5,700 hours, including 200 hours during the last six months, on his class 1 medical certificate application, dated July 23, 2014. The medical certificate was unrestricted.

The pilot-rated passenger, age 43, held an ATP certificate with airplane multiengine land, airplane single engine land, rotorcraft-helicopter, and instrument helicopter ratings. He did not possess a current or previous FAA medical certificate. He reported 1,600 hours total flight time, including 900 hours in airplanes, on his most recent FAA rating (ATP) application, dated February 18, 2012.

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N95480
Model/Series:	J3C-65	**Aircraft Category:**	Airplane
Year of Manufacture:	1942	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	8403
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	August 9, 2014 Annual	**Certified Max Gross Wt.:**	1170 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	2698 Hrs as of last inspection	**Engine Manufacturer:**	CONT MOTOR
ELT:	C91 installed, not activated	**Engine Model/Series:**	A75-8F
Registered Owner:	HAASE STEVEN A	**Rated Power:**	65 Horsepower
Operator:	HAASE STEVEN A	**Operating Certificate(s) Held:**	None

The airplane was a Piper model J3C-65 that was manufactured in 1942. It was powered by a Continental A75-8F engine, rated at 65 horsepower and was equipped with a Sensenich wooden, fixed-pitch propeller.

An examination of available maintenance records revealed that an annual inspection was performed on the airframe and engine on August 9, 2014. The airframe total time at the annual inspection was 2,698 hours.

FAA registration records indicated that the pilot purchased the airplane on September 1, 2010.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	BIJ,285 ft msl	**Distance from Accident Site:**	12 Nautical Miles
Observation Time:	15:35 Local	**Direction from Accident Site:**	140°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 1800 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:		**Temperature/Dew Point:**	28°C / 24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Headland, AL (0J6)	**Type of Flight Plan Filed:**	None
Destination:	Eufaula, AL (EUF)	**Type of Clearance:**	None
Departure Time:	10:00 Local	**Type of Airspace:**	

The 1135 EDT surface weather observation for Blakely, Georgia (BIJ), located about 12 miles southeast of the accident site, included broken clouds at 1,800 feet agl, overcast clouds at 2,200 feet agl, wind from 200 degrees at 4 knots, visibility 10 statute miles or greater.

The 1037 CDT (1137 EDT) surface weather observation for Eufaula, Alabama (EUF), located about 21 miles northwest of the accident site, included scattered clouds at 1,400 feet agl, broken clouds at 2,100 feet agl, wind variable at 4 knots, visibility 10 statute miles or greater, and altimeter setting 30.06 inches of mercury.

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	31.555555,-85.04972

An initial examination of the wreckage at the recovery site revealed that all major structural components of the airframe and engine were accounted for. The left and right main landing gear, including the wheels and tires, were found by local residents in the river, downstream from the accident site. Flight control continuity was confirmed from the ailerons, elevator, and rudder to the cockpit controls. Both wings remained intact and partially connected the fuselage. The right wing exhibited crushing signatures beginning at the leading edge and continuing in the aft direction. The empennage was generally intact. The engine remained attached to the firewall. Both propeller blade tips were broken free and the remaining blade roots were splintered due to impact forces.

The wreckage was moved to a storage facility at Griffin, Georgia and was examined by the investigation team on September 26, 2014.

The fuel tank was ruptured at a lower seam weld joint from impact forces. The fuel cap was in place and secure. The fuel quantity indicator, consisting on a sliding rod and cork assembly, indicated empty, and the pipe that held the indicator rod was bent over about 90 degrees. The fuel strainer was broken open and the bowl was missing. The cockpit-mounted fuel lever was in the "on" position. The engine throttle was found in the mid-range position.

The engine was intact and attached to the firewall. The top spark plugs and rocker covers were removed and the crankshaft was rotated by manually turning the propeller. Continuity was confirmed to all cylinders and to the rear accessory drives. Compression and suction were confirmed on all cylinders. The numbers 2 and 4 spark plugs were broken in half. The electrodes of all plugs exhibited dark deposits and normal wear when compared to a Champion inspection chart. The oil screen was free of metallic particles. The left and right magnetos were removed and found to be saturated with water. The units were opened and an attempt was made to dry them with a hair dryer. After re-assembly, three of the four leads on the left magneto produced a spark when rotated. No spark could be observed on the right magneto. The carburetor was partially broken away from the engine. The bowl was full of water. No fuel was present. The fuel screen contained a small amount of particulate debris. The unit was disassembled and the float and needle valve were in place and free to move. The needle valve seat was clean.

The cylinders were removed and engine was disassembled. No anomalies were noted with the cylinders, valves, pushrods, and pistons; power train continuity was confirmed and all components indicated normal operating signatures. All bearings were coated with oil. The engine case, crankshaft, camshaft and bearings were normal in appearance.

The inspection of the engine did not reveal any abnormalities that would have prevented normal

operation or production of rated horsepower. Internal continuity of the engine was confirmed.

Medical and Pathological Information

A postmortem examination of the pilot was performed at the Central Regional Lab of the Division of Forensic Sciences, Georgia Bureau of Investigation on September 26, 2015. The autopsy report noted the cause of death as "multiple blunt force trauma in conjunction with asphyxia due to drowning" and the manner of death was "accident."

Forensic toxicology testing of the pilot was performed on specimens of the pilot by the Federal Aviation Administration (FAA) Bioaeronautical Sciences Research Laboratory (CAMI), Oklahoma City, Oklahoma. The CAMI toxicology report indicated 60 mg/dL ethanol in the liver, and 48 mg/dL ethanol in the muscle. N-propanol was detected in the liver. Testing for cyanide and carbon monoxide was not performed. Rosuvastatin (Crestor®) was detected in the liver and muscle.

Given the advanced stage of decomposition of the specimens, the ethanol found was likely from sources other than ingestion.

The pilot reported the use of esomeprazole (Nexium®) on his most recent first class medical certificate application. Nexium is a proton pump inhibitor medication that decreases the amount of acid produced in the stomach. It is available by prescription or over-the-counter. The Crestor found in the toxicology results was not reported to the FAA by the pilot. Crestor is a prescription medication used to reduce blood cholesterol levels.

A postmortem examination of the pilot-rated passenger was performed at the Central Regional Lab of the Division of Forensic Sciences, Georgia Bureau of Investigation on September 26, 2015. The autopsy report noted the cause of death as "multiple blunt force trauma" and the manner of death was "accident."

Forensic toxicology testing of the pilot was performed on specimens of the pilot-rated passenger by the Federal Aviation Administration (FAA) Bioaeronautical Sciences Research Laboratory (CAMI), Oklahoma City, Oklahoma. The CAMI toxicology report indicated 81 mg/dL ethanol in the liver, and 134 mg/dL ethanol in the muscle. N-propanol and N-butanol was detected in the muscle and liver. Testing for cyanide and carbon monoxide was not performed. Desmethylsertraline, diphenhydramine, and sertraline were detected in the liver and muscle.

Sertraline (Zoloft®) is a prescription antidepressant used for a variety of conditions including depression, obsessive-compulsive disorder, panic attacks, posttraumatic stress disorder and social anxiety disorder. Desmethylsertraline is a metabolite of sertraline. Diphenhydramine is an over-the-counter antihistamine used to treat allergic conditions
and as a sleep aid. It is available in several generic of brand name products such as Benadryl®, Sominex®, Advil PM®, Hydramine®, etc.

Survival Aspects

First responders noted that the lap belts for the pilot and pilot-rated passengers were still connected; however, the shoulder harnesses for both seats were not connected and were not damaged. The pilot was found at the rear cockpit seat position and the passenger was found in the front seat. The pilot was most of the way out of the aircraft, but one of his feet was still lodged inside the aircraft.

Tests and Research

Fueling History

According to fueling records provided by the airport manager at 0J6, the pilot attempted to purchase 100LL aviation fuel on the morning of the accident at 0719 CDT and again at 0724 CDT, using two different credit cards. The two transactions totaled 0.173 gallons. The reason that the pilot could not purchase more fuel was not determined. A similar occurrence was recorded two days earlier, also at 0J6. The pilot purchased a total of 0.182 gallons of 100LL with two credit card transactions. It was not determined if the pilot was able to obtain fuel from another source.

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	Mark C Ricker; FAA/FSDO; Atlanta, GA John Kent; Continental Motors Inc.; Mobile, AL
Original Publish Date:	June 18, 2015
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=90149