



Aviation Investigation Final Report

Location:	Savannah, Georgia	Accident Number:	ERA10LA164
Date & Time:	March 5, 2010, 10:30 Local	Registration:	N45976
Aircraft:	Luscombe 8A	Aircraft Damage:	Substantial
Defining Event:	Aerodynamic stall/spin	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Prior to engine start, the pilot advised the witness that he intended to fly for about 45 minutes and remain close to the departure airport. The witness performed a hand start of the airplane for the pilot. After the second attempt, the engine started and the witness stated everything sounded and appeared normal but the takeoff appeared a little wobbly, but quite normal considering the breezy conditions. He repeated that he noticed nothing out of the ordinary with the pilot, the engine, or the airplane. The witness departed the airport before the pilot was expected to return that afternoon.

The airplane was located submerged in a pond, about 100 yards off the departure end of the runway, the following day. There were no witnesses to the accident. Examination of the wreckage revealed no evidence of preimpact mechanical malfunctions or failures with the airplane that would have precluded normal operation. The damage was indicative of a low-power, low-speed, aerodynamic stall and collision with water. Post mortem examination of the pilot revealed the presence of arteriosclerotic cardiovascular disease and hypertensive heart disease, and the recent use of antidepressants, anti-anxiety, and painkilling medications. It was not known to what degree, if any, these issues affected the outcome of the flight. The pilot's most recent medical certificate was issued 19 years prior to the accident, but he was not required to hold a current one while operating as a sport pilot.

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 airspeed and inadvertent stall after takeoff.

Findings

Aircraft Personnel issues Airspeed - Not attained/maintained Incorrect action performance - Pilot

Factual Information

History of Flight

Takeoff Uncontrolled descent Aerodynamic stall/spin (Defining event) Collision with terr/obj (non-CFIT)

HISTORY OF FLIGHT

On March 5, 2010, about 1030 eastern standard time, a Luscombe 8A, N45976, was substantially damaged when it crashed in a pond shortly after takeoff from Hodges Field (GA39), Savannah, Georgia. The certificated commercial pilot/owner was fatally injured. Visual meteorological conditions prevailed for the local personal flight that originated at GA39, and was conducted under the provisions of 14 Code of Federal Regulations Part 91.

In a written statement, a witness said that he arrived at GA39 as the pilot prepared to handprop the accident airplane for engine start. The witness offered to perform the hand start for the pilot, and the pilot climbed into the cockpit. The engine started on the second attempt, and "everything sounded and appeared normal." Prior to engine start, the pilot stated that he intended to fly for about 45 minutes, and remain close to GA39. The airplane taxied for takeoff from runway 12, and the takeoff appeared "a little wobbly, but quite normal considering the breezy conditions...In short, I observed nothing out of the ordinary with [the pilot], the engine, or the aircraft."

The witness departed GA39 before the pilot was expected to return. Later that afternoon, friends and family notified local authorities that the pilot was missing. On March 6, 2010, the airplane was located submerged in a pond, about 100 yards off the departure end of runway 12, at GA39.

PERSONNEL INFORMATION

A review of Federal Aviation Administration (FAA) airman records revealed that the pilot held a commercial pilot certificate with a rating for airplane single-engine land, glider, and instrument airplane. His most recent FAA second class medical certificate was issued in June 1990. The pilot reported 1,700 total hours of flight experience on that date.

The pilot's logbook was recovered, but could not be immediately reconciled due to several omissions, and bookkeeping errors. His most recent flight was logged on January 6, 2009, and his total estimated flight experience was 2,055 hours. No flights in the accident airplane were annotated in the logbook.

The pilot/owner also held a repairman experimental aircraft builder certificate, and a mechanic

certificate with ratings for airframe and powerplant. He received his powerplant rating on February 5, 2010.

The pilot was operating in the FAA "Sport Pilot" category, and as such, was not required to hold a current FAA medical certificate, only a valid driver's license.

AIRCRAFT INFORMATION

According to FAA and maintenance records, the airplane was manufactured in 1946 and had accrued 1,617 total aircraft hours. Its most recent 100-hour inspection was completed on February 26, 2010, at 1,617 aircraft hours. A review of the airplane's maintenance records by an FAA aviation safety inspector revealed that the pilot/owner had performed extensive maintenance, overhaul, and modification work to both the airframe and powerplant in the months preceding the accident.

The airplane's maximum allowable gross weight was 1,260 pounds, which was below the light sport category maximum of 1,320 pounds.

METEOROLOGICAL INFORMATION

At 1053, the weather reported at Savannah/Hilton Head International Airport (SAV), 8 miles north of the site, included clear skies and winds from 200 degrees at 7 knots. The visibility was 10 miles. The temperature was 11 degrees C and the dew point was -7 degrees C. The altimeter setting was 30.15.

WRECKAGE AND IMPACT INFORMATION

The airplane was recovered from the pond, and examination of the airplane at the scene by the FAA inspector revealed substantial damage to the nose cowling, firewall, fuselage, wings, and empennage structures. One propeller blade was intact, and the other was fractured along its span from near the root to about the tip. The fuel tank was full of fuel.

Both wings were displaced aft from their fuselage mounts, and displayed uniform crushing along their entire spans.

Control continuity was established from the cockpit out to all flight control surfaces. The engine was rotated by hand at the propeller, and continuity was established from the powertrain to the valvetrain. Compression was confirmed using the thumb method. The examination was suspended, and the airplane was moved to a recovery facility in Atlanta, Georgia.

Examination of the airplane engine was performed in Atlanta, Georgia, on March 24, 2010, under the supervision of an FAA inspector. The top spark plugs were removed, and displayed normal wear when compared to the Champion Check-A-Plug comparison chart. Borescope

examination of the cylinders revealed normal wear and deposits.

Timing was confirmed on the right magneto, but could not be confirmed on the left magneto. The magnetos were removed, their driveshafts were rotated, but neither magneto would produce spark at any terminals. The magnetos were disassembled, and both contained water and displayed corrosion.

The carburetor was separated from the engine and displayed impact damage, but the throttle and carburetor heat controls functioned smoothly. Disassembly revealed the metal float and needle valve moved freely. The carburetor bowl, venturi, and fuel jet were all clean and absent of debris.

The engine oil screen was removed and examination revealed a large quantity of metal flakes and carbon-type deposits; all coated with clear oil.

MEDICAL AND PATHOLOGICAL INFORMATION

The Office of the Medical Examiner, Georgia Bureau of Investigation, performed the autopsy on the pilot in Savannah, Georgia. The autopsy report indicated that the pilot died as a result of "blunt force injury with drowning." Other significant conditions included "arteriosclerotic cardiovascular disease" and " hypertensive heart disease."

The FAA's Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, performed toxicological testing of the pilot. The testing revealed the following substances either detected or measured in both blood and urine samples:

112 (ug/ml, ug/g) Amitriptylene 0.85 (ug/ml, ug/g) Meprobamate 0.049 (ug/ml, ug/g) Nortriptylene 9.922 (ug/ml, ug/g) Tramadol Carisoprodol

Amitriptylene and Nortriptylene were most commonly prescribed as antidepressants. Meprobamate was most commonly prescribed as an anti-anxiety medication and muscle relaxant. Carisoprodol was most commonly prescribed as a muscle relaxant. Tramadol was most commonly prescribed for relief of moderate to severe pain, often associated with arthritis.

In a telephone interview, a representative of the pilot's family revealed that the pilot's widow had no knowledge of the pilot's medical history, the physicians he may have consulted, or the point of sale for the medications he had taken. The family surmised that the pilot may have received medical treatment from the United States Department of Veterans Affairs (VA), but written and verbal requests for medical records from the VA revealed no records.

Pilot Information

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Certificate:	Commercial	Age:	77,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Glider	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Sport pilot	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2055 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Luscombe	Registration:	N45976
Model/Series:	8A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2503
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	February 26, 2010 100 hour	Certified Max Gross Wt.:	1260 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1617 Hrs at time of accident	Engine Manufacturer:	CONT MOTOR
ELT:	Not installed	Engine Model/Series:	A&C65 SERIES
Registered Owner:	GAUTREAU ARTHUR G	Rated Power:	65 Horsepower
Operator:	GAUTREAU ARTHUR G	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	SAV,50 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	10:53 Local	Direction from Accident Site:	360°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.14 inches Hg	Temperature/Dew Point:	11°C / -7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Savannah, GA (GA39)	Type of Flight Plan Filed:	None
Destination:	Savannah, GA (GA39)	Type of Clearance:	None
Departure Time:	10:30 Local	Type of Airspace:	

Airport Information

Airport:	McLendon GA39	Runway Surface Type:	Grass/turf
Airport Elevation:	360 ft msl	Runway Surface Condition:	Dry
Runway Used:	36	IFR Approach:	None
Runway Length/Width:	2000 ft / 40 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	32.03989,-81.180862(est)

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	Leo J Scott; FAA/FSDO; Atlanta, GA John Kent; Teledyne Continental Motors; Mobile, AL
Original Publish Date:	October 6, 2011
Last Revision Date:	
Investigation Class:	<u>Class</u>
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=75447

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.