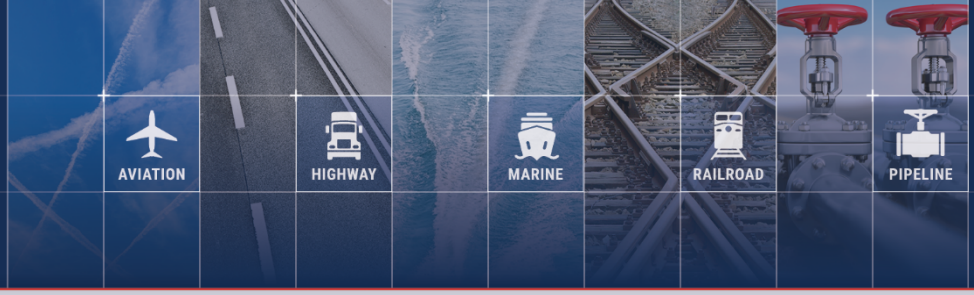

Aviation Investigation Final Report

Location:	Schlater, Mississippi	**Accident Number:**	CEN19FA138
Date & Time:	May 6, 2019, 19:45 Local	**Registration:**	N7665S
Aircraft:	Champion 7GCAA	**Aircraft Damage:**	Substantial
Defining Event:	Aerodynamic stall/spin	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was departing from a private airstrip with a light tailwind present. A witness at the airstrip saw the airplane lift off the ground, northbound, about 1,500 ft down the runway; the airplane flew another 500 ft before it pitched up. The airplane was about 100 ft above the ground and not climbing when it banked left and then turned right. The airplane nose pitched down and the airplane entered a dive and subsequently impacted terrain.

The airplane came to rest on its nose and its engine was embedded in terrain. Examination of the airframe and engine did not reveal any preimpact anomalies that would have precluded control of the airplane.

Given the available information, it is likely that the pilot failed to maintain the proper airspeed during the initial climb after takeoff, which resulted in the exceedance of the airplane's critical angle of attack and the airplane experiencing an aerodynamic stall at too low of an altitude to recover. Investigators were not able to determine why the airplane was on the ground for 1,500 ft before it rotated and took off.

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 the proper airspeed during the initial climb after takeoff, which resulted in an exceedance of the airplane's critical angle of attack and a stall.

Findings

Personnel issues	Aircraft control - Pilot
Environmental issues	Tailwind - Contributed to outcome
Aircraft	Airspeed - Not attained/maintained
Aircraft	Angle of attack - Not attained/maintained

Factual Information

History of Flight

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

On May 7, 2019, about 1945 central daylight time, a Champion 7GCAA airplane, N7665S, impacted terrain during a takeoff from a private airstrip near Schlater, Mississippi. The pilot was fatally injured. The airplane sustained substantial damage. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight. Day visual meteorological conditions prevailed in the area about the time of the accident, and the flight was not operated on a flight plan. The flight was originating from the private airstrip at the time of the accident.

According to a witness, the airplane was departing from the private airstrip to the north when the accident occurred. The airplane lifted off the ground about 1,500 ft down the runway and flew about another 500 ft before it pitched up. The airplane was about 100 ft above the ground when it banked left and turned toward the west and then turned toward to the east. The airplane was not climbing, it had a slow sink, the nose pitched down, and the airplane subsequently impacted terrain in a dive. The witness did not hear any anomalies in the engine sound. According to the witness, there was a light wind from the south at the time of the accident.

Pilot Information

Certificate:	Commercial	**Age:**	27,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	4-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	March 7, 2019
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 250 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Champion	**Registration:**	N7665S
Model/Series:	7GCAA	**Aircraft Category:**	Airplane
Year of Manufacture:	1976	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	331-76
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	May 2, 2018 Annual	**Certified Max Gross Wt.:**	1650 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	2300.8 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed	**Engine Model/Series:**	IO-320-E2A
Registered Owner:	On file	**Rated Power:**	150 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KGWO,133 ft msl	**Distance from Accident Site:**	16 Nautical Miles
Observation Time:	19:53 Local	**Direction from Accident Site:**	119°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	23°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Schlater, MS (Pvt)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	Private Pvt	**Runway Surface Type:**	Concrete
Airport Elevation:	125 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	36	**IFR Approach:**	None
Runway Length/Width:	1700 ft / 18 ft	**VFR Approach/Landing:**	None

According to measurements taken from aerial images on Google Earth maps, the prepared runway surface was about 1,700 ft long by about 18 ft wide. The runway orientation was about 359°.

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:**	33.626945,-90.374443

The airplane came to rest on its nose on a heading of about 100° on a grass overrun about 175 ft north of the runway's prepared surface. The engine was embedded in terrain, and the outboard section of one propeller blade was visible. The left aileron cable exhibited a separation with a broom straw appearance, consistent with overload. All other flight control cables were traced back to the cockpit flight controls from their respective flight control surfaces. The front control stick and an attached section of its stick socket separated from its stick socket assembly. Both stick socket separation surfaces exhibited a dull grainy appearance consistent with overload. The ground under both wings' leading edges exhibited depressions consistent with the structure and shape. The fuel tanks contained a liquid consistent with fuel. No blighting was observed on the grass around the wings. The hour meter indicated 681.5 hours, and the tachometer indicated 1,138.1 hours. No preimpact anomalies were found with the airframe that could be associated with a preexisting condition.

The wreckage was recovered to a storage facility. The engine was subsequently removed from its airframe mount and the propeller was removed from its flange. The engine crankshaft was rotated by turning the crankshaft propeller flange, and continuity of the crankshaft to the rear gears and valve train was confirmed. Compression and suction were observed from all four cylinders. The interior of the cylinders was observed using a lighted borescope and no damage was noted other than water and corrosion debris. The fuel injector servo was fractured across its throttle bore and was separated from the engine. The throttle and mixture control cables remained attached to their respective control arms on the servo. The servo was disassembled. No debris was found in the fuel injector servo fuel inlet screen. Liquid consistent with the smell of aviation gasoline drained from the servo during disassembly. The fuel distribution valve was disassembled and no damage to its rubber diaphragm was noted. The fuel injector lines were secure, and the two-piece fuel injector nozzles were unobstructed. The pumping

segment of the engine driven fuel pump was separated from its mounting base. The pumping segment was disassembled, and no damage was noted to its rubber diaphragms or internal check valves. Liquid consistent with the smell of aviation gasoline drained from the pump as it was disassembled.

The left magneto was removed, and it produced spark from all its ignition towers in correct sequence when it was rotated using an electric drill. The right magneto was removed, and it produced no spark from its ignition towers when rotated using an electric drill. The right magneto was disassembled, and corrosion was noted on the contact surfaces of the ignition points. The magneto's internal parts did not exhibit any preimpact anomalies. The Nos. 1, 2, and 4 top spark plugs and the No. 4 bottom spark plug exhibited dark gray coloration and normal worn condition. The electrode wells of the No. 3 top and all bottom spark plugs contained corrosion debris. The electrode wells of the Nos. 2 and 3 bottom spark plugs contained oily liquid. The No. 2 bottom spark plug was impact damaged. Oily liquid was observed in the engine. The oil suction screen was not examined. However, there was no debris observed in the oil filter media when its can was cut open. The oil cooler and parts of its associated plumbing exhibited impact damage. The electric fuel pump was operational when electric power was applied.

There were no preimpact mechanical anomalies detected with the engine or the airframe that would have precluded normal operations.

Medical and Pathological Information

The Federal Aviation Administration (FAA) Forensic Sciences Laboratory performed toxicology testing on specimens from the pilot for a variety of substances. None were detected.

The remains of the pilot were recovered and sent to the Mississippi Crime Lab, to have an autopsy completed. As of the date of this publication no autopsy report was available. An evaluation of the circumstances of the accident, toxicological testing results, and a review of the pilot's medical history as recorded by the FAA was completed by an National Transportation Safety Board medical officer. The review found no evidence of a medical condition or use of a substance by the pilot which would have contributed to this accident.

Administrative Information

Investigator In Charge (IIC):	Malinowski, Edward
Additional Participating Persons:	Allan Crabbe; Federal Aviation Administration; Jackson, MS J M Childers; Lycoming Engines; Williamsport, PA Jerry Mehlaff Jr; American Chanpion; Watertown, WI
Original Publish Date:	December 3, 2020
Last Revision Date:	
Investigation Class:	Class 2
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=99401