Aviation Investigation Final Report

Location:	Jackson, Mississippi	**Accident Number:**	DFW07FA055
Date & Time:	January 10, 2007, 12:01 Local	**Registration:**	N2625H
Aircraft:	Cessna 310	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

A 3,800-hour commercial pilot departed on a personal cross-country flight in a light piston powered, twin-engine airplane. Shortly after take-off, the pilot reported to the controller that "[he] found a problem and that he wanted to check it out on the ground". The pilot stated that, he was heading back to the departure airport. The air traffic controller offered the pilot, a straight-in approach to the airport. The pilot declined, and stated that he would do a [normal] downwind to the runway. During the conversation with the controller, the pilot did not disclose the nature of the problem. The airplane crashed approximately 4 miles prior to reaching the airport, in a vacant lot. Radar data revealed the airplane departed the airport and flew the runway heading. When the airplane was approximately 5 miles from the airfield and approximately 5,000 feet mean sea level (msl), altitude, the airplane initiated a turn to the right. The airplane continued with a 180-degree turn and then proceeded in a straight line. During the return flight back to the airfield, radar showed the airplane gradually descending while at a ground speed of 170 knots. The last radar hit showed the airplane at 2,700 feet, at a ground speed of 160 knots. The wreckage of the airplane was examined at the accident site on January 11-12, 2007. A post-impact fire consumed part of the airframe cabin. All major components of the airplane were accounted for at the scene. The airplane was found to have impacted the ground in a near nose-down (vertical) attitude. The airframe was extensively crushed by the impact, in an "accordion" style-crushing nose to tail. The wings remained attached to the airplane and perpendicular to the fuselage; both engines were driven several feet into the ground. Control continuity to all flight controls was established. The landing gear was in the retracted position. The flap drive mechanism was located and corresponded to a flap setting of approximately 30 degrees. Post examinations of the engines and propellers were conducted. The left engine sustained heavy impact damage to the front of the engine, and included a crack in the engine's crankcase. Both magnetos separated from the engine during the accident sequence; the magneto's had heavy impact damage and would not produce a spark. Sparkplugs in the left engine were removed and examined. When compared to the Champion Aviation Check-a-Plug Comparison card, the sparkplugs were worn out

normal. The top sparkplugs had light gray deposits and the bottom sparkplugs were oily in the electrode areas. No anomalies were noted with the fuel pump or oil pump. The engine was disassembled, and no pre-impact abnormalities with the engine, cylinder assemblies, or engine components were found. The right engine also sustained heavy impact damage. Both magnetos, which separated from the engine during the crash, produced spark. The sparkplugs had similar appearances to the ones installed in the left engine. During the disassembly of the right engine, no pre-impact abnormalities with the engine, cylinder assemblies, or engine components were found. During the accident sequence both propellers remained attached to their respective engine. The propeller blades on both engines were "wrapped" aft to the engines. Examination of the propellers revealed that neither propeller was feathered at the time of impact. Three of the four propeller blades had extensive nicks and gouges along the leading edge.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's loss of control for undetermined reasons.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE - NORMAL

Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: DESCENT - UNCONTROLLED

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
2. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On January 10, 2007, about 1201 central standard time, a twin-engine Cessna 310 airplane, N2625H, was destroyed when it collided with terrain following a loss of control while returning to the Hawkins Field Airport (HKS), near Jackson, Mississippi. The commercial pilot, sole occupant of the airplane, was fatally injured. The airplane was registered to, and operated by the pilot. The 139-nautical mile cross-country flight originated at HKS and was destined for the Ocean Springs Airport (5R2) near Ocean Springs, Mississippi. Visual meteorological conditions prevailed for the personal flight conducted under 14 Code of Federal Regulations Part 91.

Several witnesses reported observing the airplane overhead, before hearing a "pop." The witnesses also reported that the airplane appeared to "nose-dive into the ground."

PERSONNEL INFORMATION

The pilot held a commercial pilot certificate for airplane single-engine land and sea; multi-engine land, and instrument airplane. The pilot's logbooks were not recovered during the course of the investigation. At the time of his last Federal Aviation Administration (FAA) medical examination in May 2006, the pilot reported having accumulated a total of 3,800 flight hours.

AIRCRAFT INFORMATION

The airplane was a 1955-model Cessna 310, which was a twin-engine, low-wing, all-metal airplane, featuring a retractable tricycle landing gear. The airplane was powered by two Continental O-470 reciprocating engines, rated at 230 horsepower each. Each engine drove a Hartzell 2-bladed, full-feathering constant speed propeller.

A review of the airplane's maintenance logbooks revealed that the last annual inspection was performed on April 21, 2006, with a airframe total time of 3,652.2 hours. The time accrued on the airplane since the last annual inspection was approximately 181 hours.

The accident pilot reportedly owned several older light general aviation aircraft that he hangared at HKS. Registration records for N2625H revealed that he had purchased the aircraft in May 2004. It was also reported that the aircraft was refueled after each flight; the last fuel receipt, at HKS for N2625H, was dated 23 December, 2006.

METEOROLOGICAL INFORMATION

At 1204, the weather at HKS was reported as, wind calm, temperature 52 degrees Fahrenheit, dew point 27 degrees Fahrenheit, and an altimeter setting of 30.43 inches of Mercury. The visibility was reported as 10-statute miles and the sky was clear.

COMMUNICATIONS

A review of air traffic control (ATC) communications revealed that after the flight was cleared to takeoff from Runway 16 at HKS, the flight was further cleared to climb to 5,500 feet on the runway heading. The pilot was then handed over to Jackson Departure Control, where he requested and received VFR flight following services.

Several minutes later, the pilot reported that "[he] found a problem and that he wanted to check it out on the ground." After coordination with HKS tower, the departure controller offered the Cessna pilot, a straight-in approach to Runway 34 at HKS. The pilot declined, and stated that he would perform a [normal] downwind to Runway 16. During the conversation with the controllers, the pilot did not disclose the nature of the problem.

A review of radar data revealed the airplane departing the Hawkins Field airport and was flying the runway heading. When the airplane was approximately 5 miles from the airfield and approximately 5,000 feet mean sea level (msl), altitude, the airplane initiated a turn to the right. The airplane continued with a 180-degree turn and then proceeded in a straight line. During the return flight back to the airfield, radar showed the airplane gradually descending while at a ground speed of 170 knots. The last radar hit showed the airplane at 2,700 feet, at a groundspeed of 160 knots.

AERODROME INFORMATION

The Hawkins Field Airport is a public use airport with an operating control tower, in class D airspace, located near Jackson, Mississippi. Additionally, the airfield is also underneath Jackson International Airport's class C airspace. Hawkins Field has two asphalt runways. Runway 16/34 is 5,387 feet long and 150 feet wide and Runway 11/29 is 4,822 feet long and 150 feet wide. The field elevation is 342 feet mean sea level (msl).

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest in a vacant lot, approximately 4 miles from the airport, at the coordinates of 32 20.58 degrees north latitude; 090 16.95 west longitude. The wreckage of the airplane was examined at the accident site on January 11-12, 2007. The main wreckage area included the fuselage, wings, empennage, and engines/propellers. A post-impact fire consumed part of the airframe cabin. All major components of the airplane were accounted for at the scene. Ground signatures and scars were compatible with the airplane impacting the ground in a pronounced nose-low (vertical) attitude. The airframe was extensively crushed by the impact, in an "accordion style" crushing nose to tail. The wings remained attached to the

airplane and perpendicular to the fuselage; both engines were found buried several feet into the ground.

Flight control continuity was established to all flight controls.

Small craters, compatible with the shape of both wing tip tanks were found. A post-impact fire consumed most of the tip tanks.

The landing gear was found in the retracted position. The flap drive mechanism was located and corresponded to a flap setting of approximately 30 degrees.

Post examinations of the engines and propellers were conducted at Air Salvage of Dallas (ASOD) in Lancaster, Texas. The left and right engines were removed from the airframe to facilitate a detailed inspection.

The left engine sustained heavy impact damage to the front of the engine, and included a crack in the engine's crankcase. Both magnetos separated from the engine during the accident sequence; the magneto's had heavy impact damage and would not produce a spark. Sparkplugs in the left engine were removed and examined. When compared to the Champion Aviation Check-a-Plug Comparison card, the sparkplugs were worn-out normal. The top sparkplugs had light gray deposits and the bottom sparkplugs were oily in the electrode areas. No abnormalities were noted with the fuel pump or oil pump. The engine was disassembled, and no pre-impact abnormalities with the engine, cylinder assemblies, or engine components were found.

The right engine also sustained heavy impact damage. Both magnetos, which separated from the engine during the crash, produced spark. The sparkplugs had similar appearances to the ones installed in the left engine. During the disassembly of the right engine, no pre-impact abnormalities with the engine, cylinder assemblies, or engine components were found.

Both propellers remained attached to their respective engine. The propeller blades on both engines were "wrapped" aft to the engines. Examination of the propellers revealed that neither propeller was feathered at the time of impact. Three of the four propeller blades had extensive nicks and gouges along the leading edge.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed by the Hinds County Coroner's Office, near Jackson, Mississippi.

Due to condition of the body, a toxicology test could not be performed.

ADDITIONAL INFORMATION

The wreckage was released to the owner's representative on 13 February, 2007.

Pilot Information

Certificate:	Commercial	**Age:**	55,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-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 Without waivers/limitations	**Last FAA Medical Exam:**	May 1, 2006
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	June 1, 2005
Flight Time:	3800 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N2625H
Model/Series:	310	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	35025
Landing Gear Type:	Retractable - Tricycle	**Seats:**	
Date/Type of Last Inspection:	April 1, 2006 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:	3652 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-470
Registered Owner:	On file	**Rated Power:**	230 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:	HKS	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	12:04 Local	**Direction from Accident Site:**	90°
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:	30.43 inches Hg	**Temperature/Dew Point:**	11°C / -3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	JACKSON, MS (HKS)	**Type of Flight Plan Filed:**	None
Destination:	OCEAN SPRINGS, MS (5R2)	**Type of Clearance:**	Traffic advisory
Departure Time:		**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-ground
Total Injuries:	1 Fatal	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Hatch, Craig
Additional Participating Persons:	Mike Jones; FAA, FSDO; Jackson, MS Tom L Moody; Cessna Aircraft Company; Wichita, KS Andrew L Swick; TCM aircraft engines; Mobile, AL John T Kent; TCM aircraft engines; Mobile, AL Tom McCreary; Hartzell Propeller; Piqua, OH
Original Publish Date:	July 25, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=65135