



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	McComb, Mississippi	Accident Number:	ERA11FA232
Date & Time:	April 10, 2011, 04:34 Local	Registration:	N100TK
Aircraft:	Cessna 310R	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	3 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The instrument-rated pilot and two passengers arrived at the departure airport about 0320 after going to a bar. The pilot did not obtain a weather briefing or file an instrument flight rules flight plan; night instrument meteorological conditions prevailed at the destination airport. The airplane departed uneventfully at 0408. At 0423, the pilot reported to air traffic control that he had the destination airport in sight and elected to cancel flight following services. At that time, the destination airport was 24 miles away and under two broken cloud ceilings and an overcast ceiling; thus, the pilot most likely did not have the destination airport in sight. The airplane subsequently overflew the destination airport and initiated a left turn. The last radar target was recorded at 0432, at an altitude of 2,600 feet mean sea level, which was above the two broken cloud ceilings and slightly below the overcast ceiling. Examination of the wreckage and data recovered from an onboard engine analyzer did not reveal any preimpact mechanical malfunctions. Toxicological testing revealed that the pilot was impaired due to alcohol ingestion.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's impairment due to alcohol ingestion and his failure to maintain airplane control during an approach at night in instrument meteorological conditions.

Findings

Personnel issues	Alcohol - Pilot
Personnel issues	Aircraft control - Pilot
Environmental issues	Low ceiling - Not specified
Environmental issues	Dark - Not specified

Factual Information

History of Flight

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

HISTORY OF FLIGHT

On April 10, 2011, at 0434 central daylight time, a Cessna 310R, N100TK, owned and operated by the commercial pilot, was substantially damaged when it collided with trees during approach to McComb Airport (MCB), McComb, Mississippi. The certificated commercial pilot and two passengers received fatal injuries. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91. Instrument meteorological conditions prevailed and no flight plan was filed for the flight that departed Louis Armstrong New Orleans International Airport (MSY), New Orleans, Louisiana, at 0408.

According to an employee at a fixed based operator at MSY, the pilot and two passengers arrived via rental car about 0320. The employee spoke briefly to the pilot, and he remarked that they went to a bar to watch a band play and had a nice time. The pilot and passengers boarded the airplane about 0335 and the employee marshaled them out of the parking area about 0338.

Review of air traffic control recordings and radar data revealed that the pilot contacted MSY Clearance delivery about 0404 and received a VFR clearance to MCB at 3,500 feet. The flight was cleared for takeoff about 0407 and transferred to MSY Departure at 0408, which the pilot acknowledged. The pilot then established radio contact with MSY Departure as the airplane was climbing through 600 feet mean sea level (msl). About 0413, the pilot reported to the MSY Departure controller that the airplane was level at a cruise altitude of 4,500 feet, which the controller acknowledged. At 0416, the MSY Departure controller instructed the pilot to contact Houston Center, which he did.

At 0423, the pilot reported to the Houston Center controller that he was beginning his descent for MCB. He also reported the airport was in-sight and elected to cancel flight following. At that time, MCB was 24 miles north of the airplane, below two broken cloud ceilings and an overcast ceiling. The airplane continued on a northwesterly track and overflew the airport about 4 miles. The airplane then initiated a left turn and the last radar target was recorded at 0432, at an altitude of 2,600 feet msl. The wreckage was located about 4 miles northwest of MCB, near the extended centerline for runway 15.

PERSONNEL INFORMATION

The pilot, age 52, held a commercial pilot certificate, with ratings for airplane multiengine land

and instrument airplane. He also held a private pilot certificate, with a rating for airplane single-engine land. His most recent FAA third-class medical certificate was issued on August 25, 2010. At that time, the pilot reported a total flight experience of 3,500 hours. The pilot's logbook was not recovered.

AIRCRAFT INFORMATION

The six-seat, low-wing, retractable-gear airplane, serial number 310R0915, was manufactured in 1977. It was powered by two Continental IO-520, 285-horsepower engines, equipped with McCauley propellers. The airplane maintenance logbooks were not recovered. According to a maintenance invoice, the airplane's most recent annual inspection was completed on August 20, 2010. At that time, the airplane's hour meter indicated 1,734.5 hours. The hour meter was not recovered at the accident site.

METEOROLOGICAL INFORMATION

The reported weather at MCB, at 0434, was: wind from 180 degrees at 6 knots; visibility 8 miles; broken ceiling at 800 feet, broken ceiling at 1,200 feet, and overcast ceiling at 2,900 feet; temperature 22 degrees Celsius; dew point 22 degrees Celsius; altimeter 30.01 inches of mercury.

There was no record of the pilot obtaining a weather briefing or filing a flight plan with either flight service or direct user access terminal.

WRECKAGE AND IMPACT INFORMATION

A debris path originated with tree strikes, and extended on an easterly course for approximately 400 feet to the main wreckage. Sections of the right wingtip were located along the right side of the debris path and sections of the left wingtip were located along the left side of the debris path; however, sections of the left wing were also found on the right side of the debris path near its end. The debris path also consisted of an approximately 18-inch diameter tree that was cut at a 45-degree angle, and exhibited black paint transfer. The airplane came to rest inverted in a creek, on a heading of 300 degrees magnetic, and was significantly consumed by a postcrash fire.

All major components of the airplane were accounted for at the scene. The left engine had separated and was located in front of the main wreckage. The right engine had also separated and was located in shrubs to the east of the wreckage. The empennage and sections of the left wing remained partially intact. The cockpit and cabin area were consumed by fire. Rudder, rudder trim, elevator, and elevator trim control continuity was confirmed from the cockpit area to their respective bellcranks or actuators at the rear of the airplane. Rescue personnel stated they cut cables near the mid-cabin area to extract the occupants. Left aileron control cable continuity was established from the aileron bellcrank to the wing root. The right wing was destroyed and the aileron cable was not recovered from the creek.

Measurement of the rudder trim jackscrew revealed a 5-degree rudder trim tab right position. Measurement of the elevator trim jackscrew revealed an approximate 25-degree tab down position. Examination of the landing gear actuator revealed that the landing gear was in the extended position. Examination of the flap actuator revealed that the flaps were in the 15-degree flap extended position. The left and right fuel selectors were destroyed.

The left propeller hub separated from its engine; one blade separated from the left propeller hub and was bent forward. The other two blades remained attached to the hub and did not exhibit damage. The right propeller hub remained attached to the right engine and all three blades remained attached to the right propeller hub. One blade exhibited s-bending and was separated about mid-span. The separated portion was not recovered. Another blade exhibited rearward tip bending and the third blade was curled rearward.

The engines were subsequently examined at a recovery facility. All valve covers were removed from both engines. Six top and three bottom sparkplugs were removed from the left engine, and six top sparkplugs were removed from the right engine. Their electrodes were intact and light to medium gray in color. The vacuum pump from each engine was removed and disassembled, and their vanes were intact, except for one vane in the left vacuum pump, which was fractured consistent with impact forces. Additionally, both vacuum pump drive couplings were intact. The attitude indicator was disassembled and its gyro housing exhibited rotational scoring. The crankshafts were rotated by hand on both engines. Camshaft, crankshaft and valvetrain continuity was established to the rear accessory sections, and thumb compression was attained on all cylinders. Both magnetos from the left engine had separated and were found submerged in the creek. They could not be tested; however, one magneto remained attached to the right engine and sparked at all towers when rotated by hand. The other magneto from the right engine had separated and was not recovered.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot on April 11, 2011, by the State of Mississippi Office of the Chief Medical Examiner, Jackson, Mississippi.

Toxicological testing was performed on the pilot by the FAA Bioaeronautical Science Research Laboratory, Oklahoma City, Oklahoma.

Review of the toxicology report revealed"

123 (mg/dL, mg/hg) ETHANOL detected in Blood (Heart)
126 (mg/dL, mg/hg) ETHANOL detected in Urine
150 (mg/dL, mg/hg) ETHANOL detected in Vitreous
1 (mg/dL, mg/hg) METHANOL detected in Vitreous...
...Amlodipine detected in Blood (Heart)
Amlodipine detected in Urine

1.075 (ug/ml, ug/g) Citalopram detected in Blood (Heart)
 Citalopram detected in Liver
 N-Desmethylocitalopram detected in Liver
 0.353 (ug/mL, ug/g) N-Desmethylocitalopram detected in Blood (Heart)
 Nordiazepam detected in Urine
 Nordiazepam NOT detected in Blood (Heart)...
 ...0.057 (ug/ml, ug/g) Oxazepam detected in Urine
 Oxazepam NOT detected in Blood (Heart)"

Additionally, the pilot's serotonin metabolite ratio was "480 (pmol/nmol) Serotonin Metabolite Ratio detected in Urine," which was indicative of ethanol ingestion.

ADDITIONAL INFORMATION

A digital engine analyzer was recovered from the cockpit and forwarded to the NTSB Vehicle Recorders Laboratory, Washington, DC, for data download.

Data was successfully downloaded and the following parameters were plotted: cylinder head and exhaust gas temperature for each engine; fuel flow for each engine; fuel used for each engine; and oil temperature for each engine. The unit recorded data at an interval of once per every 6 seconds.

Review of the data for the last 4 minutes of the recording revealed that the fuel flow and exhaust gas temperatures were consistent with both engines operating at a cruise power setting, until the end of the data.

Pilot Information

Certificate:	Commercial; Private	Age:	51, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	August 25, 2010
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	3500 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N100TK
Model/Series:	310R	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	310R0915
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	August 20, 2010 Annual	Certified Max Gross Wt.:	5500 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	1734 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-520
Registered Owner:	Cardiovascular Extreme LLC	Rated Power:	285 Horsepower
Operator:	Taylor K Pickett	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Night/dark
Observation Facility, Elevation:	MCB, 413 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	04:34 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:		Visibility	8 miles
Lowest Ceiling:	Broken / 800 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.01 inches Hg	Temperature/Dew Point:	22°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	New Orleans, LA (MSY)	Type of Flight Plan Filed:	None
Destination:	McComb, MS (MCB)	Type of Clearance:	VFR flight following
Departure Time:	04:08 Local	Type of Airspace:	

Airport Information

Airport:	McComb Airport MCB	Runway Surface Type:	
Airport Elevation:	413 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	Unknown
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	2 Fatal	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Fatal	Latitude, Longitude:	31.251388,-90.500556

Administrative Information

Investigator In Charge (IIC):	Gretz, Robert
Additional Participating Persons:	Albert McCray; FAA/FSDO; Jackson, MS Jason Lukasik; Continental Motors; Mobile, AL Andrew Hall; Cessna Aircraft Company; Wichita, KS
Original Publish Date:	December 27, 2011
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=78811

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