



Aviation Investigation Factual Report

Location:	Baytown, Texas	Accident Number:	DFW08FA061
Date & Time:	February 4, 2008, 18:45 Local	Registration:	N968CC
Aircraft:	Cessna 210	Aircraft Damage:	Destroyed
Defining Event:	Loss of control in flight	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

HISTORY OF FLIGHT

On February 4, 2008, about 1845 central standard time, a single-engine Cessna 210 airplane, N968CC, was destroyed upon impact with terrain following a loss of control while in cruise flight near Baytown, Texas. The non-instrument rated private pilot, sole occupant of the airplane, was fatally injured. The airplane was registered to El Mar Consulting, LLC, of Lafayette, Louisiana, and was operated by the pilot. A flight plan was not filed for the Title 14 Code of Federal Regulations Part 91 flight. The 197-nautical mile cross-country flight originated from the Acadiana Regional Airport (ARA) New Iberia, Louisiana, with the West Houston Airport (IWS), Houston, Texas as its intended destination.

A review of the airplane's radar track shows the airplane's approach from the east, heading westbound. At about 1830 the airplane initiated a descent from 6,500 feet. Prior to disappearing from radar at 1844, the airplane made a single, descending "S" turn, heading in an easterly direction, then turning back westerly. The "S" turn began at an altitude of 2,400 feet, and ended at the last radar plot at 1,100 feet.

A witness, who lived near the crash site, reported that as the airplane approached his location, he heard the airplane engine "winding up". A few moments later he reported hearing the impact. The witness also reported the weather at the time of the crash was extremely foggy, with visibility less than a tenth of a mile.

PERSONNEL INFORMATION

The pilot held a private pilot certificate for airplane single-engine land. His third class Federal Aviation Administration (FAA) medical was issued October 5, 2007. The pilot's log book was located, and the pilot had recorded 613.8 total flight hours. The logbook also disclosed that the pilot flew regularly between ARA and IWS.

AIRCRAFT INFORMATION

The airplane was a 1986 model Cessna 210R, which is a single-engine, high-wing airplane, with retractable, tricycle landing gear. The airplane was powered by a Continental IO-520 reciprocating engine, rated at 285-horsepower. The engine was equipped with a 3-blade, McCauley constant speed propeller. The airplane is normally configured for 6 occupants.

A review of the airplane's maintenance logbooks revealed that the last annual inspection was performed on June 6, 2007, at tachometer time of 4,969.0 hours. At the time of the accident the tachometer read 5,029.3 hours.

METEOROLOGICAL INFORMATION

Prior to departure the pilot contacted the Fort Worth, Texas, Flight Service Station (FSS) for a weather briefing. He received a standard weather briefing for his route of flight. The pilot was advised that the weather was marginal across his route of flight, and that VFR (Visual Flight Rules) flight was not recommended. However, the weather forecast for the Sugarland airport was for VFR conditions.

At 1853, the automated weather station at HOU, located approximately 25 miles from the accident site, reported winds from 160 degrees at 13 knots gusting to 21 knots, temperature 72 degrees Fahrenheit, dew point 68 degrees Fahrenheit, visibility 9 miles, ceiling at 1,300-feet broken, and a 2,000 foot broken, and 4,800 foot overcast sky, an altimeter setting of 29.83 inches of Mercury.

On February 4th, the sunrise was at 0708, and the sunset at 1800.

COMMUNICATIONS

The Federal Aviation Administration (FAA) provided a transcript of air traffic control communications with the accident flight. As the pilot (N968CC) approached Houston area, he radioed Houston Intercontinental Terminal Radar Approach Control Facility (TRACON); the following is a summary of the last communication with N968CC:

Houston: "... you're cleared to descend through class bravo airspace expect the I-10 corridor, maintain VFR at two thousand five hundred or below"

N968CC: acknowledged the radio call and then shortly afterwards stated, " Houston approach centurion 968CC we're going to have to go back one hundred and eighty degrees and get back up..."

Houston: "... course reversal approved, maintain VFR and what are your intentions?"

N968CC: " ...I guess we'll have to head back to where we were, because, we're not gonna be able to come down"

The Houston controller acknowledged the transmission, and then told N968CC "... maintain VFR at or below three thousand five hundred after you get turned around"

Shortly afterwards the controller asked, "... understand you're turning eastbound and you're going back towards Beaumont once you get turned to the east? Maintain VFR at or below three thousand five hundred.

N968CC responded "will turn eastbound and maintain three thousand five ..."

Shortly afterwards the controller asked N968CC, " ... just verify maintain VFR at or below three thousand five hundred"

N968CC acknowledged the radio transmission.

The controller then asked N968CC his requested altitude, and then repeated the radio call. Moments later the controller radioed N968CC " ... low altitude alert, I am showing one thousand feet and are you VFR right now ?"

N968CC did not acknowledge the radio call nor was there any additional radio communications with N968CC

WRECKAGE AND IMPACT INFORMATION

On February 5-6, 2008, the NTSB, FAA, and technical representatives from the airframe and engine manufacturer inspected the aircraft wreckage on scene. All major components of the airplane were accounted for at the accident site. The airplane contacted several trees along its flight path, before impacting terrain. The airplane's ground impact created approximately a 16-foot long, 7-foot wide, and 30-inch deep crater in the ground. Near the end of the crater, and at the base of a tree, was the airplane's engine. About 70-feet past the crater and at the base of a tree, was the airplane's main wreckage, which consisted of the airplane's empennage and a highly distorted section of the cabin. The wreckage path was approximately 235-feet long, on about a 330-degree heading. The airplane was fragmented, with pieces of the airplane scattered along the wreckage path. Near the start of the wreckage path, several angular cuts were found on tree branches. Additionally, patches of vegetation near the initial impact area displayed signs of fuel contamination. The flap actuator was measured, and the flaps were determined to be in the up position. The left main landing gear was in the retracted position; the remaining landing gear were separated from the fuselage and their position prior to impact could not be determined. Control continuity from the tail section to the front cabin area was established. The aileron control cables were separated from overload in the cabin area; the right aileron cables were still attached to the bellcrank. Parts of the aircraft instruments vacuum system, including the filter element and vacuum manifold, was found in the aircraft's wreckage path and were heavily damaged during the accident. Additionally during the accident, the check-valve attached to the manifold had been torn away.

The airplane and engine were recovered to Air Salvage of Dallas (ASOD), near Lancaster, Texas, for further examination.

On March 28, 2008, at ASOD, the aircraft wreckage was examined under the supervision of the NTSB investigator-in-charge (IIC), along with technical representatives from Teledyne Continental Motors (TCM) and Cessna Aircraft Company.

The engine had heavy impact damage, and most of the engine accessories were stripped from

the engine case during the accident sequence. The valve covers and the top spark plugs (except the number 2 sparkplug, which was broken off) were removed, and the crankshaft was rotated. Continuity was confirmed to all of the cylinders and to the rear of the engine. The cylinders were borescoped (except the #2 cylinder); the cylinder domes and piston heads had normal deposits. The top spark plugs were "normal wear" when compared to the Champion Check-A-Plug comparison card. They had light gray deposits in the electrode areas. During the examination, the heat shroud surrounding the left muffler was peeled back; both the shroud and muffler had impact damage. The muffler was breached in several locations; however there was no evidence of any sooting or heat marks near the holes. The propeller hub remained attached to the engine. One blade remained in the hub; the other two blades were broken away. One blade was missing the very tip of the blade, this blade and one other blade were "twisted". The third blade did not exhibit the twist; however the blade was bent slightly towards the cambered side.

The aircraft was equipped with dual (two) vacuum pumps; the first engine driven pump was found broken open at the crash site exposing the internal components. The drive coupling remained attached to the engine, and the internal components were found to be shattered. The second pump was located outside the wreckage at the accident site. The drive coupling had separated, and during the examination, the internal components were found to be shattered as well.

The examination of the engine did not reveal any pre-impact mechanical anomalies that would have prevented normal engine operation.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot, by the Southeast Texas Forensic Center, Inc. DBA Jefferson County Morgue February 6, 2008. The medical examiner lists the cause of death as, "multiple injuries..."

Pilot Information

Certificate:	Private	Age:	49, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	October 1, 2007
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	614 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N968CC
Model/Series:	210	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	21064983
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	June 1, 2007 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:	60 Hrs	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-520
Registered Owner:	On file	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Night
Observation Facility, Elevation:	KHOU	Distance from Accident Site:	25 Nautical Miles
Observation Time:	18:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	13 knots / 21 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.82 inches Hg	Temperature/Dew Point:	22°C / 20°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	NEW IBERIA, LA (ARA)	Type of Flight Plan Filed:	None
Destination:	HOUSTON, TX (IWS)	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	29.756666,-94.845001

Administrative Information

Investigator In Charge (IIC):	Hatch, Craig
Additional Participating Persons:	Paul Downs; FAA, FSDO; Houston, TX John Kent; Continental Aircraft Engines; Mobile, AL Tom Tepik; Cessna Aircraft Company; Wichita, KS
Report Date:	May 27, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=67465

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](#).