



Aviation Investigation Final Report

Location:	Leakey, Texas	Accident Number:	FTW01FA116
Date & Time:	May 13, 2001, 13:00 Local	Registration:	N8246M
Aircraft:	Cessna 210K	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	4 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane entered a left-hand traffic pattern for the runway and averaged 130 knots ground speed on the downwind leg. The aircraft's average ground speed on final approach was 146 knots. Review of the radar data depicted that the pilot would have had to fly a 5.06 degree descent angle from the last radar position in order to land at the runway's threshold. An ear-witness, located at the airport, stated that he heard a reduction in engine power coming from a left downwind position, as if the airplane was coming in for a landing. The ear-witness heard the airplane fly the traffic pattern, then heard the engine power being applied "as if the pilot was intending to go-around or had performed a touch-and-go." The ear-witness subsequently heard two bangs followed by a louder bang. The airplane impacted trees near the departure end of the runway and subsequently hit a paved road. The airplane came to rest inverted on the side of the road and was consumed by fire. The flaps and landing gear were found in the retracted positions. No anomalies with the engine or aircraft were noted that would have prevented normal flight operations.

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 obstacle clearance during a go-around, which resulted in the aircraft impacting a tree.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: GO-AROUND (VFR)

Findings

1. PROPER GLIDEPATH - NOT OBTAINED - PILOT IN COMMAND
2. GO-AROUND - INITIATED - PILOT IN COMMAND
3. OBJECT - TREE(S)
4. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On May 13, 2001, at 1300 central daylight time, a Cessna 210K single-engine airplane, N8246M, was destroyed when it impacted trees and terrain near the Real County Airport, Leakey, Texas. The airplane was registered to a private individual and was operated by the pilot. The private pilot, his pilot-rated passenger, and two other passengers received fatal injuries. Visual meteorological conditions prevailed and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 personal flight. The 112-nautical mile cross-country flight originated from the Austin Bergstrom International Airport at 1201, and was destined for the Real County Airport.

ATC data revealed that the pilot requested and obtained flight following after departing Austin that continued to approximately 10 nautical miles from the Real County Airport. Radar data supplied by the FAA depicted the aircraft entering a left hand traffic pattern for runway 15 after over flying the airport at 3,200 feet msl. The radar data revealed an average downwind leg ground speed of 130 knots. The last four radar data returns depicted an average final approach ground speed of 146 knots with an average descent rate of 500 feet per minute. The last radar return depicted the airplane 2.14 nautical miles from the displaced threshold at 1,160 feet above the airport elevation. The descent angle required to land the airplane at the displaced threshold from that elevation and distance was calculated to be 5.06 degrees.

A pilot-rated ear-witness, located at the airport, stated that he heard a reduction in engine power coming from a left downwind position for runway 15, as if the airplane was coming in for a landing. He heard the airplane fly the traffic pattern, then heard engine power being applied "as if the pilot was intending to go-around or had performed a touch-and-go." The ear-witness then heard two "bangs, which sounded like backfires," followed by a louder bang. Another ear-witness, located approximately 1/2 mile from the airport, stated that she heard two "pops, similar to an engine backfire, followed by a loud bang." She stated that she could hear engine power, but never saw the airplane.

PERSONNEL INFORMATION

The pilot was issued a private pilot certificate with an airplane single-engine land rating on October 5, 1998. He was issued a second class medical certificate on August 24, 2000, with the limitation that he must wear corrective lenses for near and distant vision. Charred remnants of the pilot's logbook were located in the aircraft wreckage. Review of the burnt logbook revealed that the pilot had accumulated approximately 234.5 total flight hours, of which 96.7 hours were in complex aircraft. The part of the logbook listing the specific aircraft that were flown had been burnt, so it was not discernible how many hours the pilot had

accumulated in the accident airplane. According to the endorsement section of the pilot's logbook, he had obtained a high performance endorsement on January 3, 1999, and had completed his last biennial flight review on August 29, 2000. There were visible remnants of a complex aircraft endorsement; however, the date had been destroyed by fire damage. According to the registered owner of the airplane, an insurance application indicated that the pilot had listed 65 hours in Cessna 210 aircraft, of which 20 hours had been with an instructor.

The pilot-rated passenger was issued a private pilot certificate with an airplane single-engine land rating on March 31, 1998. She was issued a third class medical certificate on September 26, 1997, with the limitation which required the pilot to wear corrective lenses. It is unknown whether the passenger had accumulated any flight time in the accident airplane.

AIRCRAFT INFORMATION

The 1970-model airplane was powered by a Continental IO-520-L engine and a McCauley 3-bladed constant speed propeller. The aircraft's maintenance records were not located. According to the aircraft's primary maintenance facility, the airplane had undergone its last annual inspection on July 10, 2000. It is unknown how much flight time the airframe and engine had accumulated at the times of the annual inspection and the accident. According to the aircraft owner, the engine had undergone a top-overhaul approximately 150 hours prior to the accident. The aircraft owner added that the pilot had completed a round trip flight from Austin to Colorado Springs, Colorado, and back the week prior to the accident, and had not reported any anomalies with the airplane.

AERODROME INFORMATION

The Real County Airport, elevation 1,640 feet msl, consisted of one asphalt runway 15-33, which was 3,975 feet long and 50 feet wide. Runways 15 and 33 had displaced thresholds of 240 feet and 270 feet respectively with trees on both ends. Both runways utilized left hand traffic patterns. The airport is non-towered and unattended.

METEOROLOGICAL INFORMATION

At 1251, the Kimble County Airport (located 50 miles north of the accident site) reported the wind from 100 degrees at 7 knots, visibility 10 statute miles, clear skies, temperature 27 degrees Celsius, dew point 15 degrees Celsius, and an altimeter setting of 30.23 inches of Mercury.

At 1253, the Del Rio International Airport (located 70 miles southwest of the accident site) reported the wind from 150 degrees at 12 knots, visibility 10 statute miles, a few clouds at 4,600 feet, temperature 29 degrees Celsius, dew point 15 degrees Celsius, and an altimeter setting of 30.17 inches of Mercury.

WRECKAGE AND IMPACT INFORMATION

The airplane impacted a 30-foot tree, located 0.12 miles south-southwest of the runway 15 departure end, at a global positioning system (GPS) location of 29 degrees 44.392 minutes North latitude and 99 degrees 45.620 minutes West longitude. Adjacent to the base of the tree were numerous broken and cut branches. One of the branches was cut twice and displayed black paint transfers similar to the paint on the propeller. The initial ground impact mark was located on US Highway 83, approximately 344 feet from the tree. The initial ground impact mark was a diagonal line across the paved road, which measured 36 feet and 9 inches in length (the wing span for the Cessna 210K is 36 feet and 9 inches). On the left side of the impact mark were pieces of a green navigation lens. Midway along the diagonal ground scar were 4 parallel gashes in the paved road. One of the propeller blades came to rest next to the gashes. The pavement displayed deep scrapes in the road leading from the initial impact mark to the airplane's final resting place. The airplane came to rest inverted in the grass north of the road with its empennage on the road. The cockpit, cabin, and both wings were consumed by fire.

The propeller hub, with two propeller blades attached came to rest on the road, approximately 135 feet from the initial ground impact mark. All three propeller blades displayed chord-wise scrapes and gouges. Each propeller blade was twisted toward a low pitch setting. The propeller hub had separated from the engine just aft of the crankshaft propeller flange, and the fracture surface displayed characteristics indicative of torsional overload.

The airplane wreckage was removed from the road and relocated to a secure area adjacent to the accident site. Photographs of the wreckage, taken prior to its relocation, revealed that the aircraft flight control cables ran through the cockpit area to their respective control surfaces. Examination of the flap actuator revealed that the flaps were in the retracted position at the time of the accident. The main landing gear and nose landing gear appeared to be in the retracted position; however, the main landing gear up locks were destroyed by fire damage. Examination of the cockpit revealed that the aircraft instruments and switches were destroyed by impact and fire damage. The left side control yoke remained attached to its post; however, the right side horn was separated. The right side control yoke was separated from its post and both of its horns remained attached.

PATHOLOGICAL INFORMATION

Autopsies were conducted on both the pilot and the pilot-rated passenger at the Bexar County Medical Examiner's Office in San Antonio, Texas. A toxicology test was performed on both the pilot and the pilot-rated passenger. The toxicology results of the pilot were negative for carbon monoxide, cyanide, ethanol, and drugs. The toxicology results of the pilot-rated passenger were positive for an unquantified amount of phenylpropanolamine detected in the urine. Phenylpropanolamine is found in decongestants.

ADDITIONAL INFORMATION

According to the aircraft owner's manual, under the short field landing techniques section, the recommended approach airspeed is 82 miles per hour (71.2 knots). The owner's manual recommends that if a balked landing (go-around) is required, the pilot should adjust the flap setting to "20 degrees immediately after full power is applied. After all obstacles are cleared and a safe altitude and airspeed are obtained, the wing flaps should be retracted."

The aircraft wreckage was released to the owner's representative on June 8, 2001.

Pilot Information

Certificate:	Private	Age:	45, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	August 24, 2000
Occupational Pilot:	No	Last Flight Review or Equivalent:	August 29, 2000
Flight Time:	235 hours (Total, all aircraft)		

Co-pilot Information

Certificate:	Private	Age:	42, Female
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	September 26, 1997
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	50 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N8246M
Model/Series:	210K	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	21059246
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	July 10, 2000 Annual	Certified Max Gross Wt.:	3800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-520-L (1)
Registered Owner:	R. Michael Brown	Rated Power:	300 Horsepower
Operator:	Thomas O. Hutchinson	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	JCT,1749 ft msl	Distance from Accident Site:	50 Nautical Miles
Observation Time:	12:51 Local	Direction from Accident Site:	360°
Lowest Cloud Condition:	Few / 3800 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.22 inches Hg	Temperature/Dew Point:	27°C / 18°C
Precipitation and Obscuration:			
Departure Point:	Austin , TX (AUS)	Type of Flight Plan Filed:	None
Destination:	Leakey, TX (49R)	Type of Clearance:	VFR
Departure Time:	17:01 Local	Type of Airspace:	Class G

Airport Information

Airport:	Real County 49R	Runway Surface Type:	Asphalt
Airport Elevation:	1640 ft msl	Runway Surface Condition:	Dry
Runway Used:	15	IFR Approach:	None
Runway Length/Width:	3975 ft / 50 ft	VFR Approach/Landing:	Unknown

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	2 Fatal	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	On-ground
Total Injuries:	4 Fatal	Latitude, Longitude:	29.738611,-99.761108

Administrative Information

Investigator In Charge (IIC):	Charnon, Nicole
Additional Participating Persons:	Jesus M Cavasos; FAA FSDO; San Antonio, TX John Kent; Teledyne Continental Motors; Mobile, AL Thomas Teplik; Cessna Aircraft Company; Wichita, KS
Original Publish Date:	November 28, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=52248

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