Aviation Investigation Final Report

Location:	Alexandria, Louisiana	**Accident Number:**	DFW05FA065
Date & Time:	February 3, 2005, 16:10 Local	**Registration:**	N99452
Aircraft:	Ercoupe 415-C	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While entering the airport traffic pattern on a left downwind, at the conclusion of a 213 nautical mile cross country flight, the commercial pilot lost control of the airplane and the airplane impacted terrain in a nose low attitude on airport property. A witness located on one of the closed runways observed the airplane fly over a tree line with no erratic movements. As the airplane descended, it "went into an approximate 20 degree nose down attitude" and impacted the ground. There was no fire. Flight control continuity was established throughout the airframe at the accident site. No mechanical anomalies were noted with the engine or airframe. The 68-year old commercial pilot had purchased the 1946-vintage airplane approximately 2 months prior to the accident and he had accumulated a total of 3.9 hours on the airplane. The pilot had been denied his last medical certificate following his last examination in 1978. All radio communications between the pilot and the tower operator were reported as normal. The pilot's autopsy did not produce any signs of incapacitation.

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 while maneuvering to land.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings
1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
2. TERRAIN CONDITION - OPEN FIELD

Factual Information

HISTORY OF FLIGHT

On February 3, 2005, at 1610 central standard time, an Ercoupe 415-C single-engine airplane, N99452, was destroyed upon impact with terrain following a loss of control while maneuvering to land at the Alexandria International Airport (AEX) near Alexandria, Louisiana. The airplane was registered to and operated by the pilot. The commercial pilot, sole occupant of the airplane, was fatally injured. Visual meteorological conditions prevailed and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 personal flight. The 213-nautical mile cross-country flight originated from the Trent Lott International Airport (PQL), near Pascagoula, Mississippi, at an unknown time, destined for AEX.

The air traffic control tower (ATCT) controller reported to the NTSB investigator-in-charge (IIC) that the pilot had radioed his initial position approximately seven miles from the airport. Another radio call was made about two miles southeast of the airport. Soon after the second radio call, the pilot told the controller that he was over the field and setting up for a left downwind to runway 32. Subsequently, the controller observed the airplane nose downward and impact the ground.

A witness, who was located on runway 36/18 at AEX, reported to the IIC, that he observed the airplane fly steadily over a tree line with no erratic movements. As the airplane descended to an altitude of approximately 200 feet above ground level (agl), the airplane "went into an approximate 20 degree nose down attitude" and impacted the terrain.

An employee for a local fixed base operator at PQL reported in a written statement to the IIC that he observed the pilot approach the aircraft with "two five gallon fuel cans" to refuel his airplane, but "did not see the pilot refuel the airplane." Sometime in the afternoon, the witness observed the pilot depart PQL on the day of the accident.

PERSONNEL INFORMATION

The 68-year old pilot held a commercial pilot certificate with an airplane single-engine land rating. The pilot was denied a Federal Aviation Administration (FAA) medical certificate on August 24, 1978.

Review of the pilot's log books revealed that the pilot obtained a flight review on January 6, 2005, in the accident make/model airplane. During a telephone interview, the flight instructor who flew with the pilot reported that he found no discrepancies. The pilot displayed confidence in his flying abilities and knowledge of the airplane. The instructor also said the pilot appeared to be in good health. The logbook indicated that the pilot had flown the airplane

four times totaling 3.9 hours of flight. The pilot's logbooks were not recovered during the course of the investigation.

AIRCRAFT INFORMATION

The 1946 vintage Ercoupe 415-C, serial number 2075, was a fabric covered low wing, metal covered fuselage design airplane, with a fixed tricycle landing gear, and was configured for a maximum of two occupants. The airplane was powered by Continental four cylinder C-75 engine, rated at 75 horsepower driving a two bladed fixed pitch propeller.

According to sales receipts found within the airplane, the pilot had recently purchased the airplane on December 22, 2004.

The aircraft maintenance records were not located during the course of the investigation.

METEOROLOGICAL INFORMATION

At 1553, the automated surface observing system at AEX reported wind from 360 degrees at 6 knots, visibility 10 statute miles, sky condition overcast at 2,100 feet, temperature 46 degrees Fahrenheit, dew point 37 degrees Fahrenheit, and an altimeter setting of 30.36 inches of Mercury.

AERODROME INFORMATION

AEX is a controlled airport operating under Class D airspace 24-hours a day. The controlled airspace encompasses a 5 nautical mile ring around the airport, from the surface to 2,600 feet msl. The field elevation for AEX is 89 feet. The airport features two runways; runway 14/32 (9,352-foot long and 150-foot wide grooved concrete runway), and runway 18/36 (7,001-foot long and 150-foot wide grooved asphalt runway).

WRECKAGE AND IMPACT INFORMATION

The main wreckage was located in a water covered field approximately 0.16 miles east of runway 32 near the northern end of taxiway Bravo. The Global Positioning System (GPS) coordinates recorded at the accident site using a hand held GPS unit were latitude 31 degrees 19.811 minutes North and longitude 092 degrees 33.359 minutes West, at a field elevation of approximately 63 feet mean sea level (msl). The airplane came to rest upright on a heading of 190 degrees. The wreckage energy path measured approximately 96 feet in length on a magnetic heading of 010 degrees.

The airplane impacted soft terrain within standing water that was about two inches deep. The initial ground scar measured approximately 24 feet in length. Fragments of red glass consistent with the left wing navigational lens were found at the end of the ground scar. A crater approximately eight feet wide by three feet long was located at the end of the initial

ground scar. A second ground scar originating from the crater was approximately 15 feet in length. Fragments of green glass consistent with the right wing navigational lens were found at the end of the second ground scar.

Examination of the airplane revealed that the forward portion of the fuselage was separated from the aft portion of the fuselage underneath the cabin seating area. The windscreen and canopy were fragmented and spread throughout the debris path. Flight control continuity from the left and right flight control yokes aft to the bellcrank behind the seat could not be obtained due to the extent of the damage. The instrument panel was bent with multiple instruments displaced or destroyed. The throttle was found approximately 1/2 inch from full forward. The mixture was observed in the full rich position. The magneto switch was set to "BOTH." The fuel header tank located behind the instrument panel was punctured. No fuel was observed within the header tank.

The outboard portion of the left wing was separated approximately four feet outboard of the wing root. The remaining four feet of the wing remained attached to the fuselage and was crushed aft. The outboard portion of the wing was twisted and crushed aft throughout its span. Control continuity was established from the bellcrank aft of the seating area within the fuselage to the aileron attach point. The left wing fuel tank was destroyed.

The right wing remained attached to the fuselage and was buckled throughout its span. The outboard three feet of the leading edge was crushed aft at an approximate 45 degree angle. Control continuity was established from the bellcrank aft of the seating area within the fuselage outboard to the aileron attach point. The right wing fuel tank was destroyed.

The empennage remained attached to the fuselage, but was forward and right of the horizontal stabilizer. The left vertical stabilizer remained attached to the horizontal stabilizer and the left rudder remained attached to its mounts. The leading edge of the left vertical stabilizer was bent with minor damage throughout. The right vertical stabilizer remained attached to the horizontal stabilizer and the right rudder remained attached to its mounts. The lower portion of the left rudder and vertical stabilizer were bent inboard approximately 15 degrees outward.

Examination of the Continental C-75 engine revealed that the crankshaft was bent. Continuity was established to the #4 cylinder intake, exhaust valves, and accessory gear housing when the propeller was rotated by hand. The left magneto was destroyed. The right magneto was removed and when rotated by hand, produced spark on all posts. The #2 and #3 cylinder top sparkplugs were missing and were not located. The #1 and #4 cylinder top spark plugs were removed and found consistent with normal operation when compared to the Champion Aviation Check-A-Plug Wear Guide (Part Number AV-27). The carburetor was separated from its mounts, and no fuel was observed in the carburetor float bowl. When the fuel pump was actuated, no fuel was expelled.

The propeller spinner was crushed aft onto the propeller blades and mounting flange. One propeller blade displayed leading edge gouging throughout its span and was "S" bent

approximately mid-span. The tip of the blade was curled aft, approximately three inches inboard from the blade tip. The other propeller blade was "S" bent approximately mid-span of the blade. The blade also had chipped edges in the mid-span area.

MEDICAL AND PATHOLOGICAL INFORMATION

On February 7, 2005, an autopsy was performed on the pilot by the Forensic Pathologists, Inc., of Bossier City, Louisiana. The cause of death was reported as "Multiple traumatic injuries."

Toxicological testing on the pilot was performed by the FAA's Civil Aeromedical Institute (CAMI) Forensic Toxicological and Accident Research Center, Oklahoma City, Oklahoma, for carbon monoxide, cyanide, volatiles, and drugs.

SURVIVAL ASPECTS

The airplane was equipped with two lap belt restraints. It was reported to the IIC by first responders that the seat belt restraints were unbuckled.

ADDITIONAL INFORMATION

The aircraft wreckage was not retained by the NTSB.

Pilot Information

Certificate:	Commercial	**Age:**	68,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	January 1, 2005
Flight Time:	4 hours (Total, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Ercoupe	**Registration:**	N99452
Model/Series:	415-C	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	2075
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	1175 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	C-75
Registered Owner:	Wayne John Patout	**Rated Power:**	75 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	AEX,82 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	15:53 Local	**Direction from Accident Site:**	0°
Lowest Cloud Condition:	Thin Overcast / 2100 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Overcast / 2100 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.36 inches Hg	**Temperature/Dew Point:**	8°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Pascagoula, MS (PQL)	**Type of Flight Plan Filed:**	None
Destination:	Alexandria, LA (AEX)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class C

Airport Information

Airport:	Alexandria International Airpo AEX	**Runway Surface Type:**	Concrete
Airport Elevation:	89 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	32	**IFR Approach:**	Unknown
Runway Length/Width:	9532 ft / 150 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

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:**	31.327222,-92.548332

Administrative Information

Investigator In Charge (IIC):	McGill, C Frank
Additional Participating Persons:	Dan Malone; Federal Aviation Administration; Baton Rouge, LA
Original Publish Date:	September 13, 2005
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=60951