



Aviation Investigation Final Report

Location:	Panacea, Florida	Accident Number:	MIA06LA118
Date & Time:	June 21, 2006, 21:39 Local	Registration:	N99355
Aircraft:	Ercoupe (Eng & Research Corp.) 415C	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The accident airplane's co-owner/pilot and a pilot-rated passenger had both been at a social function near the airport, and had departed on a short flight to demonstrate the co-owner's recently acquired airplane. The flight originated about 2125 and a short while later the airplane clipped trees at about the 20-foot level, and then descended, impacting the ground and burning just short of the runway. The fire largely consumed the airplane, but the absence of evidence of propeller rotation suggested that the engine ceased operating prior to impact. Post-accident engine examination did not reveal any anomalies that would have precluded normal engine operation. The pilot's postmortem examination revealed evidence of the pilot having focal severe coronary atherosclerosis, and no evidence of smoke inhalation or obviously fatal injuries. There was insufficient evidence to determine conclusively whether or when a cardiac event might have occurred. Toxicology testing of specimens from the pilot suggested that he was intoxicated by alcohol at the time of the flight and had used marijuana within 10 hours of the accident. The pilot-rated passenger did not have a current medical certificate.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for undetermined reasons, which resulted in the airplane descending and impacting trees during the approach. A possible contributing factor was the pilot's pre-existing cardiovascular condition.

Findings

Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED
2. (F) INCAPACITATION(CARDIOVASCULAR) - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

3. OBJECT - TREE(S)

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

4. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On June 21, 2006, about 2139 eastern daylight time, an Ercoupe 415-C, N99355, registered to and operated by a private individual as a Title 14 CFR Part 91 personal flight, crashed while on short final for landing at Wakulla County Airport, Panacea, Florida. Night visual meteorological conditions prevailed, and no flight plan was filed. The commercial rated pilot and pilot-rated passenger received fatal injuries, and the airplane was destroyed. The flight originated the same night, about 2125.

A Wakulla County Sheriff's deputy initially responded to the accident, which was reported to have occurred east of highway 98 near the Wakulla County Airport., and a fire was raging in a wooded area about 200 yards from the end of runway 18, at the Wakulla County Airport.

According to the FAA inspector who responded to the accident scene, witnesses said that the two pilots were with them at a social function near the airport, and had left together, about 2120, on a short flight to demonstrate a recently acquired airplane. The witnesses said that soon after the airplane departed a large fire was seen at the end of runway 18, in the woods.

PERSONNEL INFORMATION

Records obtained from the FAA showed that the pilot/co-owner of the accident airplane held a flight instructor's certificate, as well as a commercial pilot certificate with airplane single land, sea, and instrument airplane ratings, last issued by the FAA on June 14, 2005. He also held an FAA second-class medical certificate, issued on August 10, 2005, with the limitation that the holder must wear corrective lenses, while exercising the privileges of his airman certificate, as well as an airframe and powerplant license with an inspection authorization rating. A pilot logbook was not available to the NTSB, however during the pilot's last application for a medical certificate, he reported having accumulated a total of 10,000 flight hours of flight experience. Upon receiving notification of accident having occurred and being provided the name of the pilot by the NTSB, an inspector with the FAA Flight Standards District Office (FSDO) stated that he recognized the name of the pilot, and that the pilot was one of "their" Designated Pilot Examiner's.

The pilot-rated passenger held a private pilot certificate with airplane land ratings, issued on June 11, 1988. His medical certificate had been issued on February 12, 2002, and it had expired. A logbook belonging to the rated-passenger' was not available, however a cursory examination of FAA records revealed that during the rated passenger's last application for a medical certificate in 2002 he reported having a total of over 500 hours of flight related

experience.

AIRCRAFT INFORMATION

N99355 is a 1946 Ercoupe 415-C model built airplane, serial number 1978. N99355 was equipped with a Teledyne Continental Motors C85-12F, 85 horsepower engine, serial number 2156-6-12-C. the airplane was also equipped a McCauley 1B90 propeller, serial number 27277. As configured the Ercoupe 415-C had a maximum takeoff gross weight of 1260 pounds.

Aircraft records showed that the latest known maintenance related events recorded was dated September 14, 2004, and pertained to a solid steel needle valve being installed in the carburetor, and a new fuel pump being installed. Other maintenance related entries included the replacement of eight new champion REM-40E spark plugs, installation of a new bracket air filter was installed, a compression check being performed. In addition the log had an entry affirming that all flight controls had been checked and lubricated on September 28, 2005.

METEOROLOGICAL INFORMATION

Night visual meteorological conditions prevailed at the time of the accident. The accident occurred at the Wakulla County Airport Florida (2J0), a grass field located about 24.5 south, and on a 185-degree radial from the Tallahassee Regional Airport (TLH). .

The Tallahassee Regional Airport 2153 surface weather observation was, few clouds at 9,000 feet, scattered clouds at 25,000 feet, winds calm, visibility 9 statute miles, temperature 25 degrees C, dew point temperature 21 degrees C, altimeter setting 30.11 inHg.

WRECKAGE AND IMPACT INFORMATION

According to the FAA inspector who responded to the accident scene, daytime examination of the scene and the airplane wreckage revealed information consistent with the airplane having clipping trees at about the 20-foot level, while on short final to land on runway 18. The inspector said that after its initial impact with the trees, the airplane then impacted additional trees which appeared to cause it change direction, and then it descended impacting the ground, and coming to rest in position 29 degrees 59.610 minutes North latitude, 084 degrees, 23.767 minutes West Longitude. A postcrash fire ensued, and the fire had enveloped the airplane, and had consumed most of the airplane, to include its wings, engine areas, and cabin areas, through to the empennage.

A small section of empennage, the airplane's engine, and its propeller remained, but had incurred either fire related damage, impact related damage, or both. According to the inspector, the on-scene signatures at the scene revealed information consistent with the

airplane's engine having ceased to operate on short final. The inspector stated that there were no propeller scratch marks, or characteristic bending of the propeller consistent with the propeller rotating upon impact.

The engine was removed from the airframe, and transported to Aero Associates Inc., Tallahassee, Florida, for further examination.

On June 23, 2006, an FAA inspector, and a representative from Teledyne Continental Motors, Inc, examined the engine that had been installed in the accident airplane. The examination revealed no abnormalities that would have precluded normal engine operation and the production of rated horsepower.

The engine had incurred fire and impact related damage, however it was intact. The ignition harness and magnetos had charred in the fire, and the carburetor had separated. All other engine accessories were still attached. All but one intake tube had separated, and the throttle control was still connected and was found to be in the full throttle position. The mixture control was also connected and it was free to move, and carburetor heat control was connected and was in the on position. When the crankshaft with the propeller that was still was rotated, compression was obtained on all cylinders. All cylinders were checked and were found to exhibit normal signatures.

The carburetor which had separated exhibited heavy fire damage, however all controls were connected, and its screen was about 1/3 obstructed with fire related debris. Upon disassembly the carburetor was found to be clean, dry, and it parts operated without restrictions or obstructions.

The spark plugs, were Champion REM-40E and they exhibited normal wear when compared to Champion check-A-plug comparison cards. Plugs from cylinders two and four had oil in area of the electrodes. The oil screen, had one small piece of metal on the outside screen, and some debris was observed, however there was no evidence of metal particles.

The fuel pump, was in place and both fuel lines were attached. When disassembled, a liquid consistent with auto gas was found, and no anomalies were noted with the pump.

Both magnetos were Bendix S4LN-21, and as stated earlier they had been charred in the fire. When activated the points did not produce a spark, and upon disassembly they were found to have incurred internal fire related damage with some parts having melted.

The airplanes propeller, a McCauley model 1B90, had remained attached but the spinner was crushed. One blade was bent slightly towards the non-cambered side at the tip, and the second blade was undamaged except for some heat related discoloration.

MEDICAL AND PATHOLOGICAL INFORMATION

Postmortem examinations of the pilot and the rated-passenger were performed by a medical examiner with District 2 Medical Examiners Office, Tallahassee, Florida. In the case of both individuals; the cause of death was attributed to thermal burns. The pilot's postmortem examination revealed evidence of the pilot having focal severe coronary atherosclerosis.

Toxicologists at the Forensic Toxicology Laboratory at the University of Florida Reference Laboratories, Gainesville, Florida, conducted toxicological studies of samples obtained from the pilot, to include tests for volatiles and drugs. Ethanol was positively detected in blood at a level of 125 mg/dL (0.12 g/dL), Ethanol was positively detected in urine at a level of 163 mg/dL (0.16 g/dL), and ethanol was positively detected in vitreous humor at a level of 142 mg/dL (0.14g/dL). A comprehensive drug screen did not detect the presence of drugs, and tests of carboxyhemoglobin revealed 2 percent saturation.

The FAA Toxicology Laboratory, Oklahoma City, Oklahoma, performed toxicological studies on samples obtained from the pilot. The samples were tested for carbon monoxide, cyanide, volatiles, and drugs. 140 (mg/dL, mg/hg) ethanol was detected in blood, 170 (mg/dL, mg/hg) ethanol was detected in urine, 107 (mg/dL, mg/hg) ethanol was detected in muscle, and 134 (mg/dL, mg/hg) ethanol was detected in brain. Samples from the pilot were also tested for drugs and 0.0018 (ug/ml, ug/g) tetrahydrocannabinol (marihuana) was detected in blood, 0.2192 ug/ml, ug/g) tetrahydrocannabinol (marihuana) was detected in lung, 0.0078 (ug/ml, ug/g) tetrahydrocannabinol carboxylic acid (marihuana) was detected in blood, 0.0105 (ug/ml, ug/g) tetrahydrocannabinol carboxylic acid (marihuana) was detected in lung, and 0.0083 (ug/ml, ug/g) tetrahydrocannabinol carboxylic acid (marihuana) was detected in urine.

Toxicologists at the Forensic Toxicology Laboratory at the University of Florida Reference Laboratories, Gainesville, Florida, conducted toxicological studies of samples obtained from the rated-passenger, to include tests for volatiles and drugs. Ethanol was positively detected in blood at a level of 25 mg/dL (0.02 g/DL), and ethanol was positively detected in urine at a level of 22 mg/dL (0.02 g/dL). In addition, a comprehensive drug screen detected Acetaminophen and Ibuprofen in urine, and tests of carboxyhemoglobin revealed 8 percent saturation.

The FAA Toxicology Laboratory, Oklahoma City, Oklahoma, performed toxicological studies on samples obtained from the rated-passenger. The samples were tested for carbon monoxide, cyanide, volatiles, and drugs. 124 (mg/dL, mg/hg) ethanol was detected in blood, 18 (mg/dL, mg/hg) ethanol was detected in urine, 19 (mg/dL, mg/hg) ethanol was detected in muscle, and 25 (mg/dL, mg/hg) ethanol was detected in brain. Samples from the rated-passenger were also tested for drugs and Ibuprofen was detected in blood.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	59, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	Yes
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	August 1, 2005
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	August 1, 2005
Flight Time:	10000 hours (Total, all aircraft), 15 hours (Last 90 days, all aircraft)		

Co-pilot Information

Certificate:	Private	Age:	56, Male
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 2 With waivers/limitations	Last FAA Medical Exam:	February 1, 2002
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	500 hours (Total, all aircraft), 0 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Ercoupe (Eng & Research Corp.)	Registration:	N99355
Model/Series:	415C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1978
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	September 1, 2005 Annual	Certified Max Gross Wt.:	1260 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1549.53 Hrs as of last inspection	Engine Manufacturer:	Teledyne Continental
ELT:		Engine Model/Series:	C85-12F
Registered Owner:	Poppy Wayne J	Rated Power:	85 Horsepower
Operator:	Gar Braun	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	TLH	Distance from Accident Site:	25 Nautical Miles
Observation Time:	21:53 Local	Direction from Accident Site:	185°
Lowest Cloud Condition:	Few / 9000 ft AGL	Visibility	9 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	0 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.11 inches Hg	Temperature/Dew Point:	25°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Panacea, FL (2J0)	Type of Flight Plan Filed:	None
Destination:	(2J0)	Type of Clearance:	None
Departure Time:	21:25 Local	Type of Airspace:	

Airport Information

Airport:	WAKULLA COUNTY 2J0	Runway Surface Type:	Grass/turf
Airport Elevation:	11 ft msl	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	2590 ft / 70 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	29.993333,-84.395278

Administrative Information

Investigator In Charge (IIC): Lovell, John

Additional Participating Persons: Robert P Anderson; Tampa FSDO SO-35; Tampa, FL
John T Kent; Teledyne Continental Motors, Inc; Mobile, AL

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Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=63952>

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](#).