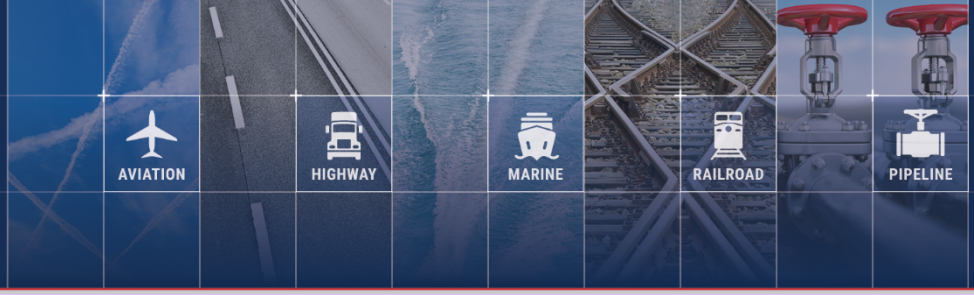

Aviation Investigation Final Report

Location:	OLUSTEE, Oklahoma	**Accident Number:**	FTW98FA203
Date & Time:	May 5, 1998, 20:35 Local	**Registration:**	N87125
Aircraft:	Ercoupe (Eng & Research Corp.) 415-C	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The student pilot with a passenger onboard, had completed 2 or 3 touch and go landings to runway 35. During the following takeoff, while turning left crosswind, the aircraft 'shuddered' and entered what the pilot believed was a 'slip stall.' He 'vaguely' remembered struggling to recover the aircraft from the stall and seeing the end of the runway over his left shoulder and thinking 'we have got to get back over there.' Subsequently, the aircraft impacted the ground. The wreckage path was oriented on a magnetic heading of 130 degrees, and the airplane came to rest approximately 320 feet from the departure end of runway 35. No structural or mechanical anomalies were observed during an examination of the airplane. According to the FAA Southwest Region Flight Surgeon, the blood alcohol concentration of 0.044% detected at the hospital and the 0.029% detected at the Civil Aeromedical Institute (CAMI) 'may have affected the pilot's performance, but he would not have been impaired.'

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The student pilot's improper decision to attempt an 180 degree turn to return to the takeoff runway.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Findings
1. STALL/MUSH - ENCOUNTERED - PILOT IN COMMAND
2. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

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

Factual Information

HISTORY OF FLIGHT

On May 5, 1998, approximately 2035 central daylight time, an Engineering & Research 415-C (Ercoupe) airplane, N87125, owned and operated by a private individual, was substantially damaged when it impacted the ground in an uncontrolled descent at the Olustee Municipal Airport near Olustee, Oklahoma. Visual meteorological conditions prevailed, and a flight plan was not filed for the Title 14 CFR Part 91 local personal flight. The student pilot sustained serious injuries, and his passenger was fatally injured. The flight had originated from the Olustee Municipal Airport, about 5 minutes before the accident.

During a personal interview conducted by the NTSB investigator-in-charge (IIC) and on the enclosed statements, the student pilot reported that he had completed 2 or 3 touch and go landings to runway 35. During the following takeoff, while turning left crosswind, the aircraft "shuddered" and entered what he believed was a "slip stall." He "vaguely" remembered struggling to recover the aircraft from the stall and seeing the end of the runway over his left shoulder and thinking "we have got to get back over there." Subsequently, the aircraft impacted the ground.

The pilot reported that at 1700, he left work and proceeded directly home, which is approximately 0.9 mile from his office. When he arrived home, his brother, who is an electrician, was waiting for him, along with one of his brother's employees. They were there to correct an electrical problem with the house's electrical system. At this time his brother offered him a beer, which he accepted and drank. After correcting the electrical problem, they proceeded to the local convenience store. While en route back to his residence, a decision was made to go flying. Upon arrival at his residence a friend was waiting, and the friend agreed to go flying with them. They proceeded to the Olustee Municipal Airport, which is about a 16 mile drive. They arrived at the airport approximately 1800-1815, and after rolling the aircraft out of its hangar, a preflight inspection was completed.

The student pilot and his friend flew to the Altus Municipal Airport, Altus, Oklahoma, for fuel. According to Altus Airport records, the aircraft arrived at 1840. The aircraft was fueled with 21 gallons of 100 octane low lead aviation fuel and departed at 1915.

The student pilot reported that after flying back to Olustee, he flew around the area for about 5-10 minutes showing his friend "the river and other spectacular sites." They then flew to the airport and landed. At this time the owner of the airplane got in, and they did touch and go landings for about 10-15 minutes. Next he took his brother's employee for a short flight. He then flew his brother around the area showing him the local sights. Then "after gaining some altitude we made some turns as well as a few stalls." They then returned to the airport and

landed. He then got out of the airplane for the first time since getting fuel at Altus.

The student pilot further reported that his friend asked to go up a second time. "As he was my best friend, I agreed to take him up one more time. We both climbed back into the cockpit and took off."

Witnesses reported observing the pilot "practicing stalls, steep turns and approaches."

PERSONNEL INFORMATION

A review of the student pilot's flight logbook revealed that his first instructional flight was on October 17, 1997. There was an endorsement for VFR solo flight for the Olustee Municipal Airport, dated January 2, 1998, and an endorsement for solo cross-country flight dated April 1, 1998. The last entry in his logbook was dated April 29, 1998, for 0.9 hour dual instruction. He had accumulated a total of 34.7 flight hours, of which 10 hours were dual, and all was in the Ercoupe.

AIRCRAFT INFORMATION

The 1946 Engineering & Research 415-C (Ercoupe) is a low wing, single engine, two-place airplane, which has fixed tricycle landing gear. The registered owner purchased the airplane at an auction in Plainview, Texas, on August 30, 1997. According to the owner, he had an agreement with the student pilot, allowing him to fly the airplane whenever he wanted. Part of this agreement was that the student pilot would pay half of the maintenance costs, which included the annual inspection.

A review of the airframe and engine records did not reveal evidence of any anomalies or uncorrected maintenance defects. The aircraft's last annual inspection was completed on October 12, 1997, at an aircraft total time of 1,267.9 hours.

WRECKAGE IMPACT INFORMATION

The wreckage distribution, including ground scars, encompassed an area approximately 96 feet long. The centerline of the energy path was oriented on a heading of 130 degrees magnetic, and the aircraft came to rest upright on a heading of 170 degrees magnetic, about 320 feet from the departure end of runway 35.

Examination of the aircraft revealed the forward portion of the fuselage was displaced to the left. The left wing had leading edge damage and the leading edge was twisted downward. The nose and right main landing gear were separated.

The engine was found attached to its mounts. The crankshaft was rotated and continuity was confirmed to all cylinders and to the rear of the engine. Thumb compression was noted on all cylinders, and both magnetos sparked at all terminals when the crankshaft was rotated by

hand.

The propeller remained attached to the engine. One blade exhibited "S" type bending and chordwise scratching. The other blade was twisted toward the direction of rotation, and it had chordwise scratching.

Examination of the airplane wreckage did not disclose evidence of any pre-impact structural or mechanical anomalies. Continuity was established to all flight control surfaces.

MEDICAL AND PATHOLOGICAL INFORMATION

The toxicology report from the Jackson County Memorial Hospital Laboratory, Altus, Oklahoma, revealed that 44 MG/DL (0.044%) alcohol was detected in the pilot's blood. The specimen was drawn at 2130, on May 5, 1998, the day of the accident, and analyzed at 1130, on May 6, 1998.

A specimen of the pilot's blood was sent to the Civil Aeromedical Institute (CAMI), Oklahoma City, Oklahoma for testing. CAMI measured a blood alcohol concentration of 29 mg/dl (0.029%). According to Dr. Salazar, FAA Southwest Region Flight Surgeon, the blood alcohol concentration of 0.044% detected at the hospital and the 0.029% detected at CAMI "may have affected the pilot's performance, but he would not have been impaired." As a point of reference, under the provisions of the Department of Transportation/Federal Aviation Administration Aviation Alcohol Misuse Prevention Program, this level would have placed a commercial pilot in a "not ready for duty status." Relating this value to automobile "driving while impaired" levels, most states use either 0.08% or 0.1%.

SURVIVAL ASPECTS

The airplane was not equipped with shoulder harnesses for either occupant.

ADDITIONAL DATA

The aircraft wreckage was released to the owner on May 6, 1998.

Pilot Information

Certificate:	Student	**Age:**	37,Male
Airplane Rating(s):	None	**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:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	December 29, 1997
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	35 hours (Total, all aircraft), 35 hours (Total, this make and model), 25 hours (Pilot In Command, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Ercoupe (Eng & Research Corp.)	**Registration:**	N87125
Model/Series:	415-C 415-C	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	298
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	October 12, 1997 Annual	**Certified Max Gross Wt.:**	1400 lbs
Time Since Last Inspection:	60 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1327 Hrs	**Engine Manufacturer:**	Continental
ELT:	Not installed	**Engine Model/Series:**	C-85-12
Registered Owner:	GLENN MARTIN	**Rated Power:**	85 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	LTS ,1382 ft msl	**Distance from Accident Site:**	12 Nautical Miles
Observation Time:	20:55 Local	**Direction from Accident Site:**	30°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	**Visibility**	7 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	30°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	24°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(F09)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	20:30 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	OLUSTEE MUNI F09	**Runway Surface Type:**	Asphalt
Airport Elevation:	1346 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	17	**IFR Approach:**	None
Runway Length/Width:	2000 ft / 50 ft	**VFR Approach/Landing:**	Touch and go

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal, 1 Serious	**Latitude, Longitude:**	34.540149,-99.419136(est)

Administrative Information

Investigator In Charge (IIC):	Wigington, Douglas
Additional Participating Persons:	RON BECKER; OKLAHOMA CITY , OK
Original Publish Date:	April 20, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=20418