Aviation Investigation Final Report

Location:	Walnut Ridge, Arkansas	**Accident Number:**	DFW06FA184
Date & Time:	July 17, 2006, 17:50 Local	**Registration:**	N6732H
Aircraft:	Piper J3	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The 199-hour private pilot lost control of the airplane while maneuvering at low altitude. The local flight originated from the pilot's private airstrip. There no eyewitnesses to the accident; however, several people in the area reported observing the vintage airplane flying slowly, overhead at a low altitude several minutes prior to the accident. A post-impact fire consumed much of the tube and fabric airplane. A witness, who was working in the field, stated, "[the plane's] airspeed was probably 50 miles per hour, maximum, and [at an] altitude of 25 to 50 feet. They waved at us and kept on [flying] south." An inspection of the airplane found all major components at the accident site, and the fuel lever in the "on" position. Control continuity to all flight controls was established. The engine had sustained heat and impact damage. The propeller remained bolted to the prop flange; the flange was bent, resulting in an angle between the crankshaft and propeller. The left and right magnetos were removed and spun by hand; both magnetos would not produce a spark. However, both magnetos were heat/fire damaged. The engine was rotated by hand, thumb compression was obtained on each cylinder and continuity was established through the motor to the accessory section. Each of the engine's bottom sparkplugs were removed and examined. The sparkplugs were dark gray in color and found to be worn. No pre-impact abnormalities with the engine, cylinder assemblies or engine components were found. Toxicological testing detected tetrahydrocannabinol (THC - the primary active substance in marijuana) and tetrahydrocannabinol carboxylic acid (an inactive metabolite of THC) in the pilot’s blood at levels consistent with very recent use.

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 airspeed and the subsequent stall. Contributing factors were the low altitude and impairment due to drugs.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE

Findings
1. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
2. (C) STALL - INADVERTENT - PILOT IN COMMAND
3. (F) IMPAIRMENT(DRUGS) - PILOT IN COMMAND

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

Findings
4. (F) LOW ALTITUDE FLIGHT/MANEUVER
5. (F) USE OF INAPPROPRIATE MEDICATION/DRUG - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On July 17, 2006, approximately 1750 central daylight time, a single-engine Piper J3 tail wheel-equipped airplane, N6732H, was destroyed following a loss of control while maneuvering at low altitude near Walnut Ridge, Arkansas. The private pilot and student rated passenger sustained fatal injuries. The airplane was registered to and operated by the pilot. Visual meteorological conditions prevailed and a flight plan was not filed for the personal flight conducted under the provisions of 14 Code of Federal Regulations Part 91. The local flight originated from a private airstrip, near Walnut Ridge, Arkansas, at an unknown time.

There were no eyewitnesses to the accident; however, several people in the area reported observing the vintage airplane flying slowly overhead at a low altitude several minutes prior to the accident. One of the witnesses, who was working in the field stated, "[the plane's] airspeed was probably 50 miles per hour, maximum, and [at an] altitude of 25 to 50 feet. They waved at us and kept on [flying] south."

PERSONNEL INFORMATION

The 199-hour, 31-year old pilot, who was occupying the front seat, was a private pilot with ratings for airplane single-engine land. The pilot's most recent FAA third-class medical certificate was issued January 2005. However, FAA records showed that his last medical was conducted May, 1998. The AME (Aviation Medical Examiners) that signed the pilot's flight medical had her medical license suspended in October 2004, and her AME designation suspended in April, 2005.

The 26-year old student-rated pilot was occupying the rear seat. The pilot was issued a special issuance third class medical certificate on August 24, 2005.

AIRCRAFT INFORMATION

The airplane was a 1946 model Piper J3, which was a single-engine, high-wing, tube and fabric airplane, configured for two occupants with tandem sitting, and fixed conventional landing gear. The airplane was not originally equipped with shoulder harnesses, nor an electrical system.

The airplane was equipped with two fuel tanks for a total of 24 gallons of fuel. A 12-gallon header fuel tank, and an additional 12-gallon fuel tank added to the left wing under a Supplemental Type Certificate (STC). A single lever, selected the fuel flow off or on.

A review of the aircraft's maintenance log revealed the last annual inspection was performed on October 30, 2005, at a tachometer time of 1,052.4 hours. The total time on the airframe was 3,774.6 hours.

The airplane was powered by a 65-horsepower Continental A-65 reciprocating engine, serial number 3886168. At the time of the last annual inspection, the engine had accumulated 1,066 hours since its last major overhaul.

METEOROLOGICAL INFORMATION

At 1653, the automated weather observing system at the Jonesboro Municipal Airport (JBR), near Jonesboro, Arkansas, approximately 20 miles southeast of the accident site, reported winds from 070 degrees at 5 knots, 10 statute miles visibility, a clear sky, temperature 93 degrees Fahrenheit, a dew point 66 degrees Fahrenheit, and an altimeter setting of 29.95 inches of Mercury.

COMMUNICATIONS

The pilots were not in communication with air traffic control during the flight and no distress calls were reported to have been received from the flight.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest in a soybean field located near a private agricultural service airstrip, on a measured heading of 094 degrees. The accident occurred during daylight hours, at the coordinates of 36 degrees 00.00 minutes north latitude; 090 degrees 57.2 minutes west longitude, and at a field elevation of 278 feet msl (mean sea level). All major components of the airplane were accounted for at the accident site. A post-impact fire consumed much of the airframe.

The initial impact mark was located approximately 20 feet to the left and in front of the airplane, and consisted of a prop ground scar and a flattening of vegetation. The wings remained attached to the airplane and came to rest perpendicular to the fuselage. The left wing had a slight upward "bend", at about mid-span. Both main landing gear were folded under and over to the left side of the airplane. The engine was pushed down and back by the impact and had sustained relatively minor fire damage. The forward and rear cabin areas, in the tube-and-fabric airplane, were largely burn away by the post-impact fire. All tail surfaces were attached in their respective positions. Control continuity to all flight controls was established at the accident site.

Ground signatures and ground scars were consistent with the airplane in a nose low attitude, while in a slightly left turn.

Both fuel tanks and/or fuel lines had been breached by the impact or fire. Fuel was not found

in either fuel tank. The fuel shutoff valve was found in the "on" position.

The propeller remained attached to the engine crankshaft. One propeller blade was bent approximately 90 degrees aft, with the bend starting about three-quarters the way down the blade. The other propeller was bent lengthwise along the blade consisting of a "wave" type bend.

The engine was removed from the airframe to facilitate a detailed examination. The propeller remained bolted to the prop flange, but the flange was bent, which resulted in an angle between the crankshaft and propeller. The accessory section had been pushed into the firewall, slightly crushing the header fuel tank. The left and right magnetos were removed and spun by hand; both magnetos would not produce a spark. However, both magnetos were heat/fire damaged. The engine was rotated by hand, thumb compression was obtained on each cylinder and continuity was established through the motor to the accessory section. Each of the engine's bottom sparkplugs were removed and examined. The sparkplugs were dark gray in color and found to be worn. No pre-impact abnormalities with the engine, cylinder assemblies, or engine components were found.

MEDICAL AND PATHOLOGICAL INFORMATION

Autopsies were performed on July 19, 2006, by the Arkansas State Crime Laboratory, Medical Examiner Division, Little Rock, Arkansas.

Toxicological Testing was conducted by, the FAA Toxicology Accident Research Laboratory, near Oklahoma City, Oklahoma. The tests detected Tetrahydrocannabinol (Marihuana) and Tetrahydrocannabinol Carboxyic acid (Marihuana) in the blood and lung of the private pilot.

SURVIVAL ASPECTS

The occupants were wearing their respective seatbelts at the time of the accident.

ADDITIONAL INFORMATION

The wreckage was released to the owner on July 19, 2006.

Pilot Information

Certificate:	Foreign; Private	**Age:**	31,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
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 Unknown	**Last FAA Medical Exam:**	January 1, 2005
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	199 hours (Total, all aircraft)		

Student pilot Information

Certificate:	Student	**Age:**	26,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Rear
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 With waivers/limitations	**Last FAA Medical Exam:**	August 1, 2005
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N6732H
Model/Series:	J3	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	19943
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	October 1, 2005 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	3775 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	A65
Registered Owner:	On file	**Rated Power:**	65 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	JBR	**Distance from Accident Site:**	20 Nautical Miles
Observation Time:	16:53 Local	**Direction from Accident Site:**	145°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	70°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.95 inches Hg	**Temperature/Dew Point:**	34°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Walnut Ridge, AR (NONE)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

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:**	36.121944,-90.921386

Administrative Information

Investigator In Charge (IIC):	Hatch, Craig
Additional Participating Persons:	Jamie Black; FAA FSDO; Little Rock, AR Michael McClure; The New Piper Company; Prosper, TX John Kent; Continential Aircraft Engines; Mobile, AL
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Last Revision Date:	
Investigation Class:	Class
Note:	
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