



National Transportation Safety Board Aviation Accident Final Report

Location:	Pearland, TX	Accident Number:	FTW04LA226
Date & Time:	09/01/2004, 1945 CDT	Registration:	N3TW
Aircraft:	Cassutt IIM	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The 246.6-hour pilot was conducting a series of touch-and-go landings in an amateur-built race airplane. While the airplane was turning from base leg to final within the airport traffic pattern, a witness observed the airplane "descending rapidly in a nose down" attitude through approximately 500 feet agl. The witness stated that the airplane "fell straight down in a spin" until it impacted terrain. Another witness located at the airport reported seeing the airplane turn left base at a bank angle of approximately 90 degrees. Examination of the engine and airframe were conducted by the Federal Aviation Administration and no anomalies were noted. Review of the pilot's logbooks revealed he had accumulated approximately 2 hours in the accident make/model airplane. The former owner of the accident airplane reported that the pilot had recently purchased the airplane approximately six months prior to the accident.

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 sufficient for flight resulting in an inadvertent stall/spin while turning from the base leg of the traffic pattern to final. A contributing factor was the pilot's lack of experience for the make/model airplane.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: APPROACH - VFR PATTERN - BASE LEG/BASE TO FINAL

Findings

1. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
2. (C) STALL/SPIN - INADVERTENT - PILOT IN COMMAND
3. (F) LACK OF EXPERIENCE - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

4. TERRAIN CONDITION - GROUND

Factual Information

On September 1, 2004, approximately 1945 central daylight time, an amateur-built Cassutt IIIM single-engine airplane, N3TW, registered to and operated by a private individual, was destroyed when it impacted terrain following a loss of control while in the landing pattern at the Pearland Regional Airport (LVJ), near Pearland, Texas. The private pilot, sole occupant of the airplane, was fatally injured. Visual metrological conditions prevailed and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 personal flight. The local flight originated from LVJ approximately 40 minutes prior to the time of the accident.

In a written statement, a witness, who was the pilot of a Cessna 206 that was on a left downwind for Runway 32R, at an altitude of 800 feet above ground level (agl), reported that he observed N3TW approximately 1/4 mile away "descending rapidly in a nose down attitude through approximately 500 feet agl." The witness stated that the airplane "fell straight down in a spin" until it impacted terrain.

According to the Federal Aviation Administration (FAA) inspector, who responded to the site of the accident, another witness reported observing the airplane turn left base at a bank angle of approximately 90 degrees. A family member of the pilot reported to the FAA inspector that the pilot stated that the airplane had approximately 6 gallons of automotive gasoline onboard the airplane prior to departure.

The pilot held a private pilot certificate with an airplane single engine land rating. His most recent Federal Aviation Administration (FAA) third class medical certificate was issued on December 13, 2002.

A review of the private pilot's logbook revealed that he accumulated approximately 241.6 flight hours. As of June 16, 2004, the most recent logbook entry, the pilot had accumulated 2 hours of flight time in the accident make/model airplane.

The 1974 Cassutt IIIM was an amateur built mid-wing airplane composed of a tubular steel frame covered by fabric. The airplane was equipped with a Continental O-200-A engine rated at 100 horsepower. The former owner of N3TW reported that he had recently sold the airplane to the pilot in February of 2004. The former owner added that the airplane was designed for competition air racing and was "challenging to fly."

Review of the airplane logbooks revealed that the most recent Annual/100-hour inspection was performed on March 13, 2003, at an airframe and engine total time of 280.1 hours. The engine was last overhauled on August 8, 1994.

The Pearland Regional Airport features 3 runways: 14R/32L (4,302-foot long and 70-foot wide asphalt runway), 14L/32R (2,800-foot long and 90-foot wide turf runway), and 4/22 (2,400-foot long and 100-foot wide turf runway). The airport is an uncontrolled airfield operating under class G airspace. The common traffic advisory frequency (CTAF) is 122.8 megahertz.

At 1953, the automated surface observing system at LVJ reported wind calm, visibility 10 statute miles, sky clear, temperature 80 degrees Fahrenheit, dew point 63 degrees Fahrenheit, and an altimeter setting of 30.03 inches of Mercury. The NTSB investigator-in-charge calculated the density altitude to be 1,376 feet.

Examination of the airplane by the FAA inspector revealed that the airplane came to rest upright in a hay field approximately 1/2 mile south of LVJ. The fuselage area forward of the aft

section of the cockpit was crushed aft, and both wings were crushed aft throughout their respective spans. Flight control continuity was established throughout the airplane. The FAA inspector also reported that there was a strong odor of fuel at the accident site.

On September 3, 2004, at the facilities of D&N Aviation, near Pearland, Texas, under the supervision of an FAA inspector, a representative from Teledyne Continental Motors, examined the Continental O-200-A engine (serial number 231221R).

Examination of the engine revealed the left and right magnetos were separated from their respective mounts. The oil sump was pushed aft and upwards. The exhaust pipes were crushed upwards and aft. The top sparkplugs were removed, and when compared to the Champion Aviation Check-A-Plug Chart, displayed moderate wear, dark deposits in the electrode area. Rotational continuity throughout the engine and accessories housing was established when the engine was rotated by hand using the propeller. Compression was noted from all four cylinders. The gascolator screen was absent of debris. The carburetor was separated from its mount and was impact damaged. No fuel was found within the gascolator bowl. The throttle body was partially separated from the carburetor bowl. The fuel screen was absent of debris. No fuel was observed within the carburetor bowl.

The propeller remained attached to the crankshaft propeller flange. One blade was separated approximately 1/3 of its length outboard of the propeller flange. The other blade was crushed aft and splintered.

An autopsy was performed on the pilot by the office of the Galveston County Medical Examiner in Galveston, Texas, on September 2, 2004. According to the report, "The cause of death...[was] multiple blunt force injuries." Toxicological tests performed by the Federal Aviation Administration's Civil Aeromedical Institute (CAMI) were negative for carbon monoxide, alcohol, however was positive for trace amounts (values confirmed by the FAA) of Sertraline, Desmethylertraline, Diphenhydramine, and Burpropion.

According to an FAA Medical Examiner, the use of Sertraline and Burpropion would have disqualified the pilot's medical certification if it had been reported.

Pilot Information

Certificate:	Private	Age:	46, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Center
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--w/ waivers/lim.	Last FAA Medical Exam:	12/13/2002
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	241 hours (Total, all aircraft), 2 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cassutt	Registration:	N3TW
Model/Series:	IIIM	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	088
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	03/18/2003, Annual	Certified Max Gross Wt.:	850 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	280.1 Hours as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-200-A
Registered Owner:	Mary Jane Bernard	Rated Power:	100 hp
Operator:	Michael G Bernard	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	LVJ, 43 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1953 CDT	Direction from Accident Site:	180°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.03 inches Hg	Temperature/Dew Point:	27° C / 17° C
Precipitation and Obscuration:			
Departure Point:	Pearland, TX (LVJ)	Type of Flight Plan Filed:	None
Destination:	(LVJ)	Type of Clearance:	None
Departure Time:	0700 CDT	Type of Airspace:	Class G

Airport Information

Airport:	Pearland Regional Airport (LVJ)	Runway Surface Type:	Asphalt
Airport Elevation:	43 ft	Runway Surface Condition:	Dry
Runway Used:	32L	IFR Approach:	None
Runway Length/Width:	4302 ft / 70 ft	VFR Approach/Landing:	Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	29.521111, -95.241944

Administrative Information

Investigator In Charge (IIC):	Alexander Lemishko	Report Date:	02/24/2005
Additional Participating Persons:	Tom Pace; Houston, Texas; Houston, TX		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.ntsbt.gov/pubdms/ .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).