
		NTSB ID: MIA97FA142		Aircraft Registration Number: N61S	
		Occurrence Date: 04/20/1997		Most Critical Injury: Fatal	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place APEX	State NC	Zip Code 27502	Local Time 1200	Time Zone EDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:			
Aircraft Information Summary					
Aircraft Manufacturer Boeing Stearman		Model/Series N2S-4 /N2S-4		Type of Aircraft Airplane	
Revenue Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>*** Note: NTSB investigators either traveled in support of this investigation or conducted a significant amount of investigative work without any travel, and used data obtained from various sources to prepare this aircraft accident report. ***</p> <p>HISTORY OF THE FLIGHT</p> <p>On April 20, 1997, about 1200 eastern daylight time, a Boeing Stearman N2S-4, N61S, registered to private individuals, crashed while maneuvering near Apex, North Carolina, while on a Title 14 CFR Part 91 personal flight. Visual meteorological conditions prevailed at the time and no flight plan was filed. The aircraft received substantial damage and the private-rated pilot and private-rated passenger were fatally injured. The flight originated from Kennebec, North Carolina, the same day, about 1100.</p> <p>Witnesses observed the aircraft flying from south to north over Jordan Lake at an altitude of about 30 feet agl. They stated, that as the aircraft approached the bridge at Highway 64, the pilot climbed the aircraft slightly to clear the bridge and then descended back to about 30 feet above the water. About 1 mile north of the bridge, while still at about 30 feet agl, the pilot attempted to perform a loop. As the aircraft descended on the back side of the loop, the aircraft did not have enough altitude to complete the maneuver, and crashed into the water.</p> <p>PERSONNEL INFORMATION</p> <p>Information on the pilot and private-rated passenger is contained in this report under First Pilot Information and in attachments to this report.</p> <p>AIRCRAFT INFORMATION</p> <p>Information on the aircraft is contained in this report under Aircraft Information.</p> <p>METEOROLOGICAL INFORMATION</p> <p>Visual meteorological conditions prevailed at the time of the accident. Additional meteorological information is contained in this report under Weather Information.</p> <p>WRECKAGE AND IMPACT INFORMATION</p> <p>The aircraft crashed into Jordan Lake, Apex, North Carolina. The crash site was located about 1 mile north of the Highway 64 bridge, in about 20 feet of water. Recovery personnel reported the aircraft was nose down the tail was up and visible about 3 feet under the surface of the water.</p>					
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Narrative (Continued)

Examination of the aircraft after recovery from the lake showed all components of the aircraft which are necessary for flight were located on the aircraft. The leading edges of the wings and the lower engine cowling had sustained damage from water impact. The wings were displaced downward. Continuity of the flight control systems was established.

Examination of the engine and propeller showed each propeller blade had sustained rotational damage. The engine turned through and continuity of the crankshaft, camshaft, valve train, accessory drives, connecting rods, and pistons was established. Two cylinders had sustained impact damage and were cracked. Each of the other cylinders produced compression when the engine was rotated. Each spark plug had a deposit color consistent with normal engine operation. Examination of the carburetor showed no evidence of failure or malfunction. Examination of each magneto showed all components were in good condition and had no damage. Each had water contamination.

MEDICAL AND PATHOLOGICAL INFORMATION


Postmortem examination of the pilot and passenger was performed by Dr. Keith L. Lehman, Pathologist, Office of the Chief Medical Examiner, Chapel Hill, North Carolina. The cause of death for each was attributed to multiple traumatic injuries. The pilot was observed to have open dislocation fractures of both distal tibiae and injuries to the right pinkie and middle fingers. The passenger did not have any leg or hand fractures.


Postmortem toxicology studies on specimens obtained from the pilot and passenger was performed by the Office of the Chief Medical Examiner, Chapel Hill, North Carolina, and the Federal Aviation Administration, Civil Aeromedical Institute, Oklahoma City, Oklahoma. The studies conducted on specimens from the pilot were negative for ethanol alcohol, carbon monoxide, basic, acidic, and neutral drugs. The studies were positive for a detection of Naproxen in blood and urine, detection of azacyclonol in urine, and detection of ranitidine in urine. Each of these are non-prescription medications and are reported to not have any significant effects that would degrade the ability to operate an aircraft. The studies on specimens from the passenger were negative for ethanol alcohol, carbon monoxide, basic, acidic, and neutral drugs. The studies were positive for a detection of Naproxen in blood and urine.

Additional medical and pathological information is contained in supplements K to this report and the toxicology reports.

ADDITIONAL INFORMATION

The aircraft wreckage was released by NTSB on April 21, 1997, to the registered owner.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: MIA97FA142			
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		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Approach/Arrival Flown:					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer Boeing Stearman		Model/Series N2S-4 /N2S-4		Serial Number 75-3706	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Tailwheel					
Amateur Built Acft? No	Number of Seats: 2	Certified Max Gross Wt. 3200 LBS	Number of Engines: 1		
Engine Type: Reciprocating	Engine Manufacturer: Continental	Model/Series: W670-6A	Rated Power: 220 HP		
- Aircraft Inspection Information					
Type of Last Inspection Annual	Date of Last Inspection 07/1996	Time Since Last Inspection 19 Hours	Airframe Total Time 3514 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type No	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner JAMES R. CAUDILL		Street Address 6813 SUNSET LAKE ROAD			
		City FUQUAY VARINA	State NC	Zip Code 27526	
Operator of Aircraft JAMES R. CAUDILL		Street Address 6813 SUNSET LAKE ROAD			
		City FUQUAY VARINA	State NC	Zip Code 27526	
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held: None					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Personal					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: MIA97FA142
	Occurrence Date: 04/20/1997
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 70
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Sex: M	Seat Occupied: Rear	Occupational Pilot? Retired	Certificate Number: On File
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Certificate(s): Private

Airplane Rating(s): Single-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): None

Instructor Rating(s): None

Current Biennial Flight Review?

Medical Cert.: Class 3	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 01/1996
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	987	917	987		4					
Pilot In Command(PIC)	921	910	921							
Instructor										
Instruction Received										
Last 90 Days	1	1	1							
Last 30 Days	1	1	1							
Last 24 Hours	1	1	1							

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? Yes	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: None

Departure Point KENNEBEC	State NC	Airport Identifier 4WC	Departure Time 1100	Time Zone EDT
Destination Local Flight	State	Airport Identifier		


Type of Clearance: None

Type of Airspace: Class G

Weather Information

UAT/CA Source of Wx Information:

No record of briefing

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	Occurrence Type: Accident

Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
RDU	1151	EDT	436 Ft. MSL	15 NM	50 Deg. Mag.
Sky/Lowest Cloud Condition: Clear			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None		0 Ft. AGL	Visibility: 10 SM	Altimeter: 29.00 "Hg	
Temperature: 18 °C	Dew Point: -3 °C	Weather Conditions at Accident Site: Visual Conditions			
Wind Direction: Variable		Wind Speed: 5	Wind Gusts:		
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM				
Precip and/or Obscuration:					

Accident Information		
Aircraft Damage: Substantial	Aircraft Fire: None	Aircraft Explosion: None

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot	1				1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers	1				1
- TOTAL ABOARD -	2				2
Other Ground	0	0	0		0
- GRAND TOTAL -	2	0	0		2

National Transportation Safety Board

FACTUAL REPORT
AVIATION



NTSB ID: MIA97FA142

Occurrence Date: 04/20/1997

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

JEFFREY L. KENNEDY

Additional Persons Participating in This Accident/Incident Investigation:

EDWARD L MURNANE
WINSTON-SALEM, NC

DENNIS A SCARFEO
WINSTON-SALEM, NC