
		NTSB ID: MIA07FA154		Aircraft Registration Number: N8844H	
		Occurrence Date: 09/21/2007		Most Critical Injury: Fatal	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Clayton	State NC	Zip Code 27520	Local Time 1010	Time Zone EDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:			
Aircraft Information Summary					
Aircraft Manufacturer North American		Model/Series Navion		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 FLIGHT</p> <p>On September 21, 2007, about 1010 eastern daylight time, a North American Navion, N8844H, registered to and operated by a private individual, crashed into a restaurant located in Clayton, North Carolina. Instrument meteorological conditions (IMC) prevailed at the time and no flight plan was filed for the 14 Code of Federal Regulations (CFR) Part 91 personal flight from Conway-Horry County Airport (HYW), Conway, South Carolina, to Culpeper Regional Airport (CJR), Culpeper, Virginia. The airplane was destroyed by impact and a postcrash fire, and the private-certificated pilot, the sole occupant, was fatally injured. The restaurant was damaged by impact and fire; only one restaurant employee reported smoke inhalation. The flight originated about 0916, from HYW.</p> <p>The flight departed under visual flight rules (VFR), and the pilot did not establish contact with any air traffic control facility in-flight. A discrete transponder code was not assigned to the flight. Recorded radar data from the Federal Aviation Administration (FAA), Raleigh, North Carolina, Air Route Surveillance Radar (ARSR) was analyzed by personnel from the Safety Board's Office of Research and Engineering, and is contained in a report titled "Recorded Radar and Performance Study." Radar returns associated with transponder code 1200 were tracked from a point beginning about 59 nautical miles north-northeast of the departure airport, and continue to a point located within 0.18 nautical miles of the accident site location at the approximate time of the accident. The radar data reflects that the flight was tracked for 55 nautical miles and never flew higher than 800 feet pressure altitude. The study further indicated the flight proceeded in a northeasterly direction, and gradually descended while the terrain elevation increased. The airplane descended to 265 feet above ground level (agl), and was flying in a north-northeasterly direction towards two obstacles which were located northeast and north of the accident site. The first obstacle in the line of flight was an antenna tower which is 215 feet agl, and the second obstacle was a water tower which is 185 feet agl. The plot depicts the airplane turning to the north when the flight was 1.15 nautical miles from antenna tower, then continuing for about 20 seconds. The last uncorrelated radar return was at 1010:31; the airplane at that time was at 265 feet agl. Between 1001, and the last uncorrelated radar return, the smoothed ground speed never decreased less than 110 knots. The ground speed at the last radar return was 130 knots.</p> <p>One witness who was inside on the second floor of a building located approximately 829 feet north-northeast of the crash site reported first hearing a sputtering/loud sound. He looked out of an adjacent window and observed the airplane following Highway 70 East. The wings were level but the airplane was descending. The airplane suddenly/abruptly banked to the right, and at that time the engine sound increased, but still did not sound correct. The witness further reported the airplane impacted the building nearly inverted.</p>					
FACTUAL REPORT - AVIATION					
					Page 1

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: MIA07FA154
	Occurrence Date: 09/21/2007
	Occurrence Type: Accident

Narrative (Continued)

The sound he associated with the engine was similar to the sound of a semi tractor-trailer with the jake brake on.

Another witness who had just dropped off his wife at the restaurant, and was driving westbound on Highway 70 near the restaurant, reported hearing a low-flying airplane. He looked towards the restaurant and noticed an airplane emerge from the clouds. The airplane was flying between 80 and 100 feet above ground level, and was located west of the restaurant flying in a 45-degree right bank. The airplane continued in the right bank which increased when the airplane was closer to nearby power lines. The airplane then rolled into a wings level position, and began descending like it was landing. He thought the airplane was trying to land on Highway 70 in the eastbound lanes, or in a lot adjacent to the restaurant. The airplane flew over the power lines, and impacted the parking lot causing the right wing to separate. The airplane then slid into the restaurant where the left wing hit the building. The witness further reported the engine did not sound like it was running wide open, but the engine sound was constant. There was no sputtering, and he could not recall the position of the landing gear.

The airplane crashed into the restaurant during daylight hours.

PERSONNEL INFORMATION

The pilot, age 54, held a FAA private pilot certificate with ratings for airplane single engine land and instrument airplane, last issued on October 26, 2005. He held a FAA third class medical certificate issued on June 22, 2007, with the limitation that he, "Must wear corrective lenses[.] Not valid for any class after June 30, 2008."

NTSB review of the pilot's logbook which begin with his first logged flight on March 5, 1988, and ends with a logged flight of an unrecorded date on or after July 20, 2007, revealed he logged a total time of 354.3 hours, of which 332.0 hours were as pilot-in-command. Since obtaining his instrument rating in October 2005, he logged 8.5 simulated instrument hours during three separate flights; however, he did not log any time in actual instrument conditions. His last logged simulated instrument flight occurred in 2007, but the month was not determined. During the previous 90 days he logged a total time of 4.0 hours.

AIRCRAFT INFORMATION

The airplane was manufactured by North American Aviation, Inc., on March 4, 1947, as model Navion, and designated serial number NAV-4-844. It was certificated in the normal and utility categories, and powered by a Teledyne IO-520-BB 285 horsepower engine and equipped with a 3-bladed constant speed McCauley D3A32C90-R propeller. The engine and propeller were installed in accordance with the optional engines and propellers listed in the airplane type certificate data sheet.

NTSB review of copies of provided logbook entries revealed the airplane was last inspected in accordance with an annual inspection on July 20, 2007. The airplane total time and engine time since major overhaul at that time were 4,184.4 and 275 hours, respectively. The altimeter, static system, and transponder were last checked on April 1, 2005, in accordance with 14 CFR Part 91.411 Appendix E and 14 CFR Part 91.413 Appendix F. The permanent maintenance records were not located; however, a pouch containing several FAA 337 forms, several registration certificates, and the airworthiness certificate were located in the wreckage.

METEOROLOGICAL INFORMATION

The pilot did not obtain a preflight weather briefing from either Lockheed Martin (LM) Flight Service Station (FSS) or either of the two Direct User Access Terminal System (DUATS) vendors, which are Data Transformation Corporation (DTC), and Computer Services Corporation (CSC). Additionally, there was no record of any in-flight contact by the pilot with any FAA air traffic control (ATC) or LM FSS facilities.

On the day of the accident at 0715 local, or approximately 2 hours 1 minute before the flight departed, an Airman's Meteorological Information (AIRMET) for instrument flight rules (IFR) conditions was issued by the National Weather Service (NWS) forecasting ceilings below 1,000 feet and visibility below 3 miles in mist / fog.

National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: MIA07FA154

Occurrence Date: 09/21/2007

Occurrence Type: Accident

Narrative (Continued)

The AIRMET was valid until 1100 hours local, and the boundary encompassed by the AIRMET included the departure airport and accident site location.

At the time of departure, a 500 foot ceiling with 10 miles visibility existed at an airport near the departure airport, and IMC conditions (1/2 mile visibility and 200 foot overcast ceiling) prevailed at Raleigh-Durham International Airport (RDU), which was located slightly west (approximately 11 nautical miles) of a straight line course drawn from the departure to destination airports. Visual meteorological conditions prevailed at the destination airport at the time of departure and also at the estimated time of arrival.

A surface observation weather report at RDU taken at 1005, or approximately 5 minutes before the accident, indicated a broken ceiling existed at 400 feet, and the visibility was 1 mile. The RDU airport was located approximately 22 nautical miles northwest from the accident site.

COMMUNICATIONS

The pilot did not contact any FAA air traffic control facility during the accident flight.

WRECKAGE AND IMPACT INFORMATION


The airplane crashed into the parking lot then a restaurant located at 10365 US Highway 70 West, in Clayton, North Carolina, or on the south side of the eastbound lanes of Highway 70. The accident site was located approximately 25 degrees and 113 nautical miles from the departure airport. The restaurant was damaged by impact and fire. The exterior surface of the building exhibited impact marks consistent in size and shape with contact by components of the propeller.

Examination of the accident site revealed the airplane impacted the parking lot while on a magnetic heading of 200 degrees, then impacted the front side of the restaurant approximately 104 feet 9 inches from the first of five parallel ground scars associated with propeller contact. The airplane traveled into the restaurant 33 feet 5 inches and came to rest inverted. The wreckage in the restaurant consisted of the fuselage / empennage with inboard sections of both wings, the separated engine, and components of the impact damaged propeller. Aircraft debris was located along the energy path in the parking lot, adjacent to the front side of the restaurant, and one propeller blade was found 279 feet from where the wreckage came to rest. Fire damage to the wreckage in the restaurant was noted. Further examination of the accident site revealed no damage to 40 foot-tall power lines that were located 133 feet 8 inches from the propeller ground scars, nor was there any damage to a nearby tree or light pole in the parking lot. The distance between the centers of the first and second propeller ground scars measured 22.5 inches. All identifiable airplane components were recovered for further examination.

Examination of the wreckage following recovery revealed the entire airplane was fragmented and / or heat damaged. All components necessary to sustain flight, and all flight control surfaces were accounted for. Flight control cable continuity was confirmed for yaw, while tension overload of the elevator and aileron flight control cables was noted. The flaps were retracted, and the pitch trim was found at 10 degrees tab trailing edge down (nose-up). The cockpit, cabin, and inboard sections of both wings were destroyed by the postcrash fire. All fuel tanks were breached and /or fire damaged; no fuel was located in the tanks. The fuel selector was found positioned to the main tank position.

Examination of the engine following recovery revealed crankshaft, and camshaft continuity. Impact damage to the engine precluded rotation of it. The upper portions of the Nos. 1, 3, and 5 cylinders were impact separated. Examination of the power section, lubrication, ignition, fuel metering, and air induction systems of the engine revealed no evidence of preimpact failure or malfunction.

Examination of the propeller revealed the propeller hub was fractured and all propeller blades were separated from the hub. Additionally, the propeller piston, cylinder, and all pitch change components were impact separated. Examination of the propeller blades revealed all exhibited torsional twisting and heavy chordwise scratches on the cambered side of each blade.

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: MIA07FA154
	Occurrence Date: 09/21/2007
	Occurrence Type: Accident

Narrative (Continued)

MEDICAL AND PATHOLOGICAL INFORMATION

A postmortem examination of the pilot was performed by the Office of the Chief Medical Examiner, Chapel Hill, North Carolina. The cause of death was listed as "multiple blunt force traumatic injuries."

Forensic toxicology was performed on specimens of the pilot by the Federal Aviation Administration (FAA) Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, and also by Office of the Chief Medical Examiner (M.E.'s Office). The result of analysis by the FAA was negative for carbon monoxide, cyanide, volatiles, and tested drugs. The result of analysis by the M.E.'s Office was negative for volatiles (ethanol).


TESTS AND RESEARCH


Circuit boards located in the wreckage were identified as being from a J.P. Instruments "Fuel Scan 450" instrument. The circuit boards were retained, but a representative of the manufacturer reported the circuit boards do not retain any data.

The airplane was fueled on the morning of the accident at the departure airport. A total of 28.0 gallons of 100 low lead (100LL) fuel were added. The individual who performed the fueling stated each main fuel tank and the lower auxiliary fuel tank were filled as requested by the pilot.

A calculation was performed by NTSB to determine engine rpm at the moment of ground contact. The calculation included the measured distance between the first and second propeller ground scars (22.5 inches), the last known ground speed (130 knots), and the number of propeller blades (3). The result was determined to be 2,334 rpm.

Updated on Dec 3 2008 4:39PM

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: MIA07FA154			
		Occurrence Date: 09/21/2007			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used N/A	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Approach/Arrival Flown: NONE					
VFR Approach/Landing: None					
Aircraft Information					
Aircraft Manufacturer North American		Model/Series Navion		Serial Number NAV-4-844	
Airworthiness Certificate(s): Normal; Utility					
Landing Gear Type: Retractable - Tricycle					
Amateur Built Acft? No		Number of Seats: 4	Certified Max Gross Wt. 2750 LBS		Number of Engines: 1
Engine Type: Reciprocating		Engine Manufacturer: Continental		Model/Series: IO-520-BB	Rated Power: 285 HP
- Aircraft Inspection Information					
Type of Last Inspection Annual		Date of Last Inspection 07/2007	Time Since Last Inspection Hours		Airframe Total Time 4184.4 Hours
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type Yes / C91-A		ELT Operated? Yes	ELT Aided in Locating Accident Site? No		
Owner/Operator Information					
Registered Aircraft Owner Garry S. Reid		Street Address			
		City Chantilly		State VA	Zip Code 20152
Operator of Aircraft Garry S. Reid		Street Address			
		City Galivants Ferry		State SC	Zip Code 29544
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: MIA07FA154
	Occurrence Date: 09/21/2007
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 54
-----------------	-----------------	------------------	--------------------------	-----------

Sex: M	Seat Occupied: Left	Occupational Pilot? No	Certificate Number: On File
--------	---------------------	------------------------	-----------------------------

Certificate(s): Private

Airplane Rating(s): Single-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): None

Current Biennial Flight Review? 10/2005

Medical Cert.: Class 3	Medical Cert. Status: With Waivers/Limitations	Date of Last Medical Exam: 06/2007
------------------------	--	------------------------------------

- 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	354		343							
Pilot In Command(PIC)	332									
Instructor										
Instruction Received										
Last 90 Days	4		4							
Last 30 Days										
Last 24 Hours										

Seatbelt Used? Unknown	Shoulder Harness Used? Unknown	Toxicology Performed? Yes	Second Pilot? No
------------------------	--------------------------------	---------------------------	------------------

Flight Plan/Itinerary

Type of Flight Plan Filed: None

Departure Point Conway	State SC	Airport Identifier HYW	Departure Time 0916	Time Zone EDT
---------------------------	-------------	---------------------------	------------------------	------------------


Destination Culpeper	State VA	Airport Identifier CJR	
-------------------------	-------------	---------------------------	--

Type of Clearance: None

Type of Airspace:

Weather Information

Source of Wx Information:
Unknown

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: MIA07FA154
	Occurrence Date: 09/21/2007
	Occurrence Type: Accident

Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
RDU	1005	EDT	435 Ft. MSL	21 NM	310 Deg. Mag.
Sky/Lowest Cloud Condition:				Ft. AGL	Condition of Light: Day
Lowest Ceiling: Broken		400 Ft. AGL		Visibility: 1 SM	Altimeter: 30.16 "Hg
Temperature: 21 °C	Dew Point: 20 °C	Weather Conditions at Accident Site: Instrument Conditions			
Wind Direction: 60	Wind Speed: 6	Wind Gusts:			
Visibility (RVR): Ft.	Visibility (RVV) SM				
Precip and/or Obscuration:					

Accident Information

Aircraft Damage: Destroyed	Aircraft Fire: Ground	Aircraft Explosion: Ground
----------------------------	-----------------------	----------------------------

- 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					
- TOTAL ABOARD -	1				1
Other Ground					
- GRAND TOTAL -	1				1

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: MIA07FA154

Occurrence Date: 09/21/2007

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

Timothy W. Monville

Additional Persons Participating in This Accident/Incident Investigation:

Richard M Litka
FAA/FSDO
Greensboro, NC

Christopher Gardner
Sierra Hotel Aero, Inc.
South St. Paul, MN

Rodney Martinez
Teledyne Continental Motors
Mobile, AL