



# Aviation Investigation Final Report

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<b>Location:</b>	Zephyrhills, Florida	<b>Accident Number:</b>	ATL02FA162
<b>Date &amp; Time:</b>	September 1, 2002, 06:35 Local	<b>Registration:</b>	N81189
<b>Aircraft:</b>	American General Aircraft AA-5B	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

Witnesses near the accident site reported they heard an airplane flying low over the neighborhood prior to the approximate time of the accident. Shortly after hearing the low flying airplane, an explosion was heard. Witnesses discovered a nearby home engulfed in flames, and confirmed that a small airplane had collided with the home. Witnesses reported the weather conditions were foggy and very dark at the time of the accident. Lakeland Regional Airport, located 16 nautical miles southeast of Zephyrhills Airport, 0650 weather observation, reported winds calm, sky conditions scattered at 200 feet above ground level (AGL), visibility 1 statute mile, mist, temperature 25 celsius, dewpoint 25 celsius, and the altimeter setting was 30.02. The Vandenberg Airport, weather observation located 16 nautical miles southwest of Zephyrhills Airport, reported at 0552, winds 050 degrees and 5 knots, overcast sky at 500 feet AGL, visibility 1.5 statute miles, with mist, temperature 25 Celsius, and dewpoint 25 Celsius. There was no record of the pilot receiving a weather briefing before departure.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilots continued visual flight into instrument conditions (fog), and subsequent collision with a tree and a residence.

## Findings

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Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: APPROACH

Findings

1. (C) WEATHER CONDITION - FOG
2. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - CONTINUED - PILOT IN COMMAND
3. LIGHT CONDITION - DARK NIGHT

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Occurrence #2: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: APPROACH

Findings

4. OBJECT - RESIDENCE

## Factual Information

### HISTORY OF FLIGHT

On September 1, 2002, at 0635 eastern daylight time, an unregistered Grumman American AA-5B, N81189, operated by a private pilot collided with trees and a family home while on approach to Zephyrhills Municipal Airport, Zephyrhills, Florida. The personal flight operated under the provisions of Title 14 CFR part 91 with no flight plan filed. Instrument meteorological conditions prevailed at the time of the accident. The airplane was destroyed, and the private pilot and passenger were fatally injured. The flight departed Zephyrhills Municipal Airport, Zephyrhills, Florida, September 1, 2002, at an undetermined time.

Witnesses near the accident site reported they heard an airplane flying low over the neighborhood prior to the approximate time of the accident. Shortly after hearing the low flying airplane, an explosion was heard. Witnesses discovered a nearby home engulfed in flames, and confirmed that a small airplane had collided with the home. Witnesses reported the weather conditions were foggy and dark night light conditions existed at the time of the accident.

### PERSONNEL INFORMATION

Review of the information on file with the Federal Aviation Administration (FAA) Airman's Certification Division, Oklahoma City, Oklahoma, revealed the pilot was issued a private pilot certificate on January 18, 1996, with a single engine land rating. The pilot's total flight time was approximately 185 hours. The pilot's flight time in the Grumman AA-5B was not determined. The pilot held a third class medical certificate, dated May 18, 2001, valid when wearing corrective glasses for near vision. The pilot's logbooks were not recovered for examination.

### AIRCRAFT INFORMATION

Review of records revealed the current pilot purchased the airplane on September 21, 2001. A review of the FAA aircraft records revealed that the airplane was not registered to the new owner. The airplanes' logbooks were not recovered for examination.

### METEOROLOGICAL INFORMATION

Lakeland Regional Airport, located 16 nautical miles southeast of Zephyrhills Airport, 0650 weather observation, reported winds calm, sky conditions scattered at 200 feet above ground level (AGL), visibility 1 statute mile, mist, temperature 25 Celsius, dew point 25 Celsius, and the altimeter setting was 30.02. The Landenberg Airport, weather observation located 16 nautical miles southwest of Zephyrhills Airport, reported at 0552, winds 050 degrees and 5 knots,

overcast sky at 500 feet AGL, visibility 1.5 statute miles, with mist, temperature 25 Celsius, and dew point 25 Celsius. There was no record of the pilot receiving a weather briefing before departure.

## AIRPORT INFORMATION

Zephyrhills Municipal Airport has a field elevation of 90 feet MSL. It has two runways, 36-18 and 04-22. The airport has no air traffic control tower, with no instrument approach procedures. At the time of the accident the airplane was maneuvering.

## WRECKAGE AND IMPACT INFORMATION

Examination of the wreckage path revealed it was 350 feet in length on a 180-degree magnetic heading. Examination of the accident site revealed freshly broken tree branches at the top of a 50-foot tree at the beginning of the wreckage path. The right aileron was located at the base of the first stand of trees. The right wing tip was located approximately 50 feet from the aileron along the wreckage debris path. The left wing tip was located approximately 20 feet above the ground along the wreckage debris path in a tree. The first ground scar was 200 feet from the first freshly broken tree. The foliage in the area of the ground scar showed signs of intense heat. The engine was located 30 feet from the ground scar resting against a severely fire damaged house. The main fuselage was located in the rear of the home.

Examination of the right wing revealed the right aileron was separated from the wing at the attachment points, with chordwise buckling. The right flap was separated from the wing at the attachment points with chordwise buckling. The right elevator was fire damaged. The left wing was shattered, and a three-foot section of the wing tip displayed crush damage. The left elevator displayed chordwise buckling, and heavy fire damage. The cabin and fuselage were consumed by fire. The horizontal stabilizer displayed heavy crush and fire damage. All flight control cables were located within the airplane. The cable system was traced from the attachment points on the flight controls to the control surface attachment points. The cables were cut for extraction purposes.

Examination of the engine revealed crush and fire damage. The propeller was separated from the engine, and the propeller hub remained attached to the crankshaft flange. Both propeller blades exhibited twisting and chordwise scoring. The fuel system was heavily fire damaged. The right magneto produced ignition sparks from all lead towers when rotated. The left magneto was fire damaged. All spark plug electrodes were dry and tan in color. The oil pump was intact and there was no evidence of debris in the pressure screen. The crankshaft rotated and compression and suction was noted on all cylinders. Internal gear and valve train continuity was confirmed. The examination of the airframe and engine failed to disclose evidence of pre-impact failure or malfunction.

## MEDICAL AND PATHOLOGICAL INFORMATION

The Pasco & Pinellas County medical examiner, Largo, Florida, preformed the postmortem examination on the private pilot on September 1, 2002. The cause of death was multiple blunt trauma. The toxicological examinations were negative for carbon monoxide, cyanide, drugs and alcohol. Traces of Propranolol were detected in the blood, kidney, liver and urine. Propranolol decreases cardiac rate and output, reduces blood pressure, and is effective in the prophylaxis of migraine.

#### ADDITIONAL INFORMATION

The airplane wreckage was released to CTC Services Aviation (LAD Inc.) on September 11, 2002.

#### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	48, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	May 1, 2001
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	185 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	American General Aircraft	<b>Registration:</b>	N81189
<b>Model/Series:</b>	AA-5B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	AA5B-0453
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	2200 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1589 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-360
<b>Registered Owner:</b>		<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	James Rex	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Instrument (IMC)	<b>Condition of Light:</b>	Night/dark
<b>Observation Facility, Elevation:</b>	LAL,142 ft msl	<b>Distance from Accident Site:</b>	16 Nautical Miles
<b>Observation Time:</b>	06:50 Local	<b>Direction from Accident Site:</b>	153°
<b>Lowest Cloud Condition:</b>	Scattered / 200 ft AGL	<b>Visibility</b>	1 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.02 inches Hg	<b>Temperature/Dew Point:</b>	25°C / 25°C
<b>Precipitation and Obscuration:</b>	N/A - None - Fog		
<b>Departure Point:</b>	ZEPHYRHILLS, FL (ZPH)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	ZEPHYRHILLS, FL (ZPH)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	06:20 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	ZEPHYRHILLS MUNI ZPH	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	90 ft msl	<b>Runway Surface Condition:</b>	Wet
<b>Runway Used:</b>	18	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5067 ft / 150 ft	<b>VFR Approach/Landing:</b>	Unknown

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	1 Fatal	<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	On-ground
<b>Total Injuries:</b>	2 Fatal	<b>Latitude, Longitude:</b>	28.228055,-82.15583

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Alleyne, Eric
<b>Additional Participating Persons:</b>	Patrick Seggerman; Tampa FSDO; Tampa, FL Edward Rogalski; Lycoming; Belleview, FL
<b>Original Publish Date:</b>	November 25, 2003
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB traveled to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=55607">https://data.ntsb.gov/Docket?ProjectID=55607</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).