



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	CHESAPEAKE, VA	<b>Accident Number:</b>	IAD97FA039
<b>Date &amp; Time:</b>	01/02/1997, 1937 EST	<b>Registration:</b>	N3CD
<b>Aircraft:</b>	Aerostar 601P	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	4 Fatal
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The airplane departed the airport and crashed shortly thereafter. Before departure, the airplane was fueled with 120 gallons of 100LL aviation fuel. According to the refueler, the airplane had full fuel tanks. The refueler also indicated the pilot had stated he wanted to be airborne prior to the arrival of bad weather. After the accident, the engines and propellers were disassembled and examined. No engine or propeller discrepancies were noted, except (postimpact) heat damage.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: failure of the pilot to maintain proper altitude/clearance above the ground after takeoff. A related factor was the pilot's self-induced pressure to depart before the arrival of bad weather.

## Findings

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Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: TAKEOFF

### Findings

1. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
2. (F) SELF-INDUCED PRESSURE - PILOT IN COMMAND

## Factual Information

### HISTORY OF FLIGHT

On January 2, 1997, at about 1937 eastern standard time, a Aerostar 601P, N3CD, crashed in a heavily wooded swampy area approximately 1/2 mile north of runway 5, shortly after takeoff from the Chesapeake Municipal Airport in Chesapeake, Virginia. The pilot/owner and 3 passengers sustained fatal injuries, and impact and subsequent post-crash fire destroyed the airplane. Instrument meteorological conditions prevailed, and an instrument flight rules (IFR) flight plan was filed. The pleasure flight was being conducted under 14 CFR Part 91, and was originating at the time of the accident.

According to the airport manager, the pilot had dropped off his granddaughter and had taken on fuel. He stated that the pilot appeared to be in a hurry and had stated that he wanted to be airborne prior to the arrival of some bad weather. The airport manager fueled the airplane topping off the tanks and returned to his office. He said he did not watch the takeoff and was not aware of the accident until notified by local authorities later in the evening.

### PILOT INFORMATION

The pilot held a private certificate. He had private pilot privileges for airplane single engine land, multi-engine land and instrument airplane. The pilot's logbook was not recovered. The pilot's last proficiency check was undetermined due to the lack of a current logbook. The pilot reported 2100 civilian flight hours in all aircraft on the application for his most recent Third Class Medical Certificate, which was dated May 3, 1996. The medical certificate contained the limitation that the pilot must wear corrective lenses in order to exercise the privileges of the airman's certificate.

### AIRPLANE INFORMATION

The engine and aircraft records were examined, with no discrepancies found. Both engines were inspected on April 16, 1996. The airframe received an annual inspection on April 16, 1996.

### METEOROLOGICAL INFORMATION

The weather when the airplane departed was 300 feet overcast ceilings with 3 miles visibility, but according to witnesses, it was deteriorating rapidly.

### WRECKAGE AND IMPACT INFORMATION

The airplane impacted into heavy brush and moderate sized trees. The surrounding area was swampy. The airplane was located approximately 1/2 mile from the departure end of runway 5. The wreckage was distributed on a 30 degree azimuth. The descent angle through the trees was estimated to be 10 degrees down. Except for the empennage, the airplane was consumed by fire.

Prior to departure, the airplane was fueled with 120 gallons of 100LL aviation fuel. According to the refueler, the airplane then had full fuel tanks.

The weight and balance was calculated and found to be 270.2 pounds over the maximum gross weight of 6, 315 pounds.

Subsequent to the accident, the engines were disassembled and examined. The left engine

showed heat damage to the fuel injector, flow divider, fuel pump, and ignition harness. All cylinders produced thumb compression. There was continuity through the engine, including the accessory drive train. The right engine also showed extreme heat damage to the spark plugs and valves, and many components were consumed by the fire. Continuity to all connecting rods was confirmed. No discrepancies, other than the heat damage, were noted on either engine.

Both propellers were also examined. The left propeller showed the pitch change mechanism cylinder was stripped from the hub and retained by a jammed piston. The pitch change rod was fractured, with shear lips evident. No heat distress was noted on any of the blades. One blade was bent rearward about 45 degrees at the mid blade location and twisted. The next blade was bent rearward 60 degrees and twisted. The last blade was bent smoothly rearward 90 degrees and twisted. The right propeller was heat distressed throughout. The pitch change rod was fractured. The right propeller blades showed heat distress. The first blade had a large mass of molten material fused to the face of the blade, and was bent rearward. The next blade was bent rearward 80 degrees and twisted slightly. The last blade was bent rearward 40 degrees and twisted.

The left propeller piston, right propeller piston, left and right pitch change rods, right propeller cylinder, and right propeller spring were sent to the National Transportation Safety Board's Metallurgical Laboratory for further testing. According to the report, the left propeller pitch change rod was forced through the left piston under loads not encountered in normal operation. The fractures to both rods and the right piston were caused by shear overstress. The right propeller spring damage suggests that the spring was being compressed at some time.

#### MEDICAL AND PATHOLOGICAL INFORMATION

A post mortem examination of the pilot was performed January 3, 1997 by Dr. James Batten, Medical Examiner, in Chesapeake, Virginia. A toxicological examination was completed by the Federal Aviation Administration on May 1, 1997. The results were negative for carboxyhemoglobin, cyanide, ethanol, and drugs.

#### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	66, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<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>	05/03/1996
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2100 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Aerostar	Registration:	N3CD
Model/Series:	601P 601P	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	61P-0353-108
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	04/16/1996, Annual	Certified Max Gross Wt.:	5700 lbs
Time Since Last Inspection:	26 Hours	Engines:	2 Reciprocating
Airframe Total Time:	1949 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	TIO-540
Registered Owner:	C G AVIATION	Rated Power:	310 hp
Operator:	CHRISTOPHER PAVLIDES	Operating Certificate(s) Held:	None
Operator Does Business As:	C G AVIATION	Operator Designator Code:	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	CPK, 20 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1941 EST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	3 Miles
Lowest Ceiling:	Overcast / 300 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	10° C / 7° C
Precipitation and Obscuration:			
Departure Point:	(CPK)	Type of Flight Plan Filed:	IFR
Destination:	ATLANTA, GA (PDK)	Type of Clearance:	IFR
Departure Time:	1937 EST	Type of Airspace:	Class C

## Airport Information

Airport:	CHESAPEAKE MUNICIPAL (CPK)	Runway Surface Type:	Asphalt
Airport Elevation:	20 ft	Runway Surface Condition:	Dry
Runway Used:	23	IFR Approach:	None
Runway Length/Width:	4200 ft / 100 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	3 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Fatal	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	BUTCH WILSON	Report Date:	05/21/1998
Additional Participating Persons:	MARGARET MORRISON; SANDSTON, VA ROGER W STALLKAMP; PIQUA, OH JAMES F BROWN; WILLIAMSPORT, PA DARYL MIDDLEBROOK; DANBURY, CT		
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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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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](#).