



# Aviation Investigation Final Report

<b>Location:</b>	SOMERVILLE, Tennessee	<b>Accident Number:</b>	MIA97LA028
<b>Date &amp; Time:</b>	November 23, 1996, 15:45 Local	<b>Registration:</b>	N3178U
<b>Aircraft:</b>	North American T28B	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

A witness observed the airplane in aerobatic flight, above a private airstrip, which was less than a mile from the crash site. According to the witness, the airplane flew down the runway about 200 to 400 feet above the ground in straight and level flight. The witness said that he stepped inside for less than a minute, and when he returned outside, the airplane had crashed and was burning. This was a common area for this pilot and others to 'perform and practice low altitude maneuvers and aerobatics.' The area surrounding the accident site was level, but where the airplane first struck trees, the terrain was higher than most of the surrounding area. Based on witness accounts, there was evidence that the pilot miscalculated his altitude over the higher terrain, and that he was in 'inverted flight' before striking the trees. No discrepancies were found with the engine or airframe.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot misjudged his altitude/clearance above trees on terrain that was higher than the surrounding terrain, while performing an aerobatic maneuver.

### Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: MANEUVERING

Findings

1. AEROBATICS - INITIATED - PILOT IN COMMAND
2. (F) TERRAIN CONDITION - RISING
3. (F) OBJECT - TREE(S)
4. (C) ALTITUDE/CLEARANCE - MISJUDGED - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: MANEUVERING

## Factual Information

On November 23, 1996, about 1545 central standard time, a North American T28B, N3178U, registered to a private owner crashed while maneuvering near Somerville, Tennessee. Visual meteorological conditions prevailed, and no flight was filed. The personal flight was being conducted in accordance with Title 14 CFR Part 91. The airplane was destroyed and the airline transport-rated pilot was fatally injured.

A witness observed the airplane performing aerobatics, above a private airstrip, located less than a mile from the crash site. According to the witness the airplane flew down the runway about 200 to 400 feet above the ground, in straight and level flight. The witness said that he stepped inside for less than a minute, and when he returned outside the airplane had crashed and was burning.

According to the FAA inspector's report, this was a common area for this pilot and others to "perform and practice low altitude maneuvers and aerobatics." N3178U had been seen in the area for awhile performing aerobatic maneuvers. The area surrounding the accident was level, but the area where "the airplane first struck, was on higher terrain, than most of the surrounding area, and the trees just added to that."

The FAA inspector further stated, based on witness accounts, the pilot "miscalculated" his altitude over the higher terrain, and was in "inverted flight" before striking the trees. Additionally, a witness told the FAA that the engine "cutout" or hesitated just before impact. No discrepancies were found with the engine and it was the conclusion of the FAA inspector that, "...these engines are known to momentarily cutout when performing these kinds of maneuvers due to no inverted fuel systems."

### MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot, on November 25, 1996, at the University of Tennessee, in Memphis, Tennessee, by Dr. O.C. Smith.

Toxicological tests were conducted at the Federal Aviation Administration, Research Laboratory, Oklahoma City, Oklahoma, and revealed, "no drugs or alcohol."

Toxicological tests on the pilot were also conducted at the University of Tennessee, in Memphis, Tennessee, and revealed, "no drugs or alcohol."

## Pilot Information

<b>Certificate:</b>	Airline transport	<b>Age:</b>	42, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	March 1, 1996
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	13300 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	North American	<b>Registration:</b>	N3178U
<b>Model/Series:</b>	T28B T28B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Aerobatic	<b>Serial Number:</b>	137765
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	7150 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	R-1820-86B
<b>Registered Owner:</b>	JAMES PRICE	<b>Rated Power:</b>	1425 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>	JAMES PRICE AIRCRAFT	<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	MEM	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	14:50 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	12 miles
<b>Lowest Ceiling:</b>	Broken / 5500 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	140°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	17°C / 5°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	OLIVE BRANCH , MS	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	00:00 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	35.22937,-89.350387(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Yurman, Alan
<b>Additional Participating Persons:</b>	GARY MYERS; MEMPHIS , TN
<b>Original Publish Date:</b>	May 23, 1997
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=38180">https://data.nts.gov/Docket?ProjectID=38180</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](#).