



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	FLORENCE, AL	<b>Accident Number:</b>	ATL90FA139A
<b>Date &amp; Time:</b>	07/01/1990, 1723 CDT	<b>Registration:</b>	N2409K
<b>Aircraft:</b>	PIPER PA-38-112	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Fatal

**Flight Conducted Under:** Part 91: General Aviation - Instructional

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## Analysis

THE PILOTS OF TWO SIMILAR PA-38-112 AIRPLANES WERE FILED FOR SEPARATE VFR CROSS COUNTRY FLIGHTS. AFTER AN INTERMEDIATE STOPOVER AT AN AIRPORT AWAY FROM HOME BASE, THE TWO AIRPLANES JOINED UP AND BEGAN FLYING IN FORMATION. ACCORDING TO A WITNESS, THE TRAILING AIRPLANE (N2409K) COLLIDED WITH THE LEADING AIRPLANE (N2437K) FROM THE REAR WHILE MANEUVERING. IMPACT, PAINT AND RUBBER TRANSFER MARKS INDICATED THAT N2409K COLLIDED WITH N2437K FROM THE REAR, RIGHT SIDE. THE FLIGHT SCHOOL FROM WHICH THE PILOTS WERE ENROLLED EXPRESSLY PROHIBITED FORMATION FLYING OF ANY TYPE. THE PIC'S OF EACH AIRPLANE HAD LOGGED ABOUT 118 HOURS EACH PRIOR TO THE ACCIDENT, AND HAD RECEIVED THEIR PILOT CERTIFICATES THE MONTH PRIOR TO THE ACCIDENT. THE PILOTS AND PILOT RATED PASSENGERS WERE ALL SPANISH CITIZENS.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF THE PILOT-IN-COMMAND OF N2409K TO MAINTAIN SAFE SEPARATION FROM N2437K DURING UNAUTHORIZED FORMATION MANEUVERING. OVERCONFIDENCE IN PERSONAL ABILITY AND THE EXECUTIVE OF UNAUTHORIZED FORMATION FLIGHT ON THE PART OF BOTH PILOTS-IN-COMMAND WERE FACTORS IN THE ACCIDENT. THE LACK OF TOTAL EXPERIENCE OF BOTH PILOTS-IN-COMMAND WAS ALSO A FACTOR IN THE ACCIDENT.

## Findings

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Occurrence #1: MIDAIR COLLISION

Phase of Operation: CRUISE - NORMAL

### Findings

1. (F) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
2. (F) OVERCONFIDENCE IN PERSONAL ABILITY - PILOT IN COMMAND
3. (F) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT OF OTHER AIRCRAFT
4. (F) OVERCONFIDENCE IN PERSONAL ABILITY - PILOT OF OTHER AIRCRAFT
5. (F) PROCEDURES/DIRECTIVES - DISREGARDED - PILOT IN COMMAND
6. (F) LACK OF TOTAL EXPERIENCE - PILOT IN COMMAND
7. (F) PROCEDURES/DIRECTIVES - DISREGARDED - PILOT OF OTHER AIRCRAFT
8. (F) LACK OF TOTAL EXPERIENCE - PILOT OF OTHER AIRCRAFT
9. (C) CLEARANCE - NOT MAINTAINED - PILOT OF OTHER AIRCRAFT
10. (F) FORMATION FLYING - IMPROPER - PILOT OF OTHER AIRCRAFT

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	27, 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>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	01/17/1990
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	118 hours (Total, all aircraft), 5 hours (Total, this make and model), 42 hours (Pilot In Command, all aircraft), 86 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N2409K
<b>Model/Series:</b>	PA-38-112 PA-38-112	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal; Utility	<b>Serial Number:</b>	38-79A0620
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	06/14/1990, 100 Hour	<b>Certified Max Gross Wt.:</b>	1670 lbs
<b>Time Since Last Inspection:</b>	25 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	7138 Hours	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	O-235-L2C
<b>Registered Owner:</b>	BOLIVAR AIRCRAFT SALES, INC.	<b>Rated Power:</b>	112 hp
<b>Operator:</b>	BOLIVAR AIRCRAFT SALES, INC.	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MSL, 550 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	1654 CDT	Direction from Accident Site:	180°
Lowest Cloud Condition:	Scattered / 5000 ft agl	Visibility	7 Miles
Lowest Ceiling:	Overcast / 25000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.9 inches Hg	Temperature/Dew Point:	33° C / 20° C
Precipitation and Obscuration:			
Departure Point:	HUNTSVILLE, AL (HSV)	Type of Flight Plan Filed:	VFR
Destination:	BOLIVAR, TN (M08)	Type of Clearance:	None
Departure Time:	1641 CDT	Type of Airspace:	Class G

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	RALPH E HICKS	Report Date:	09/21/1992
Additional Participating Persons:			
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:pubinquiry@ntsb.gov">pubinquiry@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](#).