



Aviation Investigation Final Report

Location:	CARY, North Carolina	Accident Number:	DCA88MA032
Date & Time:	February 19, 1988, 21:27 Local	Registration:	N622AV
Aircraft:	FAIRCHILD SA227-AC	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	12 Fatal
Flight Conducted Under:	Part 135: Air taxi & commuter - Scheduled		

Analysis

THE AIRCRAFT DEPARTED DURING LOW CEILING, LOW VISIBILITY, AND NIGHT CONDITIONS. SHORTLY AFTER TAKEOFF THE AIRCRAFT IMPACTED A RESERVOIR. ANALYSIS OF RADAR DATA INDICATED THE ACFT WAS IN A 45 DEGREE DESCENDING TURN. EXAM OF THE ACFT TRIM SYSTEM SHOWED THAT THE ACFT WAS TRIMMED FOR LEVEL FLIGHT. THERE WAS NO VOICE OR FLIGHT DATA RECORDER ON BOARD. A REVIEW OF ATC COMMUNICATIONS INDICATED THAT THE CAPTAIN WAS COMMUNICATING WITH ATC ALLOWING THE FIRST OFFICER TO ACCOMP-LISH THE FLYING DUTIES. EXAMINATION OF THE WRECKAGE REVEALED NO INDICATIONS OF POWERPLANT OR SYSTEM FAILURES. HOWEVER, THERE WAS EVIDENCE THAT THE SAS WARNING LIGHT WAS ILLUMINATED, THE SAS SWITCH WAS IN THE OFF POSITION, AND NO SAS SYSTEMMALFUNCTION COULD BE FOUND. WITNESSES STATED THAT BEFORE THE FLIGHT THE CAPTAIN HAD COMPLAINED OF ILLNESS BUT HE DECIDEDTO REPORT FOR DUTY. COMPANY RECORDS SHOWED INSTANCES OF SUBSTANDARD PERFORMANCE BY THE FIRST OFFICER. THE INVESTIGATION FOUND COMPANY OVERSIGHT OF TRAINING, OPERATIONS, AND INADEQUATE FAA SUPERVISION. (SEE NTSB/AAR-88/10)

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. WEATHER CONDITION - LOW CEILING
 2. WEATHER CONDITION - FOG
 3. LIGHT CONDITION - DARK NIGHT
 4. (C) CLIMB - NOT MAINTAINED
 5. (C) VISUAL/AURAL DETECTION - COPILOT/SECOND PILOT
 6. (F) INADEQUATE SURVEILLANCE OF OPERATION - COMPANY/OPERATOR MGMT
 7. (F) INADEQUATE SURVEILLANCE OF OPERATION - FAA(ORGANIZATION)
 8. MENTAL PERFORMANCE OVERLOAD - COPILOT/SECOND PILOT
 9. (C) MONITORING - INADEQUATE - PILOT IN COMMAND
 10. PHYSICAL IMPAIRMENT - PILOT IN COMMAND
 11. STALL WARNING SYSTEM - NOT ENGAGED
 12. PROCEDURES/DIRECTIVES - MISJUDGED - PILOT IN COMMAND
 13. (C) VISUAL/AURAL PERCEPTION
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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

14. DESCENT - INADVERTENT - COPILOT/SECOND PILOT
15. TERRAIN CONDITION - WATER

Factual Information

Pilot Information

Certificate:	Airline transport; Flight instructor	Age:	38,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	November 6, 1987
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	3400 hours (Total, all aircraft), 1800 hours (Total, this make and model), 2600 hours (Pilot In Command, all aircraft), 137 hours (Last 90 days, all aircraft), 47 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	FAIRCHILD	Registration:	N622AV
Model/Series:	SA227-AC SA227-AC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	AC-622
Landing Gear Type:	Retractable - Tricycle	Seats:	21
Date/Type of Last Inspection:	February 15, 1988 Continuous airworthiness	Certified Max Gross Wt.:	14500 lbs
Time Since Last Inspection:		Engines:	2 Turbo prop
Airframe Total Time:	4222 Hrs	Engine Manufacturer:	GARRETT
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	TPE-331-11U-6
Registered Owner:	AVAIR, INC.	Rated Power:	1000 Horsepower
Operator:	AVAIR, INC.	Operating Certificate(s) Held:	Commuter air carrier (135)
Operator Does Business As:	AMERICAN EAGLE	Operator Designator Code:	FAVA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Night/dark
Observation Facility, Elevation:	RDU ,441 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	21:36 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	
Lowest Ceiling:	100 ft AGL	Visibility (RVR):	2400 ft
Wind Speed/Gusts:	5 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	226°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	8°C / 8°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	RALEIGH (RDU)	Type of Flight Plan Filed:	IFR
Destination:	RICHMOND (RIC)	Type of Clearance:	IFR
Departure Time:	21:30 Local	Type of Airspace:	Class D;Class E;TRSA

Airport Information

Airport:	RALEIGH/DURHAM RDU	Runway Surface Type:	Concrete
Airport Elevation:	437 ft msl	Runway Surface Condition:	Wet
Runway Used:	23R	IFR Approach:	None
Runway Length/Width:	10000 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	10 Fatal	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	12 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): Strauch, Barry

Additional Participating Persons:

Original Publish Date: April 4, 1989

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=15896>

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](#).