



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	WILMINGTON, NC	<b>Accident Number:</b>	ATL87FA123
<b>Date &amp; Time:</b>	04/23/1987, 1935 EDT	<b>Registration:</b>	N505LB
<b>Aircraft:</b>	SWEARINGEN SA-226TC	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Fatal
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

THE RIGHT ENGINE FAILED DURING TAKEOFF IMMEDIATELY AFTER ROTATION 3000' DOWN THE 7,002' RWY 16. THE PLT CONTINUED THE FLT AND THE LANDING GEAR REMAINED EXTENDED. THE UNAUTHORIZED PLT RATED PAX MADE XMISSIONS TO THE TOWER. WITNESSES RPTED THAT THE ACFT REACHED APPROX. 150' THEN DESCENDED INTO TREES 20 DEGREES TO THE RIGHT OF RWY CENTERLINE AND 3,000' SOUTH OF THE ARPT. THE PRE- 1979 3RD STAGE STATOR ASSY IN THE RIGHT ENGINE DID NOT HAVE THE LATEST MANUFACTURE WELDING PROCESS/INSPECTION AND FAILED CAUSING THE UNCONTAINED TURBINE FAILURE. INSTRUMENTS IN THE WRECKAGE INDICATED THAT AN UNDETERMINABLE LOSS OF ELECTRICAL POWER OCCURRED AT THE TIME OF ENGINE FAILURE. PERFORMANCE DATA INDICATED THAT A SAFE LANDING COULD HAVE BEEN MADE ON THE REMAINING RWY PAST THE POINT OF ENGINE FAILURE.

## Probable Cause and Findings

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

## Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (F) TURBINE ASSEMBLY,NOZZLE RETENTION - INADEQUATE
2. (F) ACFT/EQUIP,INADEQUATE DESIGN - MANUFACTURER
3. (F) TURBINE ASSEMBLY,TURBINE WHEEL - BURST
4. (F) ELECTRICAL SYSTEM - UNDETERMINED

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Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

5. (F) OBJECT - TREE(S)
6. (C) IN-FLIGHT PLANNING/DECISION - POOR - PILOT IN COMMAND
7. (F) PRESSURE INDUCED BY OTHERS - PILOT IN COMMAND
8. (C) EMERGENCY PROCEDURE - NOT FOLLOWED - PILOT IN COMMAND
9. (C) ALL AVAILABLE RUNWAY - NOT USED - PILOT IN COMMAND

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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

10. TERRAIN CONDITION - GROUND

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial	<b>Age:</b>	32, 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>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last Medical Exam:</b>	10/28/1986
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	6160 hours (Total, all aircraft), 1860 hours (Total, this make and model), 5460 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 43 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	SWEARINGEN	<b>Registration:</b>	N505LB
<b>Model/Series:</b>	SA-226TC SA-226TC	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	TC202
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	03/04/1987, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	12500 lbs
<b>Time Since Last Inspection:</b>	50 Hours	<b>Engines:</b>	2 Turbo Prop
<b>Airframe Total Time:</b>	7667 Hours	<b>Engine Manufacturer:</b>	GARRETT
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	TPE 331-3UW
<b>Registered Owner:</b>	AIR-LIFT ASSOCIATES, INC.	<b>Rated Power:</b>	840 hp
<b>Operator:</b>	AIR-LIFT ASSOCIATES, INC.	<b>Air Carrier Operating Certificate:</b>	Commuter Air Carrier (135); On-demand Air Taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	WPKA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ILM, 32 ft msl	Observation Time:	1936 EDT
Distance from Accident Site:	1 Nautical Miles	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 10000 ft agl	Temperature/Dew Point:	19° C / 18° C
Lowest Ceiling:	None / 0 ft agl	Visibility	15 Miles
Wind Speed/Gusts, Direction:	9 knots, 90°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	WILMINGTON, NC (ILM)	Type of Flight Plan Filed:	IFR
Destination:	LUMBERTON, NC (LBT)	Type of Clearance:	IFR
Departure Time:	1934 EDT	Type of Airspace:	Class D; Class E

## Airport Information

Airport:	NEW HANOVER (ILM)	Runway Surface Type:	Asphalt
Airport Elevation:	32 ft	Runway Surface Condition:	Dry
Runway Used:	16	IFR Approach:	None
Runway Length/Width:	7002 ft / 150 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	BEN R COLEMAN	Adopted Date:	08/31/1988
Additional Participating Persons:	WALT RIGSBEE; RALEIGH, NC JACK D MORGAN; SAN ANTONIO, TX PETER BAKER; PHOENIX, AZ TIM LUCKWALDT; NORRISVILLE, NC		
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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