



# Aviation Investigation Final Report

<b>Location:</b>	SAVANNAH, Georgia	<b>Accident Number:</b>	ATL91LA007
<b>Date &amp; Time:</b>	October 21, 1990, 15:26 Local	<b>Registration:</b>	N5506P
<b>Aircraft:</b>	PIPER PA-24-250	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

WHILE IN CRUISE FLIGHT, AT ABOUT 2000 FEET, THE ENGINE QUIT WITH A BANG. OIL COVERED THE WINDSCREEN. THE PILOT MADE A FORCED LANDING INTO A SWAMPY, MARSHY AREA, WITH THE LANDING GEAR RETRACTED. SUBSEQUENT EXAMINATION OF THE ENGINE BY A MECHANIC REVEALED THAT THE NO. 5 & 6 CONNECTING RODS HAD SEPARATED. THE DAMAGE WAS DETERMINED TO BE THE RESULT OF A ROD CAP BOLT FAILURE. THE ENGINE HAD 1851 TOTAL HOURS. A TOP OVERHAUL WAS COMPLETED ABOUT 875 HOURS PRIOR TO THE ACCIDENT.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: TOTAL FAILURE OF A CONNECTING ROD CAP BOLT WHICH RESULTED IN A TOTAL LOSS OF POWER.

### Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF  
Phase of Operation: CRUISE - NORMAL

#### Findings

1. (C) ENGINE ASSEMBLY,CONNECTING ROD BOLT - FAILURE,TOTAL

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Findings

2. TERRAIN CONDITION - NONE SUITABLE

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	66, Male
<b>Airplane Rating(s):</b>	Multi-engine land	<b>Seat Occupied:</b>	Unknown
<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>		<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	December 14, 1990
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	4500 hours (Total, all aircraft), 80 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N5506P
<b>Model/Series:</b>	PA-24-250 PA-24-250	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	24-369
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	February 8, 1990 Annual	<b>Certified Max Gross Wt.:</b>	2900 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1891 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-540-A1A5
<b>Registered Owner:</b>		<b>Rated Power:</b>	250 Horsepower
<b>Operator:</b>	COTTLE, C. R. JR.	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<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>	SAV ,51 ft msl	<b>Distance from Accident Site:</b>	20 Nautical Miles
<b>Observation Time:</b>	15:26 Local	<b>Direction from Accident Site:</b>	315°
<b>Lowest Cloud Condition:</b>	Scattered / 2500 ft AGL	<b>Visibility</b>	20 miles
<b>Lowest Ceiling:</b>	Overcast / 5500 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	14 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	120°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 19°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	WALTERBORO , SC (RBW )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	SANFORD , FL (SFB )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	15:00 Local	<b>Type of Airspace:</b>	

## Airport Information

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

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 None	<b>Latitude, Longitude:</b>	32.020679,-80.990882(est)

## Administrative Information

**Investigator In Charge (IIC):** Hicks, Preston

**Additional Participating Persons:**

**Original Publish Date:** March 12, 1993

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=8351>

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