



# Aviation Investigation Final Report

<b>Location:</b>	MONCKS CORNER, South Carolina	<b>Accident Number:</b>	ATL93LA139
<b>Date &amp; Time:</b>	August 2, 1993, 10:30 Local	<b>Registration:</b>	N7027P
<b>Aircraft:</b>	PIPER PA-24-180	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE ENGINE LOST POWER DURING CRUISE FLIGHT AT 2000 FEET AGL. THE PILOT FORCE LANDED THE AIRPLANE IN A FIELD APPROXIMATELY 5 MILES EAST OF THE AIRPORT. THE LANDING GEAR COLLAPSED ON ROLLOUT WHEN IT STRUCK A LINE OF BUSHES. EXAMINATION OF THE ENGINE REVEALED THAT THE NUMBER ONE CYLINDER HAD BROKEN OFF IN THE FLANGE RADIUS, WHICH RESULTED IN FAILURE OF THE NUMBER ONE PISTON AT THE WRIST PIN. NO EVIDENCE OF FATIGUE WAS FOUND ON THE CYLINDER FRACTURE SURFACES.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF THE NUMBER ONE CYLINDER AT THE CYLINDER FLANGE RADIUS.

## Findings

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

### Findings

1. (C) ENGINE ASSEMBLY,CYLINDER - OVERLOAD
2. ENGINE ASSEMBLY,CYLINDER - 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

3. TERRAIN CONDITION - HIGH VEGETATION

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Occurrence #4: GEAR COLLAPSED

Phase of Operation: LANDING - ROLL

Findings

4. LANDING GEAR,MAIN GEAR - OVERLOAD

## Factual Information

On August 2, 1993, at 1030 eastern daylight time, a Piper PA-24-180, N7027P, collided with terrain during a forced landing near Moncks Corner, South Carolina. The airplane was operated by the pilot under 14 CFR Part 91 and visual flight rules. Visual meteorological conditions prevailed at the time of the accident. A flight plan was not filed for the personal flight. There were no injuries to the private pilot, while the airplane was substantially damaged. Origination of the flight was Georgetown, South Carolina, at about 0900 on the same day.

The pilot reported that the engine quit while in cruise flight at approximately 2000 ft. AGL. A forced landing was made into wooded terrain, causing damage to the airframe and landing gear. Examination of the airplane's engine, a Lycoming O-360-AT1, revealed that the number one cylinder had broken away from the engine. Also, the number one piston was broken off at the wrist pin. No evidence of fatigue was found at the cylinder fracture surfaces.

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	72, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<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>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	January 11, 1993
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	6500 hours (Total, all aircraft), 15 hours (Total, this make and model), 6200 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N7027P
<b>Model/Series:</b>	PA-24-180 PA-24-180	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	24-2174
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	November 3, 1992 Annual	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>	60 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3366 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-360-A1A
<b>Registered Owner:</b>	JORDAN, RAY	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>		<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>	CHS ,46 ft msl	<b>Distance from Accident Site:</b>	20 Nautical Miles
<b>Observation Time:</b>	09:50 Local	<b>Direction from Accident Site:</b>	5°
<b>Lowest Cloud Condition:</b>	Unknown / 12000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 12000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	210°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	31°C / 20°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	GEORGETOWN , SC (GGE )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	09:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	BERKLEY COUNTY 50J	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	74 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	23	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3801 ft / 75 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>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	33.189285,-79.990966(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hicks, Preston
<b>Additional Participating Persons:</b>	LEWIS W BLACKWELL; COLUMBIA , SC
<b>Original Publish Date:</b>	December 2, 1994
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=3248">https://data.ntsb.gov/Docket?ProjectID=3248</a>

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