



# Aviation Investigation Final Report

<b>Location:</b>	SEAGROVE, North Carolina	<b>Accident Number:</b>	ATL90LA138
<b>Date &amp; Time:</b>	June 28, 1990, 10:30 Local	<b>Registration:</b>	N3081G
<b>Aircraft:</b>	BELL                      BH-47G	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

WHILE ON A ROUTINE POWER LINE PATROL FLIGHT, THE PILOT HEARD A LOUD NOISE FROM THE ENGINE COMPARTMENT. THE HELICOPTER YAWED TO THE LEFT, AND SPLIT ENGINE/ROTOR RPM INDICATIONS WERE OBSERVED. AN AUTOROTATION WAS PERFORMED IN A PARTIALLY CLEARED AREA AND THE HELICOPTER IMPACTED TREES AND TERRAIN. INSPECTION OF THE ENGINE REVEALED THE NUMBER FOUR CONNECTING ROD BELT HAD FAILED. THE CONNECTING ROD SEPARATED FROM THE CRANKSHAFT AND JAMMED ITSELF AGAINST THE CRANKSHAFT, RESULTING IN ENGINE STOPPAGE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF A NUMBER FOUR CONNECTING ROD BOLT FOR AN UNDETERMINED REASON.

## 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
2. (C) ENGINE ASSEMBLY,CONNECTING ROD BOLT - UNDETERMINED

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY  
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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - EMERGENCY

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	47, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	February 6, 1990
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	16860 hours (Total, all aircraft), 6500 hours (Total, this make and model), 850 hours (Pilot In Command, all aircraft), 244 hours (Last 90 days, all aircraft), 112 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N3081G
<b>Model/Series:</b>	BH-47G BH-47G	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	3153
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	June 9, 1990 100 hour	<b>Certified Max Gross Wt.:</b>	2950 lbs
<b>Time Since Last Inspection:</b>	84 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	13608 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>		<b>Engine Model/Series:</b>	V0540-B1B3
<b>Registered Owner:</b>	INLAND AIR LINES, INC.	<b>Rated Power:</b>	305 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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	8 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	310°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	29°C / -18°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	SOUTHERN PINES , NC (SOP)	<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	08:25 Local	<b>Type of Airspace:</b>	

## Airport Information

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

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 Minor	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 Minor	<b>Latitude, Longitude:</b>	35.539886,-79.770393(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hicks, Ralph
<b>Additional Participating Persons:</b>	DENNIS SCARFEO; WINSTON-SALEM , NC KEN KESEY; WINSTON-SALEM , NC
<b>Original Publish Date:</b>	December 8, 1992
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=8252">https://data.nts.gov/Docket?ProjectID=8252</a>

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