



# Aviation Investigation Final Report

<b>Location:</b>	PANAMA CITY BCH, Florida	<b>Accident Number:</b>	MIA87LA155
<b>Date &amp; Time:</b>	May 3, 1987, 12:48 Local	<b>Registration:</b>	N43CD
<b>Aircraft:</b>	BELL 47G-3B1	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

THE PLT REPORTED THAT SHORTLY AFTER TAKEOFF THE ENG BEGAN TO LOSE POWER, THEN FAILED. HE THEN AUTOROTATED & SET THE HELICOPTER DOWN APRX 6 FEET OFFSHORE. EXAMINATION OF THE ENG LOGBOOKS BY FAA PERSONNEL REVEALED THAT AD 62-23-02 WHICH REQUIRES INSP OF THE OIL FILTER EVERY 25 HOURS HAD BEEN OVERDUE BY 20.9 HOURS. INSP OF THE TRANSMISSION REVEALED THAT A 5 1/2 INCH PIECE FROM THE CLUTCH DRUM RING SEPARATED WHICH DISENGAGED THE MAIN ROTOR FROM THE ENG RESULTING IN THE LOSS OF MAIN ROTOR RPM. EXAMINATION OF THE FAILED CLUTCH DRUM RING REVEALED EVIDENCE TO SUGGEST THAT IT FAILED DUE TO FATIGUE.

## 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(TOTAL) - MECH FAILURE/MALF  
Phase of Operation: MANEUVERING

#### Findings

1. (C) ROTOR DRIVE SYSTEM,CLUTCH ASSEMBLY - FAILURE,TOTAL
2. (C) ROTOR DRIVE SYSTEM,CLUTCH ASSEMBLY - FATIGUE

-----

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

Findings  
3. AUTOROTATION - PERFORMED - PILOT IN COMMAND

-----

Occurrence #3: DITCHING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings  
4. (F) TERRAIN CONDITION - WATER,ROUGH

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	27, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<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--no waivers/lim.	<b>Last FAA Medical Exam:</b>	April 30, 1987
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	656 hours (Total, all aircraft), 483 hours (Pilot In Command, all aircraft), 110 hours (Last 90 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N43CD
<b>Model/Series:</b>	47G-3B1 47G-3B1	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	67 17016
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	March 17, 1987 100 hour	<b>Certified Max Gross Wt.:</b>	2950 lbs
<b>Time Since Last Inspection:</b>	46 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3463 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	VO435A1F
<b>Registered Owner:</b>	HELICOPTER CHARTER INC.	<b>Rated Power:</b>	260 Horsepower
<b>Operator:</b>	WHIRLEYBIRD HELICOPTERS	<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>	PEN ,20 ft msl	<b>Distance from Accident Site:</b>	5 Nautical Miles
<b>Observation Time:</b>	13:02 Local	<b>Direction from Accident Site:</b>	40°
<b>Lowest Cloud Condition:</b>	Scattered / 3000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 20000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	9 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	150°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	28°C / 18°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:48 Local	<b>Type of Airspace:</b>	Class D

## 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;Straight-in

## 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>	30.20045,-85.789283(est)

## Administrative Information

**Investigator In Charge (IIC):** Monville, Timothy

**Additional Participating Persons:**

**Original Publish Date:** July 5, 1988

**Last Revision Date:**

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

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=31909>

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](#).