



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	NEW PHILADELPHI, OH	<b>Accident Number:</b>	CHI82DA198
<b>Date &amp; Time:</b>	06/01/1982, 1215 EDT	<b>Registration:</b>	N2988W
<b>Aircraft:</b>	BELL 47G-5A	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Minor

**Flight Conducted Under:** Part 91: General Aviation - Aerial Observation

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## Analysis

WHILE PATROLLING A POWERLINE, THE PILOT HEARD A LOUD NOISE, SIMILAR TO A GUNSHOT, WHICH SEEMED TO COME FROM DIRECTLY BEHIND THE FIREWALL. IMMEDIATELY AFTER THAT, THE HELICOPTER STARTED TO PITCH UP AND ROLL TO THE RIGHT. HE REPORTED THAT THE HELICOPTER REACHED AN ATTITUDE OF ABOUT 60 DEGREES NOSE UP AND 15 DEGREES TO THE RIGHT. HE CLOSED THE THROTTLE AND LOWERED THE COLLECTIVE, THEN ENTERED AN AUTOROTATIVE DESCENT. WITH THE LATERAL CYCLIC CONTROL APPARENTLY NOT AFFECTED, HE WAS ABLE TO STEER CLEAR OF THE POWERLINES, BUT CRASH LANDED IN THE TREES. THE PILOT REPORTED A FAILURE OF A BOLT, PN 20-057-4-15D, IN THE FORE/AFT CYCLIC SYSTEM.

## Probable Cause and Findings

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

## Findings

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Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: CRUISE

### Findings

1. (C) ROTORCRAFT FLIGHT CONTROL,CYCLIC CONTROL - FAILURE,TOTAL  
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Occurrence #2: FORCED LANDING  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

2. AUTOROTATION - PERFORMED - PILOT IN COMMAND  
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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

3. (F) TERRAIN CONDITION - HIGH OBSTRUCTION(S)  
4. MANEUVER - PERFORMED - PILOT IN COMMAND  
5. (F) OBJECT - TREE(S)

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	36, Male
<b>Airplane Rating(s):</b>		<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	06/26/1981
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	4322 hours (Total, all aircraft), 2129 hours (Total, this make and model), 3707 hours (Pilot In Command, all aircraft), 233 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N2988W
<b>Model/Series:</b>	47G-5A 47G-5A	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	25069
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	2930 lbs
<b>Time Since Last Inspection:</b>	37 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2758 Hours	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	VO-435-B1A
<b>Registered Owner:</b>	AERO PATROLS, INC.	<b>Rated Power:</b>	260 hp
<b>Operator:</b>	AERO PATROLS, INC.	<b>Operating Certificate(s) Held:</b>	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	7 Miles
Lowest Ceiling:	Overcast / 2300 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	72° C / 0° C
Precipitation and Obscuration:			
Departure Point:	CANTON, OH	Type of Flight Plan Filed:	None
Destination:	CANTON, OH	Type of Clearance:	None
Departure Time:	1135	Type of Airspace:	

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	Report Date:	06/01/1983
Additional Participating Persons:		
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:pubinquiry@ntsb.gov">pubinquiry@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> .	

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).