



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	TRENTON, GA	<b>Accident Number:</b>	ATL99LA105
<b>Date &amp; Time:</b>	07/02/1999, 0730 EDT	<b>Registration:</b>	N23590
<b>Aircraft:</b>	Bell 47	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

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## Analysis

According to the pilot, he was unable to maintain flight after a loss of rotor rpm. He initiated an autorotation and collided with trees during the descent. The pilot attempted the autorotation with about a five knot tail wind. The pilot reported no mechanical deficiencies with the helicopter.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of main rotor rpm due to improper use of the flight controls by the pilot. Factors were the tailwind and trees.

## Findings

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Occurrence #1: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: MANEUVERING

### Findings

1. (C) ADEQUATE ROTOR RPM - NOT MAINTAINED - PILOT IN COMMAND
2. (C) FLIGHT CONTROLS - IMPROPER USE OF - PILOT IN COMMAND
3. (F) WEATHER CONDITION - TAILWIND

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

### Findings

4. AUTOROTATION - INITIATED - PILOT IN COMMAND

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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: EMERGENCY DESCENT/LANDING

### Findings

5. (F) OBJECT - TREE(S)

## Factual Information

On July 2, 1999, at 0730 eastern daylight time, a Bell 47, N23590, collided with trees during a forced landing near Trenton, Georgia, following a loss of rotor rpm. The agricultural flight was operated by the pilot under the provisions of Title 14 CFR Part 137, and no flight plan was filed. Visual meteorological conditions prevailed at the time of the accident. The helicopter sustained substantial damage and the commercial pilot received minor injuries. The flight departed Trenton, Georgia, at an undetermined time.

The pilot was conducting an aerial application for agricultural purposes. According to the pilot, the helicopter experienced a decay in rotor rpm and he was unable to maintain flight. He executed an autorotation and collided with trees on the descent.

According to the FAA, the pilot attempted the autorotation with about a five knot tailwind. No mechanical deficiencies were reported by the pilot. A Pilot/Operator Aircraft Accident Report (Form 6120.1/2) was not submitted by the pilot.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	52, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Right
<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>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	04/23/1999
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	8440 hours (Total, all aircraft), 2450 hours (Total, this make and model), 110 hours (Last 90 days, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N23590
Model/Series:	47 47	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Restricted	Serial Number:	3506
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	2950 lbs
Time Since Last Inspection:	10 Hours	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	VO-435-AIF
Registered Owner:	SOUTHERN HELICOPTER	Rated Power:	280 hp
Operator:	SOUTHERN HELICOPTER	Operating Certificate(s) Held:	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CHA, 682 ft msl	Distance from Accident Site:	22 Nautical Miles
Observation Time:	0736 EDT	Direction from Accident Site:	235°
Lowest Cloud Condition:	Scattered / 2400 ft agl	Visibility	8 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	23° C / 19° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	Class G

## Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC): PHILLIP POWELL Report Date: 06/21/2000

Additional Participating Persons: JIM PERRY

### 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 [pubinq@ntsb.gov](mailto:pubinq@ntsb.gov), or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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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](#).