



# National Transportation Safety Board Aviation Accident Data Summary

<b>Location:</b>	HANSON, MA	<b>Accident Number:</b>	NYC90DNA04
<b>Date &amp; Time:</b>	08/01/1990, 0730 EDT	<b>Registration:</b>	N34691
<b>Aircraft:</b>	BELL 47G-3B-1	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

THE PILOT STATED THAT WHILE HE WAS OPERATING THE HELICOPTER AT 100 FEET ABOVE THE GROUND IN AERIAL APPLICATION ACTIVITIES, THERE WAS A LOSS OF TAIL ROTOR CONTROL. THE HELICOPTER ENTERED A 'SLOW SPIN' AND DESCENDED INTO THE GROUND. POST-ACCIDENT INVESTIGATION REVEALED THAT THE TAIL ROTOR DRIVE SHAFT WAS 'SHEARED OFF' BETWEEN THE NUMBER 5 AND NUMBER 6 BEARINGS.

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S LOSS OF CONTROL OF THE HELICOPTER DUE TO THE FAILURE OF THE TAIL ROTOR DRIVE SHAFT.

## Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: MANEUVERING - AERIAL APPLICATION

### Findings

1. (C) ROTOR DRIVE SYSTEM, TAIL ROTOR DRIVE SHAFT - FAILURE, TOTAL  
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Occurrence #2: HARD LANDING  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

2. TERRAIN CONDITION - GRASS

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	32
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Instrument Rating(s):</b>	Airplane; Helicopter
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Instructor Rating(s):</b>	Instrument Airplane; Instrument Helicopter
<b>Flight Time:</b>	4100 hours (Total, all aircraft), 2000 hours (Total, this make and model), 3700 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N34691
<b>Model/Series:</b>	47G-3B-1 47G-3B-1	<b>Engines:</b>	1 Reciprocating
<b>Operator:</b>	ASHLEY CRANBERRY ENTERPRISE	<b>Engine Manufacturer:</b>	LYCOMING
<b>Operating Certificate(s) Held:</b>		<b>Engine Model/Series:</b>	TV0-435-B1A
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	, 0 ft msl	<b>Weather Information Source:</b>	Pilot
<b>Lowest Ceiling:</b>	None / 0 ft agl	<b>Wind Speed/Gusts, Direction:</b>	3 knots / , 350°
<b>Temperature:</b>	22° C	<b>Visibility</b>	0 Miles
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	WAREHAM, MA (NONE)	<b>Destination:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Latitude, Longitude:</b>			

## Administrative Information

<b>Investigator In Charge (IIC):</b>	JOHN GAGLIARDI	<b>Adopted Date:</b>	12/14/1992
<b>Investigation Docket:</b>	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:pubinq@ntsb.gov">pubinq@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> .		

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