



# Aviation Investigation Final Report

<b>Location:</b>	COLT, Arkansas	<b>Accident Number:</b>	FTW91DPG12
<b>Date &amp; Time:</b>	May 31, 1991, 20:00 Local	<b>Registration:</b>	N31052
<b>Aircraft:</b>	BELL 47-G3B1	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

DURING A DAY AGRICULTURE OPERATION, THE PILOT EXPERIENCED A PARTIAL LOSS OF ENGINE POWER IN A DESCENDING TURN. THE RIGHT SKID SHEARED WHEN IT STRUCK A BERM AND THE TAIL ROTOR CABLE SEPARATED. THE PILOT LOST CONTROL AND THE HELICOPTER ROLLED ON ITS RIGHT SIDE. THE HELICOPTER WAS CONSUMED BY A POST CRASH FIRE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: LOSS OF ENGINE POWER FOR AN UNDETERMINED REASON. A FACTOR WAS THE UNSUITABLE TERRAIN.

## Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF  
Phase of Operation: MANEUVERING - AERIAL APPLICATION

### Findings

1. (F) POWERPLANT - UNDETERMINED
  2. (C) REASON FOR OCCURRENCE 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: MANEUVERING - AERIAL APPLICATION

Findings

3. (F) TERRAIN CONDITION - NONE SUITABLE
4. TERRAIN CONDITION - BERM
5. LANDING GEAR, SKID ASSEMBLY - SHEARED
6. ROTORCRAFT FLIGHT CONTROL, TAIL ROTOR CABLE - SEPARATION

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	41, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Unknown
<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--no waivers/lim.	<b>Last FAA Medical Exam:</b>	March 6, 1991
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	4000 hours (Total, all aircraft), 1500 hours (Total, this make and model), 200 hours (Last 90 days, all aircraft), 60 hours (Last 30 days, all aircraft), 12 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N31052
<b>Model/Series:</b>	47-G3B1 47-G3B1	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	2934
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	April 1, 1991 Annual	<b>Certified Max Gross Wt.:</b>	2850 lbs
<b>Time Since Last Inspection:</b>	100 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	TVO-435-D1B
<b>Registered Owner:</b>	WILBURN W. TAYLOR	<b>Rated Power:</b>	270 Horsepower
<b>Operator:</b>	WILBURN W. TAYLOR	<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>	TAYLOR AVIATION, INC.	<b>Operator Designator Code:</b>	XTYG

## 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>	15 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 22°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	COLT , AR (NONE)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	19:55 Local	<b>Type of Airspace:</b>	Class G

## 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>	
<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>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	35.129707,-90.810928(est)

## Administrative Information

**Investigator In Charge (IIC):** Newberry, Earl

**Additional Participating Persons:**

**Original Publish Date:** May 3, 1993

**Last Revision Date:**

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

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=23201>

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