



Aviation Investigation Final Report

Location:	EWELL, Alabama	Accident Number:	ATL90LA030
Date & Time:	November 25, 1989, 11:00 Local	Registration:	N1358X
Aircraft:	BELL 47G-3B1	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PRIVATE RATED PILOT HAD ATTEMPTED A PRACTICE 180 DEGREE AUTOROTATION. IT WAS ABORTED BY THE INSTRUCTOR BECAUSE OF IMPROPER LINE UP BY THE PILOT UNDER INSTRUCTION. A SECOND AUTOROTATION WAS ATTEMPTED BY THE INSTRUCTOR TO DEMONSTRATE CORRECT PROCEDURE. THE INSTRUCTOR REPORTED THAT THE ENGINE DID NOT RESPOND TO AN ATTEMPTED POWER RECOVERY. HE ADDED COLLECTIVE PITCH TO AVOID TREES AND REACHED AN OPEN FIELD WITH LOW ROTOR RPM. THE HELICOPTER IMPACTED HARD & WAS SUBSTANTIALLY DAMAGED. LATER EXAMINATION OF THE ENGINE DID NOT REVEAL ANY DISCREPANCIES WHICH ACCOUNTED FOR THE REPORTED LOSS OF POWER.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE LOSS OF ENGINE POWER, FOR UNDETERMINED REASONS, AT LOW ALTITUDE DURING A PRACTICE AUTOROTATION. CONTRIBUTING TO THE ACCIDENT WAS THE INSTRUCTOR'S FAILURE TO PROPERLY PLAN THE DEMONSTRATED AUTOROTATION SO AS TO PRECLUDE AN ACCIDENT, IN THE EVENT THAT POWER WAS NOT AVAILABLE.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: HARD LANDING

Phase of Operation: DESCENT - UNCONTROLLED

Findings

2. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

3. (C) PLANNED APPROACH - MISJUDGED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	44, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	February 23, 1989
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	2853 hours (Total, all aircraft), 48 hours (Total, this make and model), 2784 hours (Pilot In Command, all aircraft), 97 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N1358X
Model/Series:	47G-3B1 47G-3B1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	6569
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	May 17, 1989 Annual	Certified Max Gross Wt.:	2950 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3717 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	TVO-435-B1B
Registered Owner:	BILL WILLIAMS	Rated Power:	270 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	DHN ,401 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	11:22 Local	Direction from Accident Site:	120°
Lowest Cloud Condition:	Unknown	Visibility	7 miles
Lowest Ceiling:	Broken / 3000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	16°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	OZARK , AL (71J)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	10:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Simulated forced landing

Wreckage and Impact Information

Crew Injuries:	2 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious	Latitude, Longitude:	31.429742,-85.639266(est)

Administrative Information

Investigator In Charge (IIC): Hicks, Preston

Additional Participating Persons: HARLEY PICKETT; BIRMINGHAM , AL
JAMES E TOOMBS; BIRMINGHAM , AL
JAMES R STABLEY; WILLIAMSPORT , PA
JACK SUTTLE; FORT WORTH , TX

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Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=8183>

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