



Aviation Investigation Final Report

Location:	MAGDALENA, New Mexico	Accident Number:	FTW98TA099
Date & Time:	January 15, 1998, 15:30 Local	Registration:	N7901S
Aircraft:	Bell 47G-3B-1	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Public aircraft		

Analysis

The helicopter was being used in the Federal Government's predator control program. The pilot said he and his passenger were flying north and entered a draw. The prey they were chasing (a coyote) turned east and they flew over it at low airspeed and altitude. The pilot was having 'trouble maintaining rotor rpm.' With higher terrain in front and to his left, he elected to turn east in hopes of exiting the draw to the south. Trees and rough terrain forced him to continue eastward. The pilot found himself below a draw and he pulled collective control. This aggravated the low rpm condition, but the helicopter cleared the rim. On the other side of the rim, the ground sloped down at a 40 degree angle and the pilot tried to stretch his descent towards flatter terrain in an attempt to make a run-on landing. The helicopter impacted the terrain and was substantially damaged. The FAA inspector who went to the scene wrote, 'There is no apparent reason for the helicopter to have lost rpm. Review of the pilot records indicate only 14 hours of flight time in the last 90 days and no training in the last three years, and the last biennial flight review was almost 20 months ago.'

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain adequate main rotor rpm. A factor was a lack of recent experience in the type of operation being performed.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings

1. (C) ROTOR RPM - NOT MAINTAINED - PILOT IN COMMAND
2. (F) LACK OF RECENT EXPERIENCE IN TYPE OPERATION - PILOT IN COMMAND

Factual Information

On January 15, 1998, approximately 1530 mountain standard time, a Bell 47G-3B-1, N7901S, was substantially damaged when it collided with terrain while maneuvering near Magdalena, New Mexico. The commercial pilot and a passenger escaped injury. Visual meteorological conditions prevailed, and no flight plan was filed for the public use flight being conducted under Title 14 CFR Part 91. The flight originated from a ranch near Magdalena.

The helicopter was being used in the Federal Government's predator control program. The pilot said he and his passenger were flying north and entered a draw. The prey they were chasing (a coyote) turned east and they flew over it at low airspeed and altitude. The pilot was having "trouble maintaining rotor rpm." With higher terrain in front and to his left, he elected to turn east in hopes of exiting the draw to the south. Trees and rough terrain forced him to continue eastward. The pilot found himself below a draw and he pulled collective control. This aggravated the low rpm condition, but the helicopter cleared the rim. On the other side of the rim, the ground sloped down at a 40 degree angle and the pilot tried to stretch his descent towards flatter terrain in an attempt to make a run-on landing. The tail rotor guard and both skids contacted the ground and the helicopter slid 10 feet before striking a small drainage. The right skid dug into soft dirt and "catapulted the helicopter nose down into the air, tearing loose the right skid." The helicopter started to roll to the left. A main rotor blade struck the ground and pitched the helicopter back to the right. The helicopter came to rest upright. The tail boom was severed.

A Federal Aviation Administration inspector was dispatched to the scene. In his accident report (FAA Form 8020-23) the inspector wrote, "Airmen competency is in question because with the existing conditions, there is no apparent reason for the helicopter to have lost rpm. Review of the pilot records indicate only 14 hours of flight time in the last 90 days and no training in the last three years, and the last biennial flight review was almost 20 months ago."

Pilot Information

Certificate:	Commercial	Age:	38, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	June 27, 1997
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	1877 hours (Total, all aircraft), 377 hours (Total, this make and model), 1799 hours (Pilot In Command, all aircraft), 14 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	Registration:	N7901S
Model/Series:	47G-3B-1 47G-3B-1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	6576
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	January 4, 1998 Annual	Certified Max Gross Wt.:	2950 lbs
Time Since Last Inspection:	10 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3293 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	TVO-435-B1A
Registered Owner:	DESERT EAGLE HELICOPTERS INC.	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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Scattered	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots / 12 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MAGDALENA , NM (NONE)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	14:30 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	34.109153,-107.22927(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	RONALD F LIVINGSTON; ALBUQUERQUE , NM
Original Publish Date:	February 16, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=20684

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).