



National Transportation Safety Board Aviation Accident Final Report

Location:	Hachita, New Mexico	Accident Number:	WPR22LA059
Date & Time:	December 3, 2021, 10:00 Local	Registration:	N7116L
Aircraft:	ROBINSON HELICOPTER R22 BETA	Aircraft Damage:	Substantial
Defining Event:	Collision with terr/obj (non-CFIT)	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

The pilot departed for a cattle roundup flight of a herd of cows and a single bull. As he approached the herd, with the intention of driving the cattle into the corral, the bull departed and headed toward an area covered with heavy mesquite brush. The pilot circled the area, and stopped the bull under a large mesquite bush, however, while at a hover the bull made a move to go behind the helicopter and the pilot maneuvered the helicopter aft and in so doing the tail rotor contacted a small mesquite limb approximately 1/2 inch in diameter. The impact resulted in a catastrophic failure of the tail rotor system, which separated from the tailboom. The helicopter began to spin, and the pilot applied correct control inputs and reduced engine power. The helicopter then landed hard in a level attitude, spreading the skids and deforming the lower fuselage structure. The pilot reported no preaccident mechanical failures or malfunctions with the helicopter that would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to adequately monitor the environment during a low level operation, which resulted in collision with vegetation.

Findings

Personnel issues	Monitoring environment - Pilot
Environmental issues	Tree(s) - Effect on operation

Factual Information

History of Flight

Maneuvering	Collision with terr/obj (non-CFIT) (Defining event)
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Pilot Information

Certificate:	Commercial	Age:	74, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	
Instructor Rating(s):	Airplane multi-engine; Helicopter	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	December 1, 2021
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	August 25, 2021
Flight Time:	22412 hours (Total, all aircraft), 8513 hours (Total, this make and model), 22135 hours (Pilot In Command, all aircraft), 200 hours (Last 90 days, all aircraft), 71 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER	Registration:	N7116L
Model/Series:	R22 BETA	Aircraft Category:	Helicopter
Year of Manufacture:	1999	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2993
Landing Gear Type:	None	Seats:	2
Date/Type of Last Inspection:	November 5, 2021 100 hour	Certified Max Gross Wt.:	1370 lbs
Time Since Last Inspection:	45.7 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	8156.6 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-360-J2A
Registered Owner:		Rated Power:	180 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KDMN, 4301 ft msl	Distance from Accident Site:	58 Nautical Miles
Observation Time:	09:53 Local	Direction from Accident Site:	40°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.2 inches Hg	Temperature/Dew Point:	14° C / 0° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hachita, NM (PVT)	Type of Flight Plan Filed:	None
Destination:	Hachita, NM	Type of Clearance:	None
Departure Time:	09:50 Local	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:		Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	31.515928, -108.45803

Administrative Information

Investigator In Charge (IIC):	Simpson, Elliott		
Additional Participating Persons:	Dennis Beattie; Federal Aviation Administration FSDO; Albuquerque, NM		
Original Publish Date:	June 9, 2022	Investigation Class:	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=104362		

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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](#).