



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Arthur, Illinois	Accident Number:	CEN23LA341
Date & Time:	July 31, 2023, 14:00 Local	Registration:	N644ME
Aircraft:	ROBINSON HELICOPTER COMPANY R44 II	Aircraft Damage:	Substantial
Defining Event:	Collision with terr/obj (non-CFIT)	Injuries:	1 Serious
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot reported that he had confirmed that there were no powerlines to avoid before entering a field to perform spray operations. While spraying next to a tree line and approaching a road, the pilot could not recall whether there were powerlines or not. The pilot reported that while making a precautionary maneuver to avoid any potential powerlines, he had forgotten about the tree line. The helicopter struck a tree branch, and subsequently impacted terrain, which resulted in substantial damage to the fuselage, empennage, and main rotor blades. The pilot reported that there were no mechanical malfunctions or failures 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 maintain clearance from trees during a low-level aerial application flight.

Findings

Environmental issues	Tree(s) - Effect on equipment
Environmental issues	Tree(s) - Awareness of condition
Personnel issues	Monitoring environment - Pilot

Factual Information

History of Flight

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

Certificate:	Commercial	Age:	48,Male
Airplane Rating(s):	None	Seat Occupied:	Front
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	March 10, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 15, 2023
Flight Time:	403 hours (Total, all aircraft), 96 hours (Total, this make and model), 328 hours (Pilot In Command, all aircraft), 72 hours (Last 90 days, all aircraft), 52 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER COMPANY	Registration:	N644ME
Model/Series:	R44 II	Aircraft Category:	Helicopter
Year of Manufacture:	2013	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	13439
Landing Gear Type:	Skid	Seats:	4
Date/Type of Last Inspection:	May 18, 2023 Annual	Certified Max Gross Wt.:	2500 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	917.58 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	IO-540-AE1A5
Registered Owner:	RAS AVIATION LLC	Rated Power:	245 Horsepower
Operator:	RAS AVIATION LLC	Operating Certificate(s) Held:	Agricultural aircraft (137)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KMTO,710 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	15:53 Local	Direction from Accident Site:	165°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	60°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.13 inches Hg	Temperature/Dew Point:	28°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Tuscola, IL	Type of Flight Plan Filed:	None
Destination:	Tuscola, IL	Type of Clearance:	None
Departure Time:	08:54 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	39.7173,-88.35816(est)

Administrative Information

Investigator In Charge (IIC):	Rutt, Brian
Additional Participating Persons:	Doyle Humphries; FAA - Springfield FSDO
Original Publish Date:	September 28, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=192767

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](#).