



Aviation Investigation Final Report

Location:	Pocahontas, Illinois	Accident Number:	CEN23LA306
Date & Time:	July 13, 2023, 19:00 Local	Registration:	N62RK
Aircraft:	ROBINSON HELICOPTER COMPANY R44 II	Aircraft Damage:	Substantial
Defining Event:	Unknown or undetermined	Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot reported that, while spraying corn about 15 ft above ground level and at an airspeed of about 60 miles per hour, the engine “started to spit and sputter” and then lost total power. He attempted to reduce the airspeed and initiated a flare before colliding with 10 ft tall corn stalks. During the impact with the corn stalks the helicopter’s landing gear skids and tail boom separated and the helicopter bounced off the ground. The helicopter became airborne, traveled about 30 ft, rolled over, and came to rest onto its left side. The helicopter sustained substantial damage to the fuselage and tail boom. The pilot reported the helicopter fuel tanks contained about 10 gallons of fuel and an odor of fuel was noted at the accident site.

Postaccident examination of the engine revealed no evidence of any preimpact mechanical malfunctions or failures that would have precluded normal operation. The reason for the reported loss of engine power could not be determined.

Probable Cause and Findings

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

A reported loss of engine power for undetermined reasons.

Findings

Not determined	(general) - Unknown/Not determined
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Factual Information

History of Flight

Maneuvering-low-alt flying	Unknown or undetermined (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT)
Landing	Hard landing

On July 13, 2023, about 1900 central daylight time, a Robinson R44 II helicopter, N62RK, sustained substantial damage when it was involved in an accident near Pocahontas, Illinois. The pilot was not injured. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 137 aerial application flight.

According to the pilot, while spraying corn about 15 ft above ground level and at an airspeed of about 60 miles per hour, the engine “started to spit and sputter” and then lost total power. The pilot attempted to reduce the airspeed and initiated a flare before colliding with 10 ft tall corn stalks. During the impact with the corn stalks, the helicopter’s landing gear skids and tail boom separated, and the helicopter bounced off the ground. The helicopter became airborne, traveled about 30 ft, rolled over, and came to rest onto its left side. The helicopter sustained substantial damage to the fuselage and tail boom. The pilot reported the helicopter fuel tanks contained about 10 gallons of fuel and an odor of fuel was noted at the accident site.

A postaccident examination of the engine was conducted, during which the spark plugs were removed and tested. The engine cylinders were borescoped with no anomalies noted to the cylinders, pistons, and valves. A cold cylinder compression check was completed with cylinder compressions in the normal range. The engine was rotated manually and through battery power to the starter; no anomalies were noted, and mechanical continuity was verified throughout the engine. Both magnetos provided spark when the engine was rotated. The engine fuel lines were checked for looseness and all lines were secured. When the engine component fuel lines were removed, an undocumented amount of fuel was present in the fuel lines and components. The examination of the engine revealed no evidence of any preimpact mechanical malfunctions or failures that would have precluded normal operation.

Pilot Information

Certificate:	Commercial	Age:	27,Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	November 7, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	November 3, 2022
Flight Time:	574 hours (Total, all aircraft), 574 hours (Total, this make and model), 538 hours (Pilot In Command, all aircraft), 257 hours (Last 90 days, all aircraft), 70 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER COMPANY	Registration:	N62RK
Model/Series:	R44 II	Aircraft Category:	Helicopter
Year of Manufacture:	2004	Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	10538
Landing Gear Type:	None; Skid	Seats:	4
Date/Type of Last Inspection:	May 11, 2023 100 hour	Certified Max Gross Wt.:	2500 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1774 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	IO-540-AE1A5
Registered Owner:	On file	Rated Power:	245 Horsepower
Operator:	On file	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:	K3LF,690 ft msl	Distance from Accident Site:	21 Nautical Miles
Observation Time:	19:15 Local	Direction from Accident Site:	343°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.86 inches Hg	Temperature/Dew Point:	28°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Flora, IL (FOA)	Type of Flight Plan Filed:	None
Destination:	Flora, IL (FOA)	Type of Clearance:	None
Departure Time:	06:00 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	38.824484,-89.542392(est)

Administrative Information

Investigator In Charge (IIC):	Sauer, Aaron
Additional Participating Persons:	Brian Semelroth; FAA; Springfield, IL
Original Publish Date:	April 18, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=192630

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](#).