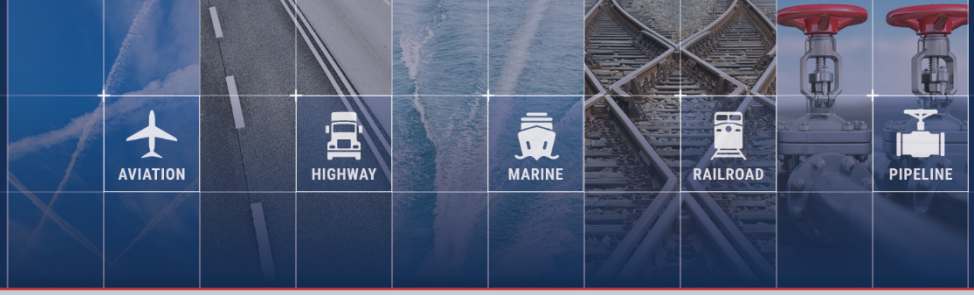

Aviation Investigation Final Report

Location:	Amity, Missouri	**Accident Number:**	CEN23LA280
Date & Time:	July 5, 2023, 14:50 Local	**Registration:**	N828WP
Aircraft:	BELL HELICOPTER TEXTRON 206L-1	**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 during an aerial application flight, the helicopter impacted wires that he failed to see, which resulted in substantial damage to the fuselage and rotor blades. He stated that a road that paralleled the field dipped down, which made the wires appear below the horizon.

The pilot stated that there were no preimpact 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 see and avoid wires while conducting a low-level aerial application flight.

Findings

Environmental issues	Wire - Awareness of condition
Personnel issues	Identification/recognition - Pilot

Factual Information

History of Flight

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

Pilot Information

Certificate:	Commercial; Flight instructor; Remote	**Age:**	43,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:**	No
Instructor Rating(s):	Helicopter	**Toxicology Performed:**	
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	April 27, 2023
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	February 25, 2023
Flight Time:	(Estimated) 4400 hours (Total, all aircraft), 58 hours (Total, this make and model), 77 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL HELICOPTER TEXTRON	**Registration:**	N828WP
Model/Series:	206L-1	**Aircraft Category:**	Helicopter
Year of Manufacture:	1979	**Amateur Built:**	
Airworthiness Certificate:	Restricted (Special)	**Serial Number:**	45294
Landing Gear Type:	Skid	**Seats:**	7
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Turbo shaft
Airframe Total Time:		**Engine Manufacturer:**	Rolls Royce
ELT:		**Engine Model/Series:**	250-C30P
Registered Owner:		**Rated Power:**	
Operator:		**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:	KSTJ,807 ft msl	**Distance from Accident Site:**	23 Nautical Miles
Observation Time:	13:53 Local	**Direction from Accident Site:**	254°
Lowest Cloud Condition:	Scattered / 2500 ft AGL	**Visibility**	10 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.04 inches Hg	**Temperature/Dew Point:**	26°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		**Type of Flight Plan Filed:**	
Destination:		**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	39.871202,-94.435221(est)

Preventing Similar Accidents

Preventing Obstacle Collisions in Agricultural Operations

Accidents involving collisions with obstacles, including poles, wires, guy wires, meteorological evaluation towers (MET), or trees, are among the most common types of agricultural aircraft accidents. Some collisions involved obstacles that the pilots did not see (even during survey flights) but others involved obstacles that were known to the pilot and/or had characteristics that would make them visibly conspicuous.

Agricultural pilots should do the following:

- Maintain a quick-reference document (paper or electronic) at the operations base that contains field maps, charts, photographs, and details of all known obstacles.
- Frequently review current aeronautical charts for information about obstacles.

- Before leaving the ground, spend time becoming familiar with all available information about the target field and programming navigation equipment. Such preflight action can help reduce the potential for confusion or distraction in flight.
- Conduct aerial surveys of the target field but do not rely solely on an aerial survey to identify potential obstacles.
- Conduct regular ground surveys of fields. Some towers can be erected in hours, and obstacles can change since you last worked that field. Speak with farmers and land owners to raise awareness about obstacle hazards.
- When possible, use ground crews. They may be in a better position to see certain obstacles and help you ensure that your aircraft remains clear of them.
- Watch for shadows and irregularities in growth patterns to help identify obstacles. Use GPS and other technology to maintain awareness of obstacle locations.
- Be aware that workload, fatigue, sun glare, and distractions in the cockpit can adversely affect your ability to see, avoid, or remember obstacles. Heavier loads and higher density altitudes can affect the performance of your aircraft.

The National Agricultural Aviation Association's Professional Aerial Applicators' Support System reminds pilots that, when ferrying an aircraft or transitioning between sites, flying above 500 feet reduces obstacle collision risks: "Ferry Above Five and Stay Alive."

See http://www.ntsb.gov/safety/safety-alerts/documents/SA_035.pdf for additional resources.

The NTSB presents this information to prevent recurrence of similar accidents. Note that this should not be considered guidance from the regulator, nor does this supersede existing FAA Regulations (FARs).

Administrative Information

Investigator In Charge (IIC):	Williams, David		
Additional Participating Persons:	Jane Cram; FAA; Kansas City, MO		
Original Publish Date:	August 31, 2023	**Investigation Class:**	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=192546		