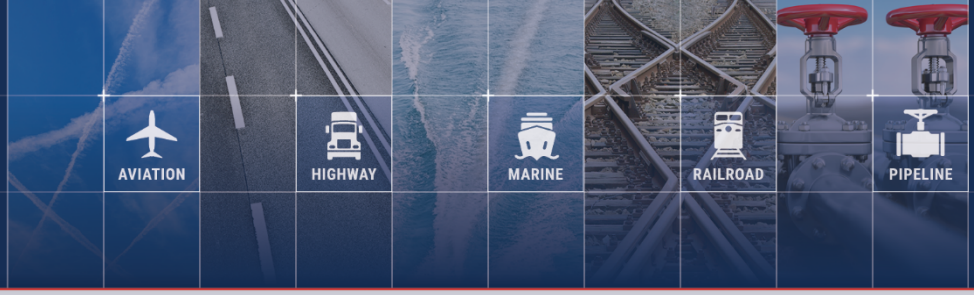

Aviation Investigation Factual Report

Location:	Blackwell, Texas	**Accident Number:**	CEN22FA288
Date & Time:	June 26, 2022, 08:30 Local	**Registration:**	N4124D
Aircraft:	ROBINSON HELICOPTER COMPANY R44 II	**Aircraft Damage:**	Destroyed
Defining Event:	Low altitude operation/event	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 137: Agricultural		

On June 26, 2022, about 0830 central daylight time, a Robinson R44 helicopter, N4124D, was destroyed when it was involved in an accident near Blackwell, Texas. The pilot sustained fatal injuries. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 137 aerial application flight.

The purpose of the aerial application flight was to apply selective herbicide targeting a large grove of mesquite trees. After loading the herbicides near the target spray area, the pilot took off and completed 2 or 3 passes over the mesquite grove. After about 3 to 4 minutes, the person who loaded the helicopter with chemicals heard a metallic-type impact sound coming from the direction of where the helicopter was spraying. He subsequently heard an impact sound and an abrupt end to the engine and rotor blade noise coming from that direction. He responded to the accident site as quickly as possible. There were no direct witnesses to the accident.

There were no radio or distress calls heard from the pilot before the accident.

Pilot Information

Certificate:	Commercial	**Age:**	41,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	5-point
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	April 19, 2022
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 1000 hours (Total, all aircraft), 800 hours (Total, this make and model), 200 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER COMPANY	**Registration:**	N4124D
Model/Series:	R44 II	**Aircraft Category:**	Helicopter
Year of Manufacture:	2007	**Amateur Built:**	
Airworthiness Certificate:	Restricted (Special)	**Serial Number:**	12095
Landing Gear Type:	Skid	**Seats:**	4
Date/Type of Last Inspection:	June 5, 2022 100 hour	**Certified Max Gross Wt.:**	2500 lbs
Time Since Last Inspection:	38 Hrs	**Engines:**	1
Airframe Total Time:	2933 Hrs at time of accident	**Engine Manufacturer:**	
ELT:	Not installed	**Engine Model/Series:**	
Registered Owner:	ASHCRAFT MATTHEW	**Rated Power:**	
Operator:	Aerial AG Services LLC	**Operating Certificate(s) Held:**	Agricultural aircraft (137)

Review of maintenance logbooks for the airframe and engine did not reveal any uncorrected defects and the annual inspections were up to date.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KSWW,2385 ft msl	**Distance from Accident Site:**	20 Nautical Miles
Observation Time:	08:15 Local	**Direction from Accident Site:**	341°
Lowest Cloud Condition:	Scattered / 10000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.22 inches Hg	**Temperature/Dew Point:**	29°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Blackwell, TX	**Type of Flight Plan Filed:**	None
Destination:	Blackwell, TX	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class E

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	32.151523,-100.33771

A series of power poles running southwest to northeast carried two wires through the mesquite grove canopy. The poles measured about 23 ft tall with one wire on top and the second wire about 3 ft below the top wire. Both wires were found separated from the pole nearest the main wreckage and the top wire was broken in that area. The next pole to the northeast was shattered at the base and came to rest 100 ft to the south with the top wire separated and the lower wire still secure. On the next pole to the southwest, the top wire was separated, and the lower wire remained secure. The lower wire was found entangled around the main wreckage and had black paint transfer marks consistent with the helicopter's paint. The top wire on both sides of the break had black paint transfer marks.

The debris field extended 315 ft, oriented north and south, beginning 130 ft south of the closest pole and consisted mostly of tailcone and tail rotor drive components. The helicopter impacted the ground in a nose-low and left-side-low attitude. There was no postimpact fire.

There was no indication of electrical arcing visible on the wires or wreckage. The main wreckage came to rest on a southerly heading about 320 ft south of the closest pole with the top wire entangled in the helicopter fuselage. The first point of ground contact was 3 to 4 ft north of the main wreckage. Wires were found wrapped around the leading edge of the main rotor swashplate and score marks consistent with rotation were visible. More wires were found wrapped around the main rotor mast fairing, over the right side of the cabin roof, and down along the aft part of the cabin door. There were more wire score marks found on the hydraulic servo below the main rotor swashplate.

Detailed examination of the helicopter airframe, flight controls, and engine did not reveal any preimpact anomalies. All separations in the flight controls were consistent with impact damage. The frame tube adjacent to the forward face of the upper sheave near the engine exhibited scuff marks in the direction of engine rotation. The forward face of the sheave exhibited score marks around its outer edge. There were black transfer marks on the tube frame consistent with impact from the adjacent engine drive belts.

Medical and Pathological Information

An autopsy on the pilot was conducted at South Plains Forensic Pathology, Lubbock, Texas. The cause of death was blunt force injuries. The pilot's autopsy identified mild coronary artery disease and mild left ventricular hypertrophy of the heart.

Toxicological tests were performed at the Federal Aviation Administration Forensic Sciences Laboratory, Oklahoma City, Oklahoma. 3.5 ng/mL Tetrahydrocannabinol (THC) was identified in heart blood, 11-hydroxy-delta-9-THC was detected in urine but not in the heart blood. Carboxy-delta-9-THC was detected in urine and 9.4 ng/mL in heart blood.

Administrative Information

Investigator In Charge (IIC):	Lemishko, Alexander
Additional Participating Persons:	Corey Wehmeyer; FAA FSADO; `Lubbock, TX Thom Webster; Robinson Helicopter; Torrence, CA
Report Date:	
Last Revision Date:	
Investigation Class:	Class 3
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=105354