Aviation Investigation Final Report

Location:	Mentone, Texas	**Accident Number:**	CEN21FA410
Date & Time:	September 10, 2021, 09:30 Local	**Registration:**	N292DD
Aircraft:	ROBINSON HELICOPTER R22 BETA	**Aircraft Damage:**	Substantial
Defining Event:	Collision with terr/obj (non-CFIT)	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Aerial observation		

Analysis

The flight was operated for the purpose of gathering cattle. The pilot departed from a temporary staging area and completed multiple passes in the area over an approximate 1 hour and 40-minute period. Ground support personnel observed the helicopter six times during that time; however, there were no witnesses to the accident. The helicopter wreckage was located near a set of powerlines in an area of low brush. One power transmission line was separated and draped over the intact lines.

The forward fuselage exhibited localized discoloration consistent with electrical arcing damage. Repetitive linear marks consistent with powerline contact were present aft of the arcing damage. Postaccident airframe and engine examinations did not identify any anomalies consistent with a preimpact failure or malfunction.

Based on the available information, it is likely that the pilot did not see the powerlines while maneuvering at low altitude, which resulted in an in-flight collision with the powerlines.

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 powerlines while maneuvering at low altitude.

Findings

Aircraft	Altitude - Not attained/maintained
Personnel issues	Lack of action - Pilot
Environmental issues	Wire - Effect on operation

Factual Information

History of Flight

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

On September 10, 2021, about 0930 central daylight time, a Robinson Helicopter R22 Beta, N292DD, was substantially damaged when it was involved in an accident near Mentone, Texas. The pilot was fatally injured. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 91 aerial observation flight.

The flight was operated for the purpose of gathering cattle. GPS position data revealed that the flight departed a local staging area about 0749. The pilot proceeded about 3 miles east and, beginning about 0752, completed multiple passes in an approximate 3-mile by 3-mile area. Ground support personnel observed the helicopter six times between 0800 and 0840. About 0859, the pilot transitioned to an area about 2 miles north of the initial area and completed multiple passes. The final GPS data point was recorded at 0926:37 about 1/2-mile north of the accident site. Due to data buffering in the GPS device, the final portion of the flight was not recorded.

The wreckage was discovered about 1557 and local authorities were contacted. There were no known witnesses to the accident. The helicopter wreckage was located about 50 ft from a set of power lines in an area of low brush. The powerline support poles extended to about 50 ft above ground level (agl); the transmission lines were about 45 ft agl. One power transmission line was separated and draped over the intact lines.

The helicopter sustained damage to the fuselage, tail boom, and main rotor blades. The fuselage nose exhibited localized discoloration consistent with electrical arcing damage. Repetitive linear marks consistent with powerline contact were present aft of the arcing damage. The aft portion of the tail boom, including the tail rotor assembly, was separated and located near the main wreckage. Fragments of the tail boom in the area of the separation exhibited scuffing marks consistent with contact with a main rotor blade. Both main rotor and both tail rotor blades were damaged but remained secured to their respective hubs.

Postaccident airframe and engine examinations did not identify any anomalies consistent with a preimpact failure or malfunction.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	40,Male
Airplane Rating(s):	None	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	3-point
Instrument Rating(s):	Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Helicopter	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	December 23, 2020
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	225 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER	**Registration:**	N292DD
Model/Series:	R22 BETA	**Aircraft Category:**	Helicopter
Year of Manufacture:	2002	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	3396
Landing Gear Type:	Skid	**Seats:**	2
Date/Type of Last Inspection:	June 25, 2021 100 hour	**Certified Max Gross Wt.:**	1370 lbs
Time Since Last Inspection:	80 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	5130 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Not installed	**Engine Model/Series:**	O-360-J2A
Registered Owner:	Concho Aviation LLC	**Rated Power:**	145 Horsepower
Operator:	Concho Aviation LLC	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KINK,2807 ft msl	**Distance from Accident Site:**	16 Nautical Miles
Observation Time:	08:53 Local	**Direction from Accident Site:**	107°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	160°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.14 inches Hg	**Temperature/Dew Point:**	21°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Sterling City, TX (PVT)	**Type of Flight Plan Filed:**	None
Destination:	Sterling City, TX (PVT)	**Type of Clearance:**	None
Departure Time:	07:50 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	31.855628,-103.49411

Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Robert Smith; FAA; Lubbock, TX
Original Publish Date:	August 31, 2022
Last Revision Date:	
Investigation Class:	Class 3
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=103836