



# Aviation Investigation Final Report

<b>Location:</b>	Paducah, Texas	<b>Accident Number:</b>	WPR14LA008
<b>Date &amp; Time:</b>	October 6, 2013, 12:17 Local	<b>Registration:</b>	N530KF
<b>Aircraft:</b>	MCDONNELL DOUGLAS HELI CO 369	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 133: Rotorcraft ext. load		

## Analysis

The pilot reported that he was maneuvering the helicopter into position near a 150-foot-tall power transmission line tower to prepare to attach a line to a rope and pull it through a traveler for power line construction. The wind had increased and was gusting, and the main rotor blades struck the tower. The helicopter spun around, and the tail rotor subsequently struck the tower. The tail rotor and tail rotor gearbox separated from the helicopter as it descended to the ground. A postcrash fire consumed the wreckage. The pilot did not report any mechanical malfunctions or failures with the helicopter that would have precluded normal operation. It is likely that the gusting wind conditions negatively affected the pilot's ability to maintain sufficient clearance from the tower while maneuvering into position.

## 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 a power transmission line tower while maneuvering to pick up a rope in gusting wind conditions.

## Findings

<b>Environmental issues</b>	High wind - Contributed to outcome
<b>Environmental issues</b>	Gusts - Contributed to outcome
<b>Environmental issues</b>	Tower/antenna (incl guy wires) - Effect on operation
<b>Personnel issues</b>	Use of equip/system - Pilot

## Factual Information

### History of Flight

<b>Maneuvering-hover</b>	Loss of control in flight (Defining event)
<b>Maneuvering-hover</b>	Collision with terr/obj (non-CFIT)

On October 6, 2013, at 1217 central daylight time, a McDonnell Douglas 369FF, N530KF, collided with a power transmission line tower while maneuvering to pick up a rope for the external load operation. The commercial pilot, the sole occupant, was fatally injured. The helicopter was registered to and operated by Rogers Aviation under the provisions of 14 Code of Federal Regulations (CFR) Part 133. The helicopter was substantially damaged. Visual meteorological conditions prevailed at the time and no flight plan was filed. The flight originated from a local area staging site.

The pilot was maneuvering the helicopter near a 150 foot tall power transmission line tower in preparation to attach a line to a rope to pull it through a traveller for power line construction. Ground crew, whose boom truck was positioned near the base of the tower, reported that the boom truck basket was positioned at the bottom traveler about 100 feet above ground level. The rope had been threaded through the top traveler. As the helicopter was maneuvering into position to pick up the rope, the wind had picked up and become gusty. As the pilot was maneuvering the helicopter, the main rotor blades struck the tower and the top traveler located about 140 feet above ground level. The helicopter spun around and the tail rotor struck the tower. The tail rotor and tail rotor gearbox separated from the helicopter as it descended rapidly to the ground near the base of the tower. A postcrash fire consumed the wreckage.

### PERSONNEL INFORMATION

The 34 year old pilot held flight certificates for commercial rotorcraft with an instrument rating, and a certified flight instructor for rotorcraft/instrument rotorcraft. The pilot held a class II Federal Aviation Administration medical certificate issued on July 10, 2013, with no waivers/limitations.

The pilot began employment with Rogers Aviation on July 8, 2013. At this time, the pilot reported a total flight time of 4,550 hours. A 14 CFR Part 133 check ride was passed and the pilot had been flying external load and power line operations.

### AIRCRAFT INFORMATION

The helicopter, model 369FF, was manufactured by McDonnell Douglas Helicopter Company in 1994, and was equipped with a Rolls-Royce C30 turbo shaft engine. As of the last 100 hour inspection, which was completed on October 1, 2013, the helicopter had accumulated 7,157 total flight hours.

The helicopter was equipped with a side-pull kit with a 30 foot line attached to the left side of the machine. The helicopter had just been refueled with 60 gallons of fuel in the main tank and 20 gallons in the auxiliary tank.

## METEOROLOGICAL INFORMATION

The nearest weather reporting facility was located 31 nautical miles north of the accident site at Childress Municipal airport, Childress, Texas.

The surface weather at 1153 reported wind from 350 degrees at 13 knots, gusting to 17 knots. The sky was clear and visibility was 10 statute miles.

At 1253, the wind was from 330 degrees at 10 knots, gusting to 18 knots.

## WRECKAGE AND IMPACT INFORMATION

The helicopter came to rest on its left side at the base of the 150 foot power pole tower. A postcrash fire consumed the cabin area forward of the aft passenger bulkhead. The tail rotor gear box was located between the tower and the boom truck. The tail rotor was found several yards south of the gear box.

There was no report of a preimpact mechanical malfunction or failure with the helicopter that would have precluded normal operation.

## MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by South Plains Forensic Pathology; P.A. The cause of death was attributed to blunt force injuries of the torso with smoke and soot inhalation.

Samples for toxicology were sent to the Federal Aviation Administration Civil Aeromedical Institute, Oklahoma City, Oklahoma, for analysis. The report stated 24% carbon monoxide was detected in the blood. Additional tests for cyanide, ethanol, and tested for drugs were negative.

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	34
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter; Instrument helicopter	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	July 10, 2013
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 4550 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	MCDONNELL DOUGLAS HELI CO	<b>Registration:</b>	N530KF
<b>Model/Series:</b>	369 FF	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	1994	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	0097FF
<b>Landing Gear Type:</b>	High skid	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	October 1, 2013 100 hour	<b>Certified Max Gross Wt.:</b>	3100 lbs
<b>Time Since Last Inspection:</b>	32 Hrs	<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>	7157 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Rolls Royce
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	C30
<b>Registered Owner:</b>	ROGERS ROBIN M	<b>Rated Power:</b>	640 Horsepower
<b>Operator:</b>	Rogers Aviation	<b>Operating Certificate(s) Held:</b>	Rotorcraft external load (133), On-demand air taxi (135), Agricultural aircraft (137)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KCDS, 1952 ft msl	<b>Distance from Accident Site:</b>	31 Nautical Miles
<b>Observation Time:</b>	11:53 Local	<b>Direction from Accident Site:</b>	340°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	13 knots / 17 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	350°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.21 inches Hg	<b>Temperature/Dew Point:</b>	21°C / 4°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Paducah, TX	<b>Type of Flight Plan Filed:</b>	
<b>Destination:</b>	Paducah, TX	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class E

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	33.939445,-100.072219

## Administrative Information

**Investigator In Charge (IIC):** Eckrote, Debra

**Additional Participating Persons:** Daniel Vengen; FAA-FSDO; Lubbock, TX

**Original Publish Date:** August 14, 2014

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=88177>

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