



# Aviation Investigation Final Report

<b>Location:</b>	East Troy, Wisconsin	<b>Accident Number:</b>	CEN22LA305
<b>Date &amp; Time:</b>	July 1, 2022, 16:30 Local	<b>Registration:</b>	N882NY
<b>Aircraft:</b>	Bell 206B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel exhaustion	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

While approaching to land on a support truck, the helicopter experienced a loss of engine power. The pilot attempted to autorotate to land and the helicopter experienced a hard landing. The right skid broke, and the main rotor blades struck the ground and the tail boom. The helicopter sustained substantial damage to the fuselage and tail boom. The pilot attributed the loss of engine power due to a possible fuel pump failure.

During a telephone interview the pilot said that he took off from the airport ramp to refuel and the fuel gauge indicated about 15 to 20 gallons. He climbed the helicopter to about 40 ft, flew about 150 yards, and landed on a support truck where the helicopter idled for about 15 minutes while ground personnel attempted to get the truck fuel pump to work. One of the ground personnel waved the pilot off to another support truck. The helicopter climbed to about 40 ft and moved about 35 - 50 yards to a second support truck. As the helicopter approached to land, the tachometer dropped then spiked, and then the engine lost power. The pilot nosed the helicopter over to avoid the truck and the helicopter hit the ground. When asked the pilot answered, "I guess I ran out of fuel".

A postaccident examination of the helicopter revealed that the fuel tanks were dry and the fuel gauge indicated 0 gallons of fuel.

## Probable Cause and Findings

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

The pilot's improper fuel management that resulted in fuel exhaustion and a loss of engine power.

## Findings

<b>Aircraft</b>	Fuel - Fluid management
<b>Aircraft</b>	Fuel - Fluid level
<b>Personnel issues</b>	Fuel planning - Pilot

## Factual Information

### History of Flight

<b>Approach</b>	Fuel exhaustion (Defining event)
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### Pilot Information

<b>Certificate:</b>	Commercial; Private	<b>Age:</b>	37, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	5-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	December 22, 2021
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	January 27, 2022
<b>Flight Time:</b>	2858 hours (Total, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Bell	<b>Registration:</b>	N882NY
<b>Model/Series:</b>	206B	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	1972	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Restricted (Special)	<b>Serial Number:</b>	882
<b>Landing Gear Type:</b>	High skid	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	May 1, 2022 Annual	<b>Certified Max Gross Wt.:</b>	3200 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>	23771 Hrs at time of accident	<b>Engine Manufacturer:</b>	Allison
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	250-C20
<b>Registered Owner:</b>		<b>Rated Power:</b>	420 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	5°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.27 inches Hg	<b>Temperature/Dew Point:</b>	17.8°C / 16.1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	East Troy, WI	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	East Troy, WI	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	EAST TROY MUNI 57C	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	860 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Unknown

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	42.777654,-88.388804(est)

## Administrative Information

**Investigator In Charge (IIC):** Brannen, John

**Additional Participating Persons:** Nicholas Holmes; FAA

**Original Publish Date:** November 3, 2022

**Investigation Class:** 4

**Note:** The NTSB did not travel to the scene of this accident.

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=105427>

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