Aviation Investigation Final Report

Location:	Springfield, Missouri	**Accident Number:**	CEN26LA027
Date & Time:	October 21, 2025, 11:08 Local	**Registration:**	N74583
Aircraft:	ROBINSON HELICOPTER R22	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

Prior to the training flight, the flight instructor received an official weather briefing from a commercial source, and the terminal area forecast reported for high winds later in the day. The flight instructor and the pilot receiving instruction were practicing autorotations in the helicopter at the airport.

During the last autorotation, after the entry and the engine power at idle, the flight instructor told the pilot to “steer” multiple times and he even gave the cyclic a “nudge.” The helicopter was oriented to about a 240° heading while drifting past the runway centerline to the south. The helicopter was drifting to the left and the flight instructor reported the pilot was unable to turn the helicopter to the right. The helicopter continued to travel to the south beyond airport property toward a public sports complex. The flight instructor initiated a flare. The helicopter impacted a grass field upright near trees in the public sports complex, and it came to rest on its left side. The helicopter sustained substantial damage to the fuselage, the main rotor system, the tail cone, the empennage, and the tail rotor system.

The flight instructor was unsure if there was a flight control malfunction and he thought that if there was a flight control malfunction, initiating a power recovery during the autorotation might exacerbate a malfunction. While the flight instructor decided to use a 300 ft agl decision check altitude for the autorotations, a power recovery was not initiated. Postaccident examination of the airframe confirmed flight control continuity.

Near the time of the accident and landing to runway 29, the wind originated from 310°, with a wind speed of 11 kts, and gusting to 21 kts. A review of meteorological data found some speed shear in the lowest 2,000 ft agl of about 15 kts above average surface magnitudes near the airport for a period near the accident time.

It is likely that during the practice autorotation, the pilot did not compensate for the gusting wind condition and the speed shear, and the flight instructor did not execute a timely remedial action with initiating a power recovery, which resulted in the helicopter impacting terrain.

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 directional control and the flight instructor's lack of proper remedial action during the practice autorotation that resulted in the helicopter impacting terrain. Contributing to the accident was the presence of the gusting wind condition and the presence of speed shear.

Findings

Personnel issues	Aircraft control - Instructor/check pilot
Personnel issues	Task monitoring/vigilance - Instructor/check pilot
Personnel issues	Lack of action - Instructor/check pilot
Personnel issues	Monitoring other person - Instructor/check pilot
Personnel issues	Aircraft control - Student/instructed pilot
Personnel issues	Task monitoring/vigilance - Student/instructed pilot
Aircraft	Directional control - Not attained/maintained
Environmental issues	Gusts - Effect on equipment
Environmental issues	Windshear - Effect on equipment

Factual Information

History of Flight

Autorotation	Other weather encounter
Autorotation	Loss of control in flight (Defining event)
Autorotation	Collision with terr/obj (non-CFIT)
Post-impact	Evacuation

On October 21, 2025, about 1108 central daylight time, a Robinson Helicopter Company (RHC) R22 Beta II helicopter, N74583, sustained substantial damage when it was involved in an accident near Springfield, Missouri. The flight instructor and the pilot receiving instruction both sustained serious injuries. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

The flight instructor had originally scheduled a cross-country training flight with the pilot receiving instruction, who was working towards obtaining his commercial pilot certificate. Prior to the flight, they obtained an official weather briefing from ForeFlight, and the terminal area forecast reported for high winds later in the day, so they elected to cancel the cross-country training flight. Instead, they decided to perform training maneuvers at the Downtown Airport (3DW), Springfield, Missouri, so they could discontinue the flight if the winds approached their limitations. The flight instructor did not complete a flight risk assessment tool, nor was he required to; however, he did discuss the terminal area forecast data with the owner of the flight training academy. They decided to utilize the limitations listed in the RHC R22 Pilot's Operating Handbook and FAA-Approved Rotorcraft Flight Manual (from FAA Airworthiness Directive 95-26-04):

1. Flight when surface winds exceed 25 kts, including gusts, is prohibited.
2. Flight when surface wind gust spreads exceed 15 kts is prohibited.
3. Continued flight in moderate, severe, or extreme turbulence is prohibited.

After the completion of the first training session, they refueled the helicopter and checked the wind conditions. During the second training session, they began practicing autorotations from 1,000 ft agl to runway 29, including utilizing 30° and 60° entries. The flight instructor decided to use 300 ft agl as the decision check altitude for the autorotations. After four 30° and 60° entry autorotations were successfully performed, they decided to proceed with four 90° entry autorotations.

During the last autorotation, after the entry and the engine power at idle, the flight instructor told the pilot to "steer" multiple times and he even gave the cyclic a "nudge." The helicopter

was oriented to about a 240° heading while drifting past the runway centerline to the south. The helicopter was drifting to the left and the flight instructor reported the pilot was unable to turn the helicopter to the right. The helicopter continued to travel to the south beyond airport property toward a public sports complex. The flight instructor initiated a flare. The helicopter impacted a grass field upright near trees in the public sports complex, and it came to rest on its left side.

The owner of the flight training academy reported that the flight instructor was unsure if there was a flight control malfunction and he thought that if there was a flight control malfunction, initiating a power recovery during the autorotation might exacerbate the malfunction.

The helicopter sustained substantial damage to the fuselage, the main rotor system, the tail cone, the empennage, and the tail rotor system. The flight controls are actuated through push-pull tubes and bell cranks; the helicopter is not equipped with a hydraulic system. Postaccident examination of the airframe confirmed flight control continuity.

The closest meteorological reporting station to 3DW is the Springfield-Branson National Airport (SGF), Springfield, Missouri. SGF is about 7.90 miles to the northwest of 3DW. The following meteorological data was obtained from the automated surface observing system at SGF:

> At 0852, the wind originated from 290°, with a wind speed of 10 kts, and no gusts reported.
>
> At 0952, the wind originated from 300°, with a wind speed of 9 kts, and gusting to 17 kts.
>
> At 1052, the wind originated from 310°, with a wind speed of 11 kts, and gusting to 21 kts.
>
> At 1152, the wind originated from 290°, with a wind speed of 14 kts, and gusting to 26 kts.
>
> At 1252, the wind originated from 290°, with a wind speed of 20 kts, and gusting to 31 kts.

A review of meteorological data found some speed shear in the lowest 2,000 ft agl of about 15 kts above average surface magnitudes near 3DW for a time near the accident time. There were no signs of directional shear found.

RHC has published Safety Notice SN-32 High Winds or Turbulence in July 2025. This document discusses flight operations in high winds or turbulence and states in part:

Flying in high winds or turbulence should be avoided. A pilot's improper application of control inputs in response to turbulence or high winds can lead to a loss of control and/or create a

dangerous low-g condition. The pilot must be aware of conditions that can be associated with turbulence, including convective activity, strong surface winds over terrain of varying elevation, mountain waves, and strong inversions.

Pilot Information

Certificate:	Commercial; Flight instructor; Remote	**Age:**	58,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter; Unmanned (sUAS)	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	Helicopter; Instrument helicopter	**Toxicology Performed:**	
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	December 4, 2024
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	March 23, 2025
Flight Time:	(Estimated) 906 hours (Total, all aircraft), 293 hours (Total, this make and model), 704 hours (Pilot In Command, all aircraft), 178 hours (Last 90 days, all aircraft), 52 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Commercial; Private; Remote	**Age:**	31,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter; Unmanned (sUAS)	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane single-engine; Instrument airplane	**Toxicology Performed:**	
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	December 6, 2024
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	September 11, 2025
Flight Time:	(Estimated) 4583 hours (Total, all aircraft), 62 hours (Total, this make and model), 4404 hours (Pilot In Command, all aircraft), 95 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER	**Registration:**	N74583
Model/Series:	R22 BETA II	**Aircraft Category:**	Helicopter
Year of Manufacture:	2005	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	3923
Landing Gear Type:	None; Skid	**Seats:**	2
Date/Type of Last Inspection:	October 3, 2025 100 hour	**Certified Max Gross Wt.:**	1370 lbs
Time Since Last Inspection:	41.2 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	6855.8 Hrs at time of accident	**Engine Manufacturer:**	Lycoming Engines
ELT:	Not installed	**Engine Model/Series:**	O-360-J2A
Registered Owner:	Mile High Carpet Rides, LLC	**Rated Power:**	145 Horsepower
Operator:	So Fly Flight Training Academy, LLC	**Operating Certificate(s) Held:**	None
Operator Does Business As:	So Fly Flight Training Academy, LLC	**Operator Designator Code:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KSGF,1262 ft msl	**Distance from Accident Site:**	7 Nautical Miles
Observation Time:	10:52 Local	**Direction from Accident Site:**	280°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots / 21 knots	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	310°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.12 inches Hg	**Temperature/Dew Point:**	16°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Springfield, MO (3DW)	**Type of Flight Plan Filed:**	None
Destination:	Springfield, MO (3DW)	**Type of Clearance:**	None
Departure Time:	10:40 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	DOWNTOWN 3DW	**Runway Surface Type:**	Asphalt
Airport Elevation:	1375 ft msl	**Runway Surface Condition:**	Dry;Vegetation
Runway Used:	11/29	**IFR Approach:**	None
Runway Length/Width:	4037 ft / 50 ft	**VFR Approach/Landing:**	Simulated forced landing;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious	**Latitude, Longitude:**	37.22076,-93.247713(est)

Administrative Information

Investigator In Charge (IIC):	Hodges, Michael
Additional Participating Persons:	Nickolaus Orphan; FAA Kansas City FSDO; Kansas City, MO
Original Publish Date:	August 20, 2026
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=201908