



Aviation Investigation Final Report

Location:	Morris, Illinois	Accident Number:	CEN21LA095
Date & Time:	December 20, 2020, 16:45 Local	Registration:	N3264U
Aircraft:	ROBINSON HELICOPTER R44	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that he had initially completed pickups and set downs on four different headings, then departed the area for a local flight. When he returned to the airport, he again practiced pickups and set downs in the same spot on the ramp, and the wind was from the west as he completed these maneuvers. During the final maneuver, the wind shifted, and he lost control of the helicopter.

There were three weather observations recorded from around the accident time and the wind was from 240° to 250° at 6 to 7 knots, with no reported gusts.

An airport surveillance video showed that during accident sequence, the helicopter was facing east when it briefly touched down and wobbled, then lifted up as the tail boom swung around in a clockwise direction. The tail rotor impacted the ramp then climbed and continued to rotate. The helicopter completed about 1.5 rotations as it descended and impacted the ground and rolled onto its right side.

The helicopter manufacturer had previously issued a safety notice for unanticipated yaw, which stated in part, “A pilot’s failure to apply proper pedal inputs in response to strong or gusty winds during hover or low-speed flight may result in an unanticipated yaw...To avoid unanticipated yaw, pilots should be aware of conditions (a left crosswind, for example) that may require large or rapid pedal inputs.”

The accident is consistent with the inadequate pedal application during the liftoff with a tailwind, which resulted in a loss of yaw control and a subsequent impact with terrain.

The pilot reported that there were no preaccident mechanical malfunctions or failures with the helicopter that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's inadequate pedal application during liftoff with a tailwind, which resulted in a loss of yaw control and a subsequent impact with terrain.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Yaw control - Not attained/maintained
Environmental issues	Tailwind - Decision related to condition

Factual Information

History of Flight

Takeoff	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	69, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	June 18, 2019
Occupational Pilot:	No	Last Flight Review or Equivalent:	December 2, 2020
Flight Time:	1650 hours (Total, all aircraft), 280 hours (Total, this make and model), 1175 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON HELICOPTER	Registration:	N3264U
Model/Series:	R44	Aircraft Category:	Helicopter
Year of Manufacture:	2007	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1715
Landing Gear Type:	None; Skid	Seats:	4
Date/Type of Last Inspection:	May 1, 2020 Annual	Certified Max Gross Wt.:	2400 lbs
Time Since Last Inspection:		Engines:	1
Airframe Total Time:	1954.1 Hrs at time of accident	Engine Manufacturer:	
ELT:		Engine Model/Series:	
Registered Owner:	TRI-B AIR LLC	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	C09,584 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	16:35 Local	Direction from Accident Site:	315°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.8 inches Hg	Temperature/Dew Point:	3°C / 0°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Morris, IL	Type of Flight Plan Filed:	None
Destination:	Morris, IL	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class E

Airport Information

Airport:	MORRIS MUNI - JAMES R WASHBURN FLD C09	Runway Surface Type:	
Airport Elevation:	584 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Touch and go

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	41.428698,-88.420823

Administrative Information

Investigator In Charge (IIC):	Lindberg, Joshua
Additional Participating Persons:	Kristian Kortokrax; Federal Aviation Administration; Des Plaines, IL
Original Publish Date:	August 20, 2021
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=102442

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