



Aviation Investigation Final Report

Location:	Russellville, Kentucky	Accident Number:	ERA24LA327
Date & Time:	July 27, 2024, 14:50 Local	Registration:	N280D
Aircraft:	Enstrom 280FX	Aircraft Damage:	Substantial
Defining Event:	Settling with power/vortex ring state	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor uneventfully demonstrated a rapid deceleration maneuver to the fixed-wing pilot-rated passenger into the wind, performed a left pedal turn, and performed another rapid deceleration maneuver (with a tailwind). The flight instructor then initiated another left pedal turn; however, the helicopter failed to turn, and the low-rotor RPM light came on. The flight instructor said that he attempted to recover by lowering the collective and adding full throttle, but the throttle was already fully open. The low-rotor RPM light remained illuminated and engine RPM started to drop. The helicopter landed and slid down a slope adjacent to the runway and came to rest on its left side. This resulted in substantial damage to the main rotor blades and tail cone. The pilot rated passenger provided a similar account of the events and said that after he exited the helicopter, the instructor told him that they had just “settled with power.” The flight instructor reported there were no mechanical deficiencies that contributed to the accident.

Probable Cause and Findings

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

The flight instructor’s failure to maintain sufficient rotor rpm while maneuvering the helicopter low to the ground, which resulted in a loss of control.

Findings

Personnel issues

Aircraft control - Instructor/check pilot

Factual Information

History of Flight

Maneuvering-low-alt flying	Settling with power/vortex ring state (Defining event)
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Flight instructor Information

Certificate:	Flight instructor	Age:	53, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Helicopter; Instrument helicopter	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	November 14, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 26, 2024
Flight Time:	307 hours (Total, all aircraft), 84 hours (Total, this make and model), 194 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Pilot-rated passenger Information

Certificate:	Flight instructor	Age:	25, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	June 13, 2024
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 860 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Enstrom	Registration:	N280D
Model/Series:	280FX	Aircraft Category:	Helicopter
Year of Manufacture:	1988	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2027
Landing Gear Type:	None; Skid	Seats:	3
Date/Type of Last Inspection:	March 27, 2024 Annual	Certified Max Gross Wt.:	2600 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1536 Hrs as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	HIO-360-F1AD
Registered Owner:	On file	Rated Power:	190 Horsepower
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:	BWG,537 ft msl	Distance from Accident Site:	21 Nautical Miles
Observation Time:	14:53 Local	Direction from Accident Site:	62°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 9000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.05 inches Hg	Temperature/Dew Point:	31°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Russellville, KY	Type of Flight Plan Filed:	None
Destination:	Russellville, KY	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	RUSSELLVILLE-LOGAN COUNTY 4M7	Runway Surface Type:	Asphalt
Airport Elevation:	691 ft msl	Runway Surface Condition:	Dry
Runway Used:	07/25	IFR Approach:	None
Runway Length/Width:	4500 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	36.799611,-86.810917

Administrative Information

Investigator In Charge (IIC):	Read, Leah
Additional Participating Persons:	Nicholas Anderson; FAA/FSDO; Louisville, KY
Original Publish Date:	January 23, 2025
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=194783

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).