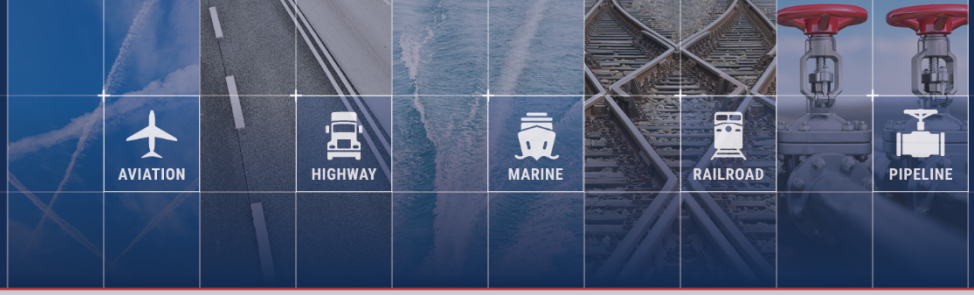

Aviation Investigation Final Report

Location:	Liberty Hill, Texas	**Accident Number:**	CEN23LA389
Date & Time:	August 31, 2023, 08:05 Local	**Registration:**	N530JR
Aircraft:	MCDONNELL DOUGLAS HELI CO 530FF	**Aircraft Damage:**	Substantial
Defining Event:	Hard landing	**Injuries:**	3 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

During an instructional flight, the instructor reported that they were practicing simulated engine failures and power recovery autorotations. During the fourth practice autorotation, the pilot receiving instruction attempted to terminate the maneuver with power to a 5 ft above ground level hover. The pilot did not move the twistgrip throttle from idle power back to full open and began raising the collective. The helicopter “fell through” and experienced a hard landing onto a field. The helicopter bounced, touched down hard again and spun about 150° resulting in substantial damage to the tail boom and empennage. The instructor reported that there were no mechanical malfunctions or failures 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 pilot’s improper recovery from a practice autorotation resulting in a hard landing. Contributing to the accident was the instructor’s inadequate supervision of the pilot receiving instruction.

Findings

Aircraft	Prop/rotor parameters - Not attained/maintained
Personnel issues	Monitoring other person - Instructor/check pilot

Factual Information

History of Flight

Autorotation	Hard landing (Defining event)

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	61,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	4-point
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	**Toxicology Performed:**	
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	December 29, 2022
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	April 29, 2022
Flight Time:	4000 hours (Total, all aircraft), 400 hours (Total, this make and model)		

Pilot Information

Certificate:	Commercial	**Age:**	59,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	4-point
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	May 1, 2023
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1900 hours (Total, all aircraft), 19.1 hours (Total, this make and model), 682 hours (Pilot In Command, all aircraft), 6.9 hours (Last 90 days, all aircraft), 6.9 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MCDONNELL DOUGLAS HELICO	**Registration:**	N530JR
Model/Series:	530FF	**Aircraft Category:**	Helicopter
Year of Manufacture:	2012	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	0711FF
Landing Gear Type:	High skid	**Seats:**	4
Date/Type of Last Inspection:	August 21, 2023 Annual	**Certified Max Gross Wt.:**	3100 lbs
Time Since Last Inspection:	12.3 Hrs	**Engines:**	1 Turbo shaft
Airframe Total Time:	760.3 Hrs at time of accident	**Engine Manufacturer:**	Rolls Royce
ELT:	Installed, not activated	**Engine Model/Series:**	250-C30
Registered Owner:	FREE THE OPPRESSED	**Rated Power:**	447 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:	KGTU,787 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	07:56 Local	**Direction from Accident Site:**	87°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.92 inches Hg	**Temperature/Dew Point:**	23°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Georgetown, TX (KGTU)	**Type of Flight Plan Filed:**	None
Destination:	Georgetown, TX (KGTU)	**Type of Clearance:**	None
Departure Time:	07:15 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	3 None	**Latitude, Longitude:**	30.66232,-97.93462(est)

Administrative Information

Investigator In Charge (IIC):	Aguilera, Jason
Additional Participating Persons:	Frederick McMilan; FAA FSDO; San Antonio, TX
Original Publish Date:	March 21, 2024
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=192972