



Aviation Investigation Final Report

Location:	Oxford, Colorado	Accident Number:	CEN23LA048
Date & Time:	November 23, 2022, 13:07 Local	Registration:	N668M
Aircraft:	Hughes 369HS	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

During a checkride with an applicant pilot, the designated pilot examiner was demonstrating a 180° autorotation. The applicant pilot reported the descent was too quick, the examiner flared too low, and the helicopter experienced a hard landing. An airport surveillance video showed the helicopter descend at a rapid rate and impact the runway. The helicopter came to rest on its left side and sustained substantial damage to the fuselage, tail boom, and main rotor system. The operator 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 designated pilot examiner’s failure to maintain a proper descent during a practice 180° autorotation which resulted in a hard landing.

Findings

Personnel issues	Aircraft control - Designated examiner
Aircraft	Descent/approach/glide path - Incorrect use/operation

Factual Information

History of Flight

Autorotation	Hard landing (Defining event)
Landing-flare/touchdown	Tailstrike
Post-impact	Roll over

Check pilot Information

Certificate:	Airline transport	Age:	58
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	Second Pilot Present:	
Instructor Rating(s):	Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	Toxicology Performed:	
Medical Certification:	Class 2 Unknown	Last FAA Medical Exam:	August 1, 2021
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	0 hours (Total, all aircraft), 0 hours (Total, this make and model)		

Student pilot Information

Certificate:	Commercial	Age:	40
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	February 1, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 1200 hours (Total, all aircraft), 0 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Hughes	Registration:	N668M
Model/Series:	369HS	Aircraft Category:	Helicopter
Year of Manufacture:	1971	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	310312S
Landing Gear Type:	None; High skid	Seats:	4
Date/Type of Last Inspection:	October 25, 2022 100 hour	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:		Engines:	1 Turbo shaft
Airframe Total Time:	9806.4 Hrs as of last inspection	Engine Manufacturer:	Rolls-Royce
ELT:	Installed	Engine Model/Series:	M250-C20
Registered Owner:		Rated Power:	400 Horsepower
Operator:		Operating Certificate(s) Held:	Rotorcraft external load (133), Commuter air carrier (135)
Operator Does Business As:		Operator Designator Code:	8C0A

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KDRO,6629 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	12:53 Local	Direction from Accident Site:	212°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 20 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.96 inches Hg	Temperature/Dew Point:	7°C / -12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Oxford, CO	Type of Flight Plan Filed:	None
Destination:	Oxford, CO	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class E

Airport Information

Airport:	DURANGO-LA PLATA COUNTY DRO	Runway Surface Type:	Asphalt
Airport Elevation:	6689 ft msl	Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	Unknown
Runway Length/Width:	9201 ft / 150 ft	VFR Approach/Landing:	Simulated forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	37.153552,-107.7518(est)

Administrative Information

Investigator In Charge (IIC):	Lemishko, Alexander		
Additional Participating Persons:	Shumway, Kerry J.; FAA-FSDO; Salt Lake City, UT		
Original Publish Date:	April 20, 2023	Investigation Class:	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=106366		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).