



# Aviation Investigation Final Report

<b>Location:</b>	Orlando, Florida	<b>Accident Number:</b>	ERA23LA269
<b>Date &amp; Time:</b>	June 5, 2023, 15:47 Local	<b>Registration:</b>	N27UK
<b>Aircraft:</b>	Bell 206B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Hard landing	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Flight test		

## Analysis

During a test flight following a maintenance event, the pilot of the helicopter took off and navigated to a landing zone near the airport. He conducted a normal landing and hover flight without incident for about 5 minutes. The pilot then took off again, climbed to about 600 ft mean sea level, and initiated a straight-in practice autorotation. About 50 ft above ground level (agl), he started the landing flare, while “simultaneously fully rolling on throttle all the way.” As the helicopter approached 15-20 ft agl, the helicopter was level, forward momentum slowed, and “it became clear the helicopter was struggling to maintain lift and we began settling.” Subsequently, he held the controls as still as possible and attempted to maintain level attitude, however, the helicopter landed hard in the grass. The tail boom sustained substantial damage. There pilot reported that there were no preimpact mechanical malfunctions or failures of 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 improper landing flare during a practice autorotation, which resulted in a hard landing.

## Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Landing flare - Incorrect use/operation

## Factual Information

### History of Flight

<b>Autorotation</b>	Hard landing (Defining event)
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### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	31, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter; Instrument helicopter	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	March 2, 2023
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	May 31, 2023
<b>Flight Time:</b>	2614 hours (Total, all aircraft), 33 hours (Total, this make and model), 2532 hours (Pilot In Command, all aircraft), 99 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Bell	<b>Registration:</b>	N27UK
<b>Model/Series:</b>	206B NO SERIES	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	1975	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Restricted (Special)	<b>Serial Number:</b>	1871
<b>Landing Gear Type:</b>	None; Skid	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	May 17, 2023 Continuous airworthiness	<b>Certified Max Gross Wt.:</b>	3200 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>	19324 Hrs at time of accident	<b>Engine Manufacturer:</b>	Allison
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	250-C20
<b>Registered Owner:</b>	ORLANDO AIRCRAFT SALES LLC	<b>Rated Power:</b>	400 Horsepower
<b>Operator:</b>	The Heli Team	<b>Operating Certificate(s) Held:</b>	Rotorcraft external load (133), Agricultural aircraft (137)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	ORL, 104 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	15:53 Local	<b>Direction from Accident Site:</b>	42°
<b>Lowest Cloud Condition:</b>	Scattered / 4500 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	14 knots / 19 knots	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	70°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.89 inches Hg	<b>Temperature/Dew Point:</b>	29°C / 18°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Orlando, FL	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Orlando, FL	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	Orlando Executive Airport ORL	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	112 ft msl	<b>Runway Surface Condition:</b>	Unknown
<b>Runway Used:</b>	NONE	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	0 ft / 0 ft	<b>VFR Approach/Landing:</b>	Simulated forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	28.541171,-81.340903(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gerhardt, Adam
<b>Additional Participating Persons:</b>	Jennifer Viteritto; FAA/FSDO; Orlando, FL
<b>Original Publish Date:</b>	November 9, 2023
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=192379">https://data.nts.gov/Docket?ProjectID=192379</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).