



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Arcola, Texas	<b>Accident Number:</b>	CEN23LA404
<b>Date &amp; Time:</b>	September 7, 2023, 12:00 Local	<b>Registration:</b>	N8372F
<b>Aircraft:</b>	McDonnell Douglas Helicopter 369E	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Hard landing	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Public aircraft		

## Analysis

During an evaluation flight with a company pilot, the instructor pilot reported that he failed to re-apply engine power prior to the completion of a practice autorotation with a power recovery. During the maneuver, the instructor's attention was diverted from reapplying engine power by an airplane holding short of the runway near their planned touchdown point. The helicopter subsequently landed hard on the runway, which resulted in substantial damage to the tail boom. The instructor reported that there were no preaccident mechanical malfunctions of 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 instructor's failure to re-apply engine power during a power recovery after a practice autorotation which resulted in a hard landing.

## Findings

Personnel issues	Aircraft control - Instructor/check pilot
Aircraft	Powerplant parameters - Incorrect use/operation

## Factual Information

### History of Flight

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

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	56, 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>	3-point
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane single-engine; Helicopter	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	August 8, 2023
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	January 27, 2023
<b>Flight Time:</b>	4115 hours (Total, all aircraft), 2525 hours (Total, this make and model), 4068 hours (Pilot In Command, all aircraft), 87 hours (Last 90 days, all aircraft), 28 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	53, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	November 1, 2022
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	February 25, 2023
<b>Flight Time:</b>	1197 hours (Total, all aircraft), 990 hours (Total, this make and model), 1155 hours (Pilot In Command, all aircraft), 87 hours (Last 90 days, all aircraft), 38 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	McDonnell Douglas Helicopter	<b>Registration:</b>	N8372F
<b>Model/Series:</b>	369E	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	1991	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	0488E
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	July 27, 2023 100 hour	<b>Certified Max Gross Wt.:</b>	3000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>	18500 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Rolls Royce
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	250-C20B
<b>Registered Owner:</b>	CITY OF HOUSTON POLICE DEPARTMENT	<b>Rated Power:</b>	420 Horsepower
<b>Operator:</b>	CITY OF HOUSTON POLICE DEPARTMENT	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KAXH, 69 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	12:15 Local	<b>Direction from Accident Site:</b>	189°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.97 inches Hg	<b>Temperature/Dew Point:</b>	35°C / 23°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Arcola, TX (AXH)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Arcola, TX (AXH)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	11:55 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	Houston Southwest AXH	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	69 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	27	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5002 ft / 100 ft	<b>VFR Approach/Landing:</b>	Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<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>	29.506268,-95.475832(est)

## Administrative Information

Investigator In Charge (IIC):	Finne, Andrew
Additional Participating Persons:	Patras, Jonathan; FAA-FSDO; Houston, TX
Original Publish Date:	November 9, 2023
Last Revision Date:	
Investigation Class:	<a href="#">Class 4</a>
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	<a href="https://data.nts.gov/Docket?ProjectID=193027">https://data.nts.gov/Docket?ProjectID=193027</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](#).