



Aviation Investigation Final Report

Location:	Miami, Florida	Accident Number:	ERA24FA075
Date & Time:	December 27, 2023, 12:59 Local	Registration:	N757TB
Aircraft:	HUGHES HELICOPTERS INC 369E	Aircraft Damage:	Substantial
Defining Event:	Part(s) separation from AC	Injuries:	1 Fatal, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot and passenger were returning to their home airport after dropping off a family member at another airport. The passenger stated that the helicopter yawed to the right and began to spin out of control immediately before the accident. The helicopter descended and impacted into a canal, where it was located in about 20 ft of water.

Postaccident examination of the wreckage revealed evidence of main rotor contact with the tail boom, resulting the separation of a portion of the tail boom in flight. Separation of the tail boom, and the resultant loss of tail rotor thrust, would lead to a sudden right yaw, consistent with the passenger’s description. There was no evidence of a malfunction of the main rotor system, flight control system, or a loss of engine power that could have resulted in the main rotor’s contact with the tail boom. Because the helicopter was not equipped with, nor was required to be equipped with, a flight data recorder or a cockpit image recorder, the pilot’s flight control inputs leading up to the main rotor’s contact with the tail boom is unknown.

Probable Cause and Findings

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

Main rotor contact with the tail boom for unknown reasons, resulting in the separation of the tail boom.

Findings

Not determined

(general) - Unknown/Not determined

Factual Information

History of Flight

Enroute	Part(s) separation from AC (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On December 27, 2023, at 1259 eastern standard time, a Hughes 369E helicopter, N757TB, was substantially damaged when it was involved in an accident near Miami, Florida. The pilot was fatally injured, and the passenger sustained minor injuries. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to the passenger, who was the pilot's daughter, the purpose of the flight was to drop off her brother at Page Field Airport (FMY), Fort Myers, Florida. They departed Miami Executive Airport (TMB), Miami, Florida, about 1030. They arrived at FMY with no issues and were on the ground about 30 minutes before departing to return to TMB. She further stated that the flight home was normal, and she did not notice anything; however, when the helicopter was about 5 miles west of TMB, it yawed to the right and the began spinning out of control. The helicopter impacted the water and her door opened. She exited the helicopter and swam to shore.

The helicopter was located at the bottom of a canal, at a water depth of about 20 ft. Damage to the bottom of the helicopter was consistent with its impacting the water in a near-vertical descent. The tail boom was fractured forward of the vertical stabilizer and was located about 450 ft from the main wreckage. Flight control continuity was observed to all primary flight controls through the fractured tail boom.

The engine remained securely attached to the respective mount struts on the engine gearbox. The aft strut on the left side mount had fractured at the rod end connection with the strut tube. Rotation of the engine power turbine, in the driving direction, resulted in rotation of the engine-to-transmission driveshaft and the main rotor head. Additionally, functionality of the overrunning clutch, both in the drive and freewheeling directions of rotation, was confirmed. A borescope was used to examine the combustion liner, nozzle shield, and first-stage gas producer turbine nozzle and blades. All the associated components appeared visually unremarkable.

The main rotor and main transmission remained installed on the helicopter. All main rotor head components remained installed with no evidence of separation or fractures. The main rotor blades were cut near their root ends to facilitate recovery of the wreckage. The main rotor blades did not exhibit fragmentation, and all were full length. The main rotor blades exhibited chordwise deformation, with two blades exhibiting significant chordwise and downward

deformation near their root ends. At the trailing edge of one blade, the upper and lower skins had splayed open at the tip end

The aft portion of the tail boom containing the tail rotor and T-tail stabilizer (empennage) was fractured and separated about 57 inches aft of the tail boom-to-main fuselage attachment and about 25 inches forward of the tail rotor gearbox attachment. The tail rotor gearbox remained installed on the aft end of the tail boom, the latter of which was fractured and separated from the main wreckage. The tail rotor blades remained installed on the tail rotor hub and did not exhibit anomalous damage other than damage due to submersion in the canal. Rotation of the tail rotor resulted in a corresponding rotation of the tail rotor drive shaft that remained within the [separated] empennage. The tail rotor drive shaft was fractured at the location of the tail boom fracture. Rotation of the tail rotor drive shaft resulted in a corresponding rotation of the main rotor, confirming continuity of tail rotor drive from the main transmission, with no evidence of binding.

Pilot Information

Certificate:	Commercial	Age:	71, 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	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	May 4, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1270 hours (Total, all aircraft), 187 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	HUGHES HELICOPTERS INC	Registration:	N757TB
Model/Series:	369E	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	0166E
Landing Gear Type:	Skid	Seats:	5
Date/Type of Last Inspection:	August 18, 2023 Annual	Certified Max Gross Wt.:	2700 lbs
Time Since Last Inspection:		Engines:	1 Turbo shaft
Airframe Total Time:	7468 Hrs as of last inspection	Engine Manufacturer:	Rolls royce
ELT:	Not installed	Engine Model/Series:	M250-C20B
Registered Owner:	On file	Rated Power:	650 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:	TMB,6 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	12:53 Local	Direction from Accident Site:	99°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.93 inches Hg	Temperature/Dew Point:	24°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fort Myers, FL (FMY)	Type of Flight Plan Filed:	None
Destination:	Miami, FL	Type of Clearance:	None
Departure Time:	12:00 Local	Type of Airspace:	Class D

Airport Information

Airport:	MIAMI EXEC TMB	Runway Surface Type:	
Airport Elevation:	10 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Fatal, 1 None	Latitude, Longitude:	25.650548,-80.497849

Administrative Information

Investigator In Charge (IIC):	Boggs, Daniel
Additional Participating Persons:	Nicholas Shepler; Rolls-Royce; Indianapolis, IN Michael Torrent; FAA/FSDO; Miami, FL
Original Publish Date:	January 2, 2025
Last Revision Date:	
Investigation Class:	Class 3
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=193575

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](#).