



National Transportation Safety Board Aviation Accident Final Report

Location:	Palm Beach, Florida	Accident Number:	ERA22LA231
Date & Time:	May 19, 2022, 12:10 Local	Registration:	N448JM
Aircraft:	Eurocopter AS355	Aircraft Damage:	Substantial
Defining Event:	Part(s) separation from AC	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot picked up the helicopter from a repair facility and while flying home heard a “boom,” felt a vibration in the tail, and performed a precautionary landing to a beach. Postaccident examination of the helicopter revealed that the engine cowling had become unlatched and was subsequently struck by a main rotor blade. The detached cowling then struck the horizontal stabilizer and tail rotor, which resulted in substantial damage. The pilot reported that he did not confirm that the engine cowling latch was properly secured during his preflight inspection. He reported that there were no mechanical malfunctions or failures of the helicopter before the cowling opened and detached.

Probable Cause and Findings

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

The pilot’s inadequate preflight inspection, which resulted in the unlatched engine cowling opening and being struck by a main rotor blade during flight. Contributing to the accident was the mechanic’s failure to properly secure the cowling following maintenance.

Findings

Personnel issues	Post maintenance inspection - Pilot
Personnel issues	Preflight inspection - Pilot
Aircraft	Service doors - Inadequate inspection
Personnel issues	(general) - Maintenance personnel
Personnel issues	Post maintenance inspection - Maintenance personnel

Factual Information

History of Flight

Prior to flight	Aircraft inspection event
Enroute	Part(s) separation from AC (Defining event)

Pilot Information

Certificate:	Private	Age:	48, 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:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	August 18, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	February 1, 2022
Flight Time:	2707 hours (Total, all aircraft), 212 hours (Total, this make and model), 2292 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 42 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Eurocopter	Registration:	N448JM
Model/Series:	AS355 N	Aircraft Category:	Helicopter
Year of Manufacture:	1997	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	5627
Landing Gear Type:	Skid	Seats:	6
Date/Type of Last Inspection:	May 19, 2022 Unknown	Certified Max Gross Wt.:	5732 lbs
Time Since Last Inspection:		Engines:	2 Turbo shaft
Airframe Total Time:	3547.2 Hrs as of last inspection	Engine Manufacturer:	Eurocopter
ELT:	Installed	Engine Model/Series:	Turbomeca Arrius 1A
Registered Owner:		Rated Power:	479 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:	BCT, 13 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	11:53 Local	Direction from Accident Site:	212°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	Unknown / Unknown
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.03 inches Hg	Temperature/Dew Point:	32° C / 23° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	West Palm Beach, FL (PBI)	Type of Flight Plan Filed:	None
Destination:	North Perry, FL (HWO)	Type of Clearance:	None
Departure Time:	12:00 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	26.448361, -80.058922

Administrative Information

Investigator In Charge (IIC):	Spencer, Lynn		
Additional Participating Persons:	Rick Beckstrom; FAA; Miramar, FL		
Original Publish Date:	July 20, 2022	Investigation Class:	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=105102		

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](#).