



Aviation Investigation Final Report

Location:	Mount Vernon, Illinois	Accident Number:	CEN22LA328
Date & Time:	July 19, 2022, 20:41 Local	Registration:	N228MT
Aircraft:	EUROCOPTER DEUTSCHLAND GMBH EC 135	Aircraft Damage:	Substantial
Defining Event:	Airport occurrence	Injuries:	3 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled - Air Medical (Unspecified)		

Analysis

During the landing, the pilot lowered the helicopter air ambulance down to the concrete pad. Shortly before touchdown, a cloth fire extinguisher cover from a nearby mobile fueling unit was blown airborne from the main rotor system wash. The cloth fire extinguisher cover was ingested into the tail rotor (the fenestron). During the cloth fire extinguisher cover ingestion sequence, the fenestron hub flexed, the metal fenestron hub cover detached, and it was also ingested. The pilot was able to land the helicopter without further incident. The helicopter sustained substantial damage to the fenestron. The evidence indicated that the ingestion of the metal fenestron hub cover contributed to the severity of the damage sustained.

The operator reported there were no preimpact mechanical malfunctions or failures with the airframe and the engines that would have precluded normal operation. The investigation revealed that the cloth fire extinguisher cover, which did not have a lanyard installed, was not secured with the retention bracket for the fire extinguisher on the mobile fueling unit. The operator additionally reported that foreign object debris checks are conducted by crew members anytime they are on the pad and that the mobile fueling unit is inspected during the daily fuel quality check. The Accident Investigation Board Norway along with the European Aviation Safety Agency, previously issued a formal safety recommendation to Eurocopter (Airbus) regarding the securement of the metal fenestron hub cover.

Probable Cause and Findings

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

The inadequate securement of the cloth fire extinguisher cover, which resulted in it being blown off the fire extinguisher and ingested into the helicopter's fenestron during the landing.

Findings

Environmental issues	Debris/dirt/foreign object - Effect on equipment
Aircraft	(general) - Failure
Aircraft	(general) - Damaged/degraded

Factual Information

History of Flight

Landing	Airport occurrence (Defining event)
Landing	Prop/jet/rotor blast/suction
Landing	Sys/Comp malf/fail (non-power)
Landing	Part(s) separation from AC

Pilot Information

Certificate:	Airline transport	Age:	50, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	March 10, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 2, 2022
Flight Time:	(Estimated) 3210.5 hours (Total, all aircraft), 2671.3 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	EUROCOPTER DEUTSCHLAND GMBH	Registration:	N228MT
Model/Series:	EC 135 P2+	Aircraft Category:	Helicopter
Year of Manufacture:	2010	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	0908
Landing Gear Type:	Skid	Seats:	5
Date/Type of Last Inspection:	July 12, 2022 100 hour	Certified Max Gross Wt.:	6415 lbs
Time Since Last Inspection:		Engines:	2 Turbo shaft
Airframe Total Time:	1271.2 Hrs as of last inspection	Engine Manufacturer:	Pratt & Whitney Canada
ELT:	C126 installed, not activated	Engine Model/Series:	PW206B2
Registered Owner:	Air Evac Lifeteam	Rated Power:	447 Horsepower
Operator:	Air Evac Lifeteam	Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:	Air Evac Lifeteam	Operator Designator Code:	EVCA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:	KMVN,480 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	19:56 Local	Direction from Accident Site:	38°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.82 inches Hg	Temperature/Dew Point:	29°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Cahokia, IL (CPS)	Type of Flight Plan Filed:	Company VFR
Destination:	Mount Vernon, IL	Type of Clearance:	VFR;Traffic advisory
Departure Time:	20:02 Local	Type of Airspace:	Class E

Airport Information

Airport:	MOUNT VERNON MVN	Runway Surface Type:	
Airport Elevation:	480 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	38.317926,-88.86306(est)

Administrative Information

Investigator In Charge (IIC):	Hodges, Michael
Additional Participating Persons:	Nicholas Loftus; FAA Springfield FSDO; Springfield, IL
Original Publish Date:	September 22, 2022
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=105540

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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](#).