

**Wreckage Examination
NTSB Accident Number
ERA22FA343**

ACCIDENT

Location:	Andalusia, AL
Date:	July 29, 2022
Time:	1502 CDT
Aircraft:	Eurocopter AS 350 B2
Registration	N124LN

PARTICIPANTS (On Scene)

Robert J Gretz
Sr. Air Safety Investigator
National Transportation Safety Board
Eastern Region Aviation

Clay Perkins
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HISTORY OF FLIGHT

On July 29, 2022, about 1502 eastern standard time, a Eurocopter AS 350 B2, N124LN, was substantially damaged when it was involved in an accident near Andalusia, Alabama. The commercial pilot and one crewmember sustained minor injuries, and a second crewmember was seriously injured. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 135 air medical flight.

The approximate 15-minute flight departed a base in Evergreen, Alabama and cruised at 2,000 ft mean sea level, destined to Andalusia Health Hospital with the intention to pick up a patient for transfer to a different hospital. During a postaccident interview, the pilot stated that he remembered reporting 7 miles from South Alabama Regional Airport (79J), Andalusia, Alabama. Although 79J was not the destination, the pilot made the report on the common traffic advisory frequency for traffic avoidance as an airplane had just departed 79J. The pilot did not recall the accident sequence. The pilot felt sweaty and clammy

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toward the end of the flight but was not lightheaded and did not experience vertigo. He remembered someone telling him to “pull up” three times and then remembered being in an ambulance.

The flight paramedic stated in a postaccident interview that the helicopter was approaching the hospital helipad and descending; however, it seemed low as the helipad was still about 1 mile away. The flight nurse was seated behind the pilot, tapped him on the shoulder and said that they were too low. The pilot replied “yeah, yeah, yeah,” and initially leveled off, but then the nose began to pitch down into another descent. At that point the flight nurse made a mayday call, shook the pilot’s seat and told him to “pullup, pullup, pullup.” The helicopter subsequently nosed-up, made a left turn and impacted a field on its right side.

The flight nurse was critically injured and could not provide a statement.

Witnesses in the field stated that the helicopter flew overhead about 300 ft above ground level, nosed up 90° or more, before turning left and impacting trees, powerlines, and the ground.



PERSONNEL INFORMATION

Pilot information was provided to the NTSB IIC by the operator.

AIRCRAFT INFORMATION

The helicopter was manufactured in 2006 and powered by a Turbomeca Arriel 1D1, 732 shaft horsepower engine. Maintenance information was provided to the NTSB IIC by the operator.

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METEOROLOGICAL INFORMATION

K79J 291956Z AUTO 21008KT 170V240 10SM CLR 34/23 A3007

COMMUNICATIONS

ADS-B and operator tracking data obtained.

FLIGHT RECORDERS

The helicopter was equipped with an Appareo, Vison 1000 cockpit recording unit. The antenna and power connections wires were attached; and the SD card was found in the “locked” position. The unit was retained and forwarded to the NTSB Vehicle Recorders laboratory for data download.

WRECKAGE AND IMPACT INFORMATION

The wreckage came to rest on its right side, oriented about 165° magnetic. An approximate 100-ft debris path was observed, oriented on a westerly heading. The beginning of the path consisted of fallen tree branches and powerlines, followed by the aft tail boom and the main wreckage at the end of the path. The vegetation of the grass/ground, near the main wreckage, where the engine exhaust exits at the tail, was observed to be burnt from a brief supply of hot exhaust gasses to the ground, post-impact. The three main rotor blades remained attached to their respective hinges; however, all three star arms were fractured at an approximate 45° angle and the main rotor blades were resting on the ground in a stacked position. The main rotor blades exhibited damage consisting with powered flight. The rotor hub remained attached to the transmission. The aft tail section separated in two sections, forward of the horizontal stabilizer, and forward of the tail rotor gearbox. The tail rotor system remained attached to the vertical stabilizer. The tail rotor blades remained attached with one exhibiting tip damage and the other partially separated at the root. The tail rotor drive shaft separated at the flex coupling and at the forward steel short shaft. The right horizontal stabilizer exhibited leading edge damage near the root, consistent with a wire strike.

The helicopter was equipped with an air medical interior, which had a right pilot seat and a litter in lieu of a left pilot seat. Two rear seats were for the flight paramedic and flight nurse. Flight control continuity was traced from the cyclic and collective, through crushed and separated push-pull tubes (the left lateral cyclic control push-pull tube and bellcrank under the transmission deck was fractured and separated, consistent with impact forces), to the main rotor system. Anti-torque continuity was traced from the pedals, through crushed push-pull tubes, to the flexball cable, to the aft tail rotor servo.

Examination of the cockpit area showed that the fuel flow control lever (FFCL) was in the flight gate detent. The rotor brake was in the full forward (off) position. The fuel cutoff shear wire was broken but the fuel cutoff lever was in the full forward position. The hydraulic cutoff switch was found in the aft (hydraulics off) position. The plastic guard covering the hydraulic cutoff switch was cracked.

All three seats were equipped with four-point harnesses that remained intact to the seats and functioned properly when tested. Both rear STC air medical seats had separated from the wall mounted seat tracks. The pilot's seat remained attached to the buckled floor rails and exhibited about 1-in attenuation on the right side. The litter remained intact and secure. The crash resistant fuel system (CRFS) remained intact

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with multiple fractures on the exterior shell and the fuel remained in the tank. The right skid was fractured at two locations and at the forward cross tube near the fuselage.

Three of the four transmission suspension bars were found broken. The engine remained installed in the helicopter with the front and rear mounts still intact. The gas generator and free turbine could be rotated by hand. The axial compressor exhibited impact marks consistent with FOD ingestion. The intake bell-mouth separated at the three connection points to the compressor casing. Continuity was confirmed through the gas generator to the accessory gearbox and from the free turbine to the end of the transmission shaft. The flector group between the transmission shaft and main transmission input separated.

All fuel, oil, air, and electrical connections were tight and properly saftied. Both the main and rear bearing electric chip detectors as well as the accessory gearbox (MO1) and reduction gear (MO5) magnetic plugs were clean. The oil and fuel filters were not removed. Proper freewheel operation was confirmed. The reduction gear MO5 was removed to examine the input pinion slippage mark. The mark was found slipped in the over torque position approximately 5mm consistent with the engine producing power at the time of main rotor strike. No mechanical anomalies were noted that would preclude normal operation.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot was admitted to Sacred Heart Hospital, Pensacola, FL. The first draw blood sample will be sent to CAMI for toxicological testing.

WITNESS STATEMENTS AND CONTACT INFORMATION

Witnesses are emailing statements to the NTSB IIC.

ADDITIONAL INFORMATION

Wreckage Recovery: Atlanta Air Recovery, Griffin, GA