



# Aviation Investigation Preliminary Report

<b>Location:</b>	Plant City, FL	<b>Accident Number:</b>	ERA24LA205
<b>Date &amp; Time:</b>	May 1, 2024, 16:10 Local	<b>Registration:</b>	N413JM
<b>Aircraft:</b>	Airbus Helicopters AS350	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Positioning		

On May 1, 2024, about 1610 eastern daylight time, an Airbus Helicopters AS-350, N413JM, was substantially damaged when it was involved in an accident near Plant City, Florida. The commercial pilot and the private pilot-rated copilot were not injured. The helicopter was operated by the Hillsborough County Sheriff’s Office (HCSO) as a Title 14 *Code of Federal Regulations* Part 91 positioning flight.

The helicopter departed Lakeland Linder International Airport (LAL), Lakeland, Florida, about 1545 and was destined for the HCSO base at Tampa Executive Airport (VDF), Tampa, Florida.

According to the pilot, he elected to conduct the flight from the left seat to remain “proficient” and while enroute, he selected a field to conduct confined area approaches, approaches to landings, and slope landings. After completing the initial approach to a 15-foot hover, the pilot maneuvered the helicopter inside the landing zone about 20 knots and 50 ft above ground level when the helicopter entered an uncommanded left turn that the pilot could not arrest. The turn progressed into a left “spin” and the helicopter rotated 2 to 3 times before impacting the ground and coming to rest upright with the engine running, the main rotor system “intact,” and no evidence of fire. The pilot performed an engine shutdown, and the crew performed a normal egress.

Examination of photographs revealed multiple bends and wrinkles in the tailboom, damage to the tail “stinger” and tail rotor guard. The tail rotor gearbox was separated, and the tail rotor driveshaft, hub and blade assembly remained attached. One of the two tail rotor blades was separated consistent with impact.

Removal of the tail rotor driveshaft cover revealed that the most aft-mounted hanger bearing (No. 1 of 5) was severely damaged and free of its mount and bearing race, while the tail rotor driveshaft itself remained intact and connected. The left side bearing mount attach bolt was

not installed but found atop the tailboom next to the mount. The right-side bolt was installed, but the attachment nut was not fully seated (see figure 1).

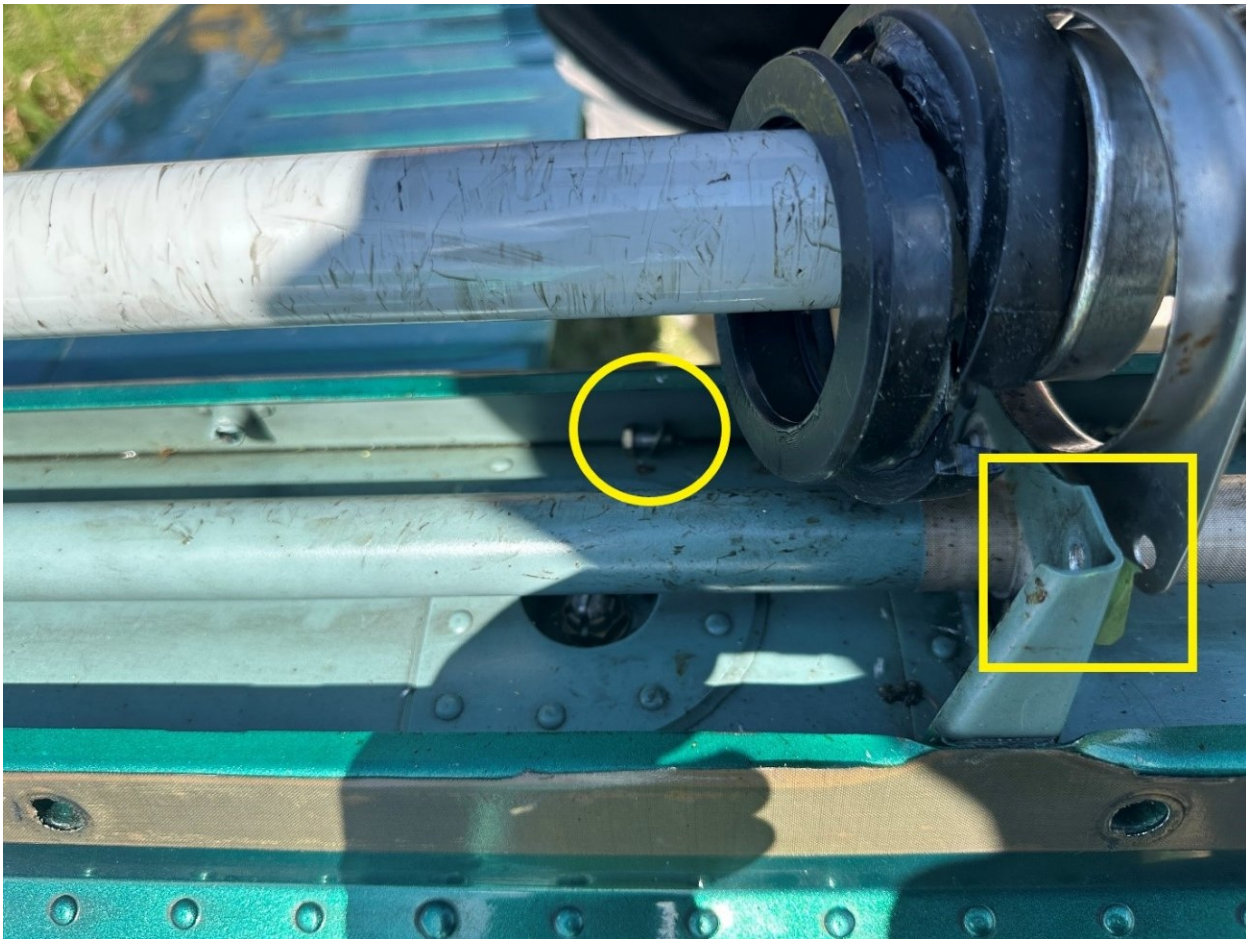


Figure 1. View of No.1 tail rotor driveshaft hanger bearing. Note bearing mount attach bolt as found (yellow circle), and its mounting position (yellow square). (Photo courtesy HCSO)

The pilot held a commercial pilot certificate with ratings for airplane single-engine land and rotorcraft - helicopter. His most recent Federal Aviation Administration (FAA) second-class medical certificate was issued February 22, 2024. He reported 2,322 total hours of flight experience, of which 1,852 hours was in helicopters with 800 hours in the accident helicopter make and model.

The copilot held a private pilot certificate with a rating for rotorcraft - helicopter. His most recent FAA second-class medical certificate was issued November 17, 2023. He reported 132 total hours of flight experience, of which all were in the accident helicopter make and model.

According to FAA and maintenance records, the helicopter was manufactured in 2019 and was powered by a Safran Arriel 2D 860-horsepower engine. Its most recent 100-hour inspection was completed on April 4, 2024, at 1,970.2 total aircraft hours.

According to the HCSO unit supervisor, the helicopter had recently been returned to service after completion of multiple inspections as well as several safety-of-flight component removals and replacements. He reported that all 5-tail rotor driveshaft hanger bearings were replaced during the inspections, and that the helicopter had accrued 12.3 hours of flight time since completion of the work.

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Airbus Helicopters	<b>Registration:</b>	N413JM
<b>Model/Series:</b>	AS350 B3	<b>Aircraft Category:</b>	Helicopter
<b>Amateur Built:</b>			
<b>Operator:</b>	Hillsborough County Sheriff's Office	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Designator Code:</b>			

### Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	VMC	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KPCM, 154 ft msl	<b>Observation Time:</b>	15:55 Local
<b>Distance from Accident Site:</b>	4 Nautical Miles	<b>Temperature/Dew Point:</b>	35°C / 16°C
<b>Lowest Cloud Condition:</b>	Scattered / 7000 ft AGL	<b>Wind Speed/Gusts, Direction:</b>	/ ,
<b>Lowest Ceiling:</b>		<b>Visibility:</b>	10 miles
<b>Altimeter Setting:</b>	29.93 inches Hg	<b>Type of Flight Plan Filed:</b>	None
<b>Departure Point:</b>	Lakeland, FL (LAL)	<b>Destination:</b>	Tampa, FL (VDF)

### Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	27.939722,-82.123708 (est)

### Administrative Information

<b>Investigator In Charge (IIC):</b>	Rayner, Brian
<b>Additional Participating Persons:</b>	Mark Keefer; FAA/FSDO; Tampa, FL
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.