



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Hopkinsville, Kentucky	<b>Accident Number:</b>	ERA23LA353
<b>Date &amp; Time:</b>	August 28, 2023, 13:00 Local	<b>Registration:</b>	N8679V
<b>Aircraft:</b>	Bellanca 7ECA	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Aircraft wake turb encounter	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot stated that, before departing in his tailwheel-equipped airplane, a U.S. Army CH-47 heavy-lift helicopter departed and proceeded upwind. When the helicopter was established on the downwind leg of the traffic pattern, the pilot initiated his takeoff. At 40 ft above ground level in the initial climb, the airplane “hit the helicopter’s rotor wash” which rolled the airplane “about 135 degrees to its right.” The pilot was able to level the wings before the airplane touched down in low brush to the right of the runway and came to rest near the airport boundary fence. The airplane sustained substantial damage to the main landing gear support structure and the pilot deplaned uninjured. The pilot reported there were no mechanical malfunctions or anomalies with the airplane that would have precluded normal operation.

## Probable Cause and Findings

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

The pilot’s inadvertent encounter with helicopter wake turbulence during initial climb, which resulted in a loss of airplane control.

## Findings

<b>Environmental issues</b>	Wake turbulence - Contributed to outcome
<b>Personnel issues</b>	Identification/recognition - Pilot

## Factual Information

### History of Flight

<b>Initial climb</b>	Aircraft wake turb encounter (Defining event)
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### Pilot Information

<b>Certificate:</b>	Airline transport; Commercial; Flight instructor	<b>Age:</b>	39,Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	Powered-lift	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane; Powered-lift	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane; Powered-lift	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	January 5, 2023
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 2812 hours (Total, all aircraft), 36 hours (Total, this make and model), 1823 hours (Pilot In Command, all aircraft), 117 hours (Last 90 days, all aircraft), 45 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Bellanca	<b>Registration:</b>	N8679V
<b>Model/Series:</b>	7ECA	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1975	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Aerobatic; Normal	<b>Serial Number:</b>	1093-75
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	August 24, 2022 Annual	<b>Certified Max Gross Wt.:</b>	1500 lbs
<b>Time Since Last Inspection:</b>	42 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3506 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C91A installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-235-C1
<b>Registered Owner:</b>	PRESLEY AVIATION LLC	<b>Rated Power:</b>	115 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KHVC, 564 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	11:15 Local	<b>Direction from Accident Site:</b>	67°
<b>Lowest Cloud Condition:</b>	Few / 2600 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots / 14 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	10°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.94 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 21°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Hopkinsville, KY	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Union City, TN (UCY)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Hopkinsville-Christian County HVC	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	564 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	08	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5505 ft / 100 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 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>	1 None	<b>Latitude, Longitude:</b>	36.856972,-87.455083(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Rayner, Brian
<b>Additional Participating Persons:</b>	Gary L. Austin ; FAA/FSDO; Louisville, KY
<b>Original Publish Date:</b>	December 21, 2023
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=192964">https://data.nts.gov/Docket?ProjectID=192964</a>

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](#).