



Aviation Investigation Final Report

Location:	Monrovia, Indiana	Accident Number:	CEN20LA304
Date & Time:	July 24, 2020, 13:16 Local	Registration:	N383ES
Aircraft:	Brantly B2B	Aircraft Damage:	Destroyed
Defining Event:	Loss of control in flight	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Flight test		

Analysis

The pilot was performing an annual inspection and maintenance flight for the helicopter at the time of the accident. After the pilot completed three or four short flights prior to attempting an additional flight. During this flight, the helicopter was exiting translational lift when it dipped and turned right abruptly and hit the ground. Postaccident examination of the helicopter confirmed flight control continuity. Additional examinations of the engine were limited due to damage incurred from impact damage and postimpact fire. The reasons for any loss of control and/or engine failure could not be determined.

There was no available evidence that a medical factor contributed to the crash.

Probable Cause and Findings

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

The pilot’s loss of control after takeoff for reasons that could not be determined based on the available information.

Findings

Aircraft	(general) - Unknown/Not determined
-----------------	------------------------------------

Factual Information

History of Flight

Initial climb	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On July 24, 2020, about 1316 eastern daylight time, a Brantly B2B helicopter, N383ES, was destroyed when it was involved in an accident near Monrovia, Indiana. The pilot was fatally injured. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 91 maintenance test flight.

A witness stated that the pilot was performing a maintenance test flight, after a 100-hour interval and annual inspection was performed. The pilot completed three or four short flights around the pilot's property before taking off and traveling southerly at an altitude of about 20 ft above ground level. The pilot's wife stated that it sounded like the helicopter was "missing." A witness stated that it looked like the helicopter was exiting effective translational lift when the helicopter dipped, it turned right abruptly, and hit the ground. A post-crash fire started immediately, and the wreckage was destroyed.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	75, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	Yes
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	February 5, 2019
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 4400 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Brantly	Registration:	N383ES
Model/Series:	B2B	Aircraft Category:	Helicopter
Year of Manufacture:	1963	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	344
Landing Gear Type:	Skid	Seats:	2
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	1670 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	IVO-360-A1
Registered Owner:	Drake Air LLC	Rated Power:	180 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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None /
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Monrovia, IN (PVT)	Type of Flight Plan Filed:	None
Destination:	Monrovia, IN (PVT)	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	Private PVT	Runway Surface Type:	
Airport Elevation:	804 ft msl	Runway Surface Condition:	Soft;Vegetation
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	39.570869,-86.500274(est)

The wreckage was destroyed by impact forces and post-crash fire. The landing gear skid were separated from the fuselage. The main rotor assembly and tail rotor assembly were separated from the fuselage and tailboom, both of which were resting along the wreckage path. The tailboom, with the tail rotor driveshaft, was attached to the fuselage.

A postaccident examination of the engine cylinders using a borescopeshowed no amonalties. Continuity of the engine valve and drive train to the accessory section was confirmed. The accessories could not undergo functional testing due to post-crash fire and impact damage. Examination of the flight control system confirmed flight control continuity.

Medical and Pathological Information

The pilot initially survived and was transported to a hospital for specialized burn/trauma care. No significant pre-existing natural disease was documented. An early hospital blood test for ethanol was negative. The pilot succumbed to his injuries on the day of the accident.

The Marion County Coroner's Office performed the pilot's autopsy, which was limited to an external examination only. According to the autopsy report, the cause of death was thermal burn injuries, and the manner of death was accident.

Toxicological testing detected the medications amlodipine and atorvastatin in the pilot's blood. Those medications generally are not considered impairing. Also detected in blood were morphine, ketamine, norketamine, and etomidate, all of which were attributable to medications administered to the pilot during his initial medical care after the accident.

Administrative Information

Investigator In Charge (IIC):	Gallo, Mitchell
Additional Participating Persons:	Leslie Thompson; Federal Aviation Administration; Indianapolis FSDO; Plainfield, IN
Original Publish Date:	August 16, 2022
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=101666

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](#).