



# Aviation Investigation Final Report

<b>Location:</b>	Mint Hill, North Carolina	<b>Accident Number:</b>	GAA18CA306
<b>Date &amp; Time:</b>	May 27, 2018, 13:30 Local	<b>Registration:</b>	N582DF
<b>Aircraft:</b>	LITE FLIGHT DRAGONFLY	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Aerodynamic stall/spin	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot reported that, while maneuvering about 1,300 ft mean sea level (about 600 ft above the ground), he initiated a 180° right turn, and about halfway through the turn, the airplane began to descend rapidly and would not respond to flight controls. The airplane struck a tree, spun to the right, and came to rest on a residential house.

Postaccident examination conducted by the pilot revealed that all controls were intact and operational.

The airplane sustained substantial damage to the fuselage, empennage, and both wings.

In a written statement provided to the local police department, the pilot reported that he lost control of the airplane, and it "spiraled down" and then struck a tree and a house.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

Given the pilot's statement, it is likely that the airplane entered an aerodynamic stall/spin when the pilot exceeded the airplane's critical angle of attack during a turn.

## Probable Cause and Findings

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

The pilot's exceedance of the airplane's critical angle of attack during a turn, which resulted in an aerodynamic stall/spin.

## Findings

<b>Aircraft</b>	Angle of attack - Capability exceeded
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Environmental issues</b>	Tree(s) - Contributed to outcome

## Factual Information

### History of Flight

<b>Maneuvering</b>	Aerodynamic stall/spin (Defining event)
<b>Maneuvering</b>	Collision with terr/obj (non-CFIT)

### Pilot Information

<b>Certificate:</b>	Sport Pilot	<b>Age:</b>	60,Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Unknown
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Sport pilot Unknown	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	LITE FLIGHT	<b>Registration:</b>	N582DF
<b>Model/Series:</b>	DRAGONFLY NO SERIES	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2006	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	82
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	September 15, 2017 Condition	<b>Certified Max Gross Wt.:</b>	992 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	730 Hrs at time of accident	<b>Engine Manufacturer:</b>	ROTAX
<b>ELT:</b>	C91A installed, not activated	<b>Engine Model/Series:</b>	582UL
<b>Registered Owner:</b>		<b>Rated Power:</b>	65 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>	KEQY, 679 ft msl	<b>Distance from Accident Site:</b>	10 Nautical Miles
<b>Observation Time:</b>	16:53 Local	<b>Direction from Accident Site:</b>	184°
<b>Lowest Cloud Condition:</b>	Scattered / 3300 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.01 inches Hg	<b>Temperature/Dew Point:</b>	27°C / 20°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Indian Trail, NC (28A )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Indian Trail, NC (28A )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	13:00 Local	<b>Type of Airspace:</b>	Class G

## 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>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	35.184722, -80.606941 (est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Benhoff, Kathryn
<b>Additional Participating Persons:</b>	Paul Meyer; FAA; Charlotte, NC
<b>Original Publish Date:</b>	November 5, 2018
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=97345">https://data.nts.gov/Docket?ProjectID=97345</a>

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