



# Aviation Investigation Final Report

<b>Location:</b>	Merritt Island, Florida	<b>Accident Number:</b>	GAA18CA479
<b>Date &amp; Time:</b>	August 9, 2018, 10:00 Local	<b>Registration:</b>	N487JK
<b>Aircraft:</b>	Piper PA28	<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 - Instructional		

## Analysis

The solo student pilot reported that, during landing, before initiating the landing flare, he saw a "white bird" heading toward the airplane. He applied left rudder to avoid the bird, and the airplane drifted left of the runway centerline. He then "[pulled] the yoke back," but the left main landing gear impacted a taxiway sign, and the airplane settled on grass adjacent to the runway.

The airplane sustained substantial damage to the left-wing spar.

The pilot reported that there were no preaccident mechanical failures or malfunctions 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 exceedance of the airplane's critical angle of attack while maneuvering to avoid a bird during the landing flare, which resulted in an aerodynamic stall.

## Findings

<b>Aircraft</b>	Angle of attack - Capability exceeded
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Environmental issues</b>	Animal(s)/bird(s) - Effect on operation

## Factual Information

### History of Flight

<b>Landing-flare/touchdown</b>	Abrupt maneuver
<b>Landing-flare/touchdown</b>	Aerodynamic stall/spin (Defining event)
<b>Landing-flare/touchdown</b>	Loss of control in flight
<b>Landing-flare/touchdown</b>	Collision with terr/obj (non-CFIT)

### Student pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	18,Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<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>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	July 11, 2018
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 21 hours (Total, all aircraft), 21 hours (Total, this make and model), 2 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N487JK
<b>Model/Series:</b>	PA28 161	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1998	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Utility	<b>Serial Number:</b>	2842044
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	July 3, 2018 100 hour	<b>Certified Max Gross Wt.:</b>	2447 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	10899.2 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C91A installed, not activated	<b>Engine Model/Series:</b>	O-320-D3G
<b>Registered Owner:</b>		<b>Rated Power:</b>	160 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	Pilot school (141)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KCOF, 8 ft msl	<b>Distance from Accident Site:</b>	8 Nautical Miles
<b>Observation Time:</b>	13:56 Local	<b>Direction from Accident Site:</b>	145°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.11 inches Hg	<b>Temperature/Dew Point:</b>	30°C / 24°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Merritt Island, FL (COI )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Merritt Island, FL (COI )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	MERRITT ISLAND COI	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	5 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	29	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3601 ft / 75 ft	<b>VFR Approach/Landing:</b>	Full stop;Traffic pattern

## 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>	28.341667,-80.686943(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Nepomuceno, Eleazar
<b>Additional Participating Persons:</b>	Scott Strickland; FAA; Orlando, FL
<b>Original Publish Date:</b>	November 6, 2019
<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=98033">https://data.nts.gov/Docket?ProjectID=98033</a>

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).