



# Aviation Investigation Final Report

<b>Location:</b>	Hillsdale, Michigan	<b>Accident Number:</b>	GAA18CA560
<b>Date &amp; Time:</b>	September 17, 2018, 18:00 Local	<b>Registration:</b>	N3544A
<b>Aircraft:</b>	Piper PA22	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Aerodynamic stall/spin	<b>Injuries:</b>	1 Minor, 1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot reported that, during landing, he flared too high, and the airplane aerodynamically stalled. He added that the airplane landed hard, the nose landing gear collapsed, the airplane veered right off the runway into the dirt, and it then nosed over.

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

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 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



## Factual Information

### History of Flight

<b>Approach-VFR pattern final</b>	Aerodynamic stall/spin (Defining event)
<b>Landing</b>	Hard landing
<b>Landing</b>	Landing gear collapse
<b>Landing</b>	Loss of control on ground
<b>Landing</b>	Runway excursion
<b>Landing</b>	Nose over/nose down

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	68,Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<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>	None	<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>	Piper	<b>Registration:</b>	N3544A
<b>Model/Series:</b>	PA22 135	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1954	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	22-1818
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	Annual	<b>Certified Max Gross Wt.:</b>	1951 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	O-290-D2
<b>Registered Owner:</b>		<b>Rated Power:</b>	135 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>	KJYM, 1182 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	22:15 Local	<b>Direction from Accident Site:</b>	117°
<b>Lowest Cloud Condition:</b>		<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 10000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	3 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	350°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.89 inches Hg	<b>Temperature/Dew Point:</b>	29°C / 15°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Hillsdale, MI (JYM)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Hillsdale, MI (JYM)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	HILLSDALE MUNI JYM	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1184 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	10	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5000 ft / 100 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor, 1 None	<b>Latitude, Longitude:</b>	41.921665,-84.587776(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Benhoff, Kathryn
<b>Additional Participating Persons:</b>	Eric Haft; FAA; East Michigan, MI
<b>Original Publish Date:</b>	April 8, 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=98320">https://data.nts.gov/Docket?ProjectID=98320</a>

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