



Aviation Investigation Final Report

Location:	Farmingdale, New York	Accident Number:	GAA18CA291
Date & Time:	May 21, 2018, 18:00 Local	Registration:	N5560W
Aircraft:	Piper PA28	Aircraft Damage:	Substantial
Defining Event:	Aerodynamic stall/spin	Injuries:	1 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, on short final, the airspeed was about 65 to 70 knots with full flaps, and he observed the two precision approach path lights indicating two white lights. The left wing dropped, and he did not hear the stall warning horn. The left main landing gear touched down hard, the right main landing gear collapsed, and the airplane veered off the runway to the right. The pilot reported that the airplane hit an "air pocket" and crashed.

A witness, located on the ramp, observed the airplane head-on coming in very low and slow. He saw the airplane aerodynamically stall, and the right wing drop. The right wing impacted the ground, followed by the right main landing gear and then the nose landing gear. The landing gear assemblies separated from the airplane, which skidded to an abrupt halt.

The airplane sustained substantial damage to both wings.

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 short final, which resulted in an aerodynamic stall and hard landing.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Angle of attack - Capability exceeded
Aircraft	Airspeed - Attain/maintain not possible

Factual Information

History of Flight

Approach-VFR pattern final	Aerodynamic stall/spin (Defining event)
Landing	Abnormal runway contact
Landing	Landing gear collapse
Landing	Runway excursion

Pilot Information

Certificate:	Commercial	Age:	27,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	December 2, 2013
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N5560W
Model/Series:	PA28 150	Aircraft Category:	Airplane
Year of Manufacture:	1962	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-653
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	2150 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:		Engine Model/Series:	O-320 SERIES
Registered Owner:		Rated Power:	
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:	KFRG, 81 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	21:53 Local	Direction from Accident Site:	317°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.14 inches Hg	Temperature/Dew Point:	19°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	Unknown
Destination:	Farmingdale, NY (FRG)	Type of Clearance:	Unknown
Departure Time:		Type of Airspace:	Class D

Airport Information

Airport:	REPUBLIC FRG	Runway Surface Type:	Asphalt
Airport Elevation:	80 ft msl	Runway Surface Condition:	Dry
Runway Used:	19	IFR Approach:	None
Runway Length/Width:	5516 ft / 150 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 2 None	Latitude, Longitude:	40.731945,-73.414443(est)

Administrative Information

Investigator In Charge (IIC):	Benhoff, Kathryn
Additional Participating Persons:	Stanley Routh; FAA; Farmingdale, NY
Original Publish Date:	October 24, 2018
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=97297

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