



Aviation Investigation Final Report

Location:	Payson, Arizona	Accident Number:	GAA18CA313
Date & Time:	May 30, 2018, 16:55 Local	Registration:	N780JA
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, during a short-field takeoff, around 100 ft above the ground, he saw the primary flight display (PFD) airspeed indicator showing 0. He added that the engine appeared to be functioning normally, but he decided to level the airplane and attempt to land on the remaining runway. The airplane then began to turn left, and he added right rudder. Subsequently, the airplane touched down on an adjacent taxiway left of the runway, and the nose landing gear collapsed.

The airplane sustained substantial damage to the left horizontal stabilizer.

Postaccident examination videos were provided by a Federal Aviation Administration inspector. The videos showed both the PFD and backup airspeed indicators moving in sync with air applied to the pitot tube.

The automated weather observation system at the airport reported that, about the time of the accident, the wind was from 190° at 10 knots, gusting to 18 knots, and the calculated density altitude was 7,883 ft. The pilot was departing from runway 24.

Probable Cause and Findings

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

The pilot's failure to maintain yaw control during a short-field takeoff in high-density altitude conditions.

Findings

Aircraft	Yaw control - Not attained/maintained
Personnel issues	Aircraft control - Pilot
Environmental issues	High density altitude - Effect on equipment

Factual Information

History of Flight

Takeoff	Miscellaneous/other
Initial climb	Loss of control in flight (Defining event)
Landing	Landing gear collapse

Pilot Information

Certificate:	Private	Age:	20, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	December 10, 2017
Flight Time:	(Estimated) 95.8 hours (Total, all aircraft), 95.8 hours (Total, this make and model), 28 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 2.5 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N780JA
Model/Series:	172	Aircraft Category:	Airplane
Year of Manufacture:	2007	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	172S10476
Landing Gear Type:	Tricycle	Seats:	3
Date/Type of Last Inspection:	100 hour	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	IO-360-L2A
Registered Owner:	On file	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:	KPAN, 5157 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	23:55 Local	Direction from Accident Site:	257°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / 18 knots	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.95 inches Hg	Temperature/Dew Point:	29°C / -10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	PRESCOTT, AZ (PRC)	Type of Flight Plan Filed:	VFR
Destination:	Payson, AZ (PAN)	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	PAYSON PAN	Runway Surface Type:	Asphalt
Airport Elevation:	5156 ft msl	Runway Surface Condition:	Dry
Runway Used:	24	IFR Approach:	None
Runway Length/Width:	5504 ft / 75 ft	VFR Approach/Landing:	Precautionary landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	34.257499,-111.336387(est)

Administrative Information

Investigator In Charge (IIC):	Benhoff, Kathryn
Additional Participating Persons:	Daren DuFriend; FAA; Scottsdale, AZ
Original Publish Date:	November 5, 2018
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=97367

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