



Aviation Investigation Final Report

Location:	Fredericksburg, Texas	Accident Number:	CEN23LA159
Date & Time:	April 17, 2023, 09:45 Local	Registration:	N478SP
Aircraft:	Cessna 172S	Aircraft Damage:	Substantial
Defining Event:	Abnormal runway contact	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that when she checked the weather inbound to the airport, the wind was reported as calm. However, the wind may have shifted resulting in a tailwind on final approach. When it became apparent that the airplane was going to land long, she added full power to attempt a go-around. However, the airplane porpoised, the nose landing gear struck the runway and collapsed, and the airplane veered left and departed the runway. The airplane sustained substantial damage to the forward fuselage. The pilot reported there were no mechanical malfunctions or failures that would have precluded normal operation. She noted that initiating the go-around earlier may have prevented the accident.

Probable Cause and Findings

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

The pilot stated that when she checked the weather inbound to the airport, the wind was reported as calm. However, the wind may have shifted resulting in a tailwind on final approach. When it became apparent that the airplane was going to land long, she added full power to attempt a go-around. However, the airplane porpoised, the nose landing gear struck the runway and collapsed, and the airplane veered left and departed the runway. The airplane sustained substantial damage to the forward fuselage. The pilot reported there were no mechanical

malfunctions or failures that would have precluded normal operation. She noted that initiating the go-around earlier may have prevented the accident.

Findings

Personnel issues	Aircraft control - Pilot
Environmental issues	Tailwind - Effect on equipment

Factual Information

History of Flight

Landing-landing roll	Abnormal runway contact (Defining event)
Landing-flare/touchdown	Hard landing
Landing-landing roll	Loss of control on ground
Landing-flare/touchdown	Runway excursion
Landing-flare/touchdown	Landing gear collapse

Pilot Information

Certificate:	Private	Age:	59,Female
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	April 29, 2021
Occupational Pilot:	No	Last Flight Review or Equivalent:	April 11, 2023
Flight Time:	189.9 hours (Total, all aircraft), 82.6 hours (Total, this make and model), 28.3 hours (Pilot In Command, all aircraft), 22 hours (Last 90 days, all aircraft), 7.7 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N478SP
Model/Series:	172S	Aircraft Category:	Airplane
Year of Manufacture:	1998	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	172S8023
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:		Engines:	1
Airframe Total Time:		Engine Manufacturer:	
ELT:	Installed, not activated	Engine Model/Series:	
Registered Owner:	Archimedes Aviation LLC	Rated Power:	
Operator:	Archimedes Aviation LLC	Operating Certificate(s) Held:	None
Operator Does Business As:	Above and Beyond	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KERV, 1617 ft msl	Distance from Accident Site:	31 Nautical Miles
Observation Time:	09:55 Local	Direction from Accident Site:	250°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.18 inches Hg	Temperature/Dew Point:	18°C / 5°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Austin, TX (KAUS)	Type of Flight Plan Filed:	VFR
Destination:	Fredericksburg, TX (T82)	Type of Clearance:	VFR
Departure Time:	08:20 Local	Type of Airspace:	Class G

Airport Information

Airport:	Gillespie County T82	Runway Surface Type:	Asphalt
Airport Elevation:	1695 ft msl	Runway Surface Condition:	Dry
Runway Used:	32	IFR Approach:	Visual
Runway Length/Width:	5001 ft / 75 ft	VFR Approach/Landing:	Go around

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	30.1435,-98.5433

Administrative Information

Investigator In Charge (IIC):	Abraham, Laura
Additional Participating Persons:	Jason Pruitt; FAA; San Antonio, TX
Original Publish Date:	October 5, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=107086

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).