



Aviation Investigation Final Report

Location:	Savannah, Georgia	Accident Number:	ERA23LA378
Date & Time:	May 25, 2023, 18:20 Local	Registration:	N177EM
Aircraft:	CIRRUS DESIGN CORP SR20	Aircraft Damage:	Substantial
Defining Event:	Landing gear collapse	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot was conducting touch-and-go takeoffs and landings. He reported that during his second landing and subsequent takeoff, he felt a vibration in the nose landing gear and decided that he would make the next landing a full stop and taxi back to the fixed base operator. During the third landing attempt the airplane touched down, the pilot heard a “snap,” as the nose landing gear settled onto the runway, and the nose landing gear then collapsed. Security video of the landing showed that the airplane landed normally, and after several seconds of landing roll, the nose landing gear collapsed and the airplane came to a stop on the runway. The airplane’s firewall, engine mounts, and lower fuselage structure were substantially damaged. The airplane was subsequently removed from the runway and stored in a hangar at the airport. The hangar later caught fire and the airplane was destroyed. An examination of the nose landing gear components could not be accomplished.

Probable Cause and Findings

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

Failure and collapse of the nose landing gear during landing.

Findings

Aircraft	Nose/tail landing gear - Unknown/Not determined
----------	---

Factual Information

History of Flight

Landing-landing roll	Landing gear collapse (Defining event)
----------------------	--

Pilot Information

Certificate:	Private	Age:	34,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	August 23, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 3, 2022
Flight Time:	(Estimated) 321 hours (Total, all aircraft), 24 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	CIRRUS DESIGN CORP	Registration:	N177EM
Model/Series:	SR20	Aircraft Category:	Airplane
Year of Manufacture:	2000	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1045
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	April 20, 2023 100 hour	Certified Max Gross Wt.:	2900 lbs
Time Since Last Inspection:	40 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2974 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	C91 installed, not activated	Engine Model/Series:	IO-360-ES6B
Registered Owner:	AERO DAVIS LLC	Rated Power:	200 Horsepower
Operator:	AERO DAVIS LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	SAV,29 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	13:53 Local	Direction from Accident Site:	2°
Lowest Cloud Condition:	Scattered / 3000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 9000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	15 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.92 inches Hg	Temperature/Dew Point:	28°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Savannah, GA	Type of Flight Plan Filed:	VFR
Destination:	Savannah, GA	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	Class C

Airport Information

Airport:	SAVANNAH/HILTON HEAD INTL SAV	Runway Surface Type:	Asphalt
Airport Elevation:	50 ft msl	Runway Surface Condition:	Dry
Runway Used:	10	IFR Approach:	None
Runway Length/Width:	9351 ft / 150 ft	VFR Approach/Landing:	Full stop;Touch and go;Traffic pattern

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:	32.127583,-81.202139(est)

Administrative Information

Investigator In Charge (IIC): Mccarter, Lawrence

Additional Participating Persons: Hal Ingram; FAA/FSDO; ATL, GA

Original Publish Date: November 16, 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=193127>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).