



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Chesterfield, Missouri	Accident Number:	CEN24LA159
Date & Time:	April 13, 2024, 12:45 Local	Registration:	N594M
Aircraft:	CIRRUS DESIGN CORP SR20	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor reported that while performing a soft-field takeoff, the airplane briefly lifted off the runway and subsequently bounced. The flight instructor directed the student pilot to pitch down as he applied forward pressure on the yoke. The airplane remained in a nose high attitude and yawed to the left. The flight instructor verbalized “my controls” as the airplane then turned to the right and the pitch increased. The airplane came to rest upright on the edge of the runway. The landing gear collapsed upon impact with the ground which resulted in substantial damage to the engine mount and firewall.

The flight instructor stated that there were no preimpact mechanical malfunctions or failures that would have precluded normal operations.

Probable Cause and Findings

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

The student pilot’s failure to maintain control during takeoff. Contributing to the accident was the flight instructor’s delayed remedial action.

Findings

Aircraft	Pitch control - Not attained/maintained
Aircraft	Yaw control - Not attained/maintained
Personnel issues	Delayed action - Instructor/check pilot
Personnel issues	Aircraft control - Student/instructed pilot

Factual Information

History of Flight

Takeoff	Loss of control in flight (Defining event)
Takeoff	Attempted remediation/recovery
Takeoff	Abnormal runway contact
Takeoff	Landing gear collapse

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	50,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	March 5, 2024
Occupational Pilot:	No	Last Flight Review or Equivalent:	April 17, 2024
Flight Time:	(Estimated) 838.8 hours (Total, all aircraft), 107.5 hours (Total, this make and model), 793.2 hours (Pilot In Command, all aircraft), 98.5 hours (Last 90 days, all aircraft), 21.2 hours (Last 30 days, all aircraft), 2.9 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Student	Age:	46,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 None	Last FAA Medical Exam:	May 1, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 75.7 hours (Total, all aircraft), 69.7 hours (Total, this make and model), 2.4 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CIRRUS DESIGN CORP	Registration:	N594M
Model/Series:	SR20	Aircraft Category:	Airplane
Year of Manufacture:	2020	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	2595
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	March 22, 2024 100 hour	Certified Max Gross Wt.:	3150 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1709.8 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C126 installed, activated, did not aid in locating accident	Engine Model/Series:	IO-390
Registered Owner:	Mistwood Air 1 LLC	Rated Power:	215 Horsepower
Operator:	Mistwood Air 1 LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KSUS, 458 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	12:54 Local	Direction from Accident Site:	175°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	Unknown / N/A
Altimeter Setting:	30.05 inches Hg	Temperature/Dew Point:	24°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Chesterfield, MO	Type of Flight Plan Filed:	VFR
Destination:	Chesterfield, MO	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	Class D

Airport Information

Airport:	SPIRIT OF ST LOUIS SUS	Runway Surface Type:	Asphalt
Airport Elevation:	463 ft msl	Runway Surface Condition:	Dry
Runway Used:	26R	IFR Approach:	None
Runway Length/Width:	5000 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	38.666123,-90.656863(est)

Administrative Information

Investigator In Charge (IIC):	Maxon, Cory
Additional Participating Persons:	Roby Sisk; Federal Aviation Administration: FSDO; Saint Louis, MO
Original Publish Date:	June 28, 2024
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=194092

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](#).