



# Aviation Investigation Final Report

<b>Location:</b>	Knoxville, Tennessee	<b>Accident Number:</b>	ERA23LA145
<b>Date &amp; Time:</b>	March 7, 2023, 13:05 Local	<b>Registration:</b>	N320CA
<b>Aircraft:</b>	CIRRUS DESIGN CORP SR22T	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Business		

## Analysis

The pilot reported that during the takeoff roll the airplane encountered a gusting and shifting crosswind. The airplane departed the left side of the runway and the pilot applied the brakes and reduced engine power. The airplane subsequently struck a culvert, the landing gear partially collapsed, and the airplane's firewall was substantially damaged. The pilot reported that there were no preaccident mechanical malfunctions or failures of 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 failure to maintain directional control during the takeoff roll where a gusting and shifting crosswind prevailed.

## Findings

<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Environmental issues</b>	Crosswind - Response/compensation



## Factual Information

### History of Flight

Takeoff-rejected takeoff	Loss of control on ground (Defining event)
Takeoff-rejected takeoff	Runway excursion

### Pilot Information

Certificate:	Private	Age:	59,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-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:	September 14, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	March 31, 2021
Flight Time:	1433 hours (Total, all aircraft), 1222 hours (Total, this make and model), 1433 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

### Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	3-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CIRRUS DESIGN CORP	<b>Registration:</b>	N320CA
<b>Model/Series:</b>	SR22T	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2014	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	0822
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	Annual	<b>Certified Max Gross Wt.:</b>	3400 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	TSIO550K1B
<b>Registered Owner:</b>	ARMSTRONG RESOURCE MANAGEMENT CORP	<b>Rated Power:</b>	315 Horsepower
<b>Operator:</b>	ARMSTRONG RESOURCE MANAGEMENT CORP	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KDKX, 833 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	12:55 Local	<b>Direction from Accident Site:</b>	258°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	10°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.12 inches Hg	<b>Temperature/Dew Point:</b>	19°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Knoxville, TN (DKX)	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	Newman, GA (CCO)	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	13:00 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	KNOXVILLE DOWNTOWN ISLAND DKX	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	833 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	8	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3499 ft / 75 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	35.96424,-83.873305(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Freeze, Christopher
<b>Additional Participating Persons:</b>	Angela Kachinski; FAA/FSDO; Nashville, TN
<b>Original Publish Date:</b>	June 23, 2023
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=106851">https://data.ntsb.gov/Docket?ProjectID=106851</a>

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](#).