Aviation Investigation Final Report

Location:	Jesup, Georgia	**Accident Number:**	ERA23FA182
Date & Time:	April 6, 2023, 07:50 Local	**Registration:**	N911TK
Aircraft:	CIRRUS DESIGN CORP SR22	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The instrument-rated private pilot was commuting to work in his airplane. The pilot did not request any air traffic control services for the 22-minute flight, and the airspace at the destination airport was not tower-controlled. Recorded track data revealed that the pilot began a descent to the destination airport and crossed over the approach end of the runway on a heading perpendicular to the runway heading. He then made two turns of about 180° while flying at airspeeds near the airplane's published stall speed, and reached about 40° of bank during each turn. Additionally, the post-accident position of the flaps suggested that at least the final phase of this maneuvering was being performed with the wing flaps retracted. The airplane impacted terrain about 1,200 ft short of the runway approach end and about 40 ft north of runway centerline. Although there was an instrument approach procedure for the runway, the track data revealed that there was no attempt by the pilot to execute it. The lowest weather minimums for the approach required at least one mile visibility. Weather at the destination airport at the time of the accident included a 300-ft ceiling, ¼ mile visibility in fog, and calm wind. The weather conditions cleared about an hour after the accident.

A postaccident examination of the wreckage did not reveal evidence of a mechanical malfunction or anomaly that would have precluded normal operation. Engine operation was recorded on the onboard avionics and revealed increasing power at impact consistent with the pilot advancing the throttle.

Based on this information, it is likely that the pilot attempted to fly under the low overcast while trying to acquire the airport visually. During this attempt, he excessively banked the airplane at slow speed, and with the wing flaps retracted, exceeded the airplane's critical angle of attack, and lost control of the airplane, resulting in a collision with terrain. His tendency to not be late for appointments may have added self-induced pressure and affected his decision-making during the flight.

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 adequate airspeed and his exceedance of the airplane's critical angle of attack, which resulted in a loss of control while maneuvering for a visual landing in low ceiling and low visibility conditions. Contributing to the accident was the pilot's decision to attempt a visual landing in low visibility conditions.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Angle of attack - Not attained/maintained
Aircraft	Airspeed - Not attained/maintained
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Low ceiling - Decision related to condition

Factual Information

History of Flight

Approach	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On April 6, 2023, about 0750 eastern daylight time, a Cirrus Design Corporation SR22, N911TK, was substantially damaged when it was involved in an accident near Jesup, Georgia. The private pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to recorded data from the airplane's primary flight display (PFD) and multi-function display (MFD), the airplane took off from Fernandina Beach Municipal Airport (FHB), Fernandina Beach, Florida, about 0728, climbed to about 1,800 ft, and flew to the north-northwest. About 0746, the airplane began descending. The pilot did not request any air traffic control services during the flight. As the airplane approached Jesup-Wayne County Airport (JES), Jesup, Georgia, from the south, it slowed to an indicated airspeed of about 75 knots (kts) and maintained this airspeed within ±5 kts for the remainder of the recording. Track data showed that the airplane initially crossed over the approach end of runway 29 perpendicular to the runway heading (see Figure 1). At 07:50:03, the airplane began to roll right to an ultimate bank angle of about 40° at 07:50:37, and then immediately rolled left to 40°. The airplane subsequently began to roll slightly back towards wings level before it rolled left and pitched down. The MFD stopped recording at 07:51:00, and the PFD stopped recording at 07:51:09.

Figure 1 – Final Flight Track and Wreckage Location

There was a published RNAV GPS approach to runway 29; however, the airplane's recorded flight track was inconsistent with that instrument approach procedure. The lowest weather minimums for the approach required at least one mile visibility.

Pilot Information

Certificate:	Private	**Age:**	61,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):	Airplane single-engine	**Toxicology Performed:**	
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	December 15, 2021
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	953 hours (Total, all aircraft), 419 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

According to the pilot's flight instructor, the pilot completed an instrument proficiency check on September 29, 2021, in the accident airplane. No record of a current flight review per 14

CFR 61.56 (a) and (c) was found. His most recent logged flight review was completed on September 11, 2019.

According to interviews with the pilot's spouse and the JES airport manager, the pilot owned the airplane and used it to commute between his home in Fernandina Beach, Florida and Jesup, where he owned a chiropractic practice. His wife reported that he was "obsessed with weather" and they had an agreement that he would take "no chances" regarding the weather. If the weather was questionable, he would drive instead.

The pilot's spouse and the airport manager both reported the pilot was never late for appointments. His office opened at 0800; however, his spouse did not know what time his first appointment was.

Aircraft and Owner/Operator Information

Aircraft Make:	CIRRUS DESIGN CORP	**Registration:**	N911TK
Model/Series:	SR22	**Aircraft Category:**	Airplane
Year of Manufacture:	2004	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1001
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	August 9, 2022 Annual	**Certified Max Gross Wt.:**	3400 lbs
Time Since Last Inspection:	23 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	977.8 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	C126 installed, not activated	**Engine Model/Series:**	IO-550-N (27)
Registered Owner:	On file	**Rated Power:**	310 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

According to the Cirrus Design SR22 Pilot's Operating Handbook, at the maximum gross weight of 3,400 lbs, stall speed with flaps up and 45° bank was 81 kts indicated airspeed (KIAS) at the most aft center of gravity (G.G.) and was 84 KIAS with flaps up and 45° bank at the most forward C.G. With flaps full down, the stall speeds under the same conditions were 72 and 73 KIAS, respectively.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KJES,109 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	07:50 Local	**Direction from Accident Site:**	279°
Lowest Cloud Condition:		**Visibility**	0.25 miles
Lowest Ceiling:	Overcast / 300 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:		**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.23 inches Hg	**Temperature/Dew Point:**	17°C / 16°C
Precipitation and Obscuration:			
Departure Point:	Fernandina Beach, FL (FHB)	**Type of Flight Plan Filed:**	None
Destination:	Jesup, GA (JES)	**Type of Clearance:**	None
Departure Time:	07:28 Local	**Type of Airspace:**	Class G

The airport was equipped with an Automated Weather Observing System (AWOS) and the 0750 observation included ¼-mile visibility in fog, calm wind, and a ceiling of 300 ft. Airport personnel who arrived to work about 5 minutes after the accident reported and documented fog on the ramp at the time of their arrival.

The AWOS reports issued surrounding the time of the accident indicated that restricted visibilities in mist were first observed at 0615, with dense fog being reported from 0635 through about 0820, then mist at 0821 through 0835 before clearing at 0855.

Airport Information

Airport:	JESUP-WAYNE COUNTY JES	**Runway Surface Type:**	Asphalt
Airport Elevation:	107 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	29	**IFR Approach:**	Unknown
Runway Length/Width:	5500 ft / 100 ft	**VFR Approach/Landing:**	Unknown

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	31.55222,-81.86972(est)

The wreckage came to rest upright, and there was no fire. Ground signatures were consistent with a right-wing-low, nose-low impact with terrain. The wreckage came to rest near to the point of initial ground impact on a heading of 040°. The wing flaps actuator was found in the retracted (up) position. One of the propeller blades fractured during the impact sequence. The blades exhibited chordwise scratching, surface polishing, and “S” bending signatures.

The airplane was equipped with the Cirrus Airframe Parachute System (CAPS). The system had not activated, and the parachute was not deployed. The CAPS safety pin was found in place in the CAPS handle holder.

The airplane was equipped with electronic multifunction and primary flight displays. The non-volatile memory from those units were forwarded to the National Transportation Safety Board Vehicle Recorders Laboratory for examination and download of the data.

Recorded engine data from the Avidyne components revealed that the engine was in operation at the time of impact with the terrain, and the data was consistent with an application of power during the last few seconds. The last recorded engine parameters indicated 2,290 rpm, oil pressure 51 psi, oil temperature 178°F, fuel flow 17.1 gph, and manifold pressure 24.9 inHg.

Examination of the airframe, engine and propeller did not reveal evidence of a mechanical malfunction or anomaly that would have precluded normal operation.

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	David Detscher; FAA/FSDO; Atlanta, GA Brannon Mayer; Cirrus Aircraft; Duluth, MN
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