



# Aviation Investigation Preliminary Report

<b>Location:</b>	Kill Devil Hills, NC	<b>Accident Number:</b>	ERA24FA397
<b>Date &amp; Time:</b>	September 28, 2024, 17:18 Local	<b>Registration:</b>	N1281F
<b>Aircraft:</b>	CIRRUS DESIGN CORP SR22	<b>Injuries:</b>	5 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

On September 28, 2024, at 1718 eastern daylight time, a Cirrus Design Corp SR22, N1281F, was destroyed when it was involved in an accident near Kill Devil Hills, North Carolina. The private pilot and four passengers were fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot departed from Moore County Airport (SOP), Carthage, North Carolina, on a multileg flight with stops in Ocracoke Island Airport (W95) and Dare County Regional Airport (MQI) before continuing to First Flight Airport (FFA), Kill Devil Hills, North Carolina. The accident flight departed from MQI at 1710 and was airborne for 8 minutes prior to the accident.

Preliminary Automatic Dependent Surveillance-Broadcast (ADS-B) data provided by the Federal Aviation Administration (FAA) showed that after departing MQI, the pilot flew to FFA and entered the left traffic pattern for runway 21. The published airport traffic pattern for runway 21 was a right-hand pattern. The pilot descended and flew above the runway. He then climbed to traffic pattern altitude and rejoined the traffic pattern using left turns. The pilot approached runway 21 a second time, and according to witnesses, was high and fast during the approach. As the airplane passed the midway point of the runway, it made a steep left turn and impacted the top of 50-foot-tall trees (see figure 1). The airplane subsequently impacted additional trees before coming to rest 300 ft east of the runway in heavily wooded terrain, where a significant postimpact fire ensued.



Figure 1- Preliminary ADS-B data showing the airplane's flight track during the accident approach (green line) and the previous approach to runway 21 (yellow line).

Preliminary review of recorded audio communications on the common traffic advisory frequency (CTAF) did not reveal any distress calls from the pilot.

The wind reported at FFA about the time of the accident was 170° at 6 knots, gusting to 14 knots.

The airplane's left wing impacted 50-foot-tall trees near the edge of the left side of runway 21 before the airplane contacted the ground approximately 135 ft from that initial contact point. The airplane came to rest in wooded terrain on an approximate 222° heading. The airplane was mostly consumed by a postimpact fire. All major portions of the airplane were accounted for at the accident site. The main wreckage area contained the fuselage, engine, empennage, right wing, and a majority of the left wing.

The empennage remained partially attached to the fuselage and was mostly consumed by postimpact fire. The empennage structure was twisted 180°. Rudder and elevator control cable continuity was established from their respective flight control surfaces to the cockpit. The Cirrus Recoverable Data Module (RDM-300) was located within the empennage and removed for data recovery and analysis.

The right wing remained with the fuselage structure. The inboard portion of the wing was mostly consumed by fire. The outboard portion and wing tip were intact and displayed thermal damage. The left wing tip was separated from the main wreckage and was found in a tall tree at the initial impact point. The navigation lighting wiring remained with the wing tip and was

wrapped around the tree. The left aileron and other miscellaneous portions of the left wing were found approximately halfway from the initial contact point and the main wreckage. The remainder of the left wing remained with the fuselage and was consumed by fire, along with the flaps. The flap actuator was found within the fuselage debris and indicated that the flaps were at the 100% position.

The cockpit was consumed by postimpact fire. The airplane was equipped with Garmin G1000 displays, which were destroyed. The secure digital (SD) cards for the G1000 system were found in their respective card slots but were melted in place. The engine control levers were destroyed. The fuel selector position could not be determined due to thermal damage.

The pilot purchased 44 gallons of fuel prior to departure from MQI. The fuel selector position could not be determined. The fuel pump switch was not located. Fuel blighting was evident on the leaves of trees between the initial impact point and the main wreckage.

The airplane was equipped with a Cirrus Airframe Parachute System (CAPS). A portion of the rocket motor was found adjacent to the empennage, and was damaged consistent with postimpact thermal exposure. The harness, suspension lines, and canopy were all contained within the deployment bag and remained restrained within the empennage in a packed state.

The engine remained attached to the airplane firewall. The engine and its accessories were exposed to the postcrash fire. The fuel pump was removed, and the drive coupling shaft was found intact. The top spark plugs were removed and displayed coloration consistent with normal engine operation. The engine was rotated and thumb compression was attained on all six cylinders. The crankshaft and camshaft continuity were confirmed throughout the engine. The magnetos could not be tested due to thermal damage.

The airplane was equipped with a 3-bladed Hartzell propeller. Propeller strike marks were observed on a large diameter tree directly in front of the engine with slash signatures measuring approximately 8 to 12" apart on the tree trunk. A large 12" section of the tree trunk was severed. The three composite material propeller blades were liberated from the propeller hub assembly. One blade was found approximately 10 ft forward of the hub assembly in one piece. A second blade was found below the hub assembly in the soil but was fractured in half from impact forces. The third propeller blade was not recovered.

The wreckage was retained for further examination.

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CIRRUS DESIGN CORP	<b>Registration:</b>	N1281F
<b>Model/Series:</b>	SR22	<b>Aircraft Category:</b>	Airplane
<b>Amateur Built:</b>			
<b>Operator:</b>	PANTHEON AVIATION LLC	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Designator Code:</b>			

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	VMC	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	FFA,13 ft msl	<b>Observation Time:</b>	17:10 Local
<b>Distance from Accident Site:</b>	0 Nautical Miles	<b>Temperature/Dew Point:</b>	27°C /20°C
<b>Lowest Cloud Condition:</b>	Clear	<b>Wind Speed/Gusts, Direction:</b>	6 knots / 14 knots, 170°
<b>Lowest Ceiling:</b>	None	<b>Visibility:</b>	10 miles
<b>Altimeter Setting:</b>	29.84 inches Hg	<b>Type of Flight Plan Filed:</b>	None
<b>Departure Point:</b>	Manteo, NC (MQI)	<b>Destination:</b>	Kill Devil Hills, NC

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	3 Fatal	<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	5 Fatal	<b>Latitude, Longitude:</b>	36.015372,-75.671062

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Enders, Ryan
<b>Additional Participating Persons:</b>	J Ferrell; Continental ; Mobile, AL Mark Haroldson; Cirrus; Duluth, MN Eden King; FAA FSDO; Greensboro, NC
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	