



# Aviation Investigation Final Report

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<b>Location:</b>	Palatka, Florida	<b>Accident Number:</b>	ERA16LA110
<b>Date &amp; Time:</b>	February 23, 2016, 11:15 Local	<b>Registration:</b>	N256CD
<b>Aircraft:</b>	CIRRUS DESIGN CORP SR22	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (partial)	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The private pilot stated that, while in cruise flight at 7,000 ft mean sea level (msl), he began a descent to a lower altitude to prepare for arrival at the destination airport. Just after he began the descent, he retarded the throttle slightly, and the engine power dropped dramatically. The propeller continued to rotate, and the pilot attempted to divert to the nearest airport. During the glide, the pilot adjusted the mixture, switched magnetos, and moved the throttle to full and then back to idle again with no effect. When he determined that the airplane would be unable to reach the diversion airport, he deployed the airframe parachute system about 1,000 ft msl. The airplane came to rest upright in the backyard of a residence.

Examination of the airplane revealed that both wing fuel tanks were about half full of fuel. After recovery, examination of the engine revealed no evidence of any preimpact mechanical malfunctions that would have precluded operation, and a successful engine test run was conducted. Additionally, review of engine monitor data did not reveal any anomalies before or after the partial loss of engine power.

## Probable Cause and Findings

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

A partial loss of engine power for reasons that could not be determined because engine examination, an engine test run, and review of engine monitor data did not reveal any evidence of preimpact anomalies that would have precluded normal operation.

## Findings

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**Not determined**

(general) - Unknown/Not determined

## Factual Information

### History of Flight

<b>Enroute-descent</b>	Loss of engine power (partial) (Defining event)
<b>Emergency descent</b>	Miscellaneous/other
<b>Emergency descent</b>	Attempted remediation/recovery
<b>Emergency descent</b>	Off-field or emergency landing

On February 23, 2016, at 1115 eastern standard time, a Cirrus Design Corp. SR22, N256CD, was substantially damaged during impact with terrain, after deployment of the Cirrus Airplane Parachute System, following a partial loss of engine power near the Palatka Municipal Airport (28J), Palatka, Florida. The private pilot received minor injuries. Visual meteorological conditions prevailed and an instrument flight rules flight plan was filed for the flight that departed from the Sanford-Lee County Airport (TTA), Sanford, North Carolina, about 0820. The flight was destined for the Leesburg International Airport (LEE), Leesburg, Florida. The personal flight was operated under the provisions of Title 14 Code of Federal Regulations Part 91.

The pilot stated that while in cruise flight, at an altitude of 7,000 feet mean sea level (msl), he began a descent to a lower altitude in preparation for arrival at the destination airport. Just after the descent began, he retarded the throttle "slightly" and the "power dropped dramatically, perhaps to idle." The propeller continued to rotate but he was unsure of the exact engine rpm as he did not look at the tachometer. He requested and received vectors from air traffic control to the nearest airport and turned toward 28J. He then switched fuel tanks, adjusted the mixture, switched magnetos, and moved the throttle to full and back to idle again, all with no effect. When he determined that the airplane would not be able to reach the airport, he deployed the airframe parachute system about 1,000 feet msl.

Examination of the airplane at the accident scene by a Federal Aviation Administration inspector revealed that the it came to rest in a residential area, 2.8 nautical miles southeast of 28J, between a backyard shed and a recreational vehicle trailer. The parachute was entangled in power lines. The propeller and the nosewheel sustained damage, and the left aileron had separated from the wing. The inspector also noted that both wing fuel tanks were about half-full of fuel.

The airplane was recovered to a storage facility and examination of the engine did not reveal any preimpact mechanical malfunctions. With the engine still installed on the airframe, an engine test-run was performed. The engine started after two revolutions and ran continuously. After a brief warmup, the throttle was advanced to 1,700 rpm and a magneto check was performed, during which the rpm drop was about 100 rpm for each magneto. The throttle was advanced to full power momentarily, and the engine reached 2,500 rpm. The throttle was then retarded to idle and the engine speed dropped to about 800 rpm. The mixture control was then pulled to the idle/cut position and the engine ceased running.

Data were download and plotted from an onboard engine monitor. Review of the data did not reveal any anomalies prior to or after the reduction in engine power and subsequent loss of engine power.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	61, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	June 24, 2014
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	May 1, 2014
<b>Flight Time:</b>	1900 hours (Total, all aircraft), 402 hours (Total, this make and model), 1850 hours (Pilot In Command, all aircraft), 10 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CIRRUS DESIGN CORP	<b>Registration:</b>	N256CD
<b>Model/Series:</b>	SR22 NO SERIES	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2002	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	0234
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	January 14, 2016 Annual	<b>Certified Max Gross Wt.:</b>	3400 lbs
<b>Time Since Last Inspection:</b>	4 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1387 Hrs at time of accident	<b>Engine Manufacturer:</b>	CONT MOTOR
<b>ELT:</b>	C91 installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-550-N7B
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	310 Horsepower
<b>Operator:</b>	On file	<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>	K28J,34 ft msl	<b>Distance from Accident Site:</b>	3 Nautical Miles
<b>Observation Time:</b>	16:15 Local	<b>Direction from Accident Site:</b>	322°
<b>Lowest Cloud Condition:</b>	Scattered / 2400 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 3100 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/ N/A
<b>Altimeter Setting:</b>	29.94 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 19°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	SANFORD, NC (TTA )	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	LEESBURG, FL (LEE )	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	08:20 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	PALATKA MUNI - LT KAY LARKIN F 28J	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	47 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	29.620555,-81.65583(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Brazy, Douglass
<b>Additional Participating Persons:</b>	Mark R Hands; FAA/FSDO ; Orlando, FL Brannon Mayer; Cirrus Aircraft; Duluth, MN Mike Council; Continental Motors; Mobile, AL
<b>Original Publish Date:</b>	November 15, 2018
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=92756">https://data.nts.gov/Docket?ProjectID=92756</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](#).