



Aviation Investigation Final Report

Location:	Elberton, Georgia	Accident Number:	ERA19LA158
Date & Time:	April 25, 2019, 13:58 Local	Registration:	N20FB
Aircraft:	Acro SUPER ACRO SPORT I	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot had just purchased the airplane and the accident flight was his first in it. Before the flight, the previous owner explained to the pilot that the main fuel tank was full of fuel and that the auxiliary tank contained no fuel. The pilot acknowledged the fuel state of the airplane and told the seller he "would not need" auxiliary fuel. Following an aborted takeoff attempt, the pilot departed for his home airport. The pilot advised first responders that during the flight, his "fuel quit working so he tried to prime it for his backup fuel to work." When that did not remedy the problem, he prepared the airplane for a forced landing and subsequently impacted trees. The airplane was substantially damaged during the forced landing and the pilot was seriously injured.

A Federal Aviation Administration inspector who examined the airplane at the accident site found that only a "very small amount" of fuel remained in the main fuel tank after the accident. The estimated fuel endurance of the airplane based on the fuel reported to be onboard at the time the pilot departed, and the estimated fuel consumption reported by the previous owner, was about 2.1 hours. The time elapsed between when the airplane departed and the accident was about 2.3 hours. Given this information, it is likely that the pilot exhausted the airplane's available fuel supply, resulting in a total loss of engine power and subsequent forced landing.

Probable Cause and Findings

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

The pilot's inadequate fuel planning, which resulted in a total loss of engine power due to fuel

exhaustion.

Findings

Aircraft	Fuel - Fluid management
Personnel issues	Fuel planning - Pilot

Factual Information

History of Flight

Enroute	Fuel exhaustion (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT)

On April 25, 2019, at 1358 eastern daylight time, an experimental amateur-built Super Acro Sport I, N20FB, was substantially damaged when it was involved in an accident near Elberton, Georgia. The pilot was seriously injured. The flight was conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a personal flight.

According to the previous owner, he had just sold the airplane to the pilot. He had filled the main fuel tank with fuel, and the auxiliary tank contained no fuel as he "never used it." The previous owner advised the pilot that the main fuel tank was full and that the auxiliary tank was empty. The pilot acknowledged that the auxiliary tank was empty and said that "he wouldn't need it." The pilot told the previous owner that he would taxi the airplane and if it felt "good" he would take off and fly back to his home airport, Broad River Air Park (3GE3), Carnesville, Georgia. Following an aborted takeoff attempt, the pilot departed at 1139 and did not return. The previous owner later attempted to contact the pilot by telephone and was unsuccessful.

When sheriff's deputies responded to the scene, the pilot reported that "his fuel quit working so he tried to prime it for his backup fuel to work." When the restoration of engine power was unsuccessful, the airplane was "too low" and the pilot said he prepared for an emergency landing and then struck trees.

The airplane came to rest in trees 4 miles northwest of Elbert County Airport-Patz Field (EBA), Elberton, Georgia. The wreckage was placed upright by first responders and was photographed by a Federal Aviation Administration inspector as it rested on all three landing gear. The airplane was largely intact except for the right wing, which was destroyed by impact. The main fuel tank was intact and the inspector described that only "a very small amount" of fuel remained in the main fuel tank. The fuel selector was found with the auxiliary fuel tank selected, though the inspector was unable to examine that fuel tank.

The airplane had a main fuel tank capacity of 17.5 gallons, and, according to the previous owner, the average fuel consumption rate was 8.5 gallons per hour. The estimated endurance of the airplane based on this fuel quantity and consumption was about 2.1 hours.

Pilot Information

Certificate:	Airline transport	Age:	82,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	BasicMed	Last FAA Medical Exam:	February 16, 2019
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	20000 hours (Total, all aircraft), 2 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Acro	Registration:	N20FB
Model/Series:	SUPER ACRO SPORT I No Series	Aircraft Category:	Airplane
Year of Manufacture:	1992	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	P S AIRCRAFT 1
Landing Gear Type:	Tailwheel	Seats:	
Date/Type of Last Inspection:	April 20, 2018 Condition	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	Reciprocating
Airframe Total Time:	1196 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-320-A2B
Registered Owner:		Rated Power:	150 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	K27A,603 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	14:15 Local	Direction from Accident Site:	130°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.93 inches Hg	Temperature/Dew Point:	24°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Saluda, SC (6J4)	Type of Flight Plan Filed:	None
Destination:	Carnesville, GA (3GE3)	Type of Clearance:	None
Departure Time:	11:39 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	34.135276,-82.873054(est)

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian		
Additional Participating Persons:	Scott Childs; FAA/FSDO; Atlanta, GA		
Original Publish Date:	June 3, 2022	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=99330		

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