



Aviation Investigation Final Report

Location:	STATESBORO, Georgia	Accident Number:	ERA23LA053
Date & Time:	November 2, 2022, 17:26 Local	Registration:	N30RK
Aircraft:	SCHMIDT RANDALL M BUSHBY MUSTANG II	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot just purchased the amateur-built airplane which was reportedly equipped with two fuel tanks in each wing totaling 22 gallons, or a total capacity of 44 gallons. According to the previous owner who was an airframe and powerplant mechanic, since filling the right fuel tank more than 1 month earlier, he flew the airplane on two separate flights totaling 1.3 hours. No additional flights were made by him after fueling. During an engine run before departure of the accident flight, the left and right fuel gauges indicated about one needle width from empty and 1/2 capacity, respectively. The new owner believed the depicted fuel amount was adequate for the intended short-duration flight to a nearby airport for fuel. He departed with the fuel selector on both, then shortly after takeoff moved it to the left fuel tank. About 13 minutes later the engine quit. He declared a mayday, moved the fuel selector to both and then right tank positions but that did not restore power. He flew towards a nearby airport but realized he was unable to land there. He maneuvered for a field, but about 26 minutes since departure the airplane collided with a tree adjacent to a residence, stalled, and impacted a portion of the house, the ground, and a car before coming to rest upright. Examination of the wreckage at the accident site by a Federal Aviation Administration inspector revealed no fuel remaining in either wing fuel tanks, in the airframe fuel strainer, fuel lines, or on the ground around the wreckage. Although the carburetor was impacted damaged, there were no fuel stains on or around it. Postaccident testing of the fuel quantity indicating system was not performed.

The engine Operator's Manual specified that the fuel consumption was about 9.0 gallons-per-hour at 65% power, or at economy cruise. Thus, for the approximate 30 minutes-long flight about 4.5 gallons of fuel were required. That value could have been reflected in any combination between the left and right fuel tanks, but it an extreme unbalance with no fuel in the left fuel tanks and all fuel in the right tanks would have reflected just under 1/4 capacity on the right fuel gauge. At no configuration based on the amount that was actually on-board should the right fuel gauge have indicated 1/2 capacity. Therefore,

the right fuel quantity gauge likely indicated that the tanks contained more fuel than the amount that was actually on board, which resulted in inadequate fuel for the intended flight and a subsequent total loss of engine power due to fuel exhaustion.

As part of the airplane's last condition inspection performed more than 12 months earlier by the previous owner, the accuracy of the fuel gauges at empty was not performed.

Probable Cause and Findings

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

A total loss of engine power due to fuel exhaustion. Contributing to the fuel exhaustion was the likely inaccurate right fuel quantity indicating system.

Findings

Aircraft	Fuel - Fluid level
Aircraft	Fuel quantity indicator - Malfunction

Factual Information

History of Flight

Enroute	Fuel exhaustion (Defining event)
Maneuvering	Off-field or emergency landing
Emergency descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	23, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	January 17, 2022
Occupational Pilot:	No	Last Flight Review or Equivalent:	December 10, 2020
Flight Time:	(Estimated) 620 hours (Total, all aircraft), 0 hours (Total, this make and model), 570 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	SCHMIDT RANDALL M	Registration:	N30RK
Model/Series:	BUSHBY MUSTANG II NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	1996	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	M-11-804
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	October 23, 2021 Annual	Certified Max Gross Wt.:	1600 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	C91A installed	Engine Model/Series:	O-320-B3B
Registered Owner:	Toribio LLC	Rated Power:	160 Horsepower
Operator:	Toribio LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KTBR,187 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	17:35 Local	Direction from Accident Site:	47°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.18 inches Hg	Temperature/Dew Point:	25°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Springfield, GA (2GA2)	Type of Flight Plan Filed:	None
Destination:	Metter, GA (MHP)	Type of Clearance:	None
Departure Time:	17:00 Local	Type of Airspace:	

Airport Information

Airport:	Statesboro-Bulloch County Airport TBR	Runway Surface Type:	
Airport Elevation:	187 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	32.43693,-81.796501(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Ronald G. Bean; FAA/FSDO; College Park, GA
Original Publish Date:	June 6, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=106267

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](#).