Aviation Investigation Final Report

Location:	Tampa Bay, Florida	**Accident Number:**	ERA25LA003
Date & Time:	October 3, 2024, 11:40 Local	**Registration:**	N8575F
Aircraft:	Piper PA28	**Aircraft Damage:**	Substantial
Defining Event:	Fuel starvation	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The student pilot reported that, during the fourth leg of a cross-country flight about 800 ft above the ground and about 9 nm from his destination, “the engine stalled, came back and stalled again.” The engine lost all power, and the student pilot reported that he did not complete the engine power loss in-flight checklist due to the airplane’s low altitude. He executed an emergency water landing rather than landing in tree-covered terrain. The airplane subsequently impacted the water, resulting in substantial damage to the left wing. A postaccident examination of the airframe and engine revealed no evidence of any preimpact mechanical malfunctions or failures that would have precluded normal operation.

Originally, the student pilot’s planned route of flight for the cross-country flight was about 217 nm long; however, due to the weather, an alternate route was flown that was about 284 nm long, about 67 nm further than planned. After completing the first two legs of the flight, he dropped off his flight instructor at the airport where the airplane was based and continued on with the last two legs of the solo cross-country flight.

Postaccident fuel consumption calculations showed that if the student pilot had switched fuel tanks every 30 minutes when the avionics alerted him to do so, at the time of the accident the selected fuel tank would have likely used about 22.4 gallons of fuel. It also found the other wing fuel tank would have likely used about 15.6 gallons of fuel. According to the airplane’s flight manual, the airplane held 50 gallons of fuel with 48 gallons usable fuel—with 24 gallons in each tank. Based on the fuel calculations and the reported performance of the engine, it is likely that the engine was starved of fuel, resulting in a total loss of engine power. The first action item on the engine power loss in-flight checklist was “Fuel Selector…switch to tank containing fuel”

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 in flight due to fuel starvation. Contributing to the accident was the inadequate preflight fuel planning by the student pilot and flight instructor, and the improper inflight fuel management by the student pilot.

Findings

Personnel issues	Fuel planning - Student/instructed pilot
Personnel issues	Fuel planning - Instructor/check pilot
Aircraft	Fuel - Fluid level
Personnel issues	Decision making/judgment - Student/instructed pilot
Personnel issues	Monitoring equip/instruments - Student/instructed pilot
Aircraft	Fuel - Fluid management

Factual Information

History of Flight

Approach	Fuel starvation (Defining event)
Approach	Ditching

On October 3, 2024, about 1140 eastern daylight time, a Piper PA-28-181, N8575F, was substantially damaged when it was involved in an accident in Tampa Bay, Florida. The student pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

The student pilot reported that the plan for the day was for he and his flight instructor to fly a round-trip cross-country flight from Albert Whitted Airport (SPG), St. Petersburg, Florida, to Arcadia Municipal Airport (X06), Arcadia, Florida, a straight-line distance of 54.2 nm. After returning with his flight instructor to SPG, the student pilot would then fly the same cross-country flight solo. The student pilot reported that he had arrived at the airport and performed a preflight inspection of the airplane. The flight instructor reported that when he arrived at the airport, the student pilot had performed a preflight inspection of the airplane, verified full fuel, and had calculated how much fuel was needed to complete the flight.

The flight departed SPG about 0830 and the student pilot reported that as the flight crossed Tampa Bay, they noticed cloud cover becoming denser and they made the decision to change the destination from X06 to Sebring Regional Airport (SEF), Sebring, Florida, a straight-line distance of 70.9 nm, which added 16.7 nm straight-line distance from SPG. They landed at SEF and returned to SPG, where the student pilot dropped off his flight instructor about 1000. About 1007, he departed on his solo flight for SEF, where he landed about 1058. He departed for SPG at 1106. About 9 nm from SPG and an altitude of about 800 ft mean sea level (msl), the student pilot reported that “the engine stalled, came back and stalled again.” The airplane descended and impacted the water, resulting in substantial damage to the left wing.

The student pilot reported that there were no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation. A postaccident examination of the airframe and engine did not reveal any preaccident mechanical malfunctions or failures with the airplane.

Fueling records showed that the airplane received 24.9 gallons of fuel the day before the accident flight, and the student pilot reported that the fuel was full before the 1st leg of the day. He also reported that he did not refuel the airplane at any point. The airplane’s Pilot’s Operating Handbook (POH) states that the airplane has a total fuel capacity of 50 US gallons, of which, 48 US gallons are usable. The student pilot reported that due to the altitude of the flights being under 3,000 ft msl, he never leaned the mixture. He also reported that he had switched between fuel tanks throughout the flights when prompted by the avionics and that this prompt was on a timer set for 30 minutes. Fuel calculations performed using data recovered from the onboard avionics, the POH, and fuel consumption from the engine manufacturer found that, not including time spent with the engine running on the ground, one

tank would have used about 22.4 gallons of fuel and the other about 15.6 gallons of fuel if the fuel selector was switched from one tank to the other every 30 minutes.

The student pilot reported that once the engine lost power, he did “ABC; airspeed, best place to land and checklist but I did not have enough time for checklist.” A review of the POH showed that the first item on the “Engine Power Loss In Flight” checklist is “Fuel Selector…switch to tank containing fuel.”

Pilot Information

Certificate:	Student	**Age:**	30,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	September 17, 2024
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	22.4 hours (Total, all aircraft), 22.4 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N8575F
Model/Series:	PA28 181	**Aircraft Category:**	Airplane
Year of Manufacture:	1976	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	28-7790259
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	August 23, 2024 100 hour	**Certified Max Gross Wt.:**	2550 lbs
Time Since Last Inspection:	96.88 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	7460 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	C126 installed, not activated	**Engine Model/Series:**	O-360-A4A
Registered Owner:	ST PETE AVIATION SERVICES LLC	**Rated Power:**	180 Horsepower
Operator:	ST PETE AVIATION SERVICES LLC	**Operating Certificate(s) Held:**	Pilot school (141)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SPG,4 ft msl	**Distance from Accident Site:**	6 Nautical Miles
Observation Time:	11:53 Local	**Direction from Accident Site:**	301°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots / None	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	80°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.96 inches Hg	**Temperature/Dew Point:**	31°C / 26°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Sebring, FL (SEF)	**Type of Flight Plan Filed:**	None
Destination:	St Petersburg, FL (SPG)	**Type of Clearance:**	VFR
Departure Time:	10:55 Local	**Type of Airspace:**	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	27.714296,-82.523125(est)

Preventing Similar Accidents

Prevent the Preventable with Careful Fuel Management (SA-067)

The Problem

Within fuel-related accidents, fuel exhaustion and fuel starvation continue to be leading causes. From 2011 to 2015, an average of more than 50 accidents per year occurred due to fuel management issues. Fuel exhaustion accounted for 56% of fuel-related accidents while fuel starvation was responsible for 35% of these accidents. Fuel exhaustion is running out of fuel whereas fuel starvation is having fuel onboard that doesn't reach the engine for reasons such as a blockage, improperly set fuel selector, or water contamination.

Running out of fuel or starving an engine of fuel is highly preventable. An overwhelming majority of our investigations of fuel management accidents—95%—cited personnel issues (such as use of equipment, planning, or experience in the type of aircraft being flown) as causal or contributing to fuel exhaustion or starvation accidents. Prudent pilot action can eliminate these issues. Less than 5% of investigations cited a failure or malfunction of the fuel system.

What can you do?

- Pilots should know how much fuel they have onboard at all times.
- During preflight inspection, measure or visually confirm the fuel quantity. Do not rely exclusively on fuel gauges.
- Know how much fuel you will need for a given flight.
- Make sure you have a fuel reserve for each flight.
- Know your engine's fuel burn rate and actively monitor the fuel burn rate for the entire time the engine is operating.
- Know your aircraft's fuel system and how it works.
- Review your aircraft's POH and use the appropriate checklists.
- Don't stretch your available fuel supply. Stop and get gas!

See https://www.ntsb.gov/Advocacy/safety-alerts/Documents/SA-067.pdf for additional resources.

The NTSB presents this information to prevent recurrence of similar accidents. Note that this should not be considered guidance from the regulator, nor does this supersede existing FAA Regulations (FARs).

Administrative Information

Investigator In Charge (IIC):	Young, Joshua
Additional Participating Persons:	Elizabeth Bailey; FAA/FSDO; Tampa, FL
Original Publish Date:	June 4, 2025
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=195267