



Aviation Investigation Final Report

Location:	Granite Shoals, Texas	Accident Number:	CEN19LA101
Date & Time:	March 6, 2019, 13:00 Local	Registration:	N6917F
Aircraft:	Cessna 150	Aircraft Damage:	Substantial
Defining Event:	Fuel starvation	Injuries:	1 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he last fueled the airplane about 5 months before the accident. Before the flight, the pilot conducted a preflight inspection and sumped both wing fuel tanks. The left fuel tank had some sediment present, but as he continued sumping the fuel became clear. The fuel in the right fuel tank ran clear. After engine start, the left tank fuel gauge indicated near empty, and the right fuel tank gauge indicated about 1/4 full. Subsequently, the pilot took off for a personal cross-country flight. After starting a right turn, and about 600 ft above ground level, the engine sputtered and lost power. The pilot then attempted to turn back to the airport but realized that the airplane was too low, so he executed a forced landing to a field with small trees, during which the left wing struck a tree, which resulted in substantial damage to the wing.

The pilot reported that, after the accident, he found more sediment in the left tank. He stated that he believed that the low fuel state and the sediment in the left tank may have starved the engine of fuel during the turn and that having more fuel onboard would have “probably been helpful.” However, it is more likely that, due to the low fuel state, when the pilot conducted the right turn, the fuel became unported, resulting in the loss of engine power due to fuel starvation.

Probable Cause and Findings

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

The pilot's decision to takeoff with a limited amount of fuel onboard, which unported during a turn, resulting in fuel starvation and a subsequent loss of engine power.

Findings

Personnel issues	Fuel planning - Pilot
Personnel issues	Decision making/judgment - Pilot
Aircraft	Fuel - Fluid level
Aircraft	Fuel - Not serviced/maintained
Aircraft	Fuel distribution - Capability exceeded

Factual Information

History of Flight

Initial climb	Fuel starvation (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT)

On March 6, 2019, about 1300 central standard time, a Cessna 150F, N6917F, was substantially damaged when it impacted terrain during a forced landing near Granite Shoals/Bob Sylvester Airpark (2G5), Granite Shoals, Texas. The pilot and 1 child passenger were not injured and another child passenger sustained minor injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that the flight's purpose was to reposition the aircraft to San Marcos, Texas, to conduct an annual inspection. The pilot recalled that he last refueled the airplane in October of 2018 with about 8 gallons, about 5 months prior to the accident flight.

Prior to the flight, the pilot conducted a preflight inspection and sumped both wing fuel tanks. The left fuel tank was virtually empty and had some sediment present, but then became clear. The right fuel tank sump was clear. After engine start, the left fuel tank gauge indicated near empty, and right fuel tank gauge indicated about 1/4 full.

The pilot stated that he started a right turn after takeoff, and about 600 ft above the ground, the engine sputtered and lost power. The pilot then attempted to turn back to the airport but realized that he was too low. He executed a forced landing to a field vegetated with small trees. During the forced landing, the left wing struck a small mesquite tree and spun the airplane around 180-degrees, resulting in substantial damage to the left wing. The pilot and two children passengers (6 and 4 years old) exited the airplane. The airplane was not equipped with child safety seating.

After the accident, the pilot reported that he discovered more sediment remaining in the left tank. The pilot reported on the NTSB Form 6120 that he believes that the low fuel state and sediment in left tank may have starved the engine during first turn when gravity pulled from left tank, and that more fuel on board would have probably been helpful.

Pilot Information

Certificate:	Private	Age:	42,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	May 1, 2014
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	200 hours (Total, all aircraft), 100 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N6917F
Model/Series:	150 F	Aircraft Category:	Airplane
Year of Manufacture:	1966	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	15063517
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	December 20, 2016 Annual	Certified Max Gross Wt.:	1601 lbs
Time Since Last Inspection:	30 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	4561 Hrs	Engine Manufacturer:	Continental
ELT:	Not installed	Engine Model/Series:	O-200 SERIES
Registered Owner:		Rated Power:	100 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:	AUS,541 ft msl	Distance from Accident Site:	55 Nautical Miles
Observation Time:	12:55 Local	Direction from Accident Site:	130°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.7 inches Hg	Temperature/Dew Point:	11°C / 4°C
Precipitation and Obscuration:			
Departure Point:	Granite Shoals, TX (2G5)	Type of Flight Plan Filed:	None
Destination:	San Marcus, TX (HYI)	Type of Clearance:	None
Departure Time:	12:55 Local	Type of Airspace:	Class E

Airport Information

Airport:	Granite Shoals Airport 2G5	Runway Surface Type:	
Airport Elevation:	860 ft msl	Runway Surface Condition:	Vegetation
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 2 None	Latitude, Longitude:	30.589445,-98.370277(est)

Administrative Information

Investigator In Charge (IIC):	Lemishko, Alexander		
Additional Participating Persons:	Victor H Lopez; FAA FSDO; San Antonio, TX		
Original Publish Date:	May 5, 2021	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=99122		

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