



National Transportation Safety Board

Aviation Accident Data Summary

Location:	Mitchell, OR	Accident Number:	WPR10LA001
Date & Time:	10/02/2009, 1240 PDT	Registration:	N1621C
Aircraft:	CESSNA 180	Injuries:	1 Serious, 1 Minor, 1 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The single engine airplane experienced a loss of engine power during flight and the pilot performed a forced landing in rugged terrain. Examination of the airplane wreckage revealed minimal evidence of fuel. The airplane had a modified fuel tank system through a supplemental type certificate (STC). The STC changed the fuel capacity of the two fuel tanks from 30 gallons to 28.2 gallons each. The installation information for the STC noted that to determine the usable fuel for the airplane, the airplane's type certificate data sheet (TCDS) should be referenced and the unusable fuel amount listed therein should be subtracted from the new total fuel capacity. The TCDS for the airplane stated that 5 gallons of fuel were unusable, which made the new total usable fuel capacity on the airplane 51.4 gallons. As a part of the STC, the airplane flight manual (AFM) and the fuel selector valve placard were to be updated with the revised usable fuel quantity. This action was noted on the FAA Form 337 for the STC installation. The pilot had purchased the airplane several years prior to the accident and the previous owner told him that all of the fuel (56.4 gallons) was usable. The pilot reported that there was no AFM supplement for the STC included in his paperwork, and that he did not ever look at the quantities indicated on the fuel selector valve placard in the cockpit due to its location between the seats. Examination of the recovered airframe and engine components revealed no evidence of preimpact mechanical malfunction.

Flight Events

Enroute-cruise - Loss of engine power (total)
Landing - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's lack of understanding of the airplane's fuel system, which resulted in a loss of engine power due to fuel exhaustion.

Findings

Aircraft-Fluids/misc hardware-Fluids-Fuel-Fluid management - C
Personnel issues-Experience/knowledge-Knowledge-Knowledge of equipment-Pilot - C
Environmental issues-Physical environment-Terrain-Rough terrain-Not specified

Pilot Information

Certificate:	Private	Age:	55
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	None
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	824 hours (Total, all aircraft), 274 hours (Total, this make and model), 724 hours (Pilot In Command, all aircraft), 42 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N1621C
Model/Series:	180	Engines:	1 Reciprocating
Operator:	William Gonce	Engine Manufacturer:	Teledyne Continental Motors
Air Carrier Operating Certificate:	None	Engine Model/Series:	O-470-J
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	RDM, 3080 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	Broken / 5000 ft agl
Condition of Light:	Day	Wind Speed/Gusts, Direction:	12 knots, 290°
Temperature:	13°C / 1°C	Visibility:	10 Miles
Precipitation and Obscuration:	No Obscuration		
Departure Point:	Pistol Creek, ID (PVT)	Destination:	Redmond, OR (RDM)

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None

Administrative Information

Investigator In Charge (IIC):	Kristi Dunks	Adopted Date:	04/19/2010
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74837		

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