National Transportation Safety Board
Aviation Accident Final Report

Location:	Skwentna, AK	**Accident Number:**	ANC12LA046
Date & Time:	06/01/2012, 1600 AKD	**Registration:**	N1795R
Aircraft:	CESSNA A185F	**Aircraft Damage:**	Substantial
Defining Event:	Fuel starvation	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The private pilot and one passenger departed from a lake on a personal cross country flight. During the pilot's preflight check, he noted that the right wing fuel tank contained about 32 gallons of fuel, and the left wing fuel tank contained about 5 gallons of fuel. About 8 miles south of the departure lake, at an altitude of about 2,000 feet mean sea level, the airplane's engine lost power. The pilot said that he turned on the fuel boost pump, and the engine rpm rose momentarily but dropped again. He stated that he did not recall checking the fuel selector valve as part of his emergency restart procedures. He executed a forced landing in a marsh.

The pilot stated that he always operated the airplane with the fuel selector valve in the "Both Tanks On" position; however, a postaccident inspection of the airplane revealed that the airplane's fuel selector valve was in the "Left Tank Only" position. A postaccident engine run revealed no mechanical anomalies with the engine, and it operated normally at all power settings. An annual inspection of the airplane was completed on May 20, 2012, and the airplane had flown approximately four hours since the inspection.

Both the normal "Before Takeoff" and the "Emergency Landing without Engine Power" checklists direct the pilot to check the fuel selector valve position. Given the lack of mechanical deficiencies with the airplane's engine and the discovery of the fuel selector valve in the "Left Tank Only" position, it is likely that the pilot did not check the fuel selector valve either during his preflight or after the loss of engine power. Considering the amount of fuel noted in the left wing fuel tank during the pilot's preflight, it is also likely that the engine lost 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 improper fuel management, which resulted in fuel starvation and a total loss of engine power in cruise flight. Contributing to the accident was the pilot's failure to follow the checklist after the loss of engine power.

Findings

Aircraft	Fuel selector/shutoff valve - Not used/operated Fuel - Fluid management (Cause) Fuel - Fluid level (Cause)
Personnel issues	Use of checklist - Pilot (Factor)

Factual Information

On June 1, 2012, about 1600 Alaska daylight time, a float-equipped Cessna A185F airplane, N1795R, sustained substantial damage during a forced landing, following a loss of engine power, near Skwentna, Alaska. The private pilot and sole passenger were not injured. The flight was being operated as a visual flight rules (VFR) personal cross-country flight under the provisions of Title 14 Code of Federal Regulations Part 91 when the accident occurred. Visual meteorological conditions prevailed, and a VFR flight plan was filed and active. The flight originated from a private lake about 1545, and was destined to Anchorage, Alaska.

In a telephone interview with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), the pilot stated that after departure, about 8 miles south of the lake, at an altitude of approximately 2,000 feet mean sea level, the engine RPM began to drop. He turned on the auxiliary fuel boost pump, and the engine RPM rose briefly, but then dropped again. Unable to restart the engine, he selected an area of sparsely treed marsh, and executed an emergency approach and landing. Upon landing, the left wing contacted trees, sustaining substantial damage.

He stated that he did not remember checking the fuel selector valve as part of his emergency restart procedures.

The pilot said that during preflight, he noted that the right wing fuel tank contained about 32 gallons of fuel, and the left wing fuel tank held about 5 gallons. He said that he always flies the airplane with the fuel selector valve in the "Both Tanks" position. However, during a postaccident inspection by a Federal Aviation Administration (FAA) inspector, the fuel selector valve was found in the "Left Tank Only" position. No other preaccident mechanical anomalies were found during the inspection, and the inspector was able to drain approximately one gallon of fuel from the left wing fuel tank.

The manufacturer's published procedures in the Pilot's Operating Handbook, Section I - OPERATING CHECKLIST, Page 1-5, BEFORE TAKEOFF checklist states, “(2) Fuel Selector Valve (if installed) -- BOTH ON.”

The manufacturer’s published procedures in the Pilot's Operating Handbook, Section III - EMERGENCY PROCEDURES, Page 3-3, EMERGENCY LANDING WITHOUT ENGINE POWER checklist states, "If an engine stoppage occurs, establish a flaps up glide at 80 MPH. If time permits, attempt to restart the engine by checking for fuel quantity, proper fuel selector valve position, and mixture control setting."

A postaccident engine run was performed by the pilot's mechanic. The engine was operated approximately eight minutes at cruise power, with the fuel still remaining in the airplane's left wing fuel tank. The engine ran normally for the entire run. After the engine run, the mechanic drained approximately one additional gallon of fuel from the left wing fuel tank.

According to the pilot, the airplane had been flown approximately four hours total since it's last annual inspection was completed on May 20.

History of Flight

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

Pilot Information

Certificate:	Private	**Age:**	63, Male
Airplane Rating(s):	Single-engine Land; Single-engine Sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	None	**Second Pilot Present:**	
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 3 With Waivers/Limitations	**Last Medical Exam:**	06/29/2011
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	07/06/2010
Flight Time:	2035 hours (Total, all aircraft), 400 hours (Total, this make and model), 4 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	**Registration:**	N1795R
Model/Series:	A185F	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	18502511
Landing Gear Type:	Float;	**Seats:**	6
Date/Type of Last Inspection:	05/20/2012, Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:	4 Hours	**Engines:**	1 Reciprocating
Airframe Total Time:	4490 Hours	**Engine Manufacturer:**	CONT MOTOR
ELT:	C91A installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO 520 SERIES
Registered Owner:	On file	**Rated Power:**	285 hp
Operator:	On file	**Air Carrier Operating Certificate:**	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:		**Observation Time:**	
Distance from Accident Site:		**Condition of Light:**	Day
Direction from Accident Site:		**Conditions at Accident Site:**	Visual Conditions
Lowest Cloud Condition:	Clear	**Temperature/Dew Point:**	9°C
Lowest Ceiling:	None	**Visibility**	10 Miles
Wind Speed/Gusts, Direction:	3 knots, 330°	**Visibility (RVR):**	
Altimeter Setting:		**Visibility (RVV):**	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Skwentna, AK	**Type of Flight Plan Filed:**	VFR
Destination:	Anchorage, AK (PALH)	**Type of Clearance:**	None
Departure Time:	0720 ADT	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	
Total Injuries:	2 None		

Administrative Information

Investigator In Charge (IIC):	Christopher R Shaver	**Adopted Date:**	02/27/2013
Additional Participating Persons:	Chris Monson; FAA Anchorage FSDO; Anchorage, AK		
Publish Date:	02/27/2013		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=83877		

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