Aviation Investigation Final Report

Location:	Fairbanks, Alaska	**Accident Number:**	ANC20LA060
Date & Time:	June 15, 2020, 10:30 Local	**Registration:**	N3186D
Aircraft:	Cessna 180	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During landing, while at about 1,200 ft above ground level, the airplane's engine lost all power. Subsequently, the airplane landed short of the lake on the land and came to rest nosed down. The airplane sustained substantial damage to the fuselage.

An FAA postaccident examination revealed that about 15.5 gallons of clean blue fuel was drained from the airplane, and that there was fuel in the firewall drain sump. It was noted that two small "pearls" of water were observed in the fuel collection cup. A picture supplied of the airplane after the accident showed that the carburetor heat was found not applied. The engine was test run and revealed no mechanical failure or malfunctions.

The pilot reported that he did not recall if he had applied carburetor heat during the approach to land prior to the loss of engine power.

The temperature and dew point were entered into a carburetor icing probability chart, which coincided with the "serious icing-glide power" category.

Probable Cause and Findings

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

The pilot's failure to utilize carburetor heat while flying in conditions conducive carburetor to icing, which resulted in a total loss of engine power.

Findings

Personnel issues	Forgotten action/omission - Pilot
Aircraft	Intake anti-ice, deice - Not used/operated
Environmental issues	Conducive to carburetor icing - Effect on equipment

Factual Information

History of Flight

Landing	Loss of engine power (total) (Defining event)
Landing	Landing area undershoot
Landing	Nose over/nose down

On June 15, 2020, about 1030 Alaska daylight time, a Cessna 180, N3186D, was substantially damaged when it was involved in an accident near Fairbanks, Alaska. The pilot and two passengers were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that, about 1,200 ft above ground level, the engine lost all power on approach to the float-pond at Fairbanks International Airport (FAI), Fairbanks, Alaska. He added that the propeller continued to windmill and that there were no unusual noises or notable changes. He then applied throttle to no effect, confirmed a full rich mixture, and focused on the landing. Subsequently, the float-equipped airplane landed short of the float-pond and came to rest nose down, resulting in substantial damage to the fuselage. All occupants were able to egress with no further incident.

The pilot reported that he had departed from a lake about 190 miles away with 42 gallons of fuel onboard, and that at the time of the accident, the airplane had about 16 gallons of fuel remaining. He added that he did not recall if he had applied carburetor heat during the approach to land prior to the loss of engine power.

A picture supplied of the airplane by the Airport Police and Fire showed that the carburetor heat was found not applied.

A Federal Aviation Administration (FAA) aviation safety inspector examined the airplane after recovery and did not observe any abnormalities. He stated that about 15.5 gallons of "clean blue fuel" was drained from the airplane. He added that there was fuel in the firewall drain sump; and two small "pearls" of water were observed in the fuel collection cup.

An external tank was installed on the airframe to provide a fuel source and a postaccident engine run revealed no anomalies.

The weather observation station located at the accident airport reported that, about the time of the accident, the temperature was 66.2°F and the dew point was 55.4°F. According to the carburetor icing-probability chart located in the FAA Special Airworthiness Information Bulletin CE-09-35, the accident flight would have been operating in conditions conducive to "serious icing in glide power."

Pilot Information

Certificate:	Private	**Age:**	52,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**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:**	No
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	December 13, 2018
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	June 21, 2019
Flight Time:	(Estimated) 1501 hours (Total, all aircraft), 144 hours (Total, this make and model), 1501 hours (Pilot In Command, all aircraft), 41 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N3186D
Model/Series:	180	**Aircraft Category:**	Airplane
Year of Manufacture:	1955	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	31984
Landing Gear Type:	Float	**Seats:**	4
Date/Type of Last Inspection:	May 12, 2020 Annual	**Certified Max Gross Wt.:**	2950 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	4480.91 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	O-520
Registered Owner:	On file	**Rated Power:**	285 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:	PAFA,432 ft msl	**Distance from Accident Site:**	2 Nautical Miles
Observation Time:	10:49 Local	**Direction from Accident Site:**	218°
Lowest Cloud Condition:	Few / 6000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	230°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.77 inches Hg	**Temperature/Dew Point:**	19°C / 13°C
Precipitation and Obscuration:			
Departure Point:	Twin Lakes, AK	**Type of Flight Plan Filed:**	
Destination:	Fairbanks, AK	**Type of Clearance:**	VFR
Departure Time:	09:00 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	FAIRBANKS INTL FAI	**Runway Surface Type:**	Water
Airport Elevation:	439 ft msl	**Runway Surface Condition:**	Unknown
Runway Used:	Float Pond 20	**IFR Approach:**	None
Runway Length/Width:	5400 ft / 100 ft	**VFR Approach/Landing:**	Full stop;Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	3 None	**Latitude, Longitude:**	64.829444,-147.82943(est)

Administrative Information

Investigator In Charge (IIC):	Swenson, Eric
Additional Participating Persons:	Craig Kenmonth; FAA; Fairbanks, AK
Original Publish Date:	March 18, 2022
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=101443