Aviation Investigation Final Report

Location:	Port Townsend, Washington	**Accident Number:**	WPR18LA020
Date & Time:	October 30, 2017, 11:50 Local	**Registration:**	N72339
Aircraft:	Cessna 140	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he performed a preflight inspection; at that time, the fuel tanks contained 12 gallons of fuel total, with 7 gallons in the left tank and 5 gallons in the right tank. The pilot then departed to practice touch-and-go landings with the fuel selector in the right tank position. During the fourth takeoff about 300 ft above ground level, the engine suddenly stopped developing power. With little time to restore power, the pilot pitched the airplane down slightly, then switched to the left tank, but was unable to restore power. He then switched back to the right tank but was again unable to restore power. The pilot subsequently performed a forced landing; the airplane impacted a stand of trees before coming to rest on its left side. The airplane sustained substantial damage to the forward fuselage and left wing.

The left fuel tank was breached during the accident sequence and no fuel was observed in the tank. The right fuel tank, which had not been breached, contained about 1 ½ gallons of aviation fuel. The airplane's operations manual does not list an unusable fuel amount.

A postaccident examination of the engine and airframe revealed no evidence of a mechanical malfunction or failure that would have precluded normal operation. The reason for the total loss of engine power could not be determined.

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 for undetermined reasons.

Findings

Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Takeoff	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Landing	Collision with terr/obj (non-CFIT)

On October 30, 2017, about 1150 Pacific daylight time, a Cessna 140, N72339, was substantially damaged when it was involved in an accident near Port Townsend, Washington. The pilot sustained minor injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that he had just purchased the airplane two days prior to the accident and flew it both days with no anomalies noted. On the morning of the accident flight, during the preflight inspection, the pilot performed a walk-around inspection according to the owner's manual. About 12 gallons of fuel was on board; 7 gallons in the left tank and 5 gallons in the right tank. The fuel capacity of the airplane is 22 gallons, with 12.5 gallons in each tank. The pilot further stated that the fuel selector was in the right tank position for takeoff and for all circuits in the traffic pattern while practicing touch-and-go landings. After touching down during the 3rd landing and prior to the start of the 4th takeoff roll, the pilot opined that the carburetor heat was pushed into the OFF position. He then retracted the flaps, applied full power, and started a best rate of climb (Vy). About 300 ft above ground level the engine suddenly stopped developing power, and with very little time to restore power he pitched the nose down slightly, then switched the fuel selector to the left tank position, but at such a low altitude he was unable to restart the engine. He then switched back to the right fuel tank, but to no avail; he could not restart the engine. He then performed a forced landing, during which the airplane impacted a stand of trees before coming to rest on its left side. The left wing and fuselage were substantially damaged.

Prior to wreckage recovery, it was revealed that there was no fuel in the left fuel tank, as it had been breached during the accident sequence. About 1 ½ gallons of aviation fuel was recovered from the right fuel tank, which had not been breached. The airplane's Operation Manual does not specify an unusable fuel amount. However, it does state under Section 1 – Operating Check List, Before Starting the Engine, "Set fuel tank selector to fullest tank. (Do not take off on less than ¼ tank.)" One-quarter tank equates to 3.125 gallons of fuel.

Postaccident examination of the engine and airframe revealed no evidence of a mechanical failure or malfunction that would have precluded normal operation.

Pilot Information

Certificate:	Commercial	**Age:**	82,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Glider	**Restraint Used:**	4-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Sport pilot With waivers/limitations	**Last FAA Medical Exam:**	May 11, 2017
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	April 10, 2017
Flight Time:	9000 hours (Total, all aircraft), 1 hours (Total, this make and model), 8636 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N72339
Model/Series:	140 Undesignat	**Aircraft Category:**	Airplane
Year of Manufacture:	1946	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	9523
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	August 25, 2017 Annual	**Certified Max Gross Wt.:**	1451 lbs
Time Since Last Inspection:	26 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1403 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	C91 installed, activated, did not aid in locating accident	**Engine Model/Series:**	C85 SERIES
Registered Owner:	On file	**Rated Power:**	85 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:	0S9,110 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	11:55 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:		**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.22 inches Hg	**Temperature/Dew Point:**	15°C / 0°C
Precipitation and Obscuration:	N/A - None - Dust or sand whirls		
Departure Point:	Port Townsend, WA (0S9)	**Type of Flight Plan Filed:**	None
Destination:	Port Townsend, WA (0S9)	**Type of Clearance:**	None
Departure Time:	11:30 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Port Townsend Intl Airport 0S9	**Runway Surface Type:**	Asphalt
Airport Elevation:	110 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	09	**IFR Approach:**	None
Runway Length/Width:	3000 ft / 75 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	48.04972,-122.796669

Administrative Information

Investigator In Charge (IIC):	Little, Thomas
Additional Participating Persons:	Dwight M Ford; Federal Aviation Administration; Renton, WA
Original Publish Date:	November 19, 2020
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=96262