Aviation Investigation Final Report

Location:	Wichita, Kansas	**Accident Number:**	CEN18LA197
Date & Time:	May 28, 2018, 12:10 Local	**Registration:**	N64176
Aircraft:	FAIRCHILD(HOWARD) M 62C(PT-23A)	**Aircraft Damage:**	Substantial
Defining Event:	Fuel exhaustion	**Injuries:**	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot reported that he filled the airplane with fuel 5 days before the accident flight. He had not flown the airplane in the intervening 5 days, and the fuel indicators were still showing that the tanks were full before the accident flight. The pilot calculated that there should have been sufficient fuel onboard for a 3-hour 15-minute-long flight. The pilot was performing flyovers at five cemeteries, which required flying holding orbits at three of the cemeteries and two passes at the other two cemeteries. He then flew back toward the departure airport to land. When the airplane was about 5 minutes from the airport, he switched fuel tanks to what appeared to be the fullest tank. He reported that the fuel level in both fuel tanks was low but that the fuel quantity indicators were showing above “E.” While on final approach, between 150 and 200 ft above the ground, the engine lost total power. He switched fuel tanks and started using the manual pump, and the engine regained power for 1 to 2 seconds before losing power again. He subsequently conducted an off-airport, forced landing in a lot about 1/8 mile from the end of the runway. The airplane touched down hard and bounced, and the right wing hit a pole. The airplane then impacted a fence and another pole before coming to rest.
The pilot used a flight tracker program, and it showed that the flight was only 2 hours 41 minutes long. Postaccident examination of the accident site found no fuel spillage. Examination of the airplane revealed that each fuel tank contained about 1/2 cup of fuel. About a teaspoon of fuel was recovered from the engine strainer bowl. Although the pilot thought there was sufficient fuel onboard the airplane for the flight, given the evidence, it is likely that the engine lost power due to fuel exhaustion because the pilot miscalculated the fuel consumption rate during preflight planning.

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 due to fuel exhaustion, which resulted from the pilot's miscalculation of the fuel consumption rate during preflight planning.

Findings

Aircraft	Fuel - Fluid level
Personnel issues	Fuel planning - Pilot
Environmental issues	Fence/fence post - Contributed to outcome
Environmental issues	Pole - Contributed to outcome

Factual Information

History of Flight

Approach-VFR pattern final	Fuel exhaustion (Defining event)
Approach-VFR pattern final	Loss of engine power (total)
Approach-VFR pattern final	Attempted remediation/recovery
Approach-VFR pattern final	Collision with terr/obj (non-CFIT)
Landing	Off-field or emergency landing
Landing	Hard landing

On May 28, 2018, at 1210 central daylight time, a Fairchild (Howard) M-62C (PT-23A) airplane, N64176, collided with a pole and a fence during a forced landing while on approach to land at the Westport Airport (71K), Wichita, Kansas. The pilot and passenger received minor injuries. The airplane was substantially damaged. The airplane was registered to and operated by the American Airpower Heritage Flying Museum under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed, and a flight plan was not filed. The local flight originated from 71K about 0930.

The pilot stated the purpose of the flight was to fly over several cemeteries in observance of Memorial Day. He performed fly-overs at five cemeteries which required flying holding orbits at three of the cemeteries and two passes at the other two cemeteries. He then flew back toward 71K to land. He stated that when he was about five minutes from 71K, he switched fuel tanks to what appeared to be the fullest tank. He reported that both fuel tanks were low, but the fuel quantity indicators were showing above "E." While on final approach at an altitude of 150 to 200 ft above the ground, the engine lost power. He switched fuel tanks, started using the wobble (manual) pump, and the engine regained power for a second or two before losing power once again. The engine regained power once again and the pilot continued using the wobble pump until committed to an off-airport landing in a storage facility lot about 1/8 mile from the end of the runway. The airplane touched down hard, bounced, and the right wing contacted a metal pole. The airplane then contacted a chain-link fence and a utility pole before coming to rest.

The pilot stated that he checked the fuel gauges before the flight and they were indicating the fuel tanks were full which is how he left the airplane five days before the accident flight. The pilot calculated he should have had about 3 hours and 15 minutes of fuel on board. The pilot used Foreflight to track his flight which indicated a flight time of 2 hours and 41 minutes. The Hobbs time indicated 2.9 hours.

A postaccident examination of the airplane was conducted by a Federal Aviation Administration Airworthiness Inspector. The inspector reported there was no fuel spill at the accident site and the fuel selector was positioned on the right fuel tank. He drained about ½ cup of fuel out of each of the fuel tanks and about a teaspoon of fuel out of the engine strainer bowl. The inspector reported the fuel gauges are on the wings and are difficult to see inflight.

Pilot Information

Certificate:	Private	**Age:**	46,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	4-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	March 15, 2018
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	May 2, 2016
Flight Time:	1074 hours (Total, all aircraft), 29 hours (Total, this make and model), 1000 hours (Pilot In Command, all aircraft), 13 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	FAIRCHILD(HOWARD)	**Registration:**	N64176
Model/Series:	M 62C(PT-23A) UNDESIGNAT	**Aircraft Category:**	Airplane
Year of Manufacture:	1943	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	256H0
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	April 1, 2018 Annual	**Certified Max Gross Wt.:**	2900 lbs
Time Since Last Inspection:	17 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1391.1 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:		**Engine Model/Series:**	W670-16
Registered Owner:		**Rated Power:**	220 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	ICT,1332 ft msl	**Distance from Accident Site:**	2 Nautical Miles
Observation Time:	11:53 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Few / 5000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	13 knots / 21 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	150°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.92 inches Hg	**Temperature/Dew Point:**	32°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Wichita, KS (71K)	**Type of Flight Plan Filed:**	None
Destination:	Wichita, KS (71K)	**Type of Clearance:**	VFR
Departure Time:	09:30 Local	**Type of Airspace:**	Class C

Airport Information

Airport:	Westport 71K	**Runway Surface Type:**	Gravel
Airport Elevation:	1290 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Minor	**Latitude, Longitude:**	37.651668,-97.383888(est)

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	Richard Terrell; FAA; Wichita, KS
Original Publish Date:	April 30, 2019
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=97335