



Aviation Investigation Final Report

Location:	Curtis, Nebraska	Accident Number:	CEN21LA206
Date & Time:	April 18, 2021, 19:45 Local	Registration:	N2955D
Aircraft:	Cessna 170B	Aircraft Damage:	Substantial
Defining Event:	Fuel contamination	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he took off from his private airstrip and flew for about 30 minutes before landing at a nearby airport for fuel. After fueling with 24 gallons of fuel, he did not perform a pre-takeoff run-up of the engine and departed the airport. About 1.5 miles from the airport the engine sputtered and lost all power. The pilot performed a forced landing to a small field. During the landing roll as the airplane was approaching the end of the field, the pilot applied heavy braking which caused the airplane to nose down coming to rest on its nose. The airplane sustained substantial damage to the left outboard wing.

The pilot reported that after the accident he sampled the fuel from the wing tanks and gascolator. The fuel sample from the gascolator was about one-half water and one-half fuel. The wing tank samples contained all water. The pilot provided photographs of the airport above ground fuel tank including photographs of the interior of the tank. The tank interior showed a large amount of rusted metal in the bottom of the tank.

The airport manager reported that the airport fuel tank was about 30 years old and was of double wall construction. Water had entered the space between the inner and outer walls of the tank and the inner tank had rusted by allowing water to enter the inner tank and fuel supply. The tank did not have filtering on the outlet. The airport ordered a new tank and planned to include filters on the outlet, including a water separating filter.

Probable Cause and Findings

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

Water contamination of the airplane's fuel supply which resulted in a total loss of engine power.

Findings

Organizational issues	Equipment monitoring - Airport
Aircraft	Fuel - Fluid condition
Aircraft	Landing distance - Attain/maintain not possible

Factual Information

History of Flight

Initial climb	Fuel contamination (Defining event)
Initial climb	Loss of engine power (total)
Landing	Off-field or emergency landing
Landing-landing roll	Nose over/nose down

Pilot Information

Certificate:	Private	Age:	63, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	May 9, 2020
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	890 hours (Total, all aircraft), 380 hours (Total, this make and model), 890 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N2955D
Model/Series:	170B	Aircraft Category:	Airplane
Year of Manufacture:	1955	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	26898
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	January 1, 2021 Annual	Certified Max Gross Wt.:	2200 lbs
Time Since Last Inspection:	2 Hrs	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-300A
Registered Owner:	WALSH DAVID E	Rated Power:	145 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:	KMCK,2530 ft msl	Distance from Accident Site:	27 Nautical Miles
Observation Time:	19:53 Local	Direction from Accident Site:	192°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	340°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	15°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Curtis, NE	Type of Flight Plan Filed:	None
Destination:	Curtis, NE	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Airport Information

Airport:	CURTIS MUNI 47V	Runway Surface Type:	
Airport Elevation:	2677 ft msl	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	40.63875,-100.47341 (est)

Administrative Information

Investigator In Charge (IIC):	Brannen, John
Additional Participating Persons:	Bernard vonRentzell; FAA - LNK FSDO; Lincoln, NE
Original Publish Date:	October 20, 2021
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=103007

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).