



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Neola, Iowa	Accident Number:	CEN23LA396
Date & Time:	September 2, 2023, 19:15 Local	Registration:	N1374F
Aircraft:	Cessna 172G	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the airplane was full of fuel before he departed for the cross-country flight. After flying for about 2 hours and 50 minutes, with a significant headwind, he decided to divert to an airport to refuel. During his attempt to refuel, it was discovered that the fuel pumps were out of order, and he did not see the active notice to airmen (NOTAM) for the out of order fuel pumps. The pilot calculated the fuel remaining in the airplane and departed for his destination. After flying for about 40 minutes, the engine lost power and he executed a forced landing on a road about 12 miles from the destination airport. During the landing, the airplane impacted a swale and nosed over adjacent to the road which resulted in substantial damage to the airplane's fuselage and both wings. The pilot reported that there were no preaccident mechanical malfunctions or failures that would have precluded normal operation.

The pilot noted that a more thorough flight planning and a more accurate use of the airplane's performance charts could have prevented the accident.

Probable Cause and Findings

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

The pilot's inadequate fuel planning and improper in-flight decision-making, which resulted in a total loss of engine power due to fuel exhaustion.

Findings

Aircraft	Fuel - Fluid management
Personnel issues	Fuel planning - Pilot
Personnel issues	Decision making/judgment - Pilot

Factual Information

History of Flight

Enroute-cruise	Fuel exhaustion (Defining event)
Landing-flare/touchdown	Off-field or emergency landing

Pilot Information

Certificate:	Private	Age:	42, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
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:	December 30, 2020
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 29, 2023
Flight Time:	(Estimated) 97 hours (Total, all aircraft), 46 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N1374F
Model/Series:	172G	Aircraft Category:	Airplane
Year of Manufacture:	1966	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17254869
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	May 31, 2023 Annual	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:	25.83 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2287.53 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	O-360-A4M
Registered Owner:	On file	Rated Power:	180 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:	KCBF, 1253 ft msl	Distance from Accident Site:	13 Nautical Miles
Observation Time:	19:15 Local	Direction from Accident Site:	207°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	19°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Sac City, IA (SKY)	Type of Flight Plan Filed:	None
Destination:	Council Bluffs, IA (CBF)	Type of Clearance:	VFR
Departure Time:	18:40 Local	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	41.448021, -95.631784(est)

Administrative Information

Investigator In Charge (IIC):	Galbraith, Damian
Additional Participating Persons:	Michael Massell; FAA; Des Moines, IA
Original Publish Date:	April 12, 2024
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=192997

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).