



# Aviation Investigation Final Report

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<b>Location:</b>	Gypsum, Colorado	<b>Accident Number:</b>	CEN24LA210
<b>Date &amp; Time:</b>	June 4, 2024, 20:12 Local	<b>Registration:</b>	N5755B
<b>Aircraft:</b>	Cessna 182	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel exhaustion	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

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## Analysis

The flight instructor and the pilot were conducting an instructional flight when the airplane had a total loss of engine power due to fuel exhaustion. The airplane fuselage sustained substantial damage during the forced landing in rough terrain. The flight instructor reported that there were no preimpact mechanical malfunctions or failures that would have precluded normal operation. The airplane operator reported that the fuel tanks remained intact after the accident, were void of usable fuel, and both fuel tank quantity gauges indicated empty.

Before the flight, the flight instructor asked another flight instructor to request the fixed based operator (FBO) to refuel the airplane. However, despite the fuel request being relayed to the FBO front desk personnel, the airplane was not fueled before it departed on the flight. The flight instructor and the pilot both admitted that they did not visually confirm the fuel quantity during their preflight inspection. Additionally, believing that the fuel tanks were topped-off as requested, the pilots erroneously reset the airplane's electronic fuel totalizer to reflect a full fuel load before takeoff.

## Probable Cause and Findings

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

The failure of the flight instructor and the pilot to visually confirm the airplane's fuel quantity during preflight, which resulted in a loss of engine power due to fuel exhaustion and an off-airport forced landing in rough terrain.

## Findings

<b>Aircraft</b>	Fuel - Fluid level
<b>Aircraft</b>	Fuel - Inadequate inspection
<b>Personnel issues</b>	Preflight inspection - Pilot
<b>Personnel issues</b>	Preflight inspection - Instructor/check pilot
<b>Environmental issues</b>	Rough terrain - Contributed to outcome

## Factual Information

### History of Flight

<b>Enroute</b>	Fuel exhaustion (Defining event)
<b>Landing</b>	Off-field or emergency landing
<b>Landing</b>	Hard landing

### Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	24, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane single-engine	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	April 5, 2022
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	February 4, 2024
<b>Flight Time:</b>	459 hours (Total, all aircraft), 25 hours (Total, this make and model), 392 hours (Pilot In Command, all aircraft), 171 hours (Last 90 days, all aircraft), 85 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	32, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	June 17, 2021
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	November 29, 2023
<b>Flight Time:</b>	156 hours (Total, all aircraft), 63 hours (Total, this make and model), 78 hours (Pilot In Command, all aircraft), 54 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N5755B
<b>Model/Series:</b>	182	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1956	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	33755
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	June 3, 2024 100 hour	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>	10 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	8136 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	C126 installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	O-470-S
<b>Registered Owner:</b>	iTechnology Design Inc	<b>Rated Power:</b>	230 Horsepower
<b>Operator:</b>	Alpine Flight Training	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	EGE,6535 ft msl	<b>Distance from Accident Site:</b>	2 Nautical Miles
<b>Observation Time:</b>	19:56 Local	<b>Direction from Accident Site:</b>	167°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots / None	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	280°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.11 inches Hg	<b>Temperature/Dew Point:</b>	23°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Eagle, CO (EGE)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Eagle, CO (EGE)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	17:53 Local	<b>Type of Airspace:</b>	Class E

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	39.688969,-106.92878(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Fox, Andrew
<b>Additional Participating Persons:</b>	Michael R. Coryer; Federal Aviation Administration - Denver FSDO; Denver, CO
<b>Original Publish Date:</b>	January 21, 2025
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=194400">https://data.ntsb.gov/Docket?ProjectID=194400</a>

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](#).