



# Aviation Investigation Final Report

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<b>Location:</b>	Reno, Nevada	<b>Accident Number:</b>	GAA16CA259
<b>Date &amp; Time:</b>	May 24, 2016, 13:25 Local	<b>Registration:</b>	N4793D
<b>Aircraft:</b>	Cessna 182	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (total)	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

According to the Federal Aviation Administration, Aviation Safety Inspector that arrived at the scene shortly after the accident, he located the uninjured pilot in command (PIC) and a passenger rated pilot who were the only occupants of the airplane. The inspector reported that the PIC told him that he had fueled the airplane prior to the flight. The PIC told the inspector that he had flown 2.5 hours on the right tank which indicated 3.9 gallons of fuel remained per the electronic fuel quantity indicator, at which time he switched to the left tank which indicated 15 gallons of fuel remained per the electronic fuel quantity indicator. The PIC reported to the inspector that after switching tanks the engine ran for an additional five minutes and ceased operation. The PIC told the inspector that he contacted air traffic control (ATC) stating that he had experienced an "engine failure", and that they would not make it to the nearest airport. The pilot landed the airplane on a highway five miles from the destination airport. During the landing the nose gear collapsed and the airplane sustained substantial damage to the firewall.

During a post-accident examination of the airplane by the FAA Inspector, there wasn't any usable fuel found in the left or right fuel tanks, and the paved surface where the airplane landed did not contain any evidence of fuel spillage.

The airplane landed 5 miles from the nearest airport. The pilot's destination airport was 17.5 nautical miles southwest of the accident site. The distance between the departure airport and the destination airport was about 415 nautical miles. According to the pilot operating handbook, the range of the accident airplane is 880 nautical miles.

The NTSB Investigator contacted the fixed base operator who reportedly fueled the airplane prior to the flight in order to acquire the fuel records. The operator did not have any fuel records for the accident airplane.

# 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, resulting in fuel exhaustion and substantial damage to the firewall during the forced landing.

## Findings

<b>Aircraft</b>	Fuel - Fluid level
<b>Personnel issues</b>	Fuel planning - Pilot

## Factual Information

### History of Flight

<b>Enroute-cruise</b>	Loss of engine power (total) (Defining event)
<b>Enroute-cruise</b>	Fuel exhaustion
<b>Enroute-cruise</b>	Emergency descent initiated
<b>Landing</b>	Collision with terr/obj (non-CFIT)
<b>Landing-flare/touchdown</b>	Hard landing

### Pilot Information

<b>Certificate:</b>	Commercial; Private	<b>Age:</b>	68, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	May 21, 2014
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 4101 hours (Total, all aircraft), 2500 hours (Total, this make and model)		

### Passenger Information

<b>Certificate:</b>		<b>Age:</b>	43, Male
<b>Airplane Rating(s):</b>		<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>		<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>		<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N4793D
<b>Model/Series:</b>	182 A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1958	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	34893
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>		<b>Certified Max Gross Wt.:</b>	3100 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>		<b>Engine Model/Series:</b>	IO-540-AB1A5
<b>Registered Owner:</b>	EXTREME SOURCE INC.	<b>Rated Power:</b>	230 Horsepower
<b>Operator:</b>	EXTREME SOURCE INC.	<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>	KRNO,4400 ft msl	<b>Distance from Accident Site:</b>	17 Nautical Miles
<b>Observation Time:</b>	19:55 Local	<b>Direction from Accident Site:</b>	314°
<b>Lowest Cloud Condition:</b>	Few / 4500 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 6000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	9 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	260°	<b>Turbulence Severity Forecast/Actual:</b>	/ N/A
<b>Altimeter Setting:</b>	29.93 inches Hg	<b>Temperature/Dew Point:</b>	15°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	PRESTON, ID (U10 )	<b>Type of Flight Plan Filed:</b>	Unknown
<b>Destination:</b>	RENO, NV (RNO )	<b>Type of Clearance:</b>	Unknown
<b>Departure Time:</b>	10:15 Local	<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<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>	39.29,-119.510002(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hicks, Michael
<b>Additional Participating Persons:</b>	Gerald W Rose; Federal Aviation Administration; Reno, NV James D Richardson; Federal Aviation Administration; Reno, NV
<b>Original Publish Date:</b>	September 12, 2016
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=93244">https://data.nts.gov/Docket?ProjectID=93244</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](#).