



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Eagle, CO	<b>Accident Number:</b>	CEN17LA247
<b>Date &amp; Time:</b>	06/30/2017, 1215 MDT	<b>Registration:</b>	N210HG
<b>Aircraft:</b>	CESSNA P210N	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (total)	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The pilot was on a cross-country flight and as he entered the traffic pattern at his destination airport the engine lost power. The pilot completed the "engine failure during flight" checklist, but the engine did not restart. He then selected a nearby road for the forced landing. After the accident, fire department and recovery personnel reported fuel was leaking from the airplane. It was also reported that the airplane had been filled with about 30 gallons of fuel, nine days before the accident flight. After recovery of the airplane, a test engine run was conducted. The engine was started and run to power. The examination of the airframe and engine did not reveal any discrepancies that would account for a loss of engine power. A review of the data from the airplane's engine data monitor (EDM) revealed several flights, including the accident flight. The EDM did not record any flights between the time the airplane was fueled and the accident flight. A plot of the accident flight data, revealed at the end of the flight, a slight increase and subsequent decrease in exhaust gas temperatures (EGTs), which was uniform across all six engine cylinders; typical of fuel being cutoff to the engine. The position of the fuel selector during the approach to the airfield could not be verified; fuel was available in the airplane fuel tanks.

## Probable Cause and Findings

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

The loss of engine power due to fuel starvation for reasons that could not be determined because an examination of the airplane and engine did not reveal any malfunctions or failures that would have precluded normal operation.

## Findings

Aircraft	Fuel distribution - Not specified (Cause)
Not determined	Not determined - Unknown/Not determined (Cause)

## Factual Information

On June 30, 2017, about 1215 mountain daylight time, a Cessna P210N airplane, N210HG conducted a forced landing near Eagle, Colorado. The pilot was not injured and the airplane was substantially damaged during the landing. The airplane was registered to and operated by Tridelaw Aviation, LLC, under the provisions of 14 *Code of Federal Regulations Part 91* as a cross-country flight. Visual meteorological conditions prevailed at the time.

The pilot reported that he departed Montrose, Colorado (KMTJ) en route to the Eagle County Regional Airport (KEGE). He added that he departed KMTJ with 60 gallons of fuel and 8 quarts of oil in the P210. As he approached KEGE, he contacted the tower controller and was directed to enter the downwind. As he entered the traffic pattern and configured the airplane for the landing, the engine lost power. The pilot reported that he followed the 'engine failure during flight' checklist, and switched fuel tanks; however, the engine did not restart. The pilot informed the controller and selected an empty road for the forced landing. During the landing, the left wing impacted a pole, the airplane then exited the road, coming to rest in an upright position. During the impact with the pole, about a 5 ft section was torn from the wing; damage was also noted on the fuselage and to the four-bladed propeller.

Fire department personnel arrived on scene and noted fuel leaking from the airplane, so they applied a water-based fire retardant to both wing fuel tanks. The responding Federal Aviation Administration (FAA) inspector also stated that after the recovery of the airplane fuel was leaking from at least one of the wing fuel tanks. It was also reported that the airplane was filled with about 30 gallons of fuel on June 21.

The airplane was recovered and transported to a salvage facility, where an examination was conducted by the NTSB Investigator-in-Charge and a technical representative from the engine manufacturer.

A fuel can was connected to the left-wing fuel line and a visual engine examination was conducted. A slight fuel leak was noted on the fuel metering unit, otherwise no external visual abnormalities were noted with the engine. The top set of sparkplugs were removed; the sparkplugs had normal wear and light grey deposits. Each cylinder was borescoped; the engine crankshaft was rotated by hand, and spark was observed on each ignition lead.

The airplane was equipped with a fuel flow and an JPI engine data monitor (EDM) 700 system. No information could be retrieved from the fuel flow system; however, the EDM contained 28 files, dated from May 27, 2017 to June 30, 2017. A review of the monitor's information revealed that there were two flights on June 19<sup>th</sup>, one flight on June 20<sup>th</sup>, and a one-hour flight on June 30<sup>th</sup>, which corresponded to the accident flight. The June 30<sup>th</sup> flight was plotted; just before the end of the data, there was a slight rise in exhaust gas temperatures (EGT), followed by a decrease. The rise and decrease in temperatures were uniform across all six cylinders.

In order to conduct an engine run, and due to damage to the engine's propeller, two blades were shortened to provide blade symmetry and balance. Prior to the engine run, the fuel

strainer was opened and liquid consistent in appearance with water, was drained from the fuel line.

The engine was started and run to 2,500 rpm; a magneto check was also performed, with no abnormalities noted. During the run, fuel continued to leak from the fuel metering unit. After the run, the unit was disassembled, the internal O-rings appeared flattened or degraded. It was not determined if the O-ring leakage was due to impact to the metering unit during the accident, degradation of the O-rings due to the fire retardant, drying out of the O-rings, or natural degradation of the O-rings over time.

The fuel metering inlet screen was removed and was absent any debris and contamination.

A reason for the loss of engine power was not determined.

## History of Flight

<b>Approach</b>	Loss of engine power (total) (Defining event) Off-field or emergency landing
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## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	67
<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>	No
<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>	03/01/2016
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1950 hours (Total, all aircraft), 80 hours (Total, this make and model), 1940 hours (Pilot In Command, all aircraft), 30.4 hours (Last 90 days, all aircraft), 20.3 hours (Last 30 days, all aircraft), 0.8 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N210HG
Model/Series:	P210N N	Aircraft Category:	Airplane
Year of Manufacture:	1980	Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	P21000569
Landing Gear Type:	Retractable - Tricycle	Seats:	
Date/Type of Last Inspection:	08/15/2016, Annual	Certified Max Gross Wt.:	4001 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3422 Hours at time of accident	Engine Manufacturer:	CONT MOTOR
ELT:	C126 installed, activated, did not aid in locating accident	Engine Model/Series:	TSIO-520 SER
Registered Owner:	TRIDELAW AVIATION LLC	Rated Power:	310 hp
Operator:	TRIDELAW AVIATION LLC	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KEGE	Distance from Accident Site:	
Observation Time:	1250 MDT	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.22 inches Hg	Temperature/Dew Point:	23° C / -4° C
Precipitation and Obscuration:	No Precipitation		
Departure Point:	Montrose, CO (KMTJ)	Type of Flight Plan Filed:	None
Destination:	Eagle, CO (EGE)	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	

## Airport Information

Airport:	Eagle County Regional (EGE)	Runway Surface Type:	N/A
Airport Elevation:	6547 ft	Runway Surface Condition:	
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing; Traffic Pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 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>	1 None	<b>Latitude, Longitude:</b>	39.646111, -106.893056 (est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Craig Hatch	<b>Report Date:</b>	11/06/2018
<b>Additional Participating Persons:</b>	Harvey Hayes; FAA FSDO; Denver, CO Nicole Channon; CMI; Mobile, AL		
<b>Publish Date:</b>	11/06/2018		
<b>Note:</b>	The NTSB did not travel to the scene of this accident.		
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=95470">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=95470</a>		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).