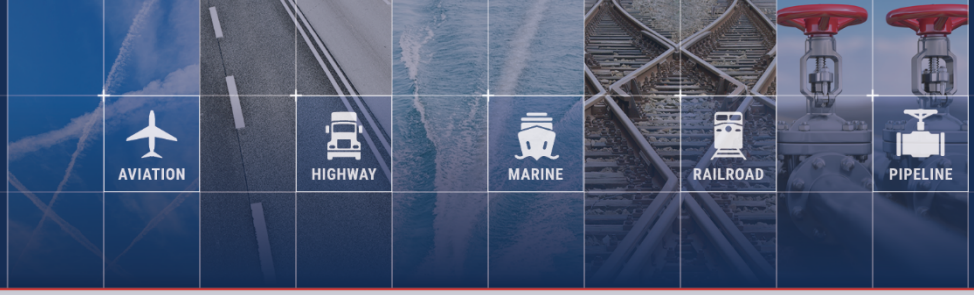

Aviation Investigation Final Report

Location:	Boulder, Utah	**Accident Number:**	WPR18LA136
Date & Time:	April 28, 2018, 17:15 Local	**Registration:**	N3377U
Aircraft:	Cessna 182F	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (partial)	**Injuries:**	1 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Following a cross-country flight, the pilot was circling in the area of the destination airport when he noticed an excessively high exhaust gas temperature (EGT) indication. He enrichened the fuel/air mixture to full rich and leveled the airplane in an attempt to "cool down" the engine, then noted that the airplane would not maintain altitude and that engine power was decreasing. The pilot performed a forced landing to a field, during which the airplane impacted two ditches, resulting in substantial damage.

Examination of the airframe and the engine failed to reveal any mechanical anomalies that would have precluded normal operation and the reason for the decreased engine power could not be determined. The calculated density altitude at the time of the accident was 8,814 ft.

Probable Cause and Findings

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

A partial loss of engine power for reasons that could not be determined due to the available evidence.

Findings

Not determined	(general) - Unknown/Not determined
Aircraft	(general) - Unknown/Not determined

Factual Information

History of Flight

Maneuvering-low-alt flying	Loss of engine power (partial) (Defining event)
Landing	Off-field or emergency landing
Landing-landing roll	Collision with terr/obj (non-CFIT)

On April 28, 2018, about 1715 mountain daylight time, a Cessna 182F, N3377U, was substantially damaged when it was involved in an accident near Boulder, Utah. The private pilot sustained a minor injury, while his two passengers were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot departed on a 172-nautical (nm) mile cross-country flight. Upon arriving in the area of the destination, they were circling over the town when the pilot observed a high exhaust gas temperature (EGT) indication. He stated that, at this time he enriched the fuel mixture setting to full rich, leveled off to cool the engine down, and immediately began looking for a possible emergency landing site. When he realized that the airplane could not maintain altitude, as engine power was decreasing, he chose a grassy field for a forced landing. During the landing roll, the airplane collided with a ditch, which separated the nose landing gear. The pilot reported that he then applied the brakes, but collided with a second ditch, which brought the airplane to a stop partially on its nose at about a 20° tail-high angle. The airplane came to rest on a magnetic heading of about 111° at an elevation of 6,627 ft mean sea level (msl), and sustained substantial damage to its firewall and engine mounts.

The airplane was examined after recovery from the site. Both wings had been separated from the fuselage for purposes of recovery. All four engine mounts were broken, and the engine was pushed aft.

The lower cowling, lower exhaust tubing, and cowl flap were impact damaged. The position of the cowl flap could not be determined. The propeller governor control and the carburetor heat cables were impact damaged and could not be functionally tested. The oil cooler coils were unremarkable.

Electrical continuity of the cylinder head temperature/exhaust gas temperature/outside air temperature gauges was confirmed. The mixture control cable and the throttle cable remained connected and moved freely and correctly. The fuel selector valve was free to rotate when activated by hand; each detent was defined.

The upper spark plugs and valve covers were removed. The engine was rotated at the propeller flange, with no binding noted through the valve train to the accessory section. Valve movement was noted on all cylinders, and thumb compression was detected on all cylinders. Spark was noted on the upper p-leads.

The upper spark plugs exhibited signatures consistent with a lean mixture and worn-out condition when compared to a Champion Spark Plug Check-a-Plug chart. The lower spark plugs were also removed and exhibited signatures consistent with normal to worn-out condition.

Examination revealed no evidence of anomalies that would have precluded normal operation.
The 1653 weather observation at Bryce Canyon Airport (BCE), Bryce Canyon, Utah, located about 60 nm west of the accident site, reported temperature 21°C, dew point 13°C, and an altimeter setting of 29.95 inches of mercury. Based on these conditions, the computed density altitude at the time of the accident was 8,814 ft msl.

Pilot Information

Certificate:	Private	**Age:**	64,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Unknown	**Last FAA Medical Exam:**	February 11, 2011
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1454 hours (Total, all aircraft), 694 hours (Total, this make and model), 1318 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N3377U
Model/Series:	182F F	**Aircraft Category:**	Airplane
Year of Manufacture:	1963	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	18254777
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	August 1, 2015 Annual	**Certified Max Gross Wt.:**	2800 lbs
Time Since Last Inspection:	12.3 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2497.7 Hrs at time of accident	**Engine Manufacturer:**	CONT MOTOR
ELT:	Installed, not activated	**Engine Model/Series:**	O-470 SERIES
Registered Owner:		**Rated Power:**	0 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:	BCE,7590 ft msl	**Distance from Accident Site:**	37 Nautical Miles
Observation Time:	16:53 Local	**Direction from Accident Site:**	250°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	25 knots / 33 knots	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	240°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.95 inches Hg	**Temperature/Dew Point:**	21°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Salt Lake City, UT (SLC)	**Type of Flight Plan Filed:**	None
Destination:	Boulder, UT	**Type of Clearance:**	None
Departure Time:	15:30 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Minor, 2 None	**Latitude, Longitude:**	37.904722,-111.41833(est)

Administrative Information

Investigator In Charge (IIC):	Little, Thomas		
Additional Participating Persons:	Rhaundale Hinsen; Federal Aviation Administration; Salt Lake City, UT		
Original Publish Date:	May 27, 2021	**Investigation Class:**	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=97194		