



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Stanley, Idaho	<b>Accident Number:</b>	WPR21LA212
<b>Date &amp; Time:</b>	May 29, 2021, 11:00 Local	<b>Registration:</b>	N9254E
<b>Aircraft:</b>	Maule M-5-235C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (partial)	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot initiated a descent to the remote airstrip with the intention of performing a low approach to check the runway surface then landing if conditions allowed. About 500 ft before the runway threshold, the pilot applied full engine power, and the engine responded but then began to progressively lose power. He turned on the carburetor heat, confirmed that the engine mixture was set correctly, and began to turn the airplane away from rising terrain. The airplane would not climb, and he maneuvered it through an adjacent canyon, at which time the engine started to regain power. Due to rising terrain, the pilot had limited options to turn around the airplane, so the pilot performed a forced landing. During the landing flare, the airplane struck a log and nosed over.

Postaccident examination revealed no anomalies with the engine that would have precluded normal operation. Weather conditions at the time of the flight were conducive to serious carburetor icing at cruise power. The pilot did not turn on carburetor heat until after the engine started to lose power, so it is likely that pilot's failure to use carburetor heat earlier in the flight caused carburetor icing that led to the partial loss of engine power.

## Probable Cause and Findings

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

The pilot's failure to use carburetor heat in weather conditions conducive to carburetor icing, resulting in a partial loss of engine power and a forced landing during which the airplane struck an object and nosed over.

## Findings

<b>Environmental issues</b>	Conducive to carburetor icing - Effect on equipment
<b>Personnel issues</b>	Delayed action - Pilot
<b>Aircraft</b>	Intake anti-ice, deice - Not used/operated

# Factual Information

## History of Flight

Approach-VFR go-around	Loss of engine power (partial) (Defining event)
Initial climb	Off-field or emergency landing
Landing-flare/touchdown	Nose over/nose down

On May 29, 2021, about 1100 mountain daylight time, a Maule M-5-235C, N9254E, was substantially damaged when it was involved in an accident near Thomas Creek Airport (2U8), Stanley, Idaho. The pilot and passenger were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 flight.

The pilot reported that the airplane’s takeoff and climb from Johnson Creek Airport (3U2), Yellow Pine, Idaho, about 30 minutes before the accident, was uneventful. When the airplane reached an altitude of about 10,000 ft mean sea level (msl), the pilot reduced engine power and initiated a descent to 2U8, with the intention of performing a low approach to check the runway surface then landing if conditions allowed.

About 500 ft before the runway threshold, the pilot applied full engine power, and the engine responded but then began to progressively lose power. He turned on the carburetor heat, confirmed that the engine mixture was set correctly, and began to turn the airplane away from rising terrain at the end of the runway. The airplane would not climb, and the pilot maneuvered the airplane through a neighboring canyon, at which time the engine started to regain power. The pilot continued to assess the surrounding terrain and decided that he would not be able to safely turn the airplane around. He then observed a flat area and maneuvered the airplane to that spot to perform a forced landing at the lowest possible airspeed. During the landing flare, the airplane struck a log and nosed over.

Postaccident examination revealed no anomalies with the engine that would have precluded normal operation.

The closest official weather observation station, located at McCall Municipal Airport, McCall, Idaho, indicated a temperature and a dew point temperature of about 44.5°F and 37.5 F, respectively, about the time of the accident. According to Federal Aviation Administration Special Airworthiness Information Bulletin CE-09-35, Carburetor Icing Prevention, such conditions were conducive to serious carburetor icing at cruise power.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	34,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>	Airplane	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	June 12, 2020
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	November 28, 2020
<b>Flight Time:</b>	349 hours (Total, all aircraft), 185 hours (Total, this make and model), 349 hours (Pilot In Command, all aircraft), 188 hours (Last 90 days, all aircraft), 88 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Maule	<b>Registration:</b>	N9254E
<b>Model/Series:</b>	M-5-235C	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1977	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	7147C
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	March 2, 2021 Annual	<b>Certified Max Gross Wt.:</b>	2300 lbs
<b>Time Since Last Inspection:</b>	130.8 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1769.2 Hrs as of last inspection	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	C91A installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-540
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	235 Horsepower
<b>Operator:</b>	On file	<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>	KMYL, 5023 ft msl	<b>Distance from Accident Site:</b>	48 Nautical Miles
<b>Observation Time:</b>	11:16 Local	<b>Direction from Accident Site:</b>	286°
<b>Lowest Cloud Condition:</b>	Scattered / 1300 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Overcast / 2000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.18 inches Hg	<b>Temperature/Dew Point:</b>	7°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Johnson Creek Airport, ID (3U2)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Stanley, ID	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	THOMAS CREEK 2U8	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	4415 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	21	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2100 ft / 75 ft	<b>VFR Approach/Landing:</b>	None

## 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>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	44.67962,-115.01661

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Simpson, Elliott
<b>Additional Participating Persons:</b>	Darren Vaughn; Federal Aviation Administration; Boise, ID
<b>Original Publish Date:</b>	December 7, 2022
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=103183">https://data.nts.gov/Docket?ProjectID=103183</a>

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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](#).