



# Aviation Investigation Final Report

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<b>Location:</b>	Shelby, Montana	<b>Accident Number:</b>	GAA18CA220
<b>Date &amp; Time:</b>	April 19, 2018, 09:00 Local	<b>Registration:</b>	N1283C
<b>Aircraft:</b>	Piper PA 22	<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 reported that, while flying over the destination airport, the airplane's engine lost power. He initiated a glide, applied mixture full rich, and restarted the engine, but during the approach the engine lost power again. He checked the fuel gauges and the right gauge read between  $\frac{1}{4}$  and  $\frac{1}{2}$  tank, and he switched to the left fuel tank which he knew was full. The engine restarted briefly, but then lost power. He added that, he "must not have put the selector in the [correct] position because [he] had plenty of fuel in the left tank."

During the forced landing, the airplane landed off of the runway, rolled for about 20 to 25 ft., the left main landing gear collapsed, and the airplane came to rest on its nose.

The airplane sustained substantial damage to the left wing.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

## Probable Cause and Findings

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

The pilot's improper use of the fuel selector, which resulted in fuel starvation to the engine and an off-runway landing.

## Findings

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<b>Aircraft</b>	Fuel selector/shutoff valve - Incorrect use/operation
<b>Aircraft</b>	Fuel - Fluid management
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Environmental issues</b>	Rough terrain - Effect on equipment
<b>Personnel issues</b>	Incorrect action performance - Pilot

## Factual Information

### History of Flight

<b>Approach</b>	Loss of engine power (total) (Defining event)
<b>Emergency descent</b>	Off-field or emergency landing
<b>Landing</b>	Landing gear collapse
<b>Landing</b>	Nose over/nose down

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	65, 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>	Lap only
<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 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	October 29, 2017
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 200 hours (Total, all aircraft), 3 hours (Total, this make and model), 200 hours (Pilot In Command, all aircraft), 1 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N1283C
<b>Model/Series:</b>	PA 22 135	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1953	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	22-1079
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	October 12, 2017 Annual	<b>Certified Max Gross Wt.:</b>	1950 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2790 Hrs at time of accident	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	C91 installed, not activated	<b>Engine Model/Series:</b>	O-290-D2
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	135 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>	KCTB,3838 ft msl	<b>Distance from Accident Site:</b>	20 Nautical Miles
<b>Observation Time:</b>	14:56 Local	<b>Direction from Accident Site:</b>	281°
<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>	/	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/ N/A
<b>Altimeter Setting:</b>	30.15 inches Hg	<b>Temperature/Dew Point:</b>	2°C / -2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Shelby, MT (SBX )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Shelby, MT (SBX )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	07:20 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	SHELBY SBX	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	3442 ft msl	<b>Runway Surface Condition:</b>	Holes;Rough;Soft;Vegetation
<b>Runway Used:</b>	23	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5005 ft / 75 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<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>	48.540832,-111.871109(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Swenson, Eric
<b>Additional Participating Persons:</b>	Bryan Hanson; FAA; Helena, MT
<b>Original Publish Date:</b>	August 27, 2018
<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=97069">https://data.nts.gov/Docket?ProjectID=97069</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.

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