



# Aviation Investigation Final Report

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<b>Location:</b>	Bozeman, Montana	<b>Accident Number:</b>	GAA18CA437
<b>Date &amp; Time:</b>	July 19, 2018, 11:15 Local	<b>Registration:</b>	N3224D
<b>Aircraft:</b>	Cessna 180	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The pilot of the tailwheel-equipped airplane reported that, after a wheel landing, the tailwheel touched down, and it then started shaking violently. In an attempt to stop the shaking, he pushed forward on the control yoke to no avail. He then tried adding power, raised the tail, and let the tailwheel touch down again; however, the tailwheel continued to shake, and the airplane began to veer left, and he corrected by applying right rudder. Shortly after the airplane regained the runway heading, it suddenly veered right, exited the runway to the right, and ground looped.

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.

The pilot added that, during landing, the wind was from 010° at 4 knots. The airport's automated weather observation station reported that, about the 15 minutes before the accident, the wind was from 160° at 4 knots. The pilot landed the airplane on runway 03.

## Probable Cause and Findings

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

The pilot's failure to maintain directional control during landing.

## Findings

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<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Pilot

## Factual Information

### History of Flight

Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Attempted remediation/recovery
Landing-landing roll	Runway excursion

### Pilot Information

Certificate:	Private	Age:	81, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	June 1, 2016
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated)		

### Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N3224D
Model/Series:	180 Undesignat	Aircraft Category:	Airplane
Year of Manufacture:	1954	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	32022
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Amateur/Experimental
ELT:		Engine Model/Series:	Unknown
Registered Owner:	On file	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	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>	KBZN,4427 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	16:56 Local	<b>Direction from Accident Site:</b>	325°
<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>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	60°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.15 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 7°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Bozeman, MT (BZN )	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	Bozeman, MT (BZN )	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	BOZEMAN YELLOWSTONE INTL BZN	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	4473 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	03	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2650 ft / 75 ft	<b>VFR Approach/Landing:</b>	Full stop

## 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>	45.777221,-111.150276(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Nepomuceno, Eleazar
<b>Additional Participating Persons:</b>	Robert A Radtke; FAA; Helena, MT
<b>Original Publish Date:</b>	September 26, 2019
<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=97880">https://data.nts.gov/Docket?ProjectID=97880</a>

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