



# Aviation Investigation Final Report

<b>Location:</b>	Pullman, Washington	<b>Accident Number:</b>	GAA19CA159
<b>Date &amp; Time:</b>	March 9, 2019, 12:20 Local	<b>Registration:</b>	N4100Z
<b>Aircraft:</b>	Piper PA18	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot of the tailwheel- and ski-equipped airplane reported that, while landing off airport on a snow-covered ridge, the back of the right ski struck about a 6-inch-tall, firm snow drift. The right ski then pitched forward, the tip dug into the "crusty" snow, and the airplane nosed over.

The airplane sustained substantial damage to the fuselage, empennage, and lift strut.

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 selection of unsuitable terrain for landing, which resulted in a nose-over.

## Findings

<b>Personnel issues</b>	Decision making/judgment - Pilot
<b>Environmental issues</b>	Snow/ice - Effect on operation
<b>Environmental issues</b>	Snow/slush/ice covered surface - Effect on operation
<b>Environmental issues</b>	Sloped/uneven terrain - Effect on operation

## Factual Information

### History of Flight

<b>Landing</b>	Collision with terr/obj (non-CFIT)
<b>Landing</b>	Loss of control on ground (Defining event)
<b>Landing</b>	Nose over/nose down

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	63, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	4-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>	July 25, 2017
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	May 27, 2017
<b>Flight Time:</b>	(Estimated) 2379 hours (Total, all aircraft), 1268 hours (Total, this make and model), 2379 hours (Pilot In Command, all aircraft), 38 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N4100Z
<b>Model/Series:</b>	PA18 150	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1964	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Utility	<b>Serial Number:</b>	18-8114
<b>Landing Gear Type:</b>	Tailwheel; Ski/wheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	July 20, 2018 Annual	<b>Certified Max Gross Wt.:</b>	2000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5459.45 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C126 installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-320-B2B
<b>Registered Owner:</b>		<b>Rated Power:</b>	160 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>	KPUW, 2551 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	11:53 Local	<b>Direction from Accident Site:</b>	300°
<b>Lowest Cloud Condition:</b>	Few / 2300 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.95 inches Hg	<b>Temperature/Dew Point:</b>	-9°C / -11°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Pullman/Moscow, WA (PUW)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Pullman/Moscow, WA (PUW)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:20 Local	<b>Type of Airspace:</b>	Class E

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<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 Minor	<b>Latitude, Longitude:</b>	46.735832,-117.088058(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Swenson, Eric
<b>Additional Participating Persons:</b>	Chris Lang; FAA; Spokane, WA
<b>Original Publish Date:</b>	November 6, 2019
<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=99090">https://data.nts.gov/Docket?ProjectID=99090</a>

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