



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Sterling, Alaska	<b>Accident Number:</b>	ANC17LA016
<b>Date &amp; Time:</b>	February 8, 2017, 15:03 Local	<b>Registration:</b>	N1268A
<b>Aircraft:</b>	Piper PA18	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Unknown or undetermined	<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The private pilot reported that, while making a right turn during a personal flight, the flight controls "stuck." She was unable to make aileron or elevator control inputs, and was also unable to correct the airplane's bank using rudder inputs. The airplane subsequently descended in a right turn until it impacted the ground.

The airplane was removed from the accident site before it could be examined. During recovery, both wings and their control cables were cut. The airplane was later examined on the pilot's property, strapped to a trailer. Examination of the airframe and engine revealed no evidence of any control anomalies that would have precluded normal operation; however, since the flight control system was compromised during the recovery, the pre-accident condition of the flight controls could not be determined and the investigation was unable to establish a reason for the pilot's reported loss of control.

## Probable Cause and Findings

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

The pilot's loss of control while maneuvering for reasons that could not be determined based on the available information.

## Findings

<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	Lateral/bank control - Not specified
<b>Aircraft</b>	(general) - Not specified
<b>Not determined</b>	(general) - Unknown/Not determined

## Factual Information

### History of Flight

<b>Maneuvering-low-alt flying</b>	Low altitude operation/event
<b>Maneuvering-low-alt flying</b>	Unknown or undetermined (Defining event)
<b>Maneuvering-low-alt flying</b>	Loss of control in flight
<b>Maneuvering-low-alt flying</b>	Collision with terr/obj (non-CFIT)

On February 8, 2017, about 1503 Alaska standard time (AST), a ski-equipped Piper PA-18-125 airplane, N1268A, sustained substantial damage when it impacted terrain while maneuvering about 4 miles southwest of Sterling, Alaska. The private pilot sustained serious injuries. The airplane was registered to and operated by the pilot under the provisions of Title 14 *Code of Federal Regulations* (CFR) Part 91. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed for the personal flight, which originated from the pilot's private airstrip about 3 miles southwest of Sterling about 1445.

An Alaska State Trooper who responded to the site just after the accident stated that, when he arrived, the pilot told him the airplane became uncontrollable when the aileron control system locked in place as she turned the airplane to the right. Unable to roll the wings level, the airplane subsequently descended nose low and struck the surface of a frozen river.

The pilot added she was unable to make aileron or elevator control inputs and was unable to "correct" by using rudder inputs.

A Garmin Aera 500 GPS was recovered from the airplane and downloaded by an NTSB Investigator. The accident flight was recorded starting at 12:18:31 AST on February 8, 2017. Refer to the GPS Factual Report in the public docket for further flight track information.

Family members of the pilot removed the wreckage from the accident site without permission of the NTSB and before an on-scene examination was performed.

Photographs taken the day of the accident showed that the airplane impacted an area of snow-and ice-covered terrain on a river. The airplane came to rest in a near-vertical, nose-down attitude. The right wing exhibited spanwise twisting and was displaced about 30° aft of the airplane's lateral axis. The left wing displayed impact damage on the forward inboard section and wingtip and separation from the fuselage at the rear spar attachment points, and was displaced about 60° forward of the airplane's lateral axis. The propeller remained attached to the engine and exhibited aft bending and torsional twisting of both blades.

The airplane was examined on the pilot's property on February 9 strapped to a trailer with several of its components separated and placed inside the airplane cabin. Both wings and the landing gear were removed, and the control cables for both wings were cut during the recovery operation. Control

continuity was established for the rudder and elevator control systems. The aileron cables displayed continuity except for a right wing through-cable pulley, which was no longer located on the pulley track but was wedged between the pulley and attachment hardware. The pulley was sent to the NTSB Materials Laboratory for further examination; no evidence of unusual wear in the pulley or cable and no slack or loose connections in the pulley system was found.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	27,Female
<b>Airplane Rating(s):</b>	Single-engine land	<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>	May 22, 2012
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 292 hours (Total, all aircraft), 262 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N1268A
<b>Model/Series:</b>	PA18 125	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1951	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	18-1063
<b>Landing Gear Type:</b>	Tailwheel; Ski	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	January 13, 2017 Annual	<b>Certified Max Gross Wt.:</b>	1499 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3535 Hrs as of last inspection	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	C126 installed, not activated	<b>Engine Model/Series:</b>	O-320 SERIES
<b>Registered Owner:</b>		<b>Rated Power:</b>	150 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>	PASX, 113 ft msl	<b>Distance from Accident Site:</b>	6 Nautical Miles
<b>Observation Time:</b>	23:56 Local	<b>Direction from Accident Site:</b>	249°
<b>Lowest Cloud Condition:</b>		<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Overcast / 2300 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	290°	<b>Turbulence Severity Forecast/Actual:</b>	/ N/A
<b>Altimeter Setting:</b>	29.84 inches Hg	<b>Temperature/Dew Point:</b>	-4°C / -12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Sterling, AK	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Sterling, AK	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<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 Serious	<b>Latitude, Longitude:</b>	60.510276,-150.850555(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Swenson, Eric
<b>Additional Participating Persons:</b>	Jeff Burch; FAA; Kenai, AK
<b>Original Publish Date:</b>	November 15, 2018
<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=94703">https://data.nts.gov/Docket?ProjectID=94703</a>

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).