Aviation Investigation Final Report

Location:	Girdwood, Alaska	**Accident Number:**	ANC19LA051
Date & Time:	September 3, 2019, 13:15 Local	**Registration:**	N6672L
Aircraft:	Lake LA-4-200	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control on ground	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

According to the pilot, the landing gear and flaps failed to retract after departure. After verifying that the hydraulic pump circuit breaker had not opened and noting that the hydraulic pressure gauge indicated zero, he was able to successfully retract both the landing gear and wing flaps using the emergency hydraulic hand pump. Upon arrival at his destination, he again used the hand pump to extend both the landing gear and wing flaps. After touchdown, he applied the wheel brakes in an effort to slow and steer the airplane, but the airplane did not slow down. The airplane exited the side of the runway, proceeded down an embankment, and came to rest on its left wing and hull sustaining substantial damage to the left wing and fuselage.

Postaccident examination of the brake and flight control systems revealed no preaccident mechanical malfunctions or anomalies that would have precluded normal operation. Although the pilot reported the failure of the airplane's landing gear and wing flap hydraulic system, it was independent of the brake system and therefore was not examined.

Probable Cause and Findings

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

The pilot's loss of directional control while landing, which resulted in a runway excursion and collision with terrain.

Findings

Aircraft	Directional control - Incorrect use/operation
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Landing-landing roll	Loss of control on ground (Defining event)

On September 3, 2019, about 1315 Alaska daylight time, an amphibious Lake LA-4-200 airplane, N6672L, sustained substantial damage following a runway excursion at the Girdwood Airport (AQY), Girdwood, Alaska. The private pilot was not injured. The airplane was registered to, and operated by, a private individual, under the provisions of 14 Code of Federal Regulations Part 91 when the accident occurred. Visual meteorological conditions prevailed and no flight plan had been filed. The flight departed Merrill Field (MRI), Anchorage, Alaska at 1230 destined for AQY.

According to the pilot, after departing PAMR the landing gear and flaps failed to retract, so he verified that the hydraulic pump circuit breaker had not opened and noted that the hydraulic pressure gauge indicated zero. He utilized the emergency hydraulic hand pump and was able to successfully retract both the landing gear and wing flaps. Upon arrival at AQY, the hand pump was once again utilized to extend both the landing gear and wing flaps. After touchdown, in an effort to slow and steer the airplane, the wheel brakes were applied but did not work properly. The airplane exited the runway, proceeded down an embankment and came to rest on its left wing and hull, sustaining substantial damage to the left wing and fuselage.

According to the Lake LA-4 Owner's Manual, the airplane is equipped with a castering nose wheel, which requires differential braking for directional control. The hydraulic system is used to operate the landing gear, flaps, and longitudinal trim, and is composed of an integral pump and electric motor, pressure limit switch, accumulator, and reservoir, interconnected by necessary piping, check valves, and restrictors. The brake system is independent of the hydraulic system.

An examination of the brake and primary flight control systems revealed no preaccident mechanical malfunctions or anomalies that would have precluded normal operation.

The closest official weather observation station to the accident site was Portage Glacier (PATO), Whittier, Alaska, located about 20 miles southeast of the accident site. At 1253, a METAR was reporting, in part, wind, variable at 6 knots; visibility, 10 statute miles; clouds and sky condition, overcast clouds at 5,000 ft; temperature, 55°F; dew point, 52°F; and an altimeter setting of 30.08 inches of mercury.

Pilot Information

Certificate:	Private	**Age:**	81,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
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:**	September 6, 2017
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	July 7, 2019
Flight Time:	1438 hours (Total, all aircraft), 756 hours (Total, this make and model), 1380 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Lake	**Registration:**	N6672L
Model/Series:	LA-4-200	**Aircraft Category:**	Airplane
Year of Manufacture:	1970	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	435
Landing Gear Type:	Tricycle; Amphibian	**Seats:**	
Date/Type of Last Inspection:	June 8, 2019 Annual	**Certified Max Gross Wt.:**	2690 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	2333.3 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	C126 installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO-360 A1B6
Registered Owner:	On file	**Rated Power:**	200 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:	19:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Overcast / 5000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.07 inches Hg	**Temperature/Dew Point:**	13°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Anchorage, AK (MRI)	**Type of Flight Plan Filed:**	None
Destination:	Girdwood, AK (AQY)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Airport Information

Airport:	Girdwood AQY	**Runway Surface Type:**	Gravel
Airport Elevation:	164 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	20	**IFR Approach:**	None
Runway Length/Width:	2095 ft / 60 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	60.968887,-149.119445

Administrative Information

Investigator In Charge (IIC):	Banning, David
Additional Participating Persons:	William Lowen; Federal Aviation Administration ; Anchorage , AK
Original Publish Date:	November 19, 2020
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=100243