Aviation Investigation Final Report

Location:	Byron, California	**Accident Number:**	WPR17LA165
Date & Time:	July 25, 2017, 13:10 Local	**Registration:**	N7628L
Aircraft:	Lake LA 4	**Aircraft Damage:**	Substantial
Defining Event:	Landing gear collapse	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During landing, the nose landing gear and right main landing gear collapsed, and the airplane veered off the runway. The pilot stated that it was likely that he switched the hydraulic pump off during the accident flight. Although both the hydraulic switch position and checking the hydraulic system pressure were included in his before-landing checklist, he could not recall their position and indication, respectively, during the accident approach. The pilot also reported that he had been experiencing issues with the landing gear microswitches, and the airplane's landing gear indicator light was inoperative as a result. Postaccident examination of the airplane and landing gear system revealed no evidence of mechanical malfunctions or anomalies that would have precluded normal operation.

It is likely that the pilot's failure to properly configure the hydraulic switch, and his subsequent failure to recognize the error during his before-landing check, resulted in inadequate hydraulic pressure to extend and lock the landing gear. The airplane's inoperative landing gear indicator light likely contributed to the pilot's failure to recognize that the landing gear was not fully extended and locked before landing.

Probable Cause and Findings

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

The pilot’s failure to activate the hydraulic system during the approach, and his failure to ensure that the landing gear was down and locked before touchdown. Contributing to the accident was the pilot's decision to operate the airplane with an inoperative landing gear position indicator light.

Findings

Aircraft	Hydraulic, main system - Incorrect use/operation
Personnel issues	Use of equip/system - Pilot
Aircraft	Gear position and warning - Not serviced/maintained
Personnel issues	Decision making/judgment - Pilot
Aircraft	(general) - Incorrect use/operation

Factual Information

History of Flight

Landing-flare/touchdown	Landing gear collapse (Defining event)
Landing-landing roll	Runway excursion

On June 25, 2017, about 1310 Pacific daylight time, a Lake LA-4 airplane, N7628L, was substantially damaged when it was involved in an accident near Byron, California. The pilot and passenger were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that, during the approach for landing, he positioned the flaps to the fully extended position. Once established on the approach, he "performed his pre-landing checks, including visual inspection of the landing gear, which looked normal." The airplane landed normally, and he could feel all three wheels on the ground. Subsequently, the airplane began to sink to the right, followed by a right yaw, then it veered off the right side of the runway. A postaccident examination of the airplane revealed that the nose landing gear and the right landing gear collapsed, and the keel was substantially damaged.

The pilot reported that he had experienced issues with the landing gear microswitches failing to close properly on previous flights, which meant that the landing gear down indicator light would not illuminate., Thus, he had to visually confirm that the landing gear was down. He stated that both main landing gear were visible from the cockpit and the nose landing gear was visible from a mirror positioned on the left sponson. The pilot stated that adjustments were made to the microswitches after those flights but that he continued to conduct landings without the landing gear down indicator light being illuminated. He further stated that, for the accident flight, it was most likely that he switched the hydraulic pump off during the flight and didn't notice the position of the switch or the indicated low hydraulic system pressure during the approach. He stated that both the hydraulic switch position and checking the hydraulic system pressure were part of his before-landing checklist, but he could not recall their position and indication, respectively, during the accident approach.

Following the accident, after the airplane was lifted, the right main landing gear was pushed by hand into its down-and-locked position. The nose landing gear locked into position after activating the emergency gear extension pump. There was no evidence of preexisting malfunctions or failures that would have precluded normal operation of the airplane.

Pilot Information

Certificate:	Private	**Age:**	51,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Unknown
Instrument Rating(s):	None	**Second Pilot Present:**	
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	March 22, 2011
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	790 hours (Total, all aircraft)		

Passenger Information

Certificate:		**Age:**	
Airplane Rating(s):		**Seat Occupied:**	Right
Other Aircraft Rating(s):		**Restraint Used:**	Unknown
Instrument Rating(s):		**Second Pilot Present:**	
Instructor Rating(s):		**Toxicology Performed:**	No
Medical Certification:		**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Lake	**Registration:**	N7628L
Model/Series:	LA 4 UNDESIGNAT	**Aircraft Category:**	Airplane
Year of Manufacture:	1969	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	401
Landing Gear Type:	Retractable - Tricycle; Amphibian	**Seats:**	
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:		**Engine Model/Series:**	O-360
Registered Owner:	On file	**Rated Power:**	
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:	KLVK,393 ft msl	**Distance from Accident Site:**	12 Nautical Miles
Observation Time:	19:53 Local	**Direction from Accident Site:**	229°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	210°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	29.92 inches Hg	**Temperature/Dew Point:**	27°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LIVERMORE, CA (LVK)	**Type of Flight Plan Filed:**	None
Destination:	Byron, CA (C83)	**Type of Clearance:**	None
Departure Time:	13:00 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	BYRON C83	**Runway Surface Type:**	Asphalt
Airport Elevation:	78 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	30	**IFR Approach:**	None
Runway Length/Width:	4500 ft / 100 ft	**VFR Approach/Landing:**	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	37.826667,-121.62305(est)

Administrative Information

Investigator In Charge (IIC):	Swick, Andrew
Additional Participating Persons:	David Jensen; FAA-FSDO; Oakland, CA
Original Publish Date:	May 5, 2021
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=95662

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