



Aviation Investigation Final Report

Location:	Troy, Michigan	Accident Number:	GAA18CA391
Date & Time:	July 2, 2018, 07:20 Local	Registration:	N6508K
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The solo student pilot reported that, during landing, the airplane slowed, and the stall warning sounded as the main landing gear contacted the runway. He added that it appeared that the airplane had landed, but he then observed the nose drop below the horizon. He added power to go around, but the nosewheel impacted the runway, and the airplane pitched "rearward." Subsequently, the airplane porpoised, the nose landing gear strut collapsed, and he aborted the go-around. The student taxied the airplane to park without further incident.

The flight instructor reported that he witnessed that the airplane on approach was a little flat but did not appear to be unstable. The student then pitched the airplane for the numbers, the airplane floated down the runway, and it then touched down in a flat attitude. Subsequently, the airplane bounced 2 to 3 ft, porpoised, and the student was then able to taxi from the runway. The flight instructor added that the student was too late on the flare and that all of the energy came down on the nosewheel.

The airplane sustained substantial damage to the fuselage.

The student reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The automated weather observation system at the airport reported that, about the time of the accident, the wind was from 250° at 7 knots. The student pilot landed the airplane on runway 27.

Probable Cause and Findings

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

The student pilot's failure to maintain a proper landing flare, which resulted in a hard, porpoised landing during an aborted go-around.

Findings

Aircraft	Landing flare - Not attained/maintained
Personnel issues	Aircraft control - Student/instructed pilot

Factual Information

History of Flight

Landing	Hard landing (Defining event)
Landing	Attempted remediation/recovery
Landing	Loss of control on ground
Landing	Landing gear collapse

Student pilot Information

Certificate:	Student	Age:	60,Male
Airplane Rating(s):	None	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:	October 10, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 46.5 hours (Total, all aircraft), 40.5 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N6508K
Model/Series:	172 P	Aircraft Category:	Airplane
Year of Manufacture:	1980	Amateur Built:	
Airworthiness Certificate:	Normal; Utility	Serial Number:	17274205
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	May 30, 2018 Annual	Certified Max Gross Wt.:	2400 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	9945 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-320-A4M
Registered Owner:		Rated Power:	180 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dawn
Observation Facility, Elevation:	KVLL, 716 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	11:22 Local	Direction from Accident Site:	71°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	None / Terrain-Induced
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	N/A / Light
Altimeter Setting:	29.97 inches Hg	Temperature/Dew Point:	26°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Troy, MI (VLL)	Type of Flight Plan Filed:	None
Destination:	Troy, MI (VLL)	Type of Clearance:	None
Departure Time:	07:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	OAKLAND/TROY VLL	Runway Surface Type:	Asphalt
Airport Elevation:	727 ft msl	Runway Surface Condition:	Dry
Runway Used:	27	IFR Approach:	None
Runway Length/Width:	3549 ft / 60 ft	VFR Approach/Landing:	Full stop; Go around; 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:	42.542778, -83.178886(est)

Administrative Information

Investigator In Charge (IIC):	Swenson, Eric
Additional Participating Persons:	Augustus Gettas; FAA; Grand Rapids, MI
Original Publish Date:	March 18, 2019
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=97675

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