



# Aviation Investigation Final Report

<b>Location:</b>	Auburn, California	<b>Accident Number:</b>	GAA19CA247
<b>Date &amp; Time:</b>	May 6, 2019, 13:10 Local	<b>Registration:</b>	N734DX
<b>Aircraft:</b>	Cessna 172	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The solo student pilot reported that he simulated a power-off emergency landing with a 180° turn to the runway and then trimmed the elevator "fully nose up" and added full flaps. Before touchdown, the airplane drifted right of centerline, and he had "difficulty correcting and maintaining control" of the airplane, so he initiated a go-around. The student added that, subsequently, he "retracted [the] flaps entirely," and the airplane "fell [about 10 ft] to the ground," the nosewheel impacted terrain, and the airplane then nosed over.

The airplane sustained substantial damage to the left wing and empennage.

The student 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 improper retraction of the flaps during a go-around and his exceedance of the airplane's critical angle of attack, which resulted in an aerodynamic stall.

## Findings

<b>Aircraft</b>	Pitch control - Not attained/maintained
<b>Aircraft</b>	Configuration - Not attained/maintained
<b>Aircraft</b>	Angle of attack - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Student/instructed pilot

## Factual Information

### History of Flight

<b>Landing</b>	Simulated/training event
<b>Landing</b>	Loss of control in flight (Defining event)
<b>Landing</b>	Aerodynamic stall/spin
<b>Landing</b>	Abnormal runway contact
<b>Landing</b>	Collision with terr/obj (non-CFIT)
<b>Landing</b>	Nose over/nose down

### Pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	32,Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<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>	August 1, 2016
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 106 hours (Total, all aircraft), 103 hours (Total, this make and model), 34 hours (Pilot In Command, all aircraft), 46 hours (Last 90 days, all aircraft), 31 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N734DX
<b>Model/Series:</b>	172 N	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1977	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Restricted (Special)	<b>Serial Number:</b>	17268784
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	April 29, 2019 Annual	<b>Certified Max Gross Wt.:</b>	2299 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	8252.6 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>		<b>Engine Model/Series:</b>	O-320
<b>Registered Owner:</b>		<b>Rated Power:</b>	160 Horsepower
<b>Operator:</b>		<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>	KAUN,1531 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	20:15 Local	<b>Direction from Accident Site:</b>	317°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	220°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.88 inches Hg	<b>Temperature/Dew Point:</b>	15°C / 10°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Auburn, CA (AUN )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Auburn, CA (AUN )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Auburn Muni AUN	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1538 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	25	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3700 ft / 75 ft	<b>VFR Approach/Landing:</b>	Go around;Simulated forced landing;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<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 None	<b>Latitude, Longitude:</b>	38.954723,-121.081665(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Nepomuceno, Eleazar
<b>Additional Participating Persons:</b>	Kevin Sullivan; FAA; Sacramento, CA
<b>Original Publish Date:</b>	March 3, 2020
<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=99385">https://data.nts.gov/Docket?ProjectID=99385</a>

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