



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	ELYRIA, OH	<b>Accident Number:</b>	GAA19CA049
<b>Date &amp; Time:</b>	11/04/2018, 1330 EDT	<b>Registration:</b>	N21ZA
<b>Aircraft:</b>	Flight Design CTLS	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Hard landing	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The pilot reported that, during landing, the airplane encountered a gusting crosswind from the right. The airplane was configured with 0° flaps, and the airspeed was about 55 knots, and the airplane was about 5 ft above ground level. The airplane's airspeed was too slow for the gusting right crosswind conditions, and the airplane landed hard on the runway. The right main landing gear wheel separated from the airplane during the landing, and the airplane exited the runway to the right.

The airplane sustained substantial damage to the right main landing gear attachment points and the cabin's monocoque structure.

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

The METAR at the airport reported that, about the time of the accident, the wind was from 140° at 11 knots, gusting to 19 knots.

## Probable Cause and Findings

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

The pilot's failure to maintain adequate airspeed during landing in variable gusting crosswind conditions, which resulted in a hard landing and runway excursion.

## Findings

<b>Aircraft</b>	Airspeed - Not attained/maintained (Cause)
<b>Personnel issues</b>	Aircraft control - Pilot (Cause)
<b>Environmental issues</b>	Variable wind - Effect on operation (Cause) Gusts - Effect on operation (Cause) Crosswind - Effect on operation (Cause)

## Factual Information

### History of Flight

<b>Landing</b>	Other weather encounter Hard landing (Defining event) Part(s) separation from AC Runway excursion
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### Pilot Information

<b>Certificate:</b>	Sport Pilot	<b>Age:</b>	60, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<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>	Sport Pilot None	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	06/04/2018
<b>Flight Time:</b>	(Estimated) 145 hours (Total, all aircraft), 81 hours (Total, this make and model), 142 hours (Pilot In Command, all aircraft), 1.8 hours (Last 90 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Flight Design	<b>Registration:</b>	N21ZA
<b>Model/Series:</b>	CTLS Undesignat	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2011	<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Special Light-Sport	<b>Serial Number:</b>	F-10-09-04
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	07/05/2018, 100 Hour	<b>Certified Max Gross Wt.:</b>	1320 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2396.3 Hours as of last inspection	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	912 ULS
<b>Registered Owner:</b>	Ras Aviation Llc	<b>Rated Power:</b>	100 hp
<b>Operator:</b>	Ras Aviation Llc	<b>Operating Certificate(s) Held:</b>	Pilot School (141)

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KLPR, 794 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1832 UTC	Direction from Accident Site:	333°
Lowest Cloud Condition:	Clear	Visibility	2 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots / 19 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.23 inches Hg	Temperature/Dew Point:	13° C / 0° C
Precipitation and Obscuration:	Moderate - Haze; No Obscuration; No Precipitation		
Departure Point:	ELYRIA, OH (LPR)	Type of Flight Plan Filed:	None
Destination:	ELYRIA, OH (LPR)	Type of Clearance:	None
Departure Time:	1255 EDT	Type of Airspace:	Class G

## Airport Information

Airport:	Lorain County Rgnl (LPR)	Runway Surface Type:	Asphalt
Airport Elevation:	793 ft	Runway Surface Condition:	Dry
Runway Used:	07	IFR Approach:	None
Runway Length/Width:	5002 ft / 100 ft	VFR Approach/Landing:	Full Stop

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	41.344167, -82.177778 (est)

## Administrative Information

Investigator In Charge (IIC):	Michael A Hicks	Report Date:	11/06/2019
Additional Participating Persons:	Julio Galarza; FAA; Cleveland, OH		
Publish Date:	11/06/2019		
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	<a href="http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=98602">http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=98602</a>		

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