



# Aviation Investigation Final Report

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<b>Location:</b>	South Lakeland, Florida	<b>Accident Number:</b>	ERA17LA150
<b>Date &amp; Time:</b>	April 8, 2017, 11:45 Local	<b>Registration:</b>	N1362G
<b>Aircraft:</b>	Cessna 310R	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Landing gear collapse	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The commercial pilot stated that he confirmed that the landing gear were down and locked before landing. After a smooth landing, the left wing began to sink. The pilot shut off the left engine, and the airplane veered left off the runway onto grass. The pilot then shut off the right engine. The left wing, left horizontal stabilizer, and left propeller assembly were substantially damaged.

Examination of the left main landing gear (MLG) revealed that the fork bolt was ripped out of the torque tube, which damaged the tube and precluded a gear retraction test. Visual examination of the left MLG revealed that the overcentering tension on the down-lock assembly appeared to be rigged incorrectly; however, it could not be determined if the misrigging led to the failure of the left MLG. A review of the airframe maintenance logbooks revealed no recent maintenance to the MLG assembly. Based on the available evidence, the reason for the left MLG collapse could not be determined.

## Probable Cause and Findings

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

The failure of the left main landing gear on landing for reasons that could not be determined due to the extent of damage sustained during the accident.

## Findings

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**Not determined**

(general) - Unknown/Not determined

## Factual Information

### History of Flight

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

On April 8, 2017, about 1145 eastern daylight time, a Cessna 310R, N1362G, sustained substantial damage when the left main landing gear collapsed during landing at Lakeland Linder Regional Airport (LAL), Lakeland, Florida. The commercial pilot and passenger were not injured. The airplane sustained substantial damage. The airplane was registered to and operated by the pilot as a 14 *Code of Federal Regulations* Part 91 personal flight. Visual meteorological conditions were reported at the airport at the time of the accident and no flight plan was filed. The flight originated from North Perry Airport (HWO), Hollywood, Florida, about 1040 and was destined for LAL.

The pilot stated that he confirmed the landing gear was down and locked prior to landing. He said he landed "perfectly" but as the airplane rolled down the runway, the left wing began to sink. The pilot shut off the left engine, and the airplane veered to the left off the runway onto the grass. The pilot then shut off the right engine. When the airplane came to a stop, the pilot secured the airplane and he and his passenger exited. The left wing, and left horizontal stabilizer, and left propeller assembly were substantially damaged.

Examination of the left main landing gear revealed that the fork bolt was ripped out of the landing gear torque tube damaging the torque tube. As a result, the gear could not be retracted and tested to fully determine how the landing gear failed. However, visual examination of the landing gear revealed the over-centering tension on the down lock assembly did not appear to be rigged correctly.

A review of the airframe maintenance logbooks revealed the last annual inspection was conducted on July 12, 2016, at a total time of 7,714.2 hours. The airplane accrued a total of 7,794 hours at the time of the accident. At that time, the landing gear was retracted, and a test of the emergency extension system was found satisfactory. No specific maintenance to the main landing gear system itself was identified then or during the annual inspection in 2015.

The pilot held a commercial pilot certificate with ratings for airplane single and multiengine land, and instrument airplane. His last Federal Aviation Administration first-class medical certificate was issued on September 19, 2016. At that time, he reported a total of 4,550 flight hours.

The weather conditions reported at LAL, at 1150, included wind 010° at 4 knots, visibility 10 miles, and clear skies.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	68, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	September 19, 2016
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	4650 hours (Total, all aircraft), 140 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N1362G
<b>Model/Series:</b>	310R R	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1976	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	310R0717
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	July 12, 2016 Annual	<b>Certified Max Gross Wt.:</b>	5501 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	7794 Hrs at time of accident	<b>Engine Manufacturer:</b>	CMI
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO 520 M1B
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	285 Horsepower
<b>Operator:</b>	On file	<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>	LAL,142 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	11:50 Local	<b>Direction from Accident Site:</b>	0°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	10°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.13 inches Hg	<b>Temperature/Dew Point:</b>	21°C / -1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	HOLLYWOOD, FL (HWO )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	South Lakeland, FL (LAL )	<b>Type of Clearance:</b>	VFR;VFR flight following
<b>Departure Time:</b>	10:40 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	LAKELAND LINDER RGNL LAL	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	142 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	27	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	8499 ft / 150 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	27.988889,-82.018608(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Read, Leah
<b>Additional Participating Persons:</b>	Joe Gramzinski; FAA/FSDO; Orlando, FL
<b>Original Publish Date:</b>	April 4, 2019
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=94976">https://data.ntsb.gov/Docket?ProjectID=94976</a>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).