



Aviation Investigation Final Report

Location:	CONROE, Texas	Accident Number:	FTW99LA156
Date & Time:	May 31, 1999, 14:58 Local	Registration:	N2151C
Aircraft:	Cessna 195	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During the landing roll, the pilot heard a loud pop, then the left wing dropped to the runway, and the airplane slid about 50 to 75 feet before coming to a stop. The left main landing gear was found in the middle of the runway, approximately 80 to 90 feet from where the airplane came to a stop. The inboard section of the separated left main landing gear spring was sent to the NTSB Materials Laboratory for examination. The examination revealed that fatigue had initiated from an area that contained fretting damage from contact with the clamping mechanism.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The fatigue fracture of the left main landing gear spring at the clamping mechanism, as a result of fretting.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: LANDING - ROLL

Findings

1. (C) LANDING GEAR,MAIN GEAR SPRING - WORN
2. (C) LANDING GEAR,MAIN GEAR SPRING - FATIGUE

3. (C) LANDING GEAR,MAIN GEAR SPRING - FRACTURED
4. LANDING GEAR - SEPARATION

Factual Information

On May 31, 1999, at 1458 central daylight time, a Cessna 195 single-engine tail wheel equipped airplane, N2151C, owned and operated by the pilot, was substantially damaged during landing at the Montgomery County Airport near Conroe, Texas. The private pilot and the three passengers were not injured. Visual meteorological conditions prevailed, and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 personal flight. The flight originated from the David Wayne Hooks Memorial Airport, Houston, Texas, at 1430.

The pilot reported that during landing on runway 19, he made a wheel landing, and a tail high attitude was maintained until the tail started to lower with "speed drop off." During the landing roll, the pilot "heard a loud pop, then about 2 seconds later the [left] wing dropped to the runway and we started to slide." The aircraft slid about 50 to 75 feet before coming to a stop. The pilot found the left main landing gear in the middle of the runway, approximately 80 to 90 feet from where the airplane came to a stop.

An examination of the aircraft by the FAA inspector revealed that the left main landing gear was separated from the fuselage, the left wing was wrinkled, and the left aileron was damaged.

The inboard section of the separated left main landing gear spring was sent to the NTSB Materials Laboratory for examination. The examination revealed that "fatigue initiated from an area that contained fretting damage from contact with the clamping mechanism. Fretting on the upper surface extended almost to the aft edge of the spring. Similar areas of fretting were noted on the bottom surface near the fracture and around the bolt hole." See the enclosed Metallurgist's Factual Report for details of the examination.

Pilot Information

Certificate:	Private	Age:	48, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	August 5, 1998
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	487 hours (Total, all aircraft), 26 hours (Total, this make and model), 412 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N2151C
Model/Series:	195 195	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	16136
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	December 1, 1998 Annual	Certified Max Gross Wt.:	3350 lbs
Time Since Last Inspection:	26 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3635 Hrs	Engine Manufacturer:	Jacobs
ELT:	Installed, not activated	Engine Model/Series:	R755B-2
Registered Owner:	SAMUAL R. JONES	Rated Power:	275 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	29°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	HOUSTON , TX (DWH)	Type of Flight Plan Filed:	None
Destination:	(CXO)	Type of Clearance:	
Departure Time:	14:30 Local	Type of Airspace:	Class E

Airport Information

Airport:	MONTGOMERY COUNTY CXO	Runway Surface Type:	Asphalt
Airport Elevation:	245 ft msl	Runway Surface Condition:	Dry
Runway Used:	19	IFR Approach:	None
Runway Length/Width:	3974 ft / 100 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	30.379695,-95.380706(est)

Administrative Information

Investigator In Charge (IIC):	Wigington, Douglas
Additional Participating Persons:	MARK M LAVIGNE; HOUSTON , TX
Original Publish Date:	November 30, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=46426

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