



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	SPRINGFIELD, IL	<b>Accident Number:</b>	CHI98LA091
<b>Date &amp; Time:</b>	02/03/1998, 1803 CST	<b>Registration:</b>	N5842F
<b>Aircraft:</b>	Cessna 210G	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None

**Flight Conducted Under:** Part 91: General Aviation - Personal

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## Analysis

The pilot reported that he was unable to get the left main landing gear to extend by using the normal landing gear selector or the emergency hand pump. He shut down the engine and landed on the runway centerline with the right main and nose gears extended and the left main gear retracted. He reported that as the airspeed began to slow, the airplane entered an uncontrollable left turn. The airplane traveled into the grass alongside the runway where the left wing and left horizontal stabilizer contacted the ground. Inspection of the left main landing gear revealed a failure of the landing gear saddle. According to an FAA Inspector, the inboard mounting bolt which connects the saddle to the gear leg had sheared. An airworthiness directive (AD) had been issued in 1976 regarding the saddle. The AD was initially complied with, but the recurrent inspections required had not been performed.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of left main landing gear saddle resulting in the pilot's inability to extend the left gear. A factor was maintenance personnel's failure to comply with the related airworthiness directive.

## Findings

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Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (C) LANDING GEAR,NORMAL RETRACTION/EXTENSION ASSEMBLY - FAILURE
2. (F) MAINTENANCE,COMPLIANCE WITH AD - NOT COMPLIED WITH - OTHER MAINTENANCE PERSONNEL
3. GEAR EXTENSION - NOT POSSIBLE - PILOT IN COMMAND

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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

4. TERRAIN CONDITION - GRASS

## Factual Information

On February 3, 1998, at 1803 central standard time, a Cessna 210G, N5842F, operated by a commercial pilot was substantially damaged after landing at Capital Airport, Springfield, Illinois, with the left main gear in the retracted position. The 14 CFR Part 91 flight was operating in visual meteorological conditions without a flight plan. The pilot was not injured. The flight originated from the Capital Airport at 1740 cst.

The pilot reported he took off with the intention of flying practice approaches back to the airport. Upon reaching the outer marker for runway 04 during the first approach, he extended the landing gear and noticed the gear down and locked light did not illuminate. He reported he looked out the left side of the airplane and noted that the left gear had not extended. The pilot reported he cycled the landing gear selector handle and used the emergency extension hand pump to no avail. He then informed the air traffic control tower of the situation and decided to land on runway 04. The pilot reported he shut down the engine on final approach and landed the airplane on the runway centerline with the nose and right landing gears extended. He reported that as the airspeed decreased the airplane entered an "uncontrollable turn off the runway to the left." The pilot continued to report "When the aircraft stopped, it fell over on the left wing tip and left horizontal stabilizer."

Post accident inspection of the airplane by an inspector from the Federal Aviation Administration Springfield Flight Standards District office revealed the left main landing gear saddle, p/n 1294151, failed. He reported the inboard mounting bolt which connects the saddle to the gear leg had sheared.

The Federal Aviation Administration issued an Airworthiness Directive (AD) 76-14-07 R2 addressing the landing gear saddles on selected Cessna 210 airplanes. The AD was pertinent to N5842F. The aircraft logbooks for N5842F show the AD was complied with on October 1, 1976. The logbook entry showing compliance indicates that in accordance with the AD, the next inspection of the landing gear saddle was due to be completed at an aircraft total time of 3185 hours. On August 14, 1981, another entry shows that AD 76-10-07 is due a tach time of 2375. A logbook entry dated July 10, 1998, at an aircraft total time of 3272 hours, states "A/C has new style saddle so AD 76-14-07 is NA." There were no other references to this AD found during the review of the logbooks.

The AD requires a dye penetrant inspection of the gear saddle at each annual inspection even after the improved saddles are installed.

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	56, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane Single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	12/04/1997
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	5437 hours (Total, all aircraft), 2265 hours (Total, this make and model), 3464 hours (Pilot In Command, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N5842F
<b>Model/Series:</b>	210G 210G	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	21058842
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	05/05/1997, Annual	<b>Certified Max Gross Wt.:</b>	3400 lbs
<b>Time Since Last Inspection:</b>	40 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4276 Hours	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-520-A5B
<b>Registered Owner:</b>	B AND B FLYING SERVICE, INC	<b>Rated Power:</b>	285 hp
<b>Operator:</b>	B AND B FLYING SERVICE, INC	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SPI, 592 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1805 CST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	2° C / -2° C
Precipitation and Obscuration:			
Departure Point:	(SPI)	Type of Flight Plan Filed:	None
Destination:	(SPI)	Type of Clearance:	VFR
Departure Time:	1740 CST	Type of Airspace:	Class D

## Airport Information

Airport:	CAPITAL AIRPORT (SPI)	Runway Surface Type:	Concrete
Airport Elevation:	592 ft	Runway Surface Condition:	Dry
Runway Used:	4	IFR Approach:	None
Runway Length/Width:	7999 ft / 150 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:	

## Administrative Information

Investigator In Charge (IIC):	PAMELA SULLIVAN	Report Date:	01/22/2001
Additional Participating Persons:	SCOTT LANDORF; SPRINGFIELD, MO		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).