



Aviation Investigation Final Report

Location:	GREER, South Carolina	Accident Number:	ATL84LA035
Date & Time:	November 1, 1983, 10:16 Local	Registration:	N40249
Aircraft:	PIPER PA-23-250	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

DURING THE FLT, HYDRAULIC FAILURE OF THE LANDING SYS OCCURRED & THE AIRCREW WERE UNABLE TO GET THE GEAR LOCKED IN THE DOWN POSITION. AFTER ORBITING FOR OVER AN HOUR, A LANDING WAS MADE. DURING TOUCHDOWN, THE GEAR COLLAPSED. AN EXAM REVEALED THAT AN AILERON BALANCE CABLE HAD CHAFED AGAINST A HYDRAULIC LINE IN THE LANDING GEAR SYS UNTIL A HOLE WAS WORN THRU THE LINE. THIS ALLOWED THE HYDRAULIC FLUID TO LEAK OUT.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: UNKNOWN

Findings

1. (C) HYDRAULIC SYSTEM,LINE - CHAFED
 2. (C) FLUID,HYDRAULIC - LEAK
 3. LANDING GEAR,NORMAL RETRACTION/EXTENSION ASSEMBLY - INOPERATIVE
 4. LANDING GEAR,EMERGENCY EXTENSION ASSEMBLY - INOPERATIVE
 5. GEAR DOWN AND LOCKED - NOT POSSIBLE
-

Occurrence #2: GEAR COLLAPSED
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	25, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	June 1, 1983
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	871 hours (Total, all aircraft), 20 hours (Total, this make and model), 97 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N40249
Model/Series:	PA-23-250 PA-23-250	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	27-7305055
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	December 4, 1982 Annual	Certified Max Gross Wt.:	5200 lbs
Time Since Last Inspection:	47 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	3324 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	IO-540-C4B5
Registered Owner:	CORNERSTONE AVIATION, INC.	Rated Power:	250 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:	Night/dark
Observation Facility, Elevation:	GSP ,972 ft msl	Distance from Accident Site:	
Observation Time:	20:52 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	7 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	12°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	GREENVILLE , SC (GMU)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	18:00 Local	Type of Airspace:	Class D

Airport Information

Airport:	GREENVILLE-SPARTANBURG GSP	Runway Surface Type:	Asphalt
Airport Elevation:	972 ft msl	Runway Surface Condition:	Dry
Runway Used:	3	IFR Approach:	None
Runway Length/Width:	7600 ft / 150 ft	VFR Approach/Landing:	Straight-in

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:	34.930435,-82.230613(est)

Administrative Information

Investigator In Charge (IIC): Shipman, Richard

Additional Participating Persons:

Original Publish Date:

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=6379>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).