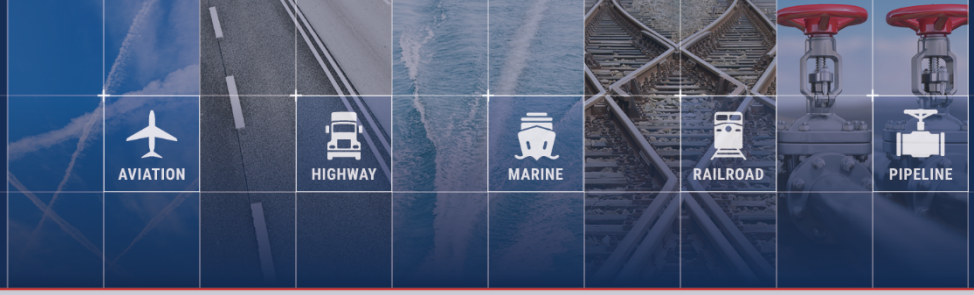

Aviation Investigation Final Report

Location:	Lumberton, Mississippi	**Accident Number:**	ERA09LA209
Date & Time:	March 8, 2009, 17:30 Local	**Registration:**	N8560Y
Aircraft:	Piper PA-30	**Aircraft Damage:**	Substantial
Defining Event:	Landing gear collapse	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane touched down softly 150 feet beyond the threshold of the 3,000-foot-long runway. About 1,500 feet into the landing roll, the airplane started to drift left of centerline, and the pilot applied right rudder pedal to correct. At that time, the left main landing gear collapsed and the airplane came to rest on the runway. Examination of the landing gear system revealed that the left main landing gear sidebrace, sidebrace studs, and links were worn. The worn components allowed the left main landing gear down-limit switch to prematurely stop the landing gear motor before the left main landing gear had reached the locked position. Subsequently, the minor sideload created by the pilot's rudder input collapsed the left main landing gear. Airworthiness directive (AD) 97-01-01R1 required an extensive applicable landing gear inspection for the make and model airplane after every 1,000 hours of time in service. Review of the maintenance records revealed that the airplane's last required inspection was performed about 12 years prior to the accident, during which time the airplane had accumulated 942 hours in service.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Collapse of the landing gear due to worn left main landing gear components.

Findings

Aircraft	Gear extension and retract sys - Fatigue/wear/corrosion

Factual Information

History of Flight

Landing-landing roll	Landing gear collapse (Defining event)

On March 8, 2009, about 1730 central daylight time, a Piper PA-30, N8560Y, operated by the private pilot, experienced a landing gear collapse during landing at I. H. Bass Jr. Memorial Airport (4R1), Lumberton, Mississippi. The airplane was substantially damaged and the certificated private pilot was not injured. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight conducted under the provisions of 14 Code of Federal Regulations Part 91. The flight originated from 4R1 about 1700.

The pilot reported that after flying over the local area for approximately 30 minutes, he returned to 4R1 for landing. During final approach, the pilot verified twice that the landing gear was down. The airplane touched down about 150 feet beyond the threshold of runway 14, a 3,000-foot-long, 75-foot-wide, asphalt runway. The pilot further stated that the airplane touched down softly on the right main landing gear first, due to his control input to compensate for a right crosswind. About 1,500 feet into the landing roll, the airplane started to drift left of centerline, and the pilot applied right rudder pedal to correct. At that time, the airplane "dropped on its belly," slid about 75 feet, and came to rest on the runway.

Witnesses also reported that the airplane touched down and rolled a significant distance, before the landing gear collapsed.

Examination of the airplane by a Federal Aviation Administration (FAA) inspector revealed damage, which included bulkheads and a stringer. The FAA inspector and an independent mechanic subsequently examined the landing gear system. The examination revealed that the left main landing gear sidebrace, sidebrace studs, and links were worn. The worn components allowed the left main landing gear down limit switch to make contact before the draglink reached the center or overcenter position. The early contact stopped the landing gear motor after the right main landing gear and nose landing gear were locked in the extended position; however, the left main landing gear had not reached the locked position. Subsequently, a minor sideload could collapse the left main landing gear.

Airworthiness directive (AD) 97-01-01R1 required an extensive applicable landing gear inspection for the make and model airplane, after every 1,000 hours time in service. Review of the maintenance records by the FAA inspector revealed that the last inspection required by the AD was performed on March 22, 1997, at a total airframe time of 5,853 hours. At the time of the accident, the airplane had accumulated a total airframe time of 6,795 hours; the airplane had accumulated 942 hours in service since the last inspection. Although the AD required the inspection after 1,000 hours in service, it did not specify a calendar date. The airplane's most

recent annual inspection was completed on January 20, 2009. The airplane had accumulated 5 hours of operation since the most recent annual inspection.

Review of the National Transportation Safety Board accident/incident database and FAA service difficulty reports, for the 5-year period preceding the accident, did not reveal any similar landing gear collapse events for the make and model airplane.

The pilot noted that his total flight experience was approximately 3,500 hours; of which, about 1,700 hours were in the same make and model as the accident airplane.

The pilot reported that the wind at the time of the accident was from 170 degrees at 16 knots, gusting to 18 knots. The reported wind at an airport located about 15 miles northeast of the accident site, at 1753, was from 180 degrees at 14 knots.

Pilot Information

Certificate:	Private	**Age:**	71,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	September 24, 2007
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	September 14, 2007
Flight Time:	3500 hours (Total, all aircraft), 1700 hours (Total, this make and model), 3500 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N8560Y
Model/Series:	PA-30	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	30-1707
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	January 20, 2009 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:	5 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	6789 Hrs as of last inspection	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	IO-320
Registered Owner:	Robert J Albrecht	**Rated Power:**	160 Horsepower
Operator:	Robert J Albrecht	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	HGB,151 ft msl	**Distance from Accident Site:**	15 Nautical Miles
Observation Time:	17:53 Local	**Direction from Accident Site:**	30°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	14 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	180°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.06 inches Hg	**Temperature/Dew Point:**	26°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Lumberton, MS (4R1)	**Type of Flight Plan Filed:**	None
Destination:	Lumberton, MS (4R1)	**Type of Clearance:**	None
Departure Time:	17:00 Local	**Type of Airspace:**	

Airport Information

Airport:	I H Bass Jr Memorial Airport 4R1	**Runway Surface Type:**	Asphalt
Airport Elevation:	310 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	14	**IFR Approach:**	None
Runway Length/Width:	3000 ft / 75 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	31.015556,-89.482498

Administrative Information

Investigator In Charge (IIC):	Gretz, Robert
Additional Participating Persons:	Chuck Wittington; FAA/FSDO; Jackson, MS
Original Publish Date:	July 14, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=73542