



Aviation Investigation Final Report

Location:	Camilla, Georgia	Accident Number:	ATL03LA132
Date & Time:	August 22, 2003, 13:33 Local	Registration:	N936D
Aircraft:	Stinson 108-2	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

When the airplane touched down, it jerked hard to the left, continued off the left side of the runway into the grass, and nosed over. A single black skid mark was observed on the runway. The left main wheel could not be turned by hand. Examination revealed the piston for the left brake assembly was partially extended and could not be pushed in by hand. The base of the exposed area of the piston was shiny around its circumference, and the upper circumference of the exposed area was rust-colored. The top portion of the left brake assembly and the upper portion of the left piston face were rust-colored with rough, dark brown debris adhered to both surfaces. Maintenance records revealed the airplane had accumulated less than 20 hours on the tachometer in the past three years.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The malfunction (locking) of the left brake piston during the landing roll, which resulted in a loss of control and subsequent nose over.

Findings

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

Findings

1. (C) LANDING GEAR,NORMAL BRAKE SYSTEM - MALFUNCTION

2. LANDING GEAR,NORMAL BRAKE SYSTEM - LOCKED

Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings

3. (C) AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND

Occurrence #3: NOSE OVER
Phase of Operation: LANDING - ROLL

Factual Information

On August 22, 2003, at 1333 eastern daylight time, a Stinson 108-2, N936D, registered to a private owner and operated by the pilot, locked one brake and nosed over during landing roll at Camilla Mitchell County Airport in Camilla, Georgia. The personal flight was operated under the provisions of Title 14 CFR Part 91 with no flight plan filed. Visual meteorological conditions prevailed. The private pilot was not injured, the passenger received minor injuries, and the airplane sustained substantial damage. The flight originated from Kendall Tamiami Executive Airport in Miami, Florida, about 1000 on August 22, 2003.

The pilot stated he just purchased the airplane in Miami, Florida, and was flying it home. The flight was en route to Caldwell, Idaho, and had made a fuel stop in Ocala, Florida. When the airplane touched down on runway 8 at Camilla Mitchell County Airport, Camilla, Georgia, it jerked hard to the left and veered left. The pilot's attempts to control the airplane were unsuccessful, and the airplane continued off the side of the runway into the grass and nosed over.

The airplane was found inverted approximately 30 feet to the left of runway 8, approximately 1,500 feet from the runway threshold. A single black skid mark originated near the runway centerline and extended to the left side of the runway. Examination of the airplane revealed the wings were wrinkled, the wing struts were bent, and the vertical stabilizer and rudder were damaged. The engine was displaced, the propeller was bent, and the fuselage was buckled near the firewall. The left main wheel could not be turned by hand.

Examination of the airplane at a recovery facility revealed the brake pads for both the left and right main wheels had been removed after the accident. Both main tires were inflated and showed no evidence of gouging or abnormal tread wear. The brake assemblies for each main wheel were found attached to their hydraulic lines, and the brake pads were found inside the cabin of the airplane. The bolt holes in the brake assembly and the bolts for securing the pads to the assemblies displayed shiny threads with no evidence of stripping. The piston for the left brake assembly was partially extended and could not be pushed in by hand. The base of the exposed area of the piston was shiny around its circumference, and the upper circumference of the exposed area was rust-colored. The top portion of the left brake assembly and the upper portion of the left piston face were rust-colored with rough, dark brown debris adhered to both surfaces. The piston for the right brake assembly was partially extended and could not be pushed in by hand.

A review of Federal Aviation Administration records revealed a Bill of Sale dated August 22, 2003, listed the pilot and passenger as purchasers. A review of maintenance records for the airplane revealed an annual inspection was completed on August 3, 2003, at a tachometer reading of 1636.0. A maintenance entry dated March 17, 2000, recorded the tachometer

reading as 1620.0. The tachometer reading on the airplane at the accident site was 1638.7.

Pilot Information

Certificate:	Private	Age:	58, 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 With waivers/limitations	Last FAA Medical Exam:	January 3, 2002
Occupational Pilot:		Last Flight Review or Equivalent:	November 13, 2002
Flight Time:	713 hours (Total, all aircraft), 73 hours (Total, this make and model), 713 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Stinson	Registration:	N936D
Model/Series:	108-2	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	108-2936
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	August 3, 2003 Annual	Certified Max Gross Wt.:	2230 lbs
Time Since Last Inspection:	2.7 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2842 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	O-470
Registered Owner:	On file	Rated Power:	230 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KABY,197 ft msl	Distance from Accident Site:	19 Nautical Miles
Observation Time:	13:53 Local	Direction from Accident Site:	10°
Lowest Cloud Condition:	Few / 3100 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	30°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Miami, FL (TMB)	Type of Flight Plan Filed:	None
Destination:	Camilla, GA (CXU)	Type of Clearance:	VFR
Departure Time:	10:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	Camilla Mitchell County CXU	Runway Surface Type:	Asphalt
Airport Elevation:	175 ft msl	Runway Surface Condition:	Dry
Runway Used:	8	IFR Approach:	None
Runway Length/Width:	4005 ft / 60 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 1 None	Latitude, Longitude:	31.213054,-84.236946

Administrative Information

Investigator In Charge (IIC):	Gagne, Catherine
Additional Participating Persons:	Rory H Dunn; Atlanta FSDO - 11; College Park, GA
Original Publish Date:	June 28, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=57776

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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](#).