



Aviation Investigation Final Report

Location:	GREENWOOD, Indiana	Accident Number:	CHI86LA229
Date & Time:	September 14, 1986, 18:15 Local	Registration:	N3072L
Aircraft:	PIPER PA-28-181	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE BRAKE PADS ON THE AIRCRAFT WERE ALLOWED TO WEAR BEYOND THEIR LIMITS. WHEN THE BRAKES WERE APPLIED, THE RIGHT BRAKE CYLINDER MOVED OUT PAST ITS LIMIT AND RELEASED THE O-RING. THIS RESULTED IN A LOSS OF BRAKE FLUID FROM THE RIGHT BRAKE. ALL OF THIS HAPPENED SIMULTANEOUSLY AS THE PILOT APPLIED BRAKE PRESSURE, WHILE ON LANDING ROLLOUT. SUBSEQUENTLY, HE HAD NO RIGHT BRAKE, BUT FULL LEFT BRAKE, WHICH LEFT HIM WITH A LACK OF CONTROL OF THE AIRCRAFT WHILE ON THE GROUND. THE PILOT STEERED THE AIRCRAFT OFF THE LEFT SIDE OF THE RUNWAY ONTO ROUGH TERRAIN WHERE THE PLANE WAS DAMAGED.

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: LANDING - ROLL

Findings

1. (F) LANDING GEAR, NORMAL BRAKE SYSTEM - WORN
2. (C) MAINTENANCE, SERVICE OF AIRCRAFT/EQUIPMENT - INADEQUATE - COMPANY/OPERATOR MANAGEMENT
3. (C) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND

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

Findings

4. DIRECTIONAL CONTROL - REDUCED

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings

5. (F) TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

Pilot Information

Certificate:	Private	Age:	32, 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--no waivers/lim.	Last FAA Medical Exam:	May 21, 1986
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	69 hours (Total, all aircraft), 13 hours (Total, this make and model), 38 hours (Pilot In Command, all aircraft), 38 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N3072L
Model/Series:	PA-28-181 PA-28-181	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	287790264
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	July 29, 1986 Annual	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2475 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	O-360-A4M
Registered Owner:	RICHARD LUDENBACK	Rated Power:	180 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:	IND ,820 ft msl	Distance from Accident Site:	11 Nautical Miles
Observation Time:	17:51 Local	Direction from Accident Site:	120°
Lowest Cloud Condition:	Unknown / 25000 ft AGL	Visibility	12 miles
Lowest Ceiling:	Overcast / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	24°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	INDIANAPOLIS (514)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	17:30 Local	Type of Airspace:	Class D

Airport Information

Airport:	SKYWAY 511	Runway Surface Type:	Asphalt
Airport Elevation:	830 ft msl	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	4000 ft / 50 ft	VFR Approach/Landing:	Traffic pattern

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:	39.61016,-86.10955(est)

Administrative Information

Investigator In Charge (IIC):	Dinwiddie, Carl
Additional Participating Persons:	J WOLTZ; INDIANAPOLIS , IN S TROKA; DES PLAINES , IL G CHANEY; DES PLAINES , IL

Original Publish Date:

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=13528>

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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](#).