



Aviation Investigation Final Report

Location:	Valparaiso, Indiana	Accident Number:	CHI05CA165
Date & Time:	July 4, 2005, 07:45 Local	Registration:	N5807Z
Aircraft:	Piper PA-22-180	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane experienced a gear collapse during a bounced landing. The pilot stated he was practicing takeoffs and landings when the accident occurred. He stated that the first landing was "fine." The pilot stated that during the second landing touchdown, he heard a "pop." The airplane became airborne again and the right wing raised slightly. He stated he corrected with aileron and the left main gear collapsed as the airplane touched down again. The pilot reported the left wing and the propeller contacted the runway prior to the airplane coming to a stop. The airplane had been converted to a tail wheel aircraft in 1982. The airplane had been flown 84 hours since the conversion. Inspection of the airplane revealed the landing gear strut was compressed and the gear was folded inward under the fuselage. He also stated the axle was pushed through the wheel and the wheel bearings were broken.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot improperly flared the airplane which resulted in a hard landing and the subsequent main gear collapse.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) FLARE - IMPROPER - PILOT IN COMMAND

Occurrence #2: GEAR COLLAPSED

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

2. LANDING GEAR,MAIN GEAR ATTACHMENT - OVERLOAD

Factual Information

On July 4, 2005, at 0745 central daylight time, a Piper PA-22-180, N5807Z, experienced a gear collapse during a bounced landing on runway 18 (4,000 feet by 75 feet, asphalt) at the Porter County Municipal Airport (VPZ), Valparaiso, Indiana. The student pilot was not injured. The airplane was substantially damaged. The 14 Code of Federal Regulations Part 91 personal flight was operating in visual meteorological conditions without a flight plan. The flight originated at VPZ at 0730.

The pilot stated he was practicing takeoffs and landings when the accident occurred. He stated that the first landing was "fine." The pilot stated that during the second landing touchdown, he heard a "pop." The airplane became airborne again and the right wing raised slightly. He stated he corrected with aileron and the left main gear collapsed as the airplane touched down again. The pilot reported the left wing and the propeller contacted the runway prior to the airplane coming to a stop.

The airplane had been converted to a tail wheel aircraft in 1982. The airplane had been flown 84 hours since the conversion.

The airplane was examined by an inspector from the Federal Aviation Administration South Bend, Indiana Flight Standards District Office. The inspector reported the landing gear strut was compressed and the gear was folded inward under the fuselage. He also stated the axle was pushed through the wheel and the wheel bearings were broken.

Pilot Information

Certificate:	Student	Age:	59, Male
Airplane Rating(s):	None	Seat Occupied:	
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 3	Last FAA Medical Exam:	August 1, 2003
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	45 hours (Total, all aircraft), 45 hours (Total, this make and model), 3 hours (Pilot In Command, all aircraft), 18 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N5807Z
Model/Series:	PA-22-180	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	22-9662
Landing Gear Type:	Tailwheel	Seats:	
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	O-235
Registered Owner:	Russell D. Ingram	Rated Power:	
Operator:	Russell D. Ingram	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	VPZ	Distance from Accident Site:	
Observation Time:	07:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	20°C / 14°C
Precipitation and Obscuration:			
Departure Point:	Valparaiso, IN (VPZ)	Type of Flight Plan Filed:	None
Destination:	Valparaiso, IN (VPZ)	Type of Clearance:	None
Departure Time:	07:30 Local	Type of Airspace:	

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:	41.453887,-87.006942

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	Robert Helbing; South Bend, IN FSDO
Original Publish Date:	October 27, 2005
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=61861

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](#).