



Aviation Investigation Final Report

Location:	Prescott, Arizona	Accident Number:	LAX03LA304
Date & Time:	August 19, 2003, 07:16 Local	Registration:	N3817T
Aircraft:	Piper PA-28R-180	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The airplane experienced a right main landing gear collapse during the landing roll. The flight instructor (CFI) reported that the purpose of the flight was to perform a biennial flight review. After completing two uneventful touch-and-go takeoffs and landings, the pilot attempted a third. He configured the airplane for a power-off landing and all three landing gear lights in the cockpit were illuminated in indication that the landing gear was in a down and locked position. Upon touching down on the runway, the airplane veered to the right and the CFI felt as though it was sinking on the right side. The right main gear collapsed and the airplane came to rest on its left main landing gear with the right gear in retracted position. The airplane was examined immediately after the accident by an A & P mechanic. The airplane was placed on jacks and the gear was cycled several times using the airplane's hydraulic system and electrically driven hydraulic pump. No defects or faults were found that could have resulted in a failure of the right gear to extend and lock. Later, a detailed landing gear extension/retraction functional test was conducted with no discrepancies noted.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The collapse of the right main gear during the landing roll for undetermined reasons.

Findings

Occurrence #1: MAIN GEAR COLLAPSED

Phase of Operation: LANDING - ROLL

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Factual Information

On August 19, 2003, at 0716 mountain standard time, a Piper PA-28R-180, N3817T, experienced a right main landing gear collapse during the landing roll at Ernest A. Love Field, Prescott, Arizona. North-Aire, Inc., was operating the airplane under the provisions of 14 CFR Part 91. The airplane sustained substantial damage. The certified flight instructor (CFI) and the private pilot were not injured. The flight originated from Prescott at 0630 for the local instructional flight. Visual meteorological conditions prevailed, and no flight plan had been filed.

In a telephone interview, the CFI reported that the purpose of the flight was to perform a biennial flight review. After completing two uneventful touch-and-go takeoffs and landings, the private pilot attempted a third. He configured the airplane for a power-off landing and all three landing gear lights in the cockpit were illuminated in indication that the landing gear was in a down and locked position. Upon touching down on the runway, the airplane veered to the right and the CFI felt as though it was sinking on the right side. He immediately seized the flight controls and applied full power in efforts to make the airplane airborne. The right main gear collapsed and he aborted all takeoff efforts. The airplane came to rest on its left main landing gear with the right gear in retracted position.

In a written statement, an airplane mechanic reported that he conducted an on scene inspection of the airplane immediately after the accident. The airplane was placed on jacks and the main landing gear was lowered into the full extended position and then cycled into both the full up and down position using the aircraft hydraulic system and electrically driven pump. At that time, no defects or faults were found that could have resulted in a partial gear failure. Later, a detailed landing gear extension/retraction functional test was conducted with no discrepancies noted.

This accident was upgraded from an incident on December 11, 2003, based on a damage assessment by the Federal Aviation Administration. There was damage to the airplane's right wing tip, right outboard wing skin, outboard wing spar, and propeller.

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	61,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	January 15, 2003
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 15, 2003
Flight Time:	11700 hours (Total, all aircraft), 2200 hours (Total, this make and model), 11425 hours (Pilot In Command, all aircraft), 65 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft)		

Check pilot Information

Certificate:	Private	Age:	82,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	January 29, 2002
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	3000 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N3817T
Model/Series:	PA-28R-180	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28R30133
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	July 25, 2003 100 hour	Certified Max Gross Wt.:	2500 lbs
Time Since Last Inspection:	40 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	5124 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	IO-360
Registered Owner:	North-Aire	Rated Power:	180 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KPRC, 5045 ft msl	Distance from Accident Site:	
Observation Time:	07:23 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 4700 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 10000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.25 inches Hg	Temperature/Dew Point:	20°C / 15°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Prescott, AZ (KPRC)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	VFR
Departure Time:	06:30 Local	Type of Airspace:	Class D

Airport Information

Airport:	Ernest A. Love Field Airport PRC	Runway Surface Type:	Asphalt
Airport Elevation:	5045 ft msl	Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	None
Runway Length/Width:	4846 ft / 60 ft	VFR Approach/Landing:	Touch and go

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	34.654445,-112.419723

Administrative Information

Investigator In Charge (IIC):	Rich, Jefferey
Additional Participating Persons:	Steve D'urso; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	December 28, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=58471

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](#).