



Aviation Investigation Final Report

Location:	COLUMBIA, South Carolina	Accident Number:	ATL95LA117
Date & Time:	June 4, 1995, 10:29 Local	Registration:	N7392P
Aircraft:	PIPER PA-24-250	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

AFTER SEVERAL ATTEMPTS TO LOWER THE LANDING GEAR, THE PILOT ELECTED TO MAKE A GEAR UP LANDING. EXAMINATION OF THE NOSE GEAR RETRACTION AND EXTENSION SYSTEM FAILED TO DISCLOSE A MATERIAL FAILURE. THE EXAMINATION OF THE NOSE GEAR DISCLOSED THAT THE ROLLER ALIGNER ASSEMBLY WAS DISPLACED OUTSIDE OF THE CENTERING TRACK, AND THE NOSE GEAR RETRACTED INTO THE WHEEL WELL AT AN ANGLE. NO NOSE GEAR ASSEMBLY COMPONENT SHOWED EXCESSIVE WEAR OR FRACTURES.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE MISALIGNMENT OF THE NOSE GEAR CENTERING TRACK AND ROLLER ASSEMBLIES WHICH PRECLUDED LANDING GEAR EXTENSION.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: APPROACH

Findings

1. (C) LANDING GEAR,NORMAL RETRACTION/EXTENSION ASSEMBLY - MALFUNCTION

Occurrence #2: WHEELS UP LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

On June 4, 1995, at 1029 eastern daylight time, a Piper PA-24- 250, N7392P, landed with the landing gear up after several low passes and attempts to lower the landing gear at Columbia Metropolitan Airport in Columbia, South Carolina. The personal flight operated under the provisions of 14 CFR Part 91 with an instrument flight plan filed. Visual weather conditions prevailed at the time of the accident. The airplane was substantially damaged; the pilot was not injured. The flight departed Winnsboro, South Carolina, at 0945 hours.

Upon arriving at Columbia, the pilot discovered that the landing gear would not extend. After several attempts to lower the landing gear, the pilot elected to make a gear up landing. The airplane touched down and skidded 200 feet to a stop. The local fixed base operator recovered the airplane, and parked it on the ramp.

An examination of the landing gear system, disclosed that the nose gear roller aligner assembly was positioned outside of the nose gear centering track. This position allowed the nose gear to retract into the wheel well at an angle. The examination of the nose gear retraction and extension assemblies failed to disclose a material failure. The exact means by which the misalignment occurred was not determined.

The Pilot failed to complete and return NTSB Form 6120.1/2 (Pilot/Operator Aircraft Accident Report Report)as requested.

Pilot Information

Certificate:	Private	Age:	28, Male
Airplane Rating(s):	Single-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 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	April 7, 1993
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	280 hours (Total, all aircraft), 15 hours (Total, this make and model), 30 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N7392P
Model/Series:	PA-24-250 PA-24-250	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	24-2576
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	2800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-540-A1A5
Registered Owner:	SANDEE L. COX	Rated Power:	250 Horsepower
Operator:	SAMUEL M. GOODWIN	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:	CAE ,236 ft msl	Distance from Accident Site:	
Observation Time:	10:58 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	10 miles
Lowest Ceiling:	Broken / 1500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	WINNSBORO , SC (FDW)	Type of Flight Plan Filed:	IFR
Destination:	(CAE)	Type of Clearance:	IFR
Departure Time:	09:45 Local	Type of Airspace:	Class C

Airport Information

Airport:	COLUMBIA METRO AIRPORT CAE	Runway Surface Type:	Asphalt
Airport Elevation:	236 ft msl	Runway Surface Condition:	Dry
Runway Used:	5	IFR Approach:	None
Runway Length/Width:	7000 ft / 150 ft	VFR Approach/Landing:	Full stop

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:	

Administrative Information

Investigator In Charge (IIC):	Powell, Phillip
Additional Participating Persons:	CHARLES C LEE; COLUMBIA , SC
Original Publish Date:	January 29, 1996
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=3578

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](#).