



Aviation Investigation Final Report

Location:	PITTSBURGH, Pennsylvania	Accident Number:	NYC91LA027
Date & Time:	November 12, 1990, 21:19 Local	Registration:	N54SA
Aircraft:	CESSNA 404	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

THE CESSNA 404 OPERATING ON A CARGO FLIGHT TOUCHED DOWN AND THE NOSE LANDING GEAR COLLAPSED. THE FAA EXAMINED THE AIRPLANE AND FOUND THE ATTACH POINTS FOR THE NOSE LANDING GEAR RETRACTION CYLINDER HAD RIPPED OUT. THE BOLT HOLES SHOWED SIGNS OF WORKING AND WERE WORN. IN ADDITION, THEY REPORTED THE MAINTENANCE MANUAL REFERENCE TO THE AREA IS GENERAL IN NATURE. THE LOCATION OF THE FAILURE IS VERY DIFFICULT TO VIEW DURING INSPECTION DUE TO LIMITED ACCESS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A FAILURE OF NOSE LANDING GEAR RETRACTION CYLINDER ATTACH POINTS WHICH ALLOWED THE NOSE LANDING GEAR TO COLLAPSE.

Findings

Occurrence #1: NOSE GEAR COLLAPSED
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

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

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	26, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	April 20, 1990
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	2103 hours (Total, all aircraft), 50 hours (Total, this make and model), 1963 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 60 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N54SA
Model/Series:	404 404	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	404-0426
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	October 12, 1990 100 hour	Certified Max Gross Wt.:	8400 lbs
Time Since Last Inspection:	33 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	9310 Hrs	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, not activated	Engine Model/Series:	GTSIO-520-M
Registered Owner:		Rated Power:	375 Horsepower
Operator:	SUPERIOR AVIATION INC	Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:		Operator Designator Code:	EATA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night/dark
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-1°C / -7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CUMBERLAND , MD (CBE)	Type of Flight Plan Filed:	IFR
Destination:		Type of Clearance:	IFR
Departure Time:	20:15 Local	Type of Airspace:	Class E

Airport Information

Airport:	PITTSBURGH PIT	Runway Surface Type:	Asphalt
Airport Elevation:	1203 ft msl	Runway Surface Condition:	Dry
Runway Used:	28R	IFR Approach:	ILS
Runway Length/Width:	10502 ft / 150 ft	VFR Approach/Landing:	None

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):	Hancock, Robert
Additional Participating Persons:	THOMAS C MAHONEY; WEST MIFFLIN , PA
Original Publish Date:	September 28, 1992
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=36841

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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](#).