



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Sandersville, Georgia	Accident Number:	ERA18LA154
Date & Time:	May 21, 2018, 13:10 Local	Registration:	N427JM
Aircraft:	Cessna 421	Aircraft Damage:	Substantial
Defining Event:	Landing gear collapse	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the flight was uneventful and during the approach for landing, he placed the landing gear handle in the down position and observed three green landing gear lights, indicating that the gear was down and locked. Shortly after touchdown, the nose landing gear collapsed into the retracted position. The airplane's nose impacted the runway and the airplane skidded to a stop, resulting in substantial damage to the airframe. After the airplane stopped, the landing gear position lights indicated that all of the landing gear were extended and locked into position. A mechanic who saw the landing and assisted in removing the airplane from the runway after the accident reported that, during the attempt to move the airplane, they lifted the nose off the ground and tried unsuccessfully to move the nose landing gear into the down and locked position.

Postaccident testing of the nose landing gear actuator revealed no discrepancies. Although the green safe switch remained illuminated during the entire testing cycle, indicating a defective switch, this did not directly contribute to the collapse of the nose landing gear. Review of maintenance records showed no nose gear discrepancies over the previous 18 months. The reason for the nose landing gear collapse could not be determined based on the available information.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A nose landing gear collapse for reasons that could not be determined based on the available information.

Findings

Aircraft	Nose/tail landing gear - Malfunction
Aircraft	Gear position and warning - Malfunction

Factual Information

History of Flight

Landing-landing roll	Landing gear collapse (Defining event)
----------------------	--

On May 21, 2018, about 1310 eastern daylight time, a Cessna 421-C, N427JM, was substantially damaged when it was involved in an accident near Sandersville, Georgia. The commercial pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot reported that the flight was uneventful; during the landing approach, he placed the landing gear handle in the down position and received three green landing gear lights, indicating that the gear was down and locked. He stated that, after the main landing gear touched down, “he didn’t feel any resistance from the nose nosewheel” when it settled onto the runway. The airplane continued to settle, and the nose impacted the runway. The pilot maintained directional control and attempted to maneuver the airplane off the runway onto a taxiway with differential braking as it skidded to a stop. After the airplane stopped, the landing gear position lights indicated that all gear were down and locked.

A mechanic saw the landing and reported that the airplane looked “normal” on final approach. He heard the main landing gear touch down, followed by “something dragging.” After the airplane came to rest, he checked on the condition of the pilot, then attempted to remove the airplane from the runway. During the attempt to move the airplane from the runway, they lifted the nose off the ground, tried unsuccessfully to get the nose landing gear into the down and locked position, and ultimately strapped the landing gear in place to move the airplane.

Examination of the airplane by a Federal Aviation Administration maintenance inspector revealed substantial damage, including buckling of the airframe on both sides of the nose landing gear well, and abrasion through to the airframe on the bottom of the nose and fuselage. The nose landing gear actuator was removed for detailed examination. The actuator was tested in the locked and unlocked position at the correct pressures with no leaks or discrepancies noted.; however, the green safe switch remained illuminated during the entire test, indicating a defective switch. The switch was brittle and appeared “very old.”

A review of the airframe maintenance logbook revealed that, during the most recent annual inspection on July 10, 2017, a landing gear retraction test was conducted per the manufacturer’s service manual with no defects noted. On April 27, 2018, a logbook entry showed a main landing gear irregularity that was corrected. The landing gear was cycled 10 times with no defects noted with the nose landing gear.

Pilot Information

Certificate:	Commercial	Age:	64,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 None	Last FAA Medical Exam:	April 18, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 15, 2018
Flight Time:	22697 hours (Total, all aircraft), 948 hours (Total, this make and model), 22690 hours (Pilot In Command, all aircraft), 141 hours (Last 90 days, all aircraft), 44 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N427JM
Model/Series:	421 C	Aircraft Category:	Airplane
Year of Manufacture:	1976	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	421C0103
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	July 11, 2017 Annual	Certified Max Gross Wt.:	7500 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	4437.2 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	GTISO520L4B
Registered Owner:	MABB TRANSPORT LLC	Rated Power:	375 Horsepower
Operator:	MABB TRANSPORT LLC	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	OKZ,384 ft msl	Distance from Accident Site:	
Observation Time:	13:30 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear / 3700 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 3700 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.7 inches Hg	Temperature/Dew Point:	23°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Carrollton, GA (CTJ)	Type of Flight Plan Filed:	IFR
Destination:	Sandersville, GA (OKZ)	Type of Clearance:	IFR
Departure Time:	12:20 Local	Type of Airspace:	Class G

Airport Information

Airport:	Kaolin Field OKZ	Runway Surface Type:	Asphalt
Airport Elevation:	438 ft msl	Runway Surface Condition:	Dry
Runway Used:	13	IFR Approach:	None
Runway Length/Width:	5016 ft / 75 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	32.966667,-82.838058(est)

Administrative Information

Investigator In Charge (IIC):	Mccarter, Lawrence
Additional Participating Persons:	Michael Pupek; FAA FSDO; Atlanta, GA
Original Publish Date:	February 9, 2022
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=97353

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](#).