



National Transportation Safety Board Aviation Accident Final Report

Location:	Oakland, CA	Accident Number:	LAX07LA136
Date & Time:	04/01/2007, 1500 PDT	Registration:	N81PC
Aircraft:	Cessna T210N	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

While attempting to start the airplane 2 days after an annual inspection, the landing gear warning horn sounded upon activation of the master switch. The pilot checked the landing gear and found it in the down and locked position with the squat switches depressed. He also noted that with both of the avionics master switches in the ON position, the landing gear warning horn stopped, the instrument panel lights activated, and the landing gear down and locked green light illuminated. He made the return flight home and the following day flew the airplane, with the landing gear in the extended position, to an avionics shop. During the inspection, a shorted terminal in the breaker box was found and repaired. During a return flight to the pilot's home base the landing gear system functioned normally. Five days later, the pilot attempted to start the engine. He realized the battery was dead and got a jump start. The avionics then failed during the takeoff initial climb. He recycled the avionics master, but power to the avionics was not returned. The pilot returned and landed without problems. The battery was removed, recharged, and then replaced. The pilot noted that everything functioned properly and he decided to continue his flight. During the takeoff roll, the nose landing gear collapsed and the airplane slid down the runway, with the left main landing gear eventually collapsing. During an inspection of the aircraft, an FAA inspector noted structural damage to the airframe. Maintenance personnel inspected the landing gear and electrical system and found no discrepancies. They replaced a weak battery and cycled the landing gear several times. They were not able to reproduce the discrepancy encountered by the pilot during the accident takeoff roll.

Probable Cause and Findings

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

Findings

Occurrence #1: NOSE GEAR COLLAPSED

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Factual Information

On April 1, 2007, about 1500 Pacific daylight time, a Cessna T210N, N81PC, experienced a collapsed nose landing gear during the takeoff roll from runway 33 at Metropolitan Oakland International Airport (OAK), Oakland, California. The pilot/owner operated the airplane under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. The airplane sustained substantial damage after one of the wings struck the runway. The pilot and one passenger were not injured. Day visual meteorological conditions prevailed for the flight that was originating at the time of the accident on a local area flight; no flight plan had been filed.

In the pilot's written report, he stated that on March 22, 2007, an annual inspection had been completed. He flew the airplane to Bryce Canyon, Utah, the following day. Two days later he attempted to start the airplane for the return flight to OAK. Upon activation of the master switch, the gear horn sounded. He stated that a gear check revealed that the landing gear was "down and locked, squat switches depressed." He checked the circuit breakers and radio switches with the master switch ON, and found that having both avionics master switches in the ON position stopped the gear horn audio and activated "all instruments as well as [the] down and locked green light." The pilot made the return flight to OAK.

On March 26, 2007, he flew the airplane to Sacramento, with the landing gear in the down position. Airborne Electronic found a shorted terminal in the breaker box, repaired it, and returned it to service. The pilot stated that the return flight to OAK was normal, and the landing gear functioned properly.

On the day of the accident, the pilot attempted to start the engine, however, the battery was dead, and he had to get a jump start. After he started the engine, he departed runway 33. On the takeoff climb out the electronics failed and recycling the master did not return power. He returned to land without any problems. He removed the battery and took it to Pacific States Aviation to have it recharged. About 4 hours later, he reinstalled the battery and noted no additional problems. The pilot stated that he taxied out, conducted the pre-takeoff checklist and was on the takeoff roll from runway 33 when the nose landing gear and eventually the left main landing gear retracted. He reduced the throttle, and the airplane slid about 300 feet down the runway.

The incident was upgraded to an accident on April 24, 2007, after a Federal Aviation Administration (FAA) airworthiness inspector examined the airplane and found structural damage to the airframe.

According to maintenance personnel from Beegles Aircraft Service, Inc., Greeley, Colorado, a thorough check of the landing gear and electrical system were conducted, with no discrepancies found. They noted a weak battery, replaced it, and then cycled the landing gear several times. They were not able to reproduce the discrepancy that the pilot had encountered on the accident takeoff roll.

Pilot Information

Certificate:	Commercial	Age:	62, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 3 With Waivers/Limitations	Last Medical Exam:	02/01/2007
Occupational Pilot:		Last Flight Review or Equivalent:	01/01/2007
Flight Time:	6500 hours (Total, all aircraft), 5000 hours (Total, this make and model), 6400 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Cessna	Registration:	N81PC
Model/Series:	T210N	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	21063620
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	03/01/2007, Annual	Certified Max Gross Wt.:	4000 lbs
Time Since Last Inspection:	5 Hours	Engines:	1 Reciprocating
Airframe Total Time:	2531 Hours	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	TSIO-520-R
Registered Owner:	John H. Austin	Rated Power:	310 hp
Operator:	John H. Austin	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	OAK, 9 ft msl	Observation Time:	1453 PST
Distance from Accident Site:	0 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	0°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	15° C / 8° C
Lowest Ceiling:	Broken / 25000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	11 knots, 260°	Visibility (RVR):	
Altimeter Setting:	30 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Oakland, CA (OAK)	Type of Flight Plan Filed:	None
Destination:	(OAK)	Type of Clearance:	VFR
Departure Time:	1500 PDT	Type of Airspace:	

Airport Information

Airport:	METROPOLITAN OAKLAND INTL (OAK)	Runway Surface Type:	Asphalt
Airport Elevation:	9 ft	Runway Surface Condition:	Dry
Runway Used:	33	IFR Approach:	None
Runway Length/Width:	3372 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None		

Administrative Information

Investigator In Charge (IIC):	Tealeye C Cornejo	Adopted Date:	03/31/2008
Additional Participating Persons:	Glenn Gathright; Federal Aviation Administration; Oakland, CA		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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