



Aviation Investigation Final Report

Location:	Plant City, Florida	Accident Number:	ERA11CA396
Date & Time:	July 10, 2011, 15:30 Local	Registration:	N325EE
Aircraft:	Piper PA-30	Aircraft Damage:	Substantial
Defining Event:	Sys/Comp malf/fail (non-power)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that he departed and proceeded to a nearby airport where he performed six touch-and-go takeoffs and landings followed by one full-stop landing, all of which were uneventful. Before landing during the return flight, the pilot lowered the landing gear lever and observed that there were no landing gear down-and-locked indications and that the landing gear circuit breaker (CB) was tripped. The pilot reset the CB and attempted to raise then lower the landing gear; however, the landing gear failed to fully extend, and the landing gear CB tripped again. Attempts to extend the landing gear using the emergency extension lever in accordance with the Pilot's Operating Handbook, using G-loading, and following guidance from maintenance personnel were unsuccessful. The pilot performed a fly-by and was informed that the landing gear appeared to be partially extended. The pilot turned off the fuel and master and placed the mixture controls to idle-cutoff. At touchdown, the right main landing gear collapsed, followed by the left, then the nose. The airplane came to rest on the runway. Postaccident examination of the nose landing gear revealed that a screw was broken off in the first thread of the nose landing gear aligner assembly. The head of the screw and associated bushings were separated and not located. No determination was made for the reason for the fractured screw. The manufacturer's assessment indicated there have been no service difficulty reports pertaining to the screw.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of a screw in the nose landing gear aligner assembly for undetermined reasons, which prevented the landing gear from fully extending.

Findings

Aircraft	Gear extension and retract sys - Malfunction
Aircraft	Nose/tail landing gear - Failure

Factual Information

History of Flight

Approach-VFR pattern final	Sys/Comp malf/fail (non-power) (Defining event)
Landing-flare/touchdown	Landing gear collapse

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	49, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	July 2, 2010
Occupational Pilot:	No	Last Flight Review or Equivalent:	March 8, 2010
Flight Time:	5000 hours (Total, all aircraft), 50 hours (Total, this make and model), 4500 hours (Pilot In Command, all aircraft), 45 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Other flight crew Information

Certificate:	Private	Age:	51, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
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 2 Without waivers/limitations	Last FAA Medical Exam:	August 22, 2008
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	275 hours (Total, all aircraft), 1 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N325EE
Model/Series:	PA-30	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	30-1537
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	May 11, 2011 Annual	Certified Max Gross Wt.:	3725 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	6388 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	IO-320-C1A
Registered Owner:	Louis A. Caporicci	Rated Power:	160 Horsepower
Operator:	Louis A. Caporicci	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	PCM,153 ft msl	Distance from Accident Site:	
Observation Time:	15:35 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 3200 ft AGL	Visibility	10 miles
Lowest Ceiling:	Overcast / 8500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	10°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	29°C / 24°C
Precipitation and Obscuration:	Light - None - Drizzle		
Departure Point:	Zephyrhills, FL (ZPH)	Type of Flight Plan Filed:	None
Destination:	Plant City, FL (PCM)	Type of Clearance:	None
Departure Time:	14:45 Local	Type of Airspace:	

Airport Information

Airport:	Plant City Airport PCM	Runway Surface Type:	Asphalt
Airport Elevation:	153 ft msl	Runway Surface Condition:	Wet
Runway Used:	10	IFR Approach:	None
Runway Length/Width:	3948 ft / 75 ft	VFR Approach/Landing:	Full stop

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:	28,-82.163055(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Mike Singleton; FAA/FSDO; Tampa, FL
Original Publish Date:	February 16, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=81078

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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](#).