



Aviation Investigation Final Report

Location:	Brooksville, Florida	Accident Number:	MIA06LA086
Date & Time:	April 12, 2006, 17:45 Local	Registration:	N6981L
Aircraft:	Cessna 310K	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that during the landing rollout, the airplane pulled to the right, and he made a correction, but it continued to pull to the right. As the rollout progressed, he said the airplane continued to pull to the right, with him using full rudder deflection. The airplane departed the right side of the runway, into the grass, and impacted orange trees. An FAA inspector responded and conducted a postcrash examination of the airplane and found the airplane sitting on its left main landing gear and nose gear. The right main landing gear had separated from the airplane. The inspector further stated that upon examining the right main landing gear the he noted a discrepancy associated with the forward trunnion. He said that the forward and aft trunnions both have two u-bolts that hold the landing gear to the pivot points on the airplane, and the aft trunnion had both u-bolts and had the pivot piece firmly locked under the u-bolts. The inspector said that on the forward trunnion the aft u-bolt was in place but the forward u-bolt was missing, and the pivot piece was not under the aft u-bolt. During the course of the investigation, the pilot provided an excerpt from the airplane maintenance records showing that the airplane's right main landing gear had been recently repaired. At the time of the accident, the airplane had accumulate about 9 hours since landing gear maintenance had been performed.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The mechanic's improper maintenance that resulted in the right main landing gear's separation from the airplane and an inadvertent loss of control during landing.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: LANDING - ROLL

Findings

1. (C) MAINTENANCE - IMPROPER - OTHER MAINTENANCE PERSONNEL
2. LANDING GEAR, MAIN GEAR - SEPARATION
3. AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND
4. GROUND LOOP/SWERVE - INADVERTENT - PILOT IN COMMAND

Factual Information

On April 12, 2006, about 1745 eastern daylight time, a Cessna 310K, N6981L, registered to and operated by a private individual, as a Title 14 CFR Part 91 flight, veered off the runway during landing at Brooksville, Florida. Visual meteorological conditions prevailed, and no flight plan was filed. The private-rated pilot and three passengers were not injured, and the airplane incurred substantial damage. The flight originated in Knoxville, Tennessee, the same day, about 1445.

The pilot stated that during the landing rollout, the airplane pulled to the right, and he made a correction, but it continued to pull to the right. He said as the rollout progressed it continued to pull to the right, with him using full rudder deflection. The airplane then departed the right side of the runway, into the grass, and impacted some orange trees near a house.

An FAA inspector responded and conducted a postcrash examination of the airplane. According to the inspector, when he viewed the airplane it was sitting on its left main landing gear and nose gear, and the right main landing gear had separated from the airplane. He further stated that upon examining the right main landing gear he noted a discrepancy associated with the forward trunnion. He said that the forward and aft trunnions both have two u-bolts that hold the landing gear to the pivot points on the airplane, and the aft trunnion had both u-bolts and had the pivot piece firmly locked under the u-bolts. He said on the forward trunnion the aft u-bolt was in place but the forward u-bolt was missing, and the pivot piece was not under the aft u-bolt.

The pilot provided an excerpt from the airplane maintenance records which showed that the accident airplane's right main landing gear had been recently repaired. According to the pilot, at the time of the accident the airplane had accumulate about 9 hours since landing gear maintenance had been performed.

Pilot Information

Certificate:	Private	Age:	56, Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 None	Last FAA Medical Exam:	November 1, 2005
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2600 hours (Total, all aircraft), 85 hours (Total, this make and model), 2600 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N6981L
Model/Series:	310K	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	310K0081
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	5200 lbs
Time Since Last Inspection:	9 Hrs	Engines:	Reciprocating
Airframe Total Time:	5500 Hrs at time of accident	Engine Manufacturer:	Teledyne Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-470
Registered Owner:	Joseph Karl	Rated Power:	260 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	TPA	Distance from Accident Site:	
Observation Time:	17:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 5000 ft AGL	Visibility	9 miles
Lowest Ceiling:	Broken / 9000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	11 knots / 17 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.17 inches Hg	Temperature/Dew Point:	26°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Knoxville, TN (DKX)	Type of Flight Plan Filed:	None
Destination:	Brooksville, FL (X05)	Type of Clearance:	None
Departure Time:	14:45 Local	Type of Airspace:	

Airport Information

Airport:	Pilot Country Airport X05	Runway Surface Type:	Asphalt
Airport Elevation:	80 ft msl	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	3700 ft / 75 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	28.470832,-82.455558

Administrative Information

Investigator In Charge (IIC):	Lovell, John
Additional Participating Persons:	Robert Blake; FAA FSDO; Tampa, FL
Original Publish Date:	July 25, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=63548

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](#).