



National Transportation Safety Board Aviation Accident Final Report

Location:	Sparta, TN	Accident Number:	ERA11CA375
Date & Time:	07/02/2011, 1010 CDT	Registration:	N106S
Aircraft:	TEMCO GC-1B	Aircraft Damage:	Substantial
Defining Event:	Flight control sys malf/fail	Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that, during the takeoff roll, he was unable to correct an uncommanded left yaw with control inputs, so he elected to abort the takeoff. During rollout, the airplane departed the left side of the runway and the landing gear collapsed, which resulted in substantial damage to the right wing spar. A postaccident examination revealed that a "nicopress" fitting on the left rudder cable had failed and disconnected from its bell-crank. The cable fitting had been pressed with an improper tool or technique at installation. The airplane's entire flight control system had been refitted and re-rigged approximately 9 years prior to the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The improper installation of the right rudder control cable by maintenance personnel, which resulted in the pilot's inability to maintain directional control during takeoff.

Findings

Aircraft	Rudder control system - Incorrect service/maintenance (Cause) Directional control - Attain/maintain not possible (Cause)
Personnel issues	Installation - Maintenance personnel (Cause)

Factual Information

History of Flight

Prior to flight	Aircraft maintenance event
Takeoff	Flight control sys malf/fail (Defining event)
Takeoff-rejected takeoff	Loss of control on ground Runway excursion

Pilot Information

Certificate:	Private	Age:	41, 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):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without Waivers/Limitations	Last Medical Exam:	02/19/2007
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1047 hours (Total, all aircraft), 361 hours (Total, this make and model), 1027 hours (Pilot In Command, all aircraft), 25 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 Manufacturer:	TEMCO	Registration:	N106S
Model/Series:	GC-1B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	2221
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	06/03/2011, Annual	Certified Max Gross Wt.:	1975 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1800 Hours	Engine Manufacturer:	CONT MOTOR
ELT:	Installed, not activated	Engine Model/Series:	C145 SERIES
Registered Owner:	ROBERSON WILLIAM F JR. / ANDERSON DAL S	Rated Power:	145 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KCSV, 1880 ft msl	Observation Time:	0953 CDT
Distance from Accident Site:	23 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	90°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	27° C / 19° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	3 knots, 360°	Visibility (RVR):	
Altimeter Setting:	30.16 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Sparta, TN (SRB)	Type of Flight Plan Filed:	None
Destination:	Sparta, TN (SRB)	Type of Clearance:	None
Departure Time:	CDT	Type of Airspace:	

Airport Information

Airport:	Upper Cumberland Regional (SRB)	Runway Surface Type:	Asphalt
Airport Elevation:	1025 ft	Runway Surface Condition:	Dry
Runway Used:	22	IFR Approach:	None
Runway Length/Width:	6005 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Brian C Rayner	Adopted Date:	10/17/2011
Additional Participating Persons:	Rocky Davidson; FAA Nashville FSDO; Nashville, TN		
Publish Date:	10/17/2011		
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=80958		

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