



National Transportation Safety Board Aviation Accident Data Summary

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|--------------------------------|--------------------------------------|-------------------------|------------|
| Location: | Sparta, TN | Accident Number: | ERA11CA375 |
| Date & Time: | 07/02/2011, 1010 CDT | Registration: | N106S |
| Aircraft: | TEMCO GC-1B | 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.

Flight Events

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

Probable Cause

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-Aircraft systems-Flight control system-Rudder control system-Incorrect service/maintenance - C
Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Directional control-Attain/maintain not possible - C
Personnel issues-Task performance-Maintenance-Installation-Maintenance personnel - C

Pilot Information

| | | | |
|----------------------------------|---|------------------------------|----------|
| Certificate: | Private | Age: | 41 |
| Airplane Rating(s): | Multi-engine Land; Single-engine Land | Instrument Rating(s): | Airplane |
| Other Aircraft Rating(s): | None | Instructor Rating(s): | None |
| 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

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|---|--------------------------------------|-----------------------------|-----------------|
| Aircraft Manufacturer: | TEMCO | Registration: | N106S |
| Model/Series: | GC-1B | Engines: | 1 Reciprocating |
| Operator: | On file | Engine Manufacturer: | CONT MOTOR |
| Air Carrier Operating Certificate: | None | Engine Model/Series: | C145 SERIES |
| Flight Conducted Under: | Part 91: General Aviation - Personal | | |

Meteorological Information and Flight Plan

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|---|----------------------------------|-------------------------------------|------------------------------|
| Observation Facility, Elevation: | KCSV, 1880 ft msl | Weather Information Source: | Weather Observation Facility |
| Conditions at Accident Site: | Visual Conditions | Lowest Ceiling: | None |
| Condition of Light: | Day | Wind Speed/Gusts, Direction: | 3 knots, 360° |
| Temperature: | 27° C / 19° C | Visibility | 10 Miles |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Sparta, TN (SRB) | Destination: | Sparta, TN (SRB) |

Airport Information

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|-----------------------------|---------------------------------|----------------------------------|---------|
| Airport: | Upper Cumberland Regional (SRB) | Runway Surface Type: | Asphalt |
| Runway Used: | 22 | Runway Surface Condition: | Dry |
| Runway Length/Width: | 6005 ft / 100 ft | | |

Wreckage and Impact Information

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

Administrative Information

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|--------------------------------------|---|----------------------|------------|
| Investigator In Charge (IIC): | Brian C Rayner | Adopted Date: | 10/17/2011 |
| Note: | This accident report documents the factual circumstances of this accident as described to the NTSB. | | |
| Investigation Docket: | http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=80958 | | |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.