

NATIONAL TRANSPORTATIONS SAFETY BOARD
Office of Aviation Safety
Washington, DC 20594

SUMMARY OF AIRPLANE EXAMINATION on site and follow-up engine exam

-- CEN21FA024 --

A. ACCIDENT

Aircraft: Glasair III, N713MJ

B. PARTICIPANTS

Shawn Williams (on scene)
Air Safety Investigator
National Transportation Safety Board
Denver, CO

Troy Helgeson (engine exam)
Air Safety Investigator
Lycoming Engines
Williamsport, PA

Edward Dabrowski (on-site and engine exam)
FAA Inspector
Federal Aviation Administration
Des Plaines, IL

C. ACCIDENT SUMMARY

See factual report

D. DETAILS OF ON-SITE EXAMINATION

During the on-site examination of the airplane the following items were noted:

- Light pole traveled with the airplane and came to rest along the leading edge of the wing and under the engine (scraping evidence found along the roadway)
- The debris path was aligned about a 340° heading.
- Left fuel cell (wet wing) was breached with fuel dripping near left main landing gear when wing was manipulated.
- Fuel cap was tight and secure
- No fuel present in the left and right wings, due to the impact damage and composite fractures
- Rudder continuity could not be established on scene due to disposition of the wreckage
 - o Rudder control cables were broomstrawed, consistent with overload failure

Summary of Engine Examination

- The right aileron primary flight control continuity was confirmed from the control surface continuously to the control sticks (both) with no breaks.
- The left aileron primary flight control continuity was confirmed from the control surface to about 18" outboard of green tape on the wing structure at the location of a fracture of the control tube and from the other side of the fracture into the cockpit and to the control sticks
- The engine rested upside down and the cockpit was right side up.

E. DETAILS OF ENGINE EXAMINATION

- The rear cylinder push rods bent, right lower engine mount broken, and the attachment spring on the propeller governor broken;
- The engine was equipped with an electronic ignition system and was not field tested
- Equipped with automotive sparkplugs were slightly dark when compared to the Champion Aviation Check-A-Plug Chart (AV-27); the electrodes appeared undamaged.
- The engine's crankshaft was rotated by hand; continuity through the engine valve train and to the accessory section was confirmed
- The oil pickup screen was clear of debris
- Fuel was found at the servo fuel line, and the fuel injectors were clear
- Engine control continuity was established.
- No preimpact anomalies were noted during the airplane examination.

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