National Transportation Safety Board Washington, DC 20594

Brief of Accident

Adopted 12/12/1995

ATL95FA092

File No. 766 04/27/1995 STEVENSON, AL Aircraft Reg No. N41SW Time (Local): 12:10 CDT Make/Model: Wittman / O&O Fatal Serious Minor/None Engine Make/Model: Continental / O-470J Crew 2 0 0 Aircraft Damage: Destroyed Pass 0 0 0 Number of Engines: 1 Operating Certificate(s): None Type of Flight Operation: Personal Reg. Flight Conducted Under: Part 91: General Aviation Last Depart. Point: OCALA, FL Condition of Light: Day Destination: OSHKOSH, WI Weather Info Src: Weather Observation Facility Airport Proximity: Off Airport/Airstrip Basic Weather: Visual Conditions Lowest Ceiling: 25000 Ft. AGL, Overcast Visibility: 15.00 SM Wind Dir/Speed: 180 / 015 Kts Temperature (°C): 23 Precip/Obscuration:

Pilot-in-Command

Certificate(s)/Rating(s)

Flight Instructor; Commercial; Multi-engine Land; Single-engine Land; Single-engine Sea

Age: 91

Instrument Ratings

Airplane

Flight Time (Hours)

Total All Aircraft: 16995 Last 90 Days: Unk/Nr Total Make/Model: Unk/Nr Total Instrument Time: Unk/Nr

Printed on: 3/22/2012 3:56:12 PM

REPORTS FROM GROUND WITNESSES, NONE OF WHOM ACTUALLY SAW THE AIRPLANE, VARIED FROM HEARING A HIGH REVVING ENGINE TO AN EXPLOSION. OF THE WRECKAGE REVEALED THAT THE AIRPLANE EXPERIENCED AN IN-FLIGHT BREAKUP. DAMAGE AND STRUCTURAL DEFORMATION WAS INDICATIVE EXAMINATION OF AILERON-WING FLUTTER. WING FABRIC DOPE WAS DISTRESSED OR MISSING ON THE AFT INBOARD PORTION OF THE LEFT WING UPPER SURFACE AND ALONG ENTIRE LENGTH OF THE TOP OF THE MAIN SPAR. LARGE AREAS OF DOPE WERE ALSO MISSING FROM THE LEFT WING UNDERSURFACE. THE ENTIRE FABRIC LOWER SURFACES OF THE RIGHT WING HAD DELAMINATED FROM THE WING PLYWOOD SKIN. THE DOPED FINISH WAS SEVERELY COVERING ON THE UPPER AND DISTRESSED AND MOTTLED. THE FABRIC COVERING HAD NOT BEEN INSTALLED IN ACCORDANCE WITH THE POLY-FIBER COVERING AND PAINT MANUAL; THE PLYWOOD WAS NOT TREATED WITH THE POLY-BRUSH COMPOUND.

Brief of Accident (Continued)

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Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: CRUISE

Findings

1. (C) WING, SKIN - DEBONDED

2. (C) ACFT/EQUIP, INADEQUATE AIRFRAME - OWNER/BUILDER

3. (C) WING, SKIN - DELAMINATION

4. (C) WING - FLUTTER

5. WING - OVERLOAD

6. WING - SEPARATION

Findings Legend: (C) = Cause, (F) = Factor

The National Transportation Safety Board determines the probable cause(s) of this accident as follows.

AILERON-WING FLUTTER INDUCED BY SEPARATION AT THE TRAILING EDGE OF AN UNBONDED PORTION OF WING FABRIC AT AN AILERON WING STATION. THE DEBONDING OF THE WING FABRIC WAS A RESULT OF IMPROPER INSTALLATION.