

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

FOR RELEASE 5:00 PM NOV 29 1974

ISSUED: November 29, 1974

Forwarded to:

Honorable Alexander P. Butterfield
Administrator
Federal Aviation Administration
Washington, D. C. 20591

SAFETY RECOMMENDATION(S)

A-74-100 thru 101

On June 15, 1974, a Polish Model SZD-24-4A FOKA 4 sailplane, N21714, was towed from Burley, Idaho, to about 30 miles southwest and was released, in clear weather, for free flight at 8,500 feet m.s.l. The aircraft crashed shortly thereafter as a result of an in-flight structural failure, and the pilot was killed. The Safety Board's investigation has disclosed that the structural bonding of the airplane was inadequate. We believe this inadequacy merits your immediate attention in order to avoid future failures.

Four witnesses saw the left wing of N21714 fold over toward the fuselage, separate, and flutter to the ground. The left wing, which was found intact on the top of a mountain 1/2 mile from the fuselage and right wing, was sent to the Forest Products Laboratory at Madison, Wisconsin, for structural evaluation. The left wing was composed of a sparless, torsion-box structure with a thick plywood-sandwich stressed skin.

Detailed examination at the Forest Products Laboratory disclosed numerous substandard glue joints characterized by excessively thick glue lines and poor adhesive bonding. More importantly, the adhesive bond between the top of the torsion-box structure--the major structural element--and the top wing skin was essentially absent. The precise structural contribution of each of the various joints to the overall strength and integrity of the wing is unknown. However, the extreme degree of substandard bonding evidenced and the absence of bond between

primary structures are interpreted as prima facie evidence of structural fault. No material defect of the particular wood was noted.

An annual inspection of the aircraft was performed on April 12, 1974, at 543 hours, and it had been flown approximately 20 additional hours before the accident.

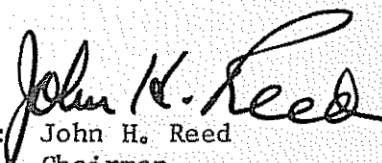
There are only about six of the SZD sailplanes registered in the United States. Poland, however, has produced about 2,600 of the SZD series, many of which have been exported throughout the world.

In view of the above, the National Transportation Safety Board recommends that the Federal Aviation Administration:

1. Issue an Airworthiness Directive to require that the adequacy of glue joints in SZD sailplanes registered in the United States be ascertained before further flight.
2. Investigate pertinent design, manufacturing, and quality control aspects of the SZD sailplane series to assure compliance with 14 CFR 21.29, "Issue of Type Certificate: import products."

Personnel from our Bureau of Aviation Safety will be made available if any further information or assistance is required.

REED, Chairman, McADAMS, THAYER, BURGESS, and HALEY, Members, concurred in the above recommendations.


By: John H. Reed
Chairman

THESE RECOMMENDATIONS WILL BE RELEASED TO THE PUBLIC ON THE DATE SHOWN ABOVE. NO PUBLIC DISSEMINATION OF THIS DOCUMENT SHOULD BE MADE PRIOR TO THAT DATE.