



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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Date: October 6, 1992

In reply refer to: A-92-105

Honorable Thomas C. Richards  
Administrator  
Federal Aviation Administration  
Washington, D.C. 20591

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On August 9, 1992, a Grob G103 sailplane<sup>1</sup>, N103FB, crashed during an approach to runway 19 at the Truckee-Tahoe Airport, Truckee, California. The pilot and passenger were completing a commercial sight-seeing flight and were on the base leg of the landing approach when the pilot extended the wing spoilers to their full open position. When he subsequently attempted to retract the spoilers to maintain the proper glide path, he found that the spoiler control handle was stuck and neither he nor his passenger were able to break the handle loose. Although he had completed the turn from base leg to final approach, the pilot was forced to lower the nose of the sailplane and descend at a relatively steep angle in order to maintain sufficient airspeed. As a result, the sailplane descended to the surface prematurely and collided with a dirt embankment short of the runway, damaging the aircraft substantially and causing serious injuries to the passenger.

The on-scene investigation of the accident by the Federal Aviation Administration's Reno, Nevada, Flight Standards District Office, disclosed that the left wing spoiler had extended beyond its normal limit, allowing the bottom of the spoiler to contact and jam against the edge of the spoiler cap recess on the upper surface of the wing. As a result, the interconnected left and right wing spoilers were both locked in their fully extended positions. The wing spoilers on the Grob 103 sailplane are attached to and actuated by pivot arms within the wing structure and, when deployed, move both vertically and laterally (from inboard to outboard). A phenolic limit or stop block attached to the outboard underside of the wing skin normally contacts and restricts the outer pivot arm and limits spoiler extension so as to preclude such jamming. However, the stop block in N103FB was found worn

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<sup>1</sup>Grob sailplanes and motorgliders are manufactured in Germany in accordance with JAR 22 European Airworthiness Requirements and imported to the United States under Title 14 CFR 21.29, "Issue of Type Certificate: Import Products."

excessively and allowed the pivot arm to overextend the spoiler above the spoiler cap recess.

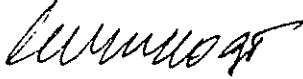
The accident aircraft, which had accumulated a total time-in-service of 2,000 flight hours, was given an annual inspection on August 6, 1992, only days before the accident, and was approved for return to service. The annual inspection checklist in the current Grob 103 maintenance manual provides no details regarding wing spoiler extension limits. Moreover, there is no specific reference to inspection of the spoiler extension stop blocks. However, the manufacturer is currently preparing a service bulletin outlining inspection procedures to ensure that the stop blocks are not worn excessively and that an overlap of at least 5 millimeters exists between the bottom of the spoiler and the upper edge of the recessed spoiler cap area. The bulletin indicates that compliance should be accomplished by December 31, 1992. Additionally, Grob maintenance manuals will be revised to include a requirement for periodic inspection of the stop blocks and appropriate repair procedures related to their removal and installation.

The wing spoiler systems in Grob G103 series sailplanes are similar to those installed in Grob G102 and G104 series sailplanes and in G109 series motorgliders. Approximately 350 of these aircraft are currently operating in the United States.

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

Issue an airworthiness directive applicable to Grob G102, G103, and G104 series sailplanes and G109 series motorgliders requiring within the next 10 hours time-in-service: (1) an inspection of the wing spoilers in their fully deployed position to ensure that adequate rigging clearance (overlap) exists in the recessed spoiler cap area, and (2) an inspection of the wing spoiler stop blocks for excessive wear or damage. Stop blocks evidencing these conditions should be removed and replaced before further flight. (Class I, Urgent Action) (A-92-105)

Chairman VOGT, Vice Chairman COUGHLIN, and Members LAUBER, HART, and HAMMERSCHMIDT concurred in this recommendation.

  
By: Carl W. Vogt  
Chairman

ARTCC stated that, based on his review of observed data, he advised the AFRCC that nothing conclusive was in the tracks of the observed data. En route low altitude charts clearly depict the ARTCC boundaries. AFRCC personnel should have realized that radar tracking information for both Indianapolis ARTCC and Cleveland ARTCC was needed.

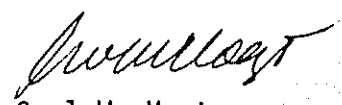
The Safety Board is aware that Scott AFRCC uses a computer program which provides the user with a listing of all radar sites within recording range of a selected point. The site listings identify the controlling facility, along with true bearing and distance from that facility to the point selected. The Safety Board believes that this type of program is best suited for locating radar facilities from a known accident site. If the accident site is not known, but there is a suspected path of an aircraft believed to have been in an accident, the entire path should be analyzed for ARTCCs that may have recorded radar information. The Safety Board believes that Scott AFRCC personnel should consult aviation navigation charts as their primary tool when selecting ARTCCs for the purpose of requesting recorded radar information.

Therefore, the National Transportation Safety Board recommends that the U.S. Air Force Rescue Coordination Center:

Develop operating procedures that direct personnel to consult aviation navigation charts that depict Air Route Traffic Control Center (ARTCC) boundaries when selecting ARTCCs for the purpose of requesting recorded radar information to ensure that all facilities that may have relevant information have been contacted. (Class II, Priority Action) (A-92-100)

Collaborate with representatives of the U. S. Coast Guard in revising the National Search and Rescue Manual to explain that various possible radar ground tracks may exist when searching for an aircraft that is not on a discrete transponder code; that the Rescue Coordination Center may supply the location of each of these tracks to local search and rescue personnel; that the accident aircraft may be located near the end of one of the tracks; and that the area near the end of the ground tracks should be thoroughly searched. (Class II, Priority Action) (A-92-101)

Chairman VOGT, Vice Chairman COUGHLIN, and Members LAUBER, HART, and HAMMERSCHMIDT concurred in these recommendations.



By: Carl W. Vogt  
Chairman