

UNITED STATES OF AMERICA  
NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: April 27, 1971

Adopted by the NATIONAL TRANSPORTATION SAFETY BOARD  
at its office in Washington, D. C.  
on the 9th day of April, 1971.  
(revised)

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FORWARDED TO: )  
Honorable John H. Shaffer )  
Administrator )  
Federal Aviation Administration )  
Washington, D. C. 20590 )  
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SAFETY RECOMMENDATIONS A-71-22&23

The National Transportation Safety Board is presently investigating the Western Air Lines Boeing 720B training accident which occurred during a "high drag" approach with a simulated inoperative engine at the Ontario International Airport, Ontario, California, March 31, 1971.

Our investigation to date indicates that control of the aircraft was suddenly lost during the missed-approach portion of the maneuver. The aircraft turned suddenly to the right, then rolled over the top and crashed in a nearly vertical attitude.

Although our investigation is still in progress, the rudder actuator support fitting P/N 65-5937 was found in the failed condition. The upper lug of the fitting had failed with evidence of stress corrosion, and the lower lug had failed due to overload. The subject assembly had been inspected in accordance with Boeing Service Bulletin 2903 and Airworthiness Directive 69-13-2. The total service time on the rudder actuator support fitting since the last inspection on February 8, 1971, was approximately 452 hours.


A failure of this assembly in flight results in complete loss of rudder control. The Safety Board has been advised that there have been four previous instances -- three of which involved foreign carriers -- in which rudder actuator support assembly upper and lower fittings both failed. In each case, the failures, which were precipitated by stress corrosion, occurred during pilot training involving engine-out maneuvers. While we do not yet know all the details of these occurrences, or the exact model of aircraft (707/720) on which they occurred, we do know that they did not result in reportable accidents.

As a result of our findings to date relative to the Western Air Lines Boeing 720B accident, the Safety Board recommends that:

1. The Federal Aviation Administration reevaluate the mandatory inspection time periods and procedures required in Airworthiness Directive 69-13-2 and Amendment 39-1174 and make modifications as deemed necessary to assure an adequate level of safety.
2. All Boeing 707/720 operators be informed of the potential hazard involved in low-altitude, high-asymmetric thrust conditions in the event that failure of the rudder actuator support fitting should occur.

The recommendations will be released to the public on the issue date shown above. No public dissemination of the contents of this document should be made prior to that date.

Reed, Chairman; Laurel, McAdams, and Burgess, Members, concurred in the above recommendation. Thayer, Member, was absent, not voting.

By:   
John H. Reed  
Chairman