

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

FOR RELEASE: 6:30 P.M., E.D.S.T., MAY 12, 1975

ISSUED: May 12, 1975

Forwarded to:

Mr. James E. Dow
Acting Administrator
Federal Aviation Administration
Washington, D. C. 20591

SAFETY RECOMMENDATION(S)

A-75-43 & -44

On January 13, 1975, a main landing gear aft trunnion failed on an Ansett Airlines Boeing 727-277, UH/RMU at Sydney, Australia. On March 13 and 14, 1975, meetings were held so that interested parties could review the investigative results pertaining to the accident and discuss proposed corrective action. A Safety Board specialist attended those meetings.

To date, six other main gear aft trunnions have failed, all of which had been reworked. Previously, it was believed that improper rework procedures contributed to the failures. However, the trunnion on the Ansett airplane had not been reworked and was the first such failure on a 200 series airplane. Boeing's metallurgical examination revealed that the fracture was caused by a fatigue crack with a concurrent small zone of stress corrosion. The fatigue crack began on the top of the trunnion at the bottom of a machining groove .002 to .004 inch deep.

Evidence of shot peening in the groove indicates that the groove was made during the original machining of the part. A similar but smaller groove was also found on the trunnion of the opposite unfailed gear on the same airplane.

The Safety Board is aware that certain corrective actions are being processed by both the FAA and Boeing. However, in view of the potential hazard involved following the failure of this part, the National Transportation Safety Board recommends that the Federal Aviation Administration:

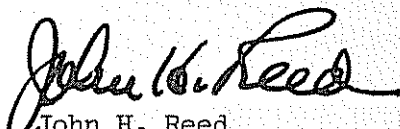
1. Require by Airworthiness Directive, a one-time visual inspection of all Boeing 727 spare and in-service main landing gear outer cylinders at the upper radius area of the aft trunnion for machining grooves visible under the paint finish. If any visible grooves or cracks are found, repair or replace as required. (Class II)

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2. Reassess the landing gear manufacturer's quality control procedures and eliminate the deficiencies which enabled an improperly machined part to enter service. (Class II)

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 ISSUE DATE SHOWN ABOVE. NO PUBLIC DISSEMINATION OF THE CONTENTS OF THIS DOCUMENT SHOULD BE MADE PRIOR TO THAT DATE.