

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

ISSUED: November 22, 1972

Adopted by the NATIONAL TRANSPORTATION SAFETY BOARD
at its office in Washington, D. C.
on the 10th day of November 1972

FORWARDED TO:

Honorable John H. Shaffer)
Administrator)
Federal Aviation Administration)
Washington, D. C. 20591)

SAFETY RECOMMENDATION A-211 & 212

The National Transportation Safety Board's investigations of two recent Boeing 727 accidents involving main landing gear rear trunnion support beam breakage indicate that additional corrective action is necessary to prevent similar, and possibly more serious, accidents in the future.

Northwest Airlines (at Washington National Airport on October 30, 1972) and Eastern Airlines (at Atlanta, Georgia on November 8, 1972) experienced failure of a main landing gear rear support beam, P/N 65-16230. Both failures occurred on taxiing and resulted in extensive damage to the aircraft. Examination of the beams showed that the fractures originated from small pre-existing cracks extending from the trunnion bearing bore.

As you know these are the last two in a series of five accidents which have involved failure of the beam. We are aware that the FAA has issued two AD's (AD 70-26-3 and AD 71-5-4) in an attempt to eliminate this problem by establishing inspections intended to detect small existing cracks in the trunnion bearing bore or the trunnion bearing retention bolt holes. Both AD's require periodic reinspection of two areas of the beam at time intervals not to exceed 2000 flight hours. However, the last two beams involved in accidents were inspected only 852 and 335 hours prior to their complete failures. The Board was unable to determine if existing cracks went undetected in these inspections, or if the cracks originated after the inspections and rapidly propagated to critical lengths.

Thus, the reason for failure of the operators to detect these cracks before the beams failed may be attributed to one or the combination of two factors; either the inspection procedure is not adequate to detect the cracks before they reach a critical size, or the cracks propagate too fast to be detected within the established inspection interval.

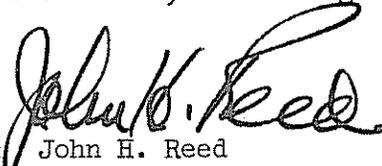
Our staff has been in communication with personnel of your Western Regional Office and have been advised that a new Airworthiness Directive for more stringent inspection requirements of this landing gear is being considered. We concur that due to the potential danger inherent in this type of failure, prompt action is warranted. The Safety Board, therefore, recommends that the Federal Aviation Administration issue a new airworthiness directive which considers the following inspection criteria:

1. That all Models 727 main landing gear support beams, P/N 65-16230, that have more than 200 hours service time since the last inspection required under AD 71-5-4 be reinspected for cracks in the trunnion bearing bore on a high priority basis with the trunnion bearing removed.
2. That such inspection be repeated at appropriate intervals, such intervals to be determined from the results of the above-mentioned inspection, or until an FAA-approved replacement beam is installed.

Our technical staff is available for any further information or assistance they may be able to provide on this problem.

This recommendation 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, McAdams, Burgess, and Haley, Members, concurred in the above recommendations. Thayer, Member, was absent, not voting.


By: John H. Reed
Chairman