

NATIONAL TRANSPORTATION SAFETY BOARD WASHINGTON, D.C.

ISSUED: September 28, 1979

Forwarded to:

Honorable Langhorne M. Bond
Administrator
Federal Aviation Administration
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-79-79

On September 18, 1979, an American Airlines, Boeing 707-323C cargo jet, N7566A, was approaching Chicago O'Hare Airport. About 10 miles northwest of the airport the left inboard trailing edge flap separated from the aircraft at 190 knots and 9,500 ft above ground level. No one on the ground was injured.

Inspection of the aircraft revealed that the flap track lower support fittings had failed. Detailed inspection by a Safety Board metallurgist revealed that the fitting, PN 65-2822, at wing station 293 had a small amount of preexisting fatigue damage.

Investigation revealed that there were no Airworthiness Directives issued previously. However, Boeing had issued Structural Interim Advisory No. 707/720-110, dated May 30, 1978, to apprise operators of cracking of the fittings. The advisory reported that, during inspections, five operators had detected seven cracked fittings at station 293 — in some fittings the cracking was extensive.

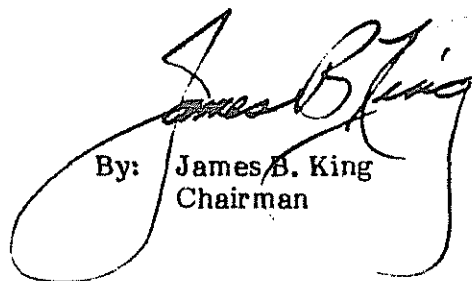
On May 30, 1978, Boeing also issued Advisory No. 707/720-111 apprising operators that cracks had been found across the base of the flap track's lower support fittings at wing station 438 on both wings of two aircraft. Cracks were reported on a total of three airplanes.

The Safety Board is continuing the investigation to determine why N7566A had an in-flight failure and the extent to which the small amount of preexisting fatigue damage contributed to or caused the failure. However, in view of the evidence of fatigue on N7566A and the service experience reported in the Boeing advisories, the Safety Board believes that interim action should be taken to ensure that the integrity of the flap installations on other B707 aircraft is not impaired by cracks in the flap track lower support fittings.

Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Issue an Airworthiness Directive to require a nondestructive inspection of 707-300/-300B/-300C/-400 models flap track lower support fittings and replacement if required. (Class I, Urgent Action) (A-79-79)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in this recommendation.



By: James B. King
Chairman