

68-17

DEPARTMENT OF TRANSPORTATION
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20591

IN REPLY
REFER TO: NC-1-NA-96

Honorable William F. McKee
Administrator
Federal Aviation Administration
Department of Transportation
Washington, D. C. 20590

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NTSB

Dear General McKee:

On October 17, 1967, a Northwest Airlines B-727, N486US, No. 3 engine, Pratt & Whitney JT8D-1, shortly after takeoff from Milwaukee, Wisconsin, experienced a power loss accompanied by a sudden drop in oil quantity and increase in oil pressure. The flight returned to Milwaukee twelve minutes after takeoff without incident or injury to personnel.

Subsequent examination of the engine disclosed that an internal fire of major proportions had existed during flight. An analysis of the factors contributing to the initiation of the fire disclosed a failure to the No. 4 bearing oil breather assembly, P/N 528628, resulting in ignition of No. 4 bearing oil and oil vapors by high pressure 13th stage air.

A Pratt & Whitney turbojet Service Bulletin, No. 1158, providing for incorporation of an improved oil breather assembly had not been incorporated in the subject engine. Incorporation of the bulletin, although recommended by the manufacturer is not mandatory.

We are aware that excessive wear to the No. 4 bearing oil breather tubes has been a service problem to the operators for some time; however, the subject failure is the only one that we are aware of which has resulted in an extensive fire.

In reviewing the report of this incident it was also noted that no fire warning was obtained by the crew while the fire was progressing. This is understandable inasmuch as the fire was contained within the fan duct. Only by the severance of the burner pressure sense line and resultant loss of power was the flight crew alerted to the existence of an engine discrepancy. Had this power loss not occurred, it is conceivable that the fire could have progressed to more serious proportions prior to its detection by the flight crew.

Honorable William F. McKee (2)

The following recommendations are forwarded for your consideration in order to preclude occurrences of a similar nature.

1. That compliance with Pratt & Whitney turbojet Service Bulletin No. 1158 be made mandatory at the earliest date practical on JT8D engines not so modified at manufacture.
2. That the adequacy of the powerplant fire warning system be reevaluated relative to the problems associated with fan duct fires.

This matter has been discussed with personnel of your Eastern Region, Engineering staff. Please do not hesitate to contact us if further information is desired in this matter.

Sincerely yours,

Original of this letter

is being retained in the file

Joseph J. O'Connell, Jr.
Chairman