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

NOV 9 1967

IN REPLY
REFER TO:

CC-1-AS-96

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

Dear General McKee:

Investigation of the accident involving National Airlines L-188, N5006K, at New Orleans, Louisiana, on September 3, 1967, indicates, in our judgment, a need for review of the carrier's line maintenance procedures and practices.

The investigation revealed that the rotary actuator, P/N 650545UD, on the No. 4 propeller was actuated from the null position and failed in the full increase RPM position. The rotary actuator is a device used in the propeller control synchronization and fuel governor systems. Due to this failure the propeller oversped during takeoff, subsequently pitch locked when the pilot reduced engine power and caused the aircraft to swerve to the left when reverse thrust was applied. The aircraft left the runway resulting in major damage to the fuselage and inboard engines.

Review of the aircraft log book entries made since February 1, 1967, revealed numerous flight complaints on the No. 4 propeller control and synchronization systems. The log book revealed that on September 2, 1967, six flights prior to the accident, the propeller synchronization system and the rotary actuators on propellers 1, 3 and 4 were inoperative. The subject aircraft was on the ground in New Orleans for 17 hours prior to the accident at which time some maintenance was performed on the propeller systems; however, the aircraft was dispatched with the Nos. 1, 3 and 4 rotary actuators still placarded inoperative. National Airlines maintenance personnel advised that these rotary actuators failed to operate when tested and that all were in the null positions when the aircraft was dispatched.

Our review of the National Airlines Maintenance Manual indicated that the aircraft may be dispatched with an inoperative propeller synchronization system as well as inoperative rotary actuators as

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long as the system is placarded inoperative in the cockpit. There was no requirement in the manual for the deactivation of the propeller synchronization circuit breakers.

In view of the subject accident the following corrective action is recommended:

1. The Maintenance Manual be revised to require pulling the pertinent circuit breakers to the "OPEN" position any time the aircraft is dispatched with an inoperative propeller synchronization system.
2. Review National Airlines maintenance procedures and practices to assure acceptable standards of airworthiness are maintained.

~~During the investigation of this accident the problem areas were discussed by personnel of our Engineering Division with members of your Flight Standards Division, Central Region and the Air Carrier District Office 34, Houston, Texas.~~

If we can be of any further assistance in this matter please feel free to contact us.

Sincerely yours,

Joseph J. O'Connell, Jr.
Chairman