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

ISSUED: July 7, 1972

Adopted by the NATIONAL TRANSPORTATION SAFETY BOARD  
at its office in Washington, D. C.  
on the 23rd day of June 1972

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FORWARDED TO: )  
Honorable John H. Shaffer )  
Administrator )  
Federal Aviation Administration )  
Washington, D. C. 20591 )  
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SAFETY RECOMMENDATIONS A-72-99 thru 101

During the National Transportation Safety Board's Public Hearing regarding the Mohawk Airlines Accident at Albany, New York, an area of disagreement developed as to the proper emergency procedures to be followed upon encountering a cruise pitch lock withdrawal malfunction. Pilots operating the FH-227B aircraft stated that they disagreed with the published procedures contained in the Mohawk Airlines Operations Manual.

The Mohawk Airlines emergency procedure now in effect describes several methods to eliminate the cruise pitch lock malfunction. The procedure goes on to state, "If the lock cannot be withdrawn, the affected engine should be shut down and the propeller feathered to avoid the danger of overheating the engine when the aircraft reduces speed for the landing." The emergency procedures contained in the Ozark Air Line Operations Manual do not follow the Mohawk presentation verbatim, but are similar.

Three Mohawk Airlines pilots (a line captain and two FAA designated check airmen) testified that they disagreed with the latter portion of the procedure. They stated, in part, that if the engine was producing thrust they would prefer to continue using it to touchdown, even though the propeller was "hung" on the cruise pitch lock. This preference coincides with the recommended procedure contained in the Rolls Royce Service Bulletin No. 61-10a, dated May 15, 1970.

The Safety Board believes that the area of disagreement brought out by the testimony and the data set forth in the Rolls Royce Bulletin 61-10a constitute sufficient grounds to request a reevaluation of the present emergency procedure.

The explanation in the emergency procedures section of the Mohawk Operations Manual is misleading. It creates the impression that the main hazard associated with a propeller "hung" on the cruise pitch lock is potential damage to, or destruction of, the affected engine. No mention is made of the difficulties associated with continued flight following such a malfunction. For instance, the hazards involved in attempting a missed approach from low indicated airspeed with the propeller "hung" on the cruise pitch lock are not described. The Operational Manual should be revised to place emphasis on the operational problems inherent in attempting to land, or execute a missed approach without shutting down the engine and feathering the affected propeller.

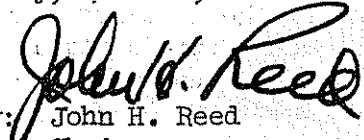
The Safety Board, therefore, recommends that the Federal Aviation Administration:

- 99 1. Review and evaluate the present cruise pitch lock emergency procedure. The review should include an evaluation of the recommended procedures set forth by the Rolls Royce Company in their Service Bulletin No. 61-10a to ascertain if these procedures are preferable to those now in effect.
- 100 2. Require that the language in the Mohawk Airlines Operations Manual and other FH-227 air carrier Operations Manuals be revised to clearly identify the potential hazards associated with continued operation, attempted landings, and missed approaches with a propeller "hung" on the cruise pitch lock.
- 101 3. Require that all carriers operating FH-227B aircraft revise their recurrent ground training curricula to include instruction on the performance characteristics of the FH-227B when operating the aircraft with a cruise pitch lock malfunction. Emphasis should be placed upon flight conditions involving a windmilling propeller on the cruise pitch or flight fine locks and the minimum control speed problems associated with such conditions.

Members of our Bureau of Aviation Safety will be available for consultation in the above matter if desired.

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.

Reed, Chairman; McAdams, Thayer, Burgess and Haley, Members, concurred in the above recommendations.

  
By: John H. Reed  
Chairman