

**NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.**

ISSUED: September 3, 1981

Forwarded to:

Honorable J. Lynn Helms  
Administrator  
Federal Aviation Administration  
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-81-101 and -102

On September 1, 1981, a Robinson R-22 helicopter, N9065D, crashed and burned in a wooded area of Granby, Connecticut; the pilot and passenger were killed. The Safety Board's on-going investigation of the accident has revealed that one of the main rotor blades separated in-flight. Preliminary metallurgical examination in the Safety Board's laboratory revealed a fatigue failure in the root area of the blade where the blade spar attaches to the root rib fitting. Fatigue had progressed across 70 percent of the blade's cross-section. The root area of the spar and fitting are completely enclosed by the external blade skin and cannot be inspected visually. Service time on the main blade, PNA016-1, was about 690 hours.

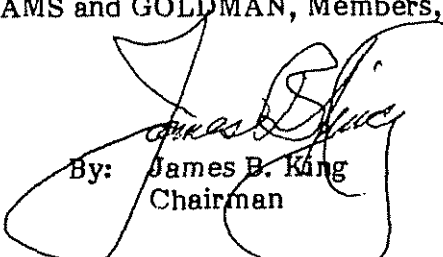
At this time, a more detailed metallurgical examination is in progress. However, the Safety Board is concerned that other main blades on Robinson R-22 helicopters may be in the same condition; therefore, we believe that immediate action is warranted to prevent similar accidents.

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

Issue an immediate Airworthiness Directive to establish a retirement time on the Robinson R-22 main rotor blades based on the service time of the failed blade. (Class I, Urgent Action) (A-81-101)

Develop and implement an inspection technique for the main rotor blades to detect progressive fatigue in the area of the rib root fitting. (Class I, Urgent Action) (A-81-102)

KING, Chairman, DRIVER, Vice Chairman, and BURSLEY, Member, concurred in these recommendations. McADAMS and GOLDMAN, Members, did not participate.

By:   
James B. King  
Chairman