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

ISSUED: January 5, 1982

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Forwarded to:

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

SAFETY RECOMMENDATION(S)

A-81-161

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On July 2, 1981, a Beech aircraft model 65-A80-8800, N100UV, was involved in a fatal accident about 7 miles east-southeast of Madisonville, Texas. The National Transportation Safety Board's investigation has revealed a maintenance problem which we believe warrants attention.

The aircraft was equipped with two Avco Lycoming direct drive engines, Model IO 720-A1B. Disassembly and examination of these engines revealed that a majority of the cylinder base nuts on the right engine, S/N 2-949-54A, were under-torqued. Further examination disclosed that the cylinder boss area under the nuts had been painted. The overhaul manual, section 3, paragraph 3-28, for these engines specifies that "all machined bosses should be masked before painting. Do not paint areas under hold down nuts where torque is required."

Although the under-torqued condition of the engine cylinder base nuts was not considered a factor in this accident, the loss of a cylinder because of this condition could result in a potentially hazardous situation.

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

Issue a General Aviation Airworthiness Alert (Advisory Circular 43-16) to emphasize the importance of following the established procedures published in the manufacturer's engine overhaul manual with regard to masking machined bosses when crankcase areas are painted. (Class II, Priority Action) (A-81-161)

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

  
By: James B. King  
Chairman

AAR-81-17

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