NATIONAL TRANSPORTATION SAFETY BOARD WASHINGTON, D.C.

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Forwarded to:

Honorable Alexander P. Butterfield Administrator Federal Aviation Administration Washington, D. C. 20591

SAFETY RECOMMENDATION(S)

A-74-117

On August 13, 1974, a Beechcraft Model B35V aircraft, N9007V, operated by the Federal Aviation Administration, was engaged in approach and landing practice at the Culpepper, Virginia, Airport when the aircraft became involved in a serious incident.

During the climbout after the second landing, intense smoke in the cockpit necessitated an immediate landing. Since the landing gear would not extend electrically, the copilot began to lower the gear manually. However, there was not enough time available to extend the gear fully, and the aircraft was landed on the partially extended gear which resulted in minor damage to the aircraft.

Investigation disclosed that the bellows portion of the wastegate exhaust elbow assembly (Beech Part No. 286S35-074-137) of the AiResearch turbosupercharger system had failed because of fatigue. Failure of the bellows allowed the elbow to drop off the wastegate flange, and consequently the engine firewall, main fuel line, and electrical wiring were exposed to open flames of the engine exhaust.

In view of the hazard potential of undetected cracks in these bellows installations, the National Transportation Safety Board recommends that the Federal Aviation Administration:

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Issue an Airworthiness Directive to require an inspection at an early date of the bellows on all turbosupercharged aircraft for cracks, specify an appropriate time interval between subsequent periodic inspections, and require a modification of the elbow so that it cannot fall off of the flange if the bellows break.

Personnel from our Bureau of Aviation Safety have been in contact with your Flight Standards representatives and will be available if any further information or assistance is desired.

REED, Chairman, McADAMS, THAYER, BURGESS, and HALEY, Members, concurred in the above recommendation

By: / John H. Reed Chairman

THIS RECOMMENDATION 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.