

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: September 11, 1979

Forwarded to:

Honorable Langhorne M. Bond
Administrator
Federal Aviation Administration
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-79-71

On June 4, 1978, an Antilles Air Boats Grumman G-21A amphibian made an emergency water landing in Charlotte Amalie Harbor, St. Thomas, U.S. Virgin Islands, after a carburetor heat valve linkage failed. As a result of the failure, power was lost from one engine shortly after takeoff on a scheduled air taxi flight with 10 passengers on board. The aircraft was landed successfully after it was unable to climb over or turn away from an island in the harbor.

Engine power was lost because the linkage connecting the cold air and hot air butterfly valves in the carburetor heat valve separated. When the linkage separated, both the hot and cold air valves closed, all air supply to the carburetor was shut off, and the engine stopped. The linkage separated after an improperly installed bolt fell out. The only provision for positive retention of these valves in the selected position was the interconnecting linkage, which in effect makes the two valves mutually dependent.

In this instance, there were no injuries and all passengers were evacuated quickly because the aircraft landed in the harbor close to the shore. However, the Safety Board is concerned over the potential for injury or loss if a similar failure causes a forced landing in the open sea. We believe that corrective action is required to prevent this type of failure.

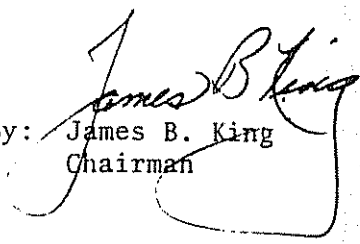
Honorable Langhorne M. Bond

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

Issue an Airworthiness Directive to (1) define and require a modification of the carburetor heat valves on all Grumman G-21A airplanes to provide positive retention of the valves in the selected position so that the valves will not close if the linkage fails; and (2) define and require a modification of the operating lever on the carburetor hot-air valve operating lever to facilitate installation of the linkage connecting bolt so that it will not fall out if the nut is lost. (Class II--Priority Action) (A-79-71)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in this recommendation.


By: James B. King
Chairman