

Log 1540

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: September 19, 1983

Forwarded to:

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

SAFETY RECOMMENDATION(S)

A-83-66

On July 31, 1982, a Maule airplane, model M-5-210C, N88JS, crashed during takeoff from the Kingsley Airport at Klamath Falls, Oregon, after experiencing a loss of engine power due to water in the fuel. None of the four occupants aboard was injured, but the airplane was substantially damaged. On January 19, 1980, a Maule model M-5-235C, N9069E, was involved in a similar accident at Portland, Oregon. However, in that case, the pilot was seriously injured, and the airplane was destroyed.

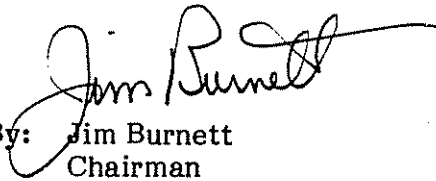
The Safety Board believes that the water in the fuel emanated from the auxiliary fuel tanks installed in the wings of these airplanes just outboard of the main fuel tanks. Fuel carried in the auxiliary tanks is transferred to the main tanks through a small vibrator pump. In the course of its investigation, the Safety Board learned that some pilots of Maule airplanes keep these auxiliary tanks empty or only partially filled for relatively long periods of time. Consequently, a considerable amount of water may accumulate within the tanks as a result of condensation. The pilot of N88JS had utilized the auxiliary tanks for the first time in several months on the flight immediately preceding the accident.

Because water which collects in the auxiliary tanks cannot drain directly to the gascolator or other fuel system low points, each auxiliary tank has a drainable sump. However, the sumps are fitted with Allen head drain plugs which are impractical and inconvenient to remove during routine preflight inspection of the airplane. As a result, in July of 1975, the Maule Aircraft Corporation issued Service Letter No. 32 which provides for replacement of auxiliary fuel tank plugs with quick drain valves to accommodate regular sump drainage. Although both N88JS and N9069E were affected by this Service Letter, which Maule deemed "mandatory," the quick drain valves had not been installed on either of the airplanes involved in the aforementioned accidents, nor had the auxiliary tank sumps on those airplanes been drained recently.

According to the Maule Aircraft Corporation, the auxiliary fuel tank sumps on as many as 64 other affected Maule airplanes may yet to have been changed in accordance with the service letter. Since routine preflight drainage of all fuel tank sumps installed in these airplanes is essential to prevent a possible recurrence of this type of accident, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Issue an Airworthiness Directive for Maule M-4 and M-5 series airplanes requiring that auxiliary fuel tank plugs be replaced with quick drain valves in accordance with Maule Service Letter No. 32. (Class II, Priority Action) (A-83-66)

BURNETT, Chairman, GOLDMAN, Vice Chairman, and McADAMS, BURSLEY, and ENGEN, Members, concurred in this recommendation.


By: Jim Burnett
Chairman