

DEPARTMENT OF TRANSPORTATION
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20591

September 26, 1967

IN REPLY
REFER TO: SB-1-96

Honorable William F. McKee
Administrator
Federal Aviation Administration
Department of Transportation
Washington, D. C. 20590

Dear General McKee:

Investigation of a fatal accident involving a Piper PA-23/250 aircraft, N8888, at Hershey, Pennsylvania, on April 30, 1967, disclosed that the right engine was not operating at impact and revealed a rupture in the main fuel flow divider diaphragm installed on this engine. This was the only failure found during the teardown and examination of both powerplants that could be considered pre-impact.

Examination of the diaphragm installed in the right engine flow divider, Bendix P/N 2524223-1, disclosed that the rupture exhibited the characteristics of a failure in tension. The diaphragm as viewed under magnification showed evidence of ozone deterioration existing on both the fuel side and on the air side of the diaphragm fold.

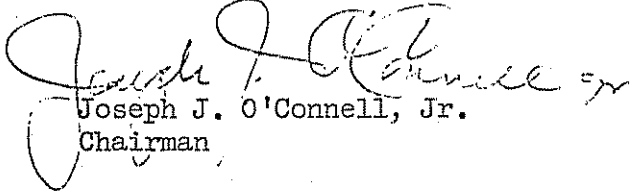
The Bendix Corporation currently specifies diaphragm P/N 2525361 in the fuel flow divider, P/N 2524223-1, whereas the diaphragm installed in the right engine fuel flow divider of N8888 was P/N 2520823. This change was made in production to incorporate a material that is resistant to ozone deterioration. However, the manufacturer did not issue a service bulletin relative to this change.

Since rupture of the diaphragm not only causes loss of engine power but also creates a fire hazard, it is recommended that consideration be given to mandatory replacement of all P/N 2520823 diaphragms in service with the improved diaphragms.

Honorable William F. McKee (2)

Our Engineering Division has been in contact with engineering personnel of your Eastern Region and also with Bendix Energy Controls Division, South Bend, Indiana, concerning this problem. Please advise us if any further information or assistance is needed.

Sincerely yours,


Joseph J. O'Connell, Jr.
Chairman
