

68-15

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

NOV 9 1967

IN REPLY
REFER TO: CC-1-AS-96

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

Dear General McKee:

On October 5, 1967, a Douglas DC-9 aircraft, N3304L, operated by Delta Air Lines experienced an overheat condition and fire warning in the auxiliary power unit area which is installed in the tail section of the aircraft. The overheat condition was of sufficient intensity to result in scorched electrical wiring located adjacent to the heat concentration. A fuel feed line located in this area was not affected. Fire extinguishing agent was discharged and, since the condition was encountered during an approach, an otherwise scheduled landing was completed.

The overheat condition was precipitated by misalignment of the primary APU exhaust duct within the secondary shroud assembly. This condition resulted in chafing, cracking and an eventual leak of the hot exhaust gases. Investigation further disclosed that previous incidents of a similar nature prompted McDonnell-Douglas Corporation to issue Service Letters Nos. 9-74, 9-139 and 9-139A on February 6, 1967, September 9, 1967, and October 19, 1967, respectively. Service Bulletins 49-7 and 49-8, dated April 14, 1966, and November 2, 1966, respectively, have also been issued by the manufacturer in an effort to correct the general problem.

In view of the latest incident, it appears that measures thus far initiated by the manufacturer were ineffective in precluding failures of the APU exhaust shroud and duct assembly. To preclude similar occurrences in the future, it is recommended that a reevaluation of the adequacy of the APU exhaust duct and shroud mounting installation on DC-9 aircraft be made and that the implementation of any design or installation changes that may result be made mandatory.

Honorable William F. McKee (2)

We further recommend that the APU not be operated in flight until the reevaluation and any necessary modifications are completed.

This matter has been discussed with your Western Region engineering personnel and if we can be of further assistance please so advise.

Sincerely yours,

Original signed by

Joseph J. O'Connell, Jr.

Joseph J. O'Connell, Jr.

Chairman