

The DC-8 “SUPER 70’S”[©]

by Dan Pemble, Douglas/Boeing Field Rep (retired September, 2009) – February 13, 2022

In 1982, faced with the choice of complying with forthcoming noise restrictions by January 1, 1985 or retiring their DC-8's, several DC-8-60 owners opted for installation of the new high-tech, low-noise, fuel-efficient, 22,000-pound takeoff-thrust-rated GE/SNECMA CFM56 turbofan engines. This engine retrofit was conceived and arranged by Cammacorp, a business formed by a group of former Douglas executives. DC-8-61's/-62's/-63's with these new engines installed were then re-designated as DC-8-71's/-72's/-73's. The 70 series aircraft easily met the then-established noise limits and had significant performance improvements. Of all model DC-8's, the DC-8-72 has the longest range at 7860 nautical miles (14,223 kilometers).



A total of 110 Super -70s were delivered: 53 -71's, 7 -72's, and 50 -73's. The final airplane to be re-engined was a -72 for NASA in 1986; then the program was terminated by its originator.

Through September/2003, 44 years after the delivery of the first DC-8, 233 of the 556 airplanes that were built were still active! Of course Super 70 airplanes comprised about half of this total. It is of little wonder that there are currently a number of DC-8-70's still in service, considering that all Douglas-built aircraft have always had an industry-wide reputation for their “extremely robust” structures!



Just today, February 13, 2022, in response to a posting on the “Simple Flying” web site about some DC-8-70’s remaining in service, I offered the following comments:

From late December 1980 thru mid-July of 1985 I served as the Douglas Aircraft Co. Field Rep in San Francisco (KSFO). My primary mission was to support PSA’s MD-80 operations. However, during my later years, I also supported several other operators at Oakland International Airport (KOAK), including TransAmerica. During this time, TransAmerica still had 9 of their original 15 DC-8-70’s in their inventory. Some years later, based on extensive testing that had been done by Douglas, it was determined that all models of the DC-8 could remain in service until such time as they achieved 58,000 total cycles or 125,000 flight hours – if they are subjected to a Douglas/Boeing-derived/FAA-approved maintenance program. Of course this was great news for owners of DC-8-70-series airplanes. These cycle and flight-hour limits coincide with the “Limits of Validity” related to the approved maintenance program. When this FAA-approved maintenance program is followed, such program will assure that catastrophic Widespread Fatigue Damage (WFD) will not occur up to the noted limits. If such WFD in critical structural elements goes undetected, it could result in loss of the airplane. Current operators of all DC-8’s that are to be continued in service up to the noted limits of validity can only do so when they have the noted FAA-approved maintenance program in place; then, once either of the noted cycle or flight-hour limits is reached, the airplane should be retired. In fact at the time when a DC-8 operator applies to the FAA for authority to continue the airplane in service up to the noted limits, the operator must also advise the FAA their future plans to retire the airplane.

Interestingly, there are many now-retired DC-8’s that could indeed have been continued in service in lieu of being in “bone yards”; of course continuing the airplanes in service is mostly dependent on economic feasibility!

