

DC-10 – TRANSPORTING A SPARE ENGINE©

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During 1979-1980 I served as a McDonnell Douglas DC-10 Field Service Representative with VARIG, the 53-year-old Brazilian airline based in Rio de Janeiro. I recall that on one occasion while one of the VARIG DC-10-30's was in Madrid, there was a requirement for an engine change. A spare engine from the General Electric CFM6-50 "world pool" was installed and the affected airplane returned to its home base in Rio a couple days later. Within the following week, the removed VARIG engine was transported from Madrid back to Rio via a wing-mounted pod/cocoon on an Iberia (the well-known Spanish carrier) DC-10-30! (VARIG had their own engine overhaul and test cell facilities in Rio to repair the engine and return it to service.)

Although as a DC-10 Field Rep I was very much aware of available DC-10 modifications to enable transporting a spare engine, I had never seen the modifications embodied nor did I ever see an airplane that was actually transporting a spare engine – until the Iberia airplane's arrival in Rio! It was an impressive site indeed! Regretfully, the photos I took of the Iberia DC-10 after its arrival in Rio are no longer available. Furthermore, after searching numerous web sites for photos of this Iberia aircraft, I have drawn a blank! Fortunately, thanks to the **Flickr** photo site, I have found the following 2 images showing spare engine installations on other DC-10's.



As you can see, the spare engine enclosure is mounted inboard of the No. 1 (or left) engine. I can no longer recall all the various operational restrictions and limitations relative to operating such aircraft in revenue service but do remember just a few: 1/ The wing leading edge slat extension had to be restricted to avoid contact with the pod/cocoon 2/ A "programming plug" had to be installed for the air data computers so that the maximum operating speed (V_{mo} – "Velocity, maximum operating"), as shown by a "barber-pole pointer" on both pilot's airspeed indicators, was reduced. There were various other considerations, but I simply don't remember the specifics (after all, my experience was 35 years ago!).

Having the noted extra load on one wing of a DC-10 and carrying on with normal and successful flights as usual reveals a whole lot about the "fly ability" of this truly amazing airplane!