

TRANSPORT AIRCRAFT TECHNICAL SERVICES COMPANY, INC.

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***** NEWSLETTER *****

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IT IS A “TWO-FER” . . . SURE, USING COMPOSITES ON ENTIRE AIRPLANES IS A BIG DEAL, BUT . . . THE BIGGER DEAL ON THE BOEING 787 MAY BE BECAUSE IT WILL BE THE FIRST AIRLINER CERTIFICATION PROGRAM MANAGED BY THE MANUFACTURER. The FAA amended 14 CFR Part 183 — REPRESENTATIVES OF THE ADMINISTRATOR — by adding . . . a new subpart - “D” - Organization Designation Authorization (ODA), which allows an organization to perform, on behalf of the Administrator, specified functions related to engineering, manufacturing, operations, airworthiness, or maintenance; existing older Delegations will expire in 2009.

The FAA has used Designated Persons since the late 1920s — usually because they don’t have in-house persons (i.e., Designated Medical Examiners to perform physicals for Airmen) or the financial resources to hire enough folks to do the tasks required by regulations¹ (Congress will mandate some new program, Noise Control for example, but not allocate funds for training existing inspectors or engineers to research the issue or training). The Airworthiness Certification and Flight Standards folks are getting older and they cost more in salaries and benefits (health care costs increase as we age — yup) and you have to hire and train replacements as they retire. The “traveling public” wants to fly *free* and user fees aren’t acceptable.

Back to ODAs . . . The last two pages are from FAA Order 8100-15 dated 8/18/06. They provide you with a good depiction of the ODA TYPE CERTIFICATION PROCESS. There are comparable figures for each of the ODA functions. § 183.55 — Limitations — allows ODAs to do “most anything” unless the *FAA notifies the ODA holder of where FAA will make specific findings (Areas of FAA direct involvement)*. Some friends at The Big Airplane Company in Seattle have stated that having an ODA merely legalizes what has become the “popular way of certifying airplanes in Seattle”.

The principal benefit to the ODA *applicant* is flexibility and the ability to work “24/7”². Only one person at the ODA is “named” — the administrator. He can appoint any qualified (we hope) person to perform any task not reserved for the FAA. They can hire consultants, also known as *guys they talked into taking early retirement*, for an hour or a day at a time. Wanna’ work Sunday or holidays? No problem. Wanna’ job shop? OK. (More than one consultant)? No problem. We understand Manufacturing and

¹ I was the 4th Designated Airworthiness Representative in the FAA’s Western Region when appointed in 1983 and served until we relocated to California last year (24+ years).

² And make-up some of the program delay.

Engineering union contracts will expire this year. Gonna' be interesting to see what happens.

AIRCRAFT WEIGHT Meanwhile our almost daily morning e-mails bring us reports from the Seattle Times, Seattle PI, London's Financial Times (we have noted postings on the "web" from dating back to early 2006) about *concern for the 787's weight*. **Weight** affects everything about operating an airplane the allowable payload (passengers and baggage), the runway required for takeoff, the time to climb to initial cruising altitude (greater than 31,000 feet at least), time until you can climb to an optimum altitude (greater than 36,000 feet please), cruising speed (greater than 460 knots please) and the amount of fuel required to fly to an alternate airport. The 777 excess weight was almost equal to the normal passenger load. Not good. Having almost enough fuel for non-stop Boston to Tokyo is going to upset the Bostonians (I found that fact while cruising the web – the Boston Airport web site – *don't want to have to go via Chicago — no sir!*)

Aloha and the recent Southwest Airlines FAA problem had their roots in Boeing's 737 **weight** reduction programs. Reduce the fuselage skin thickness (wherever possible) from 0.040 inch to 0.032 (also known as 0-too-thin) and you save 20% on each square inch of the reduced area skin panel. You then get "knife-edge" cracking at the fastener holes and *voila* - a convertible. The reason for the weight saving program was to reduce the empty weight in order to have take-off weights below 80,000 pounds — and thus eliminate the congressionally mandated (in 1948) flight engineer. The "beach boys" (Douglas Long Beach) cut the DC-9 weight by reducing the fuselage width by one passenger seat (18 inches)³. In 1965 the FAA removed the 80,000 pound limit and based the flight engineer requirement on aircraft complexity. Note: Early versions of the Airbus A-300 and the first 5-6 767s had a flight engineer station (removed before Type Certification).

The ALOHA incident was caused by the FAA PMI allowing ALOHA to over-fly a required lap joint inspection (skin cracking problem) and twenty years later Southwest over-flew some of their lap joint inspections (with the PMI's concurrence???)

We have inspected used aircraft from Alaska, American, Braniff, Continental, Delta, Eastern, Pan Am, Piedmont, United, Western and a few smaller operators. They all had, to one degree or another, actual or recordkeeping Airworthiness Directive compliance errors or omissions⁴. The largest air carrier of that group had overlooked a 727 landing gear A/D for ten years. Did they *confess* — no way Jose. They did, however perform the A/D when they read it and the applicable Service Bulletin.

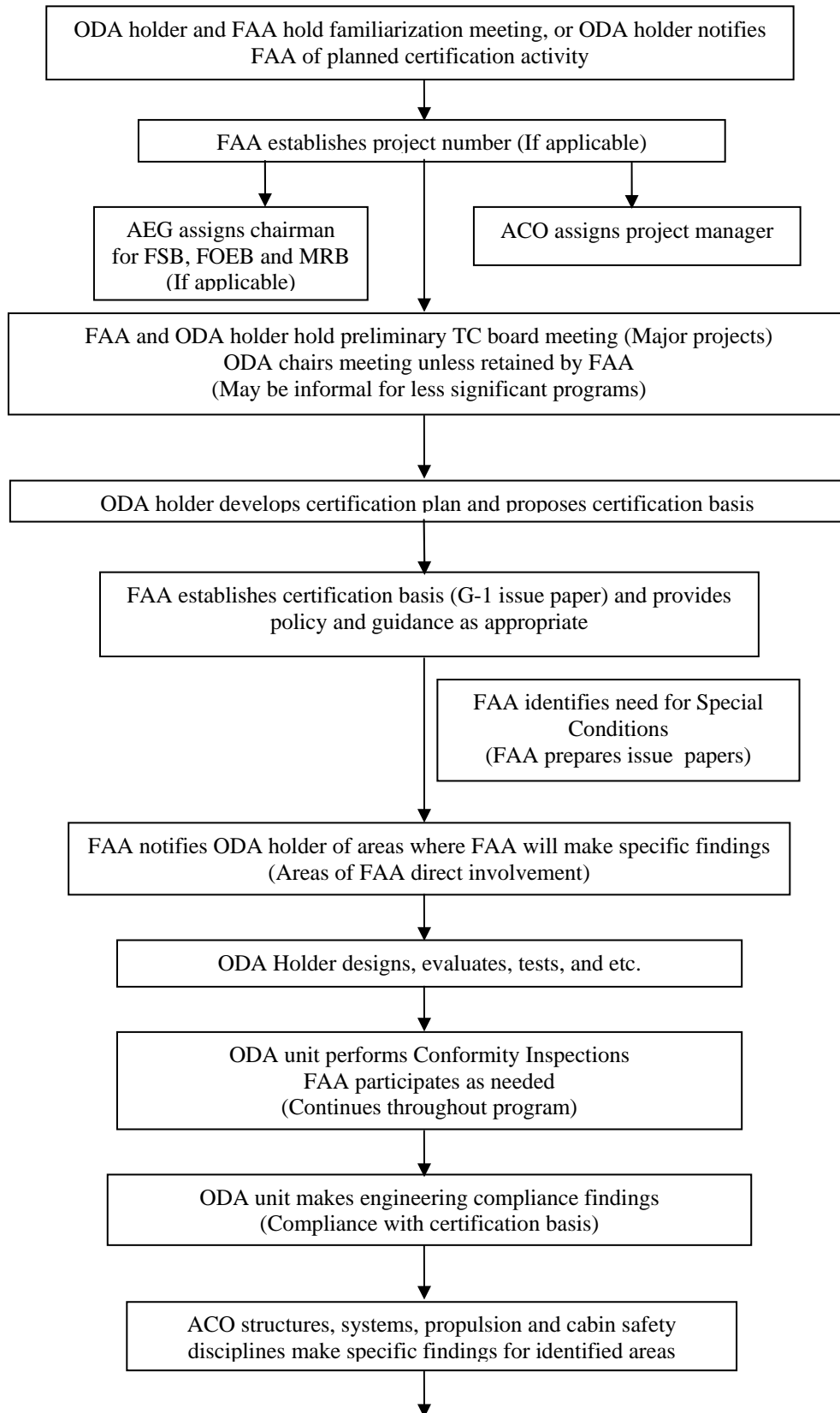
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Jim Helms, President

³ The DC-8 had 6 seats abreast – same as the Boeing products.

⁴ Our inspections of Non-FAA operator's aircraft have had better A/D Compliance.

**FIGURE 8-1. ODA TYPE CERTIFICATION PROCESS
(PAGE 1 OF 2)**



**FIGURE 8-1. ODA TYPE CERTIFICATION PROCESS
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