Red Tape

By Bill O'Brien

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My father was a big man, straight from the old sod. He was a lot smarter than I and a card-carrying survivor of the depression years. One bit of advice he gave me one day, 35 pounds ago, went like this: "Son, if you want job security, attach yourself to an unsolvable problem, work diligently every day trying to solve that problem, then retire." So, following my father's lead, it is no great secret that today I earn my living as a bureaucrat in Washington. So here I sit alone, in an small, unventilated room in front of an old GSA computer that has a desk footprint the size of a Volkswagen bug and a memory almost as bad as mine. Every working day I grind out pages and pages of FAA policy, which of course you know it by its nom de plume: red tape.

Now the intent of the policy that I write is to describe methods or procedures on how the FAA field offices will encourage compliance with a particular Federal Aviation Regulation. New policy is needed because new regulations are written with a broad brush in order to address every possible aviation situation. At the same time the broad brush approach conveniently allows an FAA lawyer some wiggle room if they have to go to court to defend the rule.

But sometimes this broad brush approach to a rule is totally unworkable in the field where the industry demands a narrow, focused standard to follow. Therefore, a narrow, focused FAA policy must be written to address this industry's need. Sometimes, amazingly enough, a new FAA policy must be written for an old rule. This is because technicians in general are such an enterprising and inventive group of people that are always coming up with new ways to get around older FAA policy

for older rules. So with new policy needs identified, I once again get to turn the old computer on, watch the lights in the ten-story headquarters building dim a bit, and begin pounding on the key board with blunt, fleshy fingers.

So, did I find job security? Did I find the unsolvable problem my dad told me to attach myself to? Well, I figure that as long as airplanes fly we have a continual need for new FAA policy, and it stands to reason that a continued need for writers of new FAA policy also exists. So what we have here is a continued need with no permanent solution. If we have no permanent solution, then that constitutes an unsolvable problem, ergo, bureaucratic job security! Dad would have been proud!

My latest attempt to achieve bureaucratic immortality is Flight Standards Information Bulletin for Airworthiness: # 98-03 titled "Instructions for continued Airworthiness for Major Alterations Approved under the Field Approval Process." It is a product of last year's long and painful discussions in the bowels of this building, deliberating the Part 135 single engine Instrument Flight Rules (IFR) passenger carrying rule. During the mandatory name calling and cussing phase of developing the rule we found that no FAA policy or instructions existed to ensure that major alterations, such as a stand-by electrical system or vacuum system required by the new rule and installed under a field approval, were going to be maintained to a published standard.

In other words, under existing policy, a FAA inspector could sign the field approval block 3 of FAA Form 337 for one of three kinds of field approvals. The most common field approval granted is approving the data only. The second kind of field approval is approving the installation by physical inspection or testing. The third kind is approving the data for multiple installations by the same modifier. However, a technician or IA performing an inspection a year later has nothing to refer to when performing an inspection or maintenance on the new equipment that was installed under a field approval.

Son of a gun, almost by mistake, during the rule-making process I went and identified a regulatory policy pot-hole. The existing policy was unfair to the FAA inspector who signed Block 3 of FAA Form 337 because when that inspector signs off block 3, he or she ceases being a judge and becomes a partner in the field approval process, and the inspector's career can be short-lived if he or she signs off a less-than-complete field approval. The policy was also unfair to the technician who is required to perform maintenance and inspections on both new and old installed equipment to a published standard in order to sign off that equipment as airworthy. If the technician signs off the inspection or maintenance on the equipment installed under a field approval without out using some sort of acceptable data, he or she is in violation of FAR 43 section 43.13 performance rules.

The Bureaucratic Fix

Since I am blessed with a smaller than average neural network, I tend to lean toward simplistic solutions rather than creating huge policy quagmires. My bureaucratic fix addresses major alterations approved under a field approval process only. I did not elect to include major repairs in this new policy because the vast majority of major repairs do not require additional instructions for continued airworthiness. Ninety-nine percent of major repair always returns the damaged area or product back to its original type design, and existing maintenance instructions should already be in place.

The new policy addresses all type certificated aircraft, engines, propellers, and appliances so the major alteration can be maintained in accordance with section 43.13 (a). The instructions for continued airworthiness for the new equipment must be identified either on Block 8 of the FAA Form 337 or permanently attached to it. I wanted the Instructions for continued airworthiness on the Form 337 for three reasons.

1. The technician requesting the field approval must develop the instructions for continued airworthiness or provide the new equipment manufacturer's instructions to satisfy the new policy.
2. Since the instructions for continued airworthiness are on the Form 337, it would give the FAA inspector an opportunity to review the maintenance instructions and make common-sense changes if necessary, before the field approval was signed.

3. Since section 91.417 (a)(vi) Maintenance Records requires that FAA Form 337 to be kept forever with the aircraft, a technician working on the same aircraft years from now could go to the original documentation for that major alteration, and that Form 337 would tell him how to maintain that piece of new equipment.

In addition, the Flight Standards Information Bulletin requires the technician in accordance with section 43.9 to record in the aircraft's log book or maintenance record the major alteration. I recommend that the log book entry identify the FAA form 337 by owner and date where the instructions for continued airworthiness, so they can be quickly found by a technician a year from now.

Questions from the field
As with any new policy that is developed in FAA headquarters there is a certain length of time in which everybody has to get use to the new way of doing business. In order to lower the compliance threshold of pain associated with change, I will try to answer some questions I think might be generated from the field offices and industry concerning my latest literary tome.

Question: Hey, Headquarters! How about some ideas on what these instructions for continued airworthiness should cover?

Answer: The Instructions for Continued Airworthiness should cover the total system that is installed, be it a single piece of equipment, or 40 or more that are installed. The recommended periods in which they should be cleaned, inspected, adjusted, tested, and lubricated; the degree of inspections; the applicable wear tolerances; and the kind of work recommended to be performed at each inspection interval should be identified. If the maintenance to be performed is pretty complicated, for example, a D check of a nuclear powered port-a-potty installed on a Porterfield, the Form 337 can refer to published instructions from the equipment manufacturer instead of putting all of the instructions on the back of the Form 337.

Question: Yo! A question from Philly. I install a new instrument panel, radio shelves, etc., to install a standard TSO radio package. This is comic book simple structural stuff that does not create a fuss, generate any dust, or rust, works real fine, and lasts a long time. It just sits there attached to the airplane. Do I really need to write up 48 pages of Instructions for Continued Airworthiness to satisfy the FAA?

Answer: If your major alteration just sits there, be it part of the structure, or if it is something like a radio package where there is nothing to rig, replace, remove, reinstall, or whatever, do this: note on the Form 337 that no additional instructions for continued airworthiness are required for this installation. This will tell the technician to inspect the installation in accordance with the aircraft manufacturer's instructions or in accordance with Appendix D of Part 43, or any other applicable inspection requirement.

Question: How in depth must these instructions be? Should I hire a tech writer to write the instructions?

Answer: The average field approval for Major Alterations are pretty standard fare. FAA inspectors are limited by FAA Order 8300.10 on just what they can field approve. So just write the instructions so that they are clear, complete, and concise to maintain the entire alteration, so that even this Washington DC bureaucrat can understand them. I would recommend that since most technicians are process-oriented folks and tend to do things in steps, write the instructions using bullets or steps. Please do not try to impress the FAA inspector by writing the history of rubber on the back side of a Form 337 if all the technician needs to know is how to change a tundra tire.

Question: Does this new policy include a major alteration performed under an STC?

Answer: No, this policy applies only to a major alteration performed under a field approval. For major alterations for aircraft, engine, or propeller installed using STC data, these alterations already are required to have instructions for continued airworthiness by section 21.50(b).

Question: Hey, Bureaucrat! I checked the book. Section 21.50(b) does not talk to appliances such as radios, GPS, interiors, and the like, so an STC for a radar installation in a corporate jet might not have any instructions for continued airworthiness. What do you want us to do?

Answer: You are right. Section 21.50(b) does not speak out loud to appliances. However, Part 43 section 43.13 (a) still requires the technician to use acceptable data to maintain appliances. To ensure future compliance with section 43.13(a), when the STC does not have instructions for continued airworthiness (ICAW) for an appliance, I suggest you contact the local FAA office, and they in turn will contact the appropriate FAA's Aircraft Evaluation Group (AEG.) These are the folks who approved ICAW for STC installations, and they should be able to help you out.

I told you what writing policy does for me, but what would this additional red tape do for the technician on the hangar floor? Well, it should save the technician time, money, and a visit from the log book police. For example, let's suppose that today you installed a TSO Imperial Star VCR model 7000 in the cabin of a Falcon 50, and you complied, with some reluctance, with this new policy. A year from now the VCR you installed was just about demolished by the company's CEO who tried to put two video tapes in the machine at one time. Wouldn't it be nice if a technician, a year from now, could go to the major alteration's Form 337 for the TSO VCR, installation and find instructions for continued airworthiness. And maybe those instructions read something like this:

Instructions for Continued Airworthiness for TSO VCR Imperial Sta, model 7000.

1. TSO VCR model 7000 is a on-condition unit and no additional maintenance is required other than to check for security and operation at normal inspection intervals.
2. If the VCR is inoperative, remove unit, secure cables and wiring, turn off applicable switches and circuit breakers and placard them inoperative, revise equipment list and weight and balance as applicable prior to flight, and make a log book entry unit was removed (refer to section 91.213 of the FAR or the aircraft's MEL)
3. The VCR can be repaired only at a factory authorized repair center or an appropriately rated FAA Part 145 Repair Station.
4. Once the VCR is repaired, reinstalled the unit in the aircraft in accordance with the original Form 337 approved data. Perform an operational check of the unit, and approve it for return to service with a log book entry required by section 43.9.

Question: When the FAA inspector "field approves" the acceptable data for a major alteration and turns it into "approved data" when Block 3 of the Form 337 is signed, does that also mean that the inspector also "approved" the instructions for continued airworthiness?

Answer: No! The FAA inspector only "approved" the submitted acceptable data for making the major alteration when signing Block 3 of the Form 337! The instructions for continued airworthiness should not be considered an integral part of the field approval, even though these instructions are identified on Block 8 on the Form 337. These instructions for continued airworthiness are for use after the major alteration is installed, and like all maintenance information, the instructions for continued airworthiness should be considered "acceptable data" only (ref: section 43.13), just like Beech, Piper, Cessna, Boeing, Airbus, etc, maintenance manuals. The only way these instructions can be "approved" is if the instructions become part of an inspection or maintenance program approved under operations specifications.

Now if you could pardon me, I have many other un-solvable problems that require my narrow and focused attention. But as a personal favor, if you need further clarification on this latest bit of red tape, you can contact me directly at 202 267-3796 or FAX 202 267-5115.