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New Field Approval Guidance Provides Opportunities for AEA Members

Are you using the new field approval guidance yet? If not, then you ought to read the new FAAadvisory guidance … and be sure to read the many articles about it that you will find in *Avionics News* this year!

This article addresses two elements of the new field approval guidance that may surprise some people in the industry; the article also provides some guidance on how to take advantage of these elements to make your business run smoothly.

Background

The FAA released AC 43-210 earlier this year (on February 17). The formal name for this AC is Standardized Procedures for Requesting Field Approval of Data, Major Alterations, and Repairs. It includes many of the elements that AEA has been talking about for the past year or so.

It is hard to say what is new and what is not in this AC, because the reason the AC was published was to remedy the balkanization of the field approval process. What was standard practice in one office might have been forbidden in another. In some cases, vast differences in the way that inspectors handled field approvals could be found within the same FAA Flight Standards Office. Thus, some people may find that the AC represents little or no change from previous practice, while others may see it as a tremendous change.

Throughout the course of this year, you will continue to hear AEA talk about the pros and cons of this advisory guidance. AEA's Vice President of Government Affairs, Ric Peri, has written on the subject and will continue to write on it. The point of this article is not to laud the AC and not to decry it. This article does not attempt to dissect the AC nor paraphrase it. Instead, this article will focus only on a few details of the AC that are most likely to cause surprise (some positive and some negative) to AEA members who rely on AC 43-210.

It's Two Mints in One

For a long time, FAA personnel and industry have debated what a field approval is.

Is it an installation approval? In the early days of the Civil Aeronautics Agency (CAA), the government approved installations one-by-one. By the time the 1940s rolled around, though, it had become clear that case-by-case installation approval would quickly overwhelm the government's resources, and the CAA changed the rules to permit mechanics to approve a properly completed maintenance function for return to service. This is the approval mechanism that survives to this day under Part 43. Thus, true installation approval as a government function was abandoned by the United States government over half a century ago. Nonetheless, FAA Aviation Safety Inspectors have frequently field-approved an installation, or other maintenance function, based on their own review and inspection of the completed work. The visual and other data gleaned from such an inspection is compared to the FAA inspector's own background and experience. Familiarity with certain aircraft or certain work (and a good working knowledge of the applicable regulations and airworthiness standards) allow the FAA inspector to field-approve properly completed work based on such an inspection.

Is it a form of data approval? While some field approvals are still approved based on an inspection of already-completed work by the FAA, the modern trend has been to require a higher level of data to support the field approval. This has lead to the use of Designated Engineering Representatives (DERs) to help approve the underlying data that will lead to the

field approval. It has also been manifested in the increased reliance by FAA Flight Standards on the assistance of engineers working for the FAA's Airworthiness Certification Offices. In some cases, the level of data required has risen to a point where there is only an insignificant difference between the field approval data package and an STC data package. This has lead some to question whether the data-driven field approval is truly serving the best interests of the industry and of public safety.

The Advisory Circular solves this dilemma by admitting the existence of both forms of field approval. It explains that there are both data and installation field approvals. AEA members will want to use this dichotomy to their best advantage. AEA members who are not close to an FAA office or do not see their FAA representative very often will want to develop more data-oriented field approvals so that the FAA can expediently approve data without wasting time and resources with an on-site visit to inspect the installation (and the related testing). This puts a premium on hiring personnel with significant engineering backgrounds and even hiring personnel with DER privileges. AEA members who are blessed with frequent visits by their FAA inspector may find it more convenient to focus on installation approvals, since this could reduce some of the effort that must go into the data package supporting the field approval.

Softens Hands While You Do the Dishes

How long does it take to get a field approval? The answer to this question is one of the most significant variables to some AEA members' success. The AC addresses the important related question—is it acceptable to begin certain types of work before the field approval is signed?

Many AEA members who cannot get a quick turn-around on field approvals have made it a practice to first apply for the field approval immediately when the work comes in (or even before the work comes in depending upon the business's schedule); second, begin the work in anticipation of the field approval; and then, finally, time the approval for return to service to occur after the field approval is issued. This practice allows the AEA member shop to provide timely service to the customer without making the customer wait for the FAAto complete the field approval review process before work can even begin.

There has been some debate in the past over whether it is appropriate to begin work before the field approval has been issued.

There is a pragmatic reason for delaying work until the field approval has been issued. If it turns out that the data package is not approvable as submitted, it is possible that the work performed in anticipation of approval could be wasted—in some cases, the denial of a field approval could even mean that the work-performed-in-anticipation renders the aircraft unairworthy! While this sort of commonsense thinking seems to support delaying a project until the field approval process is complete, there are practical considerations weighing against this advice.

The most important practical consideration in favor of beginning work before the data approval is finalized is the fact that most data packages submitted to the FAA are well-researched, well-understood, and carefully planned to assure that it will be right (and approvable) the first time it is submitted. They are frequently based on years of experience in performing installations or other aircraft maintenance work. Flaws in the data package will generally be caught by the personnel preparing the data package, or the DER assisting in its preparation and review, before the package is submitted to the FAA. Thus the worry that the package will not be approved is unfounded in most cases.

In an attempt to settle the issue of whether one may begin a project before the approval is finalized, AC 43-210 states in paragraph 307(a): "Do not start the work until you have received your approval in block 3 of FAA Form 337 …. If you start the work on the aircraft before the approval is finalized, the work you do may not conform to the alteration or repair as it is approved" (emphasis added). At first blush, this appears to settle the matter about starting work before the field approval is completed, but there are two issues to consider.

First, the restriction only applies to data approvals, and not to installation approvals. This seems to mean that someone who begins work before the field approval is issued could do so with impunity as long as the eventual field approval is captioned as an installation approval rather than a data approval.

Second, the FAA may not have sufficient regulatory support to impose a requirement that all work must wait until the field approval has been issued. The FAA's regulations say that a repair station may not approve a major repair or alteration for return to service unless the major repair or major alteration was performed in accordance with applicable approved technical data. 14 C.F.R. § 145.201(c)(2). This could be interpreted such that "performed in accordance" means that the approval must be valid at the time of the performance, but that would be stretching the plain meaning of the language, since the regulatory restriction is clearly meant to apply at the time of the approval for return to service. There is no explicit regulatory restriction on

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beginning the work before the data is approved. Appendix B to Part 43 includes additional documentation requirements for major alterations and major repairs, but Part 43 does not limit the timing of the work in relation to the actual FAA approval of the underlying data.

Without regulatory support for the need to have approved data before the work is begun, there is no basis upon which to issue guidance that demands such a restriction. The FAA could possibly argue that 43.13 (a) requires that the work be performed using "methods, techniques and practices acceptable to the Administrator," and that this language encompasses the timing of the work in relation to the field approval; however such an argument so-broadens the acceptable practices language that it would effectively serve as the basis for enforcing any advisory guidance – thus permitting the FAA to circumvent the Administrative Procedures Act in a way that denies due process (and is thus illegal).

What does this mean to AEA members? It means that if your business model relies on you starting work before the field approval is issued by the FAA, then you may not need to comply. This is an issue that you should discuss with your FAA inspector, though, so that you can be sure your local FAA representative understands what your business is doing—it may be necessary to remind your inspector that the advisory circular represents one way, but not the only way, to comply with the FAA regulations.

Having the inspector concur with a written practice in your quality manual is a good way to record his or her understanding of your procedures. A good way to reflect a practice contrary to AC 43-210 in your manuals would be to explain in the quality manual (pursuant to 14 C.F.R. § 145.211(c)(1)(vii)) the following process:

Work for a major repair or major alteration that is subject to a field approval may be started before the field approval is signed if the repair station (in consultation with the local FSDO) believes that the field approval will be approved (if such belief is based on a statement by the FAA inspector, then it is in full compliance with the Advisory Circular);

In the event that a major repair or major alteration project is started before the field approval is issued, the process control sheet (or traveler or work order) must include a final inspection element requiring review of the process used and the process as described in the field approval, to confirm that they are identical;

Where it is convenient for the FAA and the repair station, the FAA inspector will be invited to inspect the major repair or major alteration in order to characterize it as an installation field approval (obviously, this idea can only be implemented where the FAA office is convenient to the repair station, or the FAAinspector makes regular visits to the repair station);

Upon final inspection, and before the approval for return to service is signed, the person approving for return to service shall confirm that the field approval was issued by the FAA that the field approval, as issued, matched the terms of the work, as performed.

One of the reasons that this process is not so far off of the mark set by AC 43-210 is that the Advisory Circular does permit work to be started in anticipation of a data approval when the FAA has indicated that it is likely to be approved (an indication that can be provided in consultation with your FAA PMI or PAI). See AC 43-210 Paragraph 102(d). Of course, the fact that this alternative process remains in compliance with the plain language of the regulations is important, too.

Conclusion

With the recognition of both data approvals and installation approvals as two separate species of field approvals, the FAA has validated both sides of an argument over what is the fundamental nature of a field approval —this has made us all winners. It will be important to recognize that a judicious mixing of these two may be necessary for some projects – data may be needed to supplement an installation approval where inspection alone is inadequate to fully confirm airworthiness. The Advisory Circular anticipates that installation field approvals will be supported by data packages, also.

The restriction against starting work before the field approval has been issued may make sense for some businesses but for other businesses it could represent an unconscionable delay that customers will not accept. In such a case, there are a number of solutions – 1) rely on an installation approval, which for obvious reasons does not have to be delayed until the issuance of the formal field approval; 2) rely on the FAA inspector's assurance that the field approval will be issued, where he or she is willing to provide such assurance; or 3) recognize that the advisory circular is one way but not the only way to t comply with the regulations, and develop a quality system program that ensures that the approval for return to service is not accomplished until the field approval has been issued and the field approval data has been favorably compared against the actual data upon which the alteration or repair relied.

The FAA has taken an important step in giving industry the guidance in AC 43-210. This AC is a major leap in the campaign to harmonize field

approval processes. As with any such effort, there will be pros and cons to the new standards. The AEAmembers are in the best position to understand these pros and cons, as you will be working with this guidance every day. Please make sure that you keep the Association informed about the positive and the negative aspects of the AC that impact your business, so that we can make sure that FAA headquarters is apprised, and so we can lobby to fix problems in the next revision, and to preserve the smoothly-working elements in that revision. ❑