

# What does it mean to be compliant?

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What does it mean to be compliant to the Federal Air Regulation (FAR) Part 147 requirements? The answer can be more difficult than one would expect. Ask any FAA Principal Maintenance Inspector (PMI), and you will get various definitions. The reason is the vast array of interpretations regarding the term “compliant” as applied to Aviation Maintenance Technician (AMT) programs.

Anyone involved with a FAR Part 147 program has stories that could be told regarding specific “requests” made by their PMI for continued or initial certification. Simply stated, there currently exists no real consistency on how the FAA interprets the current regulation.

In attempt to gain a true understanding to the term compliance as it relates to Part 147 schools, we must review various Federal Aviation Administration resources that are available. In addition to FAR Part 147, there are the Advisory Circular (AC) 147.3, FAA order 8300.10 (Inspector’s Handbook, Chapters 4 & 185 - 188), as well as the FAA unknown requirement, which we sometimes must contend with as well.

The FAA unknown requirement defined, is the FAA Inspector’s personal perspective or interpretation of the regulations that became mandatory. This has happened to me more than once during initial and re-certifications of FAR Part 147 programs for which I was responsible to implement.

An example, during my first initial certification, the Regional Inspector came to perform a site audit at our facility. As we walked around the facility, no questions were asked, but when he saw our Cessna 150 the “unknown” became “known”. He inquired about the location of our “Prop Guard?” I laughed, thinking that he was joking, but no return laughter was granted, only a glance that indicated that he was serious. I looked over to our PMI who just shrugged his shoulders. The message was clear - build a prop guard on an operational aircraft. For those who are interested, we used a fan guard from a Sikorsky helicopter, fabricated a metal marvel to cover a shortened prop that was modified for this unique requirement. Seriously, a prop guard on a flying aircraft?

Here is another interesting story, another school, and another region. No prop guard this time, but we were asked to change all the doorknobs on the facility doors. Excuse me? This new facility has met all the state and federal building codes already. Different doorknobs? What this had to do with our certification I will never know.

To help alleviate these unknown factors and assist the PMI’s evaluation and interpretations of the 147 regulations during the third and fourth initial certifications, we encouraged communications between the district offices we have worked with formerly. This had the effect of taking the initial certification process from being a single district issue to a broader level of exposure.

Regarding compliance, the communication between PMI’s also enhanced the intensity of inspection to a more in-depth level of evaluation. For example, the PMI that was overseeing the third school was once an educator himself in an AMT program and understood the educational process. This knowledge was applied during the audit in many ways to ensure the school could comply with the FAR 147 requirements for initial certification.

As part of the final phase of the inspection, the PMI and three other inspectors took our Master FAR Part 147 Appendix B, C, & D curriculum items and examined it line by line asking how we were going to comply with the document. My first response was to present our “student workbooks” to show them the projects listed for the students to ensure adherence to the curriculum items, which were not sufficient in their eyes. We had to demonstrate the where, what, and how; we were going to accomplish each of the subject items listed in the Appendix sections.

A sample of a Student Performance Goal (SPG) in the Airframe subjects (Appendix C) reads as follows:

Appendix C, Item 2, Teaching level 1 ---IDENTIFY DEFECTS IN WOOD SAMPLES

Given: AC 43.13 or equivalent publication, random samples of aircraft wood, some of which contains the defects described in AC43.13 or equivalent publication.

Performance: The student will interpret the information in AC43.13 or equivalent publication and select those samples of wood that would be acceptable for the repair of wood aircraft structures.

Standard: The defects will be identified and the reference specifications interpreted without error. ----

For this SPG we had to produce for the PMI the wood samples and verified they had defects as described in AC 43.13. This continued for every SPG in the master curriculum. The positive result was the verification that we had every item on site necessary for the educational process, and our facility was truly in compliance with the minimum standards.

The evaluation phase was similar to the previous school, during the fourth initial certification, because of the internal communications we encouraged between the district offices. A new item for compliance was added, however, which was a formal demonstration by the instructors on how they were going to comply with the Teaching Level 3 troubleshooting requirements of Appendix C and D subjects of FAR Part 147. (There are 15 level three troubleshooting items in the Appendix C and D subjects). In meeting this initial certification requirement, we had our written documentation in the "student workbook" but the instructors were also required to perform actual demonstrations for the FAA on each malfunction generated on the related airframe and powerplant system. In addition, the instructor needed to explain the process they expected the students to take for corrective action.

Overall, these evaluation requirements were helpful for both the inspectors and the educational program. The FAA acquired a "shared base" of experience from the different district offices involved during the third and fourth initial certification and the new AMT programs were confident in their initial compliance with FAR Part 147.

The collective experience gained during these initial certifications greatly enhanced my own understanding of the term "compliance" as it relates to FAR Part 147 programs. However, it would have been a much easier process if there were a more comprehensive document or even an evaluation/audit team that could have assisted the applicant and FAA during the initial certification process.

The FAA for FAR 121 initial certification has instituted a similar "peer group" concept. This is being accomplished through the formation of the Certification Standardization and Evaluation Team (CSET). CSET was formed as one of the 90-Day Safety Review recommendations, which stated, "Create an FAA national certification team to assist local FSDOs in processing new air carrier certifications similar to the proposed Challenge 2000 Centers of Excellence." FAA Order 1100.159 formally established the Certification, Standardization, and Evaluation Team (CSET) and FAA Notice 1100.250 established CSET as a Certificate Management Office. CSET is dedicated to standardizing original certification and follow up evaluation activities for Title 14 CFR parts 119/121, (10 or more passenger air carriers). The CSET is a National group of technical experts on specific processes that provide expertise and assistance to aid field offices with applicants in the pre-application phase.

As the aforementioned CSET team is still in its initial stage, it will be interesting to see the effectiveness of this program. The concept is sound, and if governed correctly, it should prove successful. If so, a similar evaluation team for other certification processes would go far in assisting everyone involved, regardless of it being a repair station or an AMT program. This could be the first step in developing a more consistent initial evaluation process, however, we must surpass initial certification and look at a continued quality control process.

This is where the AMT programs can fit into the whole picture. By working with the FAA, we can begin the development of a more comprehensive audit document, which directs and defines a consistent evaluation standard for the aviation maintenance training industry.

The questions are - Why, who, how, and when should we engage in this task? My own answers for these questions are as follows:

Why? - To develop a concise understanding of what compliance is as applied to FAR Part 147 programs. To increase the level of accountability for both the PMI and the AMT program for pre- and post- certification. To develop a comprehensive evaluation process to measure the quality of an AMT program, instead of the current FAA process to review written test results. To have more control over the inevitable changes to the Federal Air Requirements as they pertain to Mechanic certification.

Who? - Personally, I believe there is only one organization that is focused toward these endeavors: The International Aerospace Training Standards, Inc. (IATS) Organization. It is the intent of IATS to develop an evaluation document that can be used as a base from which to formalize the evaluation process. It is a start, but success for such an effort can only be realized by collective effort among schools and the FAA. This is a difficult but not impossible challenge.

How? - IATS is currently reviewing existing occupational standards, training standards, regulatory approved curricula, and new projects and efforts emanating from the aerospace industry as a whole. An international training curriculum for the aircraft maintenance technician will be developed and measured against the training standards set by the FAA, Transport Canada and the JAA, in the early part of the year 2001. In addition, an evaluation tool is being drafted that incorporates a training control manual to establish processes for continued production of a quality product.

When? - IATS has been working on this effort for the past three years, and within the next few months, the first curriculum draft will be completed. The intent is to "raise the bar" for training and insure a method for continued quality control regarding the instructional process and environment is established.

The result of the efforts of IATS is not known. However, known is the need to be proactive, add accountability, and develop a better method of pre- and post- evaluation. In doing so, we can enhance our ability to improve the overall safety of the aviation maintenance industry by providing a more consistent graduate that is better prepared for the workforce.

Until such an evaluation standard is established, trainers must ask themselves: "Are we truly adhering to the FAR approved curriculum? Are we providing the learning environment and materials to ensure the students are challenged to the mandated teaching levels?" By the performance of a self-audit using the current FAA resources and/or the methods presented in this writing, schools can take the steps necessary to enhance the quality of graduates that are being produced.

Change is needed, and it is certain to affect how training programs conduct business. An individual or organization can remain passive and react to these changes, or be proactive and ensure that a realistic and logical evaluation process is developed.

#### Internet references

- FAR Part 147 - <http://www.faa.gov/avr/AFS/FARS/far-147.txt>
- Advisory Circular AC 147.3 - [http://www.awp.faa.gov/publications/pub\\_req.htm](http://www.awp.faa.gov/publications/pub_req.htm)
- FAA order 8300.10 - <http://www.faa.gov/avr/afs/faa/8300/8300.html>
- CSET - <http://cset.faa.gov>
- Trinity Consulting - <http://www.amt-consulting.com>
- IATS - <http://www.aerotechstandards.com>