# The View from Washington

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I'm an old movie buff. Now don't confuse me with one of those people who can recite classic lines or excel at movie trivia; that's not me. But I do enjoy the classics. Maybe it's because I don't remember the classic lines, and so they are always new to me, or maybe it's that I watch movies for entertainment and relaxation and remembering the classic lines just isn't important. Whatever the subconscious reasoning is, I just plain like the old movies.

What I do remember though is the aviation regulations. That isn't a hobby, that's my work, and the rules and regulations of aircraft maintenance have been my work for a few decades. I review the regulations on a daily basis, not because I necessarily enjoy reading about the history and life blood of aviation as it has been edited by bureaucratic lawyers, but because I constantly need a refresher. I read Federal Aviation Regulations every day.

Which brings up the issue of this month's Washington View; when was the last time you actually read the aviation regulations that govern your performance on the job, the criteria of the equipment you sell, or the organization of the maintenance business that you operate? I don't mean sitting down on a long flight with a copy of the regulations for that relaxing read as you pass the time eating peanuts and drinking sodas, today's gourmet airline meals. I mean, when did you last have a question and dusted off your old copy of Title 14 of the Code of Federal Regulations, the Federal Aviation Regulations, to find the answer?

Have you ever had the customer who questioned why you spend (and hopefully bill the customer for) so much time on the flight manual supplement after an installation? The normal response I hear is, "I don't know, my inspector requires it of me."

Well, anyone who has attended an AEA regional meeting in the past three years knows that for me that answer is never acceptable. Not that the inspector is wrong. On the contrary, in most cases of a flight manual supplement, the inspector is right. But the answer that "My inspector requires it…." is never correct. The inspector does not have the authority to require it; it is the Federal Aviation Regulations that require it, not your inspector.

So back to the question; why do we need to spend so much time updating a flight manual after an avionics installation? You guessed it; because the regulations require it.

Section 91.9 prohibits your customer from operating their aircraft without complying with the operating limitations specified in the approved Airplane or Rotorcraft Flight Manual, markings, and placards. And they are prohibited from operating their aircraft unless there is available in the aircraft a current, approved Airplane or Rotorcraft Flight Manual. There are two criteria listed here; first, a current flight manual, and second, where appropriate, approved flight manual.

And, section 23.1585 (j) requires the Flight Manual to contain procedures for the safe operation of the airplane's systems and equipment (including avionics equipment), both in normal use and in the event of malfunction.

Following an avionics installation, the installer has a responsibility to update the flight manual with any procedures that may be necessary for the "safe operation" of the new equipment. And the person that alters the aircraft has a responsibility to ensure the flight manual is current to the aircraft's configuration.

Have you ever had an FAAinspector who stated; "We don't follow that Advisory Circular" in this FSDO?" I hear that complaint more often than I should from members throughout the country. But what can you do?

Section 13.5 tells us that any person may file a complaint with the Administrator with respect to anything done or omitted to be done by any person in contravention of any provision of any Act or of any regulation or order issued under it, as to matters within the jurisdiction of the Administrator. This paragraph continues by stating that this section does not apply to complaints against the Administrator or employees of the FAA acting within the scope of their employment.

But then the question arises, "Does section 13.5 apply to FAAemployees?" Not when they are "acting within the scope of their employment," but are they acting within the scope of their employment when they refuse to accept an Advisory Circular published by the Administrator?

AC 00-2.14 clearly explains that the

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FAA issues advisory circulars to inform the aviation public in a systematic way of nonregulatory material.

The AC continues to explain that unless incorporated into a regulation by reference, the contents of an Advisory Circular are not binding on the public; it does not say that the AC is not binding on the FAA. Some inspectors have incorrectly interpreted this "one means, but not the only means" language to mean that the content of an AC is not binding on them. This is incorrect; an applicable AC is always an acceptable means of compliance to regulations and therefore, if chosen by the public, binding on the FAA. The public may choose to present an alternative means of compliance that meets or exceeds the criteria of the AC, but the FAA inspector does not have the authority to dismiss an applicable AC because they don't like what the Administrator has approved.

AC 00-2.14 states that an AC is issued by the FAA to show a method acceptable to the Administrator for complying with a Federal Aviation Regulation.

So back to the original question: is the FAA inspector acting within the scope of their employment when they refuse to accept an Advisory Circular published by the Administrator? When an FAA employee prohibits the public from using an FAA-published Advisory Circular that is applicable to the regulations at hand they are rejecting their employer's guidance and are therefore acting outside of their scope of employment. As a result of their actions, the inspector may fall under the provisions of section 13.5.

Occasionally, I will receive a question or two about equipment qualifications. Again, I refer to the Federal Aviation Regulations. This time, I'll start in Part 23.

Section 23.1303 establishes the minimum required flight and navigation instruments for normal and utility category aircraft. And Subpart B of Part 91 establishes the minimum equipment necessary for each phase of flight operations. But section 23.1301 establishes the criteria for the function and installation of the equipment.

What section 23.1301 requires is that each item of installed equipment must be of a kind and design appropriate to its intended function; be labeled as to its identification, function, or operating limitations, or any applicable combination of these factors; be installed according to limitations specified for that equipment; and to function properly when installed. In addition to the requirements of section 23.1301, section 23.1309 prohibits any item of equipment, system, or installation from adversely affecting the response, operation, or accuracy of any equipment essential to safe operation; or other equipment unless there is a means to inform the pilot of the effect when performing its intended function.

Section 23.1309 also requires that the design of each item of equipment, each system, and each installation must be examined separately and in relationship to other airplane systems and installations to determine if the airplane is dependent upon its function for continued safe flight and landing and, for airplanes not limited to VFR conditions, if failure of a system would significantly reduce the capability of the airplane or the ability of the crew to cope with adverse operating conditions.

So when your inspector tells you to validate certain interface issues, they are (often without knowing it) asking for validation to section 23.1309, though they may not know the exact regulatory cite. However, the exact cite is critical for the installer to show conformity to a specific requirement. To help show compliance with the requirements of section 23.1309, the FAA has published Advisory Circular 23.1309-1C which provides guidance and information of an acceptable means for showing compliance with the requirements of section 23.1309.

Communication is probably the single most important element between the government and the public. When the FAAinspector states a "need," it is the duty of the public to corroborate the "inspector's need" to a regulatory requirement. The easiest and most accurate method is for the public to stipulate that the need must be put in writing.

Correlating the inspector's "need" to the regulatory requirement allows the regulated public to find the appropriate advisory material which will help the shop demonstrate conformity to the specific Federal Aviation Regulation in a method that is acceptable to the Administrator. What an AC will not and cannot do is show you an acceptable method of showing compliance to an inspector's arbitrary "need." Knowing the specific Federal Aviation Regulation cite is critical to the shop, in addition to being the FAA inspector's duty and responsibility to be able to cite the specific Federal Aviation Regulation that corresponds to every requirements.

I'll leave you with two challenges this month. First, re-read Part 43. Read it in its entirety, including the appendices. I know you know what it says, but like my old movies, you may not have remembered the classic lines. You're an expert in the design and installation of avionics systems, and probably could write the designs standards. If you're not a full time quality inspector, you probably haven't reviewed the regs in sometime, and, like me and my old movies, you need that occasional review to pick up a long forgotten quote.

The second challenge is towards

your inspector. Talk to them and let them know that in the future, you will be asking for their "needs" to be referenced to the regulations and that you will be asking for their "needs" to be put in writing. The FAA policies already support this, good management practices support this, and in the name of full compliance with the Federal Aviation Regulations, should be the cornerstone of compliance. You don't cut corners in your job; don't allow your inspectors to cut corners in theirs. ❑

# Regulatory Update

## United States

### Advisory Circular (AC) 23-21, Airworthiness Compliance Checklists Used to Substantiate Major Alterations for Small Airplanes

The Federal Aviation Administration (FAA) has published a notice announcing the issuance of Advisory Circular (AC) 23-21. This advisory circular provides guidance material for the creation and use of airworthiness compliance checklists that can be used when making major alteration to small airplanes. These checklists are intended to be used by Airframe and Powerplant (A&P) mechanics with Inspection Authorization (IA) and by Federal Aviation Administration (FAA) Airworthiness Safety Inspectors (ASIs). The checklists identify the data requirements and their approval methods for several common major alterations and identify the supporting documentation that may be used to support approval for return to service after aircraft alteration. Use of the airworthiness compliance checklists should be limited to alterations that have been determined to be "major" alterations, as defined in 14 CFR, part 1. They are not intended to be used for complex alterations that require a Supplemental Type Certificate (STC), per FAAOrder 8300.10. The advisory circular is intended to work in conjunction with and complement AC 43-210, Standardized Procedures for Requesting Field Approval of Data, Major Alterations, and Repairs. The AC does not change any previously released FAA guidance material such as FAA Orders and AC's listed in section 4 of the advisory circular. The intent of the AC is to provide a tool to work within existing approval processes. The use of the checklists during the return to service of a major alteration is not mandatory nor does it alter any previously acceptable method.

A copy of AC 23-21 may be obtained on the Internet at http://www.airweb.faa.gov/AC.

### Advisory Circular 23-23, Standardization Guide for Integrated Cockpits in Part 23 Airplanes

The FAA announced the issuance of Advisory Circular (AC) 23-23, Standardization Guide for Integrated Cockpits in Part 23 Airplanes. The AC acknowledges the General Aviation Manufacturers Association (GAMA) Publication 12, "Recommended Practices and Guidelines for an Integrated Flightdeck/Cockpit in a 14 CFR Part 23 (or equivalent) Certificated Airplane,'' as an acceptable means for showing compliance with applicable requirements for electronic displays in Part 23 airplanes.

### Flight Standards Airworthiness Bulletin (FSAW) 94-32B

The revised bulletin provides guidance to supplement handbook instructions for a qualified Airworthiness aviation safety inspector (ASI) to perform field approvals of the installation and operational use of global positioning systems (GPS) or GPS with wide area augmentation system (GPS-WAAS) equipment for specified flight phases. It also clarifies procedures prescribed within Federal Aviation Administration (FAA) Advisory Circular (AC) 20-138A, Airworthiness Approval of Global Navigation Satellite System (GNSS) Equipment, for approving an operating limitation placard or an Airplane Flight Manual Supplement (AFMS) or Rotorcraft Flight Manual Supplement (RFMS) describing operational limitations and other elements affecting use of an aircraft with GPS or GPS-WAAS equipment.

## Canada

### Changes to the Canadian Aviation Regulations

Transport Canada is enhancing the electronic formats of the Canadian Aviation Regulations (CARs), i.e. CD-ROM and website. To ensure the success of this undertaking, Transport Canada did not publish a September 2004 amendment. This will allow ample time for the improvements to take place as well as ensure that all formats (print, web and CD) are amended concurrently.

The quarterly amendment cycle currently used to amend the CARs will decrease to twice per year beginning in January 2005. The amendments will

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# Frequently Asked Questions

## TOPIC: Creditability of FAA Orders towards public compliance.

**QUESTION:**

My FAAinspector recently informed me of an FAApolicy document that they acknowledge is more restrictive than regulations and advisory circulars. How should industry resolve this conflict?

**ANSWER:**

It's not industry's problem; it is your inspector's dilemma.

When inspector's employee guidance conflicts with the Federal Aviation Regulations and/or applicable Advisory Circulars, the inspector MUST enforce the regulation. Your inspector should report the conflict to their supervisor. If the conflict is still not resolved, the inspector should then report it to their Union. The fact that the FAA order conflicts with the Federal Aviation Regulations is no excuse to shirk their responsibility as a public servant to uphold the laws of the United States.

**ANALYSIS:**

The FAAhas published clear guidance on how they communicate regulatory, advisory and internal policy orders. In addition, the regulations and policies regarding alterations are actually very clear.

Advisory Circular 00-2.14 clearly states that an Advisory Circular is issued to provide guidance and information in a designated subject area or to show a method acceptable to the Administrator for complying with a Federal Aviation Regulation.

FAA Order 1320.46B which addresses the Advisory Circular (AC) system, notes that the AC system which became effective in 1962 provides a single, uniform, agency-wide system that the Federal Aviation Administration (FAA) uses to deliver advisory material to FAAcustomers, industry, the aviation community, and the public.

The AC system provides guidance such as methods, procedures, and practices acceptable to the Administrator for complying with regulations and grant requirements. ACs may also contain explanations of regulations, other guidance material, best practices, or information useful to the aviation community. They do not create or change a regulatory requirement.

According to FAAOrder 8300.10 – The Airworthiness Inspector's Handbook is referred to as a handbook and, as such, directs the activities and provides guidance for Airworthiness Aviation Safety Inspectors (ASIs), involved in the following the certification, technical administration, and surveillance of individuals, facilities, and organizations in accordance with FAR Parts 65, 91, 121, 125, 129, 133, 135, 137, 141, 145, 147, 149, and 183. And in investigating, conducting, and/or responding to aircraft accidents and incidents, accident prevention activities, enforcement activities, and miscellaneous tasks not related to specific Federal Aviation Regulations.

FAA Order 1320.1D further explains that FAA Directives are written communications that initiate, or govern actions, conduct, or procedures. Directives include guidance or instructions that describe, establish, or explain agency policies, organization, methods or procedures. Directives DO NOT include Rules, regulations, airworthiness and other rulemaking documents. Nor do Directives include Advisory Circulars issued primarily to and for the public.

Section 43.3 allows the holder of a mechanic certificate to perform maintenance, preventive maintenance, and alterations as provided in Part 65.

Section 43.7 authorizes the holder of a mechanic certificate or an inspection authorization to approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service as provided for in Part 65.

Part 1 defines Major and minor alterations.

Appendix A to Part 43 further describes alterations that are considered major alterations.

There are specific Advisory Circulars that apply directly to various avionics equipment installations.

Therefore, by design an FAA Directive CAN NOT limit the applicability of regulations or Advisory Circulars.

If your inspector tells you that you must perform an action without the ability to cite the specific FAR, then the inspector is wrong and it is incumbent on the public to request the regulatory reference or refer the issue to the inspector's supervisor for resolution. If the issue cannot be resolved at that point, contact AEA.

*Note: AEAoffers these Frequently Asked Questions (FAQs) in order to foster greater understanding of the Federal Aviation Regulations and the rules that govern our industry. AEAstrives to make them as accurate as possible at the time they are written, but rules change so you should verify any information you receive from an AEA FAQ before you rely on it. AEADISCLAIMS ANY WARRANTY FOR THE ACCURACY OF THE INFORMATION PROVIDED. This information is NOT meant to serve as legal advice – if you have particular legal questions, then these should be directed to an attorney.*

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now be available for June and December amendments only.

A summary of the latest CARs amendments may be viewed at: http://www.tc.gc.ca/aviation/regserv/carac/cars/cars/summary_e.htm

### Reminder – RVSM Implementation

Southern Domestic RVSM (SDRVSM) implementation will occur on 20 January 2005, concurrent with the implementation of DRVSM in United States Domestic airspace and Mexican Domestic airspace (MRVSM). SDRVSM will expand RVSM airspace from the current area of 57 degrees N latitude to the North Pole, to the complete Southern Domestic Airspace from FL 290 to FL 410 inclusive. This expansion will result in RVSM being applied throughout the Canadian Domestic Airspace. All aircraft operating within these FLs must be equipped and approved for RVSM operations.

Full details may be seen on the Service Projects—RVSM menu item on the NavCanada web site at: www.navcanada.com

### Transport Canada issues Policy Letter for Acceptance of Replacement Instrument Bearings

TCCA has issued PL 571-001 to clarify their acceptance of replacement bearings in aircraft systems and equipment. The PL states that replacement of bearings in gyroscopic instruments may be classified as a Minor Repair, using Acceptable Data. The replacement bearings must be approved to TSO-C149, and the bearing manufacturer must provide a letter stating that the bearings are the same as those supplied to the instrument manufacturer, and that they are not aware of any changes made to the bearings by the instrument manufacturer.

PL 571-001 may be viewed at: http://www.tc.gc.ca/CivilAviation/certification/guidance/571-001.htm

### Reciprocal Acceptance of Repair Design Approvals between TCCA and the FAA

TCCA has published Staff Instruction (SI) 513-002. This SI provides general information and basic procedures for the implementation of the Memorandum Of Understanding (MOU) between Transport Canada Civil Aviation (TCCA) and the Federal Aviation Administration (FAA), as revised October 2003, for the Repair Design Approval (RDA) of aeronautical products. It provides guidance concerning the issuance of approval and/or reciprocal acceptance of repair design data approved by either TCCA or the FAA, including their respective delegates/designees for any Canadian or U.S. registered aircraft or other aeronautical products installed on those aircraft.

Although the SI is published for the information of TCCApersonnel, repair shop personnel will find the information in the SI useful in understanding the process for acceptance of repair design data between TCCA and the FAA. SI 513-002 may be viewed at: http://www.tc.gc.ca/CivilAviation/certification/guidance/513-002.htm

## Europe

### EASA

### Agency Opinion 2/2004

On October 1, Agency Opinion was issued which provides assistance to the European Commission to revise the (EC) No 2042/2003 rule previously adopted in November 2003.

During the discussion related to the adoption of the said regulation, the subject of its entry into force was addressed. This resulted in the conclusion that the entry into force of some provisions should be progressive. It was also agreed that the pace at which these provisions would be implemented should be left to Member States to decide, as they have a better knowledge of the state of readiness of their industry to do so. This lead to the opt-out provisions of Article 7 allowing Member States to postpone the entry into force of certain provisions of Regulation (EC) No 2042/2003.

Unfortunately, the final rule focused on European organizations and the case of the foreign ones was overlooked. This results in the impossibility for the Agency to postpone the entry into force of the above paragraphs of Annex II (Part-145) for the organizations for which it acts as competent authority. As certain provisions are linked to the implementation of other annexes such as Annex III (Part 66), it would be impossible for these organizations to implement the rule. Furthermore, this situation could be felt as discriminatory by certain foreign maintenance organizations.

The agency opinion and the proposed revised rule can be found on the Agency Website.

### EUROCONTROL

The EUROCONTROL Agency has established a Mode S Enhanced Surveillance Exemption Coordination Cell (ECC) in order to support the operational introduction of SSR Mode S Enhanced Surveillance. They have issued a revised implementation and exemption policy on August 31.

State Regulatory Authorities have delegated the ECC to manage exemption requests and to notify exemptions on their behalf in the following circumstances:

Where aircraft avionics do not permit the extraction and transmission of the full set of downlink aircraft parameters (DAPs). (The list is accessible on the EUROCONTROL website and provides the currently available details of aircraft and their capabilities for

providing DAPs. This list will be updated on a regular basis.)

When aircraft operators show a clear intent to equip their aircraft as soon as practicable after March 31, 2005, but before March 30, 2007, and who experience genuine technical issues or supply problems, causing delays that are beyond their control. In these circumstances, operators may also apply for a partial alleviation from the Mode S Elementary Surveillance requirements in order to install the wiring for Aircraft Identification reporting at the same time as the wiring for Enhanced Surveillance DAPs.

For aircraft that have an out-of-service date before December 31, 2007:

For aircraft conducting flights under existing rules for the purpose of flight testing, delivery or for transit into and out of maintenance bases. (These exceptional cases may be granted strictly limited duration exemptions. In recognition of the special nature of such requests they will be processed via alternative channels. Further details will be announced on this site as they become finalized.)

For aircraft that intend to conduct only occasional IFR/GAT flights (under 30 hours per aircraft per annum).

## RTCA

A few new documents were issued:

### DO-293 Minimum Operational Performance Standards for Nickel-Cadmium and Lead Acid Batteries:

This document provides guidance for avionics manufacturers developing Nickel-Cadmium and Lead-Acid batteries to be used as power sources for equipment installed in aircraft. Specifically, the document addresses the chemical composition, cell size, cell construction, interconnection of the cell into batteries, venting, operational and storage environments, packaging, handling, test, storage and disposal.

DO-282A Minimum Operational Performance Standards for Universal Access Transceiver (UAT) Automatic Dependent Surveillance - Broadcast (ADS-B)

The document contains Minimum Operational Performance Standards for airborne equipment to support Automatic Dependent Surveillance - Broadcast utilizing the Universal Access Transceiver (UAT). UAT is a multi-purpose aeronautical data link intended to support not only ADS-B, but also Flight Information Service - Broadcast (FIS-B), Traffic Information Service - Broadcast (TIS-B) and, if required in the future, supplementary ranging and positioning capabilities.

### DO-291 Interchange Standards for Terrain, Obstacle, and Aerodrome Mapping Data

This document recommends guidelines and requirements for developing a data interchange format for terrain, obstacle, and aerodrome data. A common database interchange standard is a key factor in successfully implementing digital functions in the aviation domain. Use of information contained in this document will help system designers assure a common interchange between data originators and data integrators.

### BAUA and GAMTA Merge

The Councils of both the Business Aircraft Users Association (BAUA) and the General Aviation Manufacturers and Traders Association (GAMTA) announced that after several months of collaboration, co-operation and encouragement from members they have decided that the two associations should merge. Both Councils have passed resolutions to that effect with the result that the two organizations are now in the process of becoming one.

Mark Wilson will become the chief executive of the merged association and will continue to represent the interests of all involved with general aviation, such as manufacturers, maintenance facilities, operators or traders. The new association, with approximately 160 member companies, will represent the full spectrum of general aviation, from flight training aircraft to high end business jets, and uniquely will combine all disciplines within one organization. Comments Mark Wilson, “This merger gives the United Kingdom business and general aviation community the strongest possible voice, both nationally and, via our membership of the EBAA, IBAC and ECOGAS, internationally.”

The working title for the new organization will be the British Business and General Aviation Association (BBGA). BBGA will be formally launched at a reception at the House of Commons on the July 20, 2005. ❑

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