



The View from Washington

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Change

“The more things change, the more they are the same.” —Alphonse Karr (1808-1890)

As I write this month’s View, winter has just begun in the Northern Hemisphere; EASA has just held their third industry meeting on the transition to the new EASA regulations; CASA has just published their complete rewrite of the maintenance regulations; PASAO is beginning to impact the Island Counties of the South Pacific; and the FAA has just published its draft advisory material on the implementation of their mandated repair station training program.

And with all of this change, from all over the world, one thing is the same: “The Government doesn’t know a bloody thing about running a for-profit small business.” To add to that, I’m not convinced that those who are charged with aviation safety really know how to make reasonable safety decisions.

That’s not to say that they don’t make decisions that have a positive effect on safety. Statistically, if one implements a program which makes flying more costly, there are fewer flights and, therefore, fewer accidents and incidents.

The European Aviation Safety Agency is a National Aviation Authority-type organization which has aviation regulatory responsibility not for an individual country, but rather for the entire European Union. The physical local-level implementations of the regulations are held at the indi-

vidual NAA level.

The European institutional framework works like this. The Community (European Union) acts as a legislator, while individual Member States apply Community law under Community supervision. Legal remedies for individuals and enforcement means are provided by the individual Member States judicial systems.

The Commission may be delegated strictly defined executive powers, including the setting up of binding standards.

A Community Agency may be delegated the application of Community law, in particular the assessment of conformity with binding standards. The exercise of such powers shall be subject to the necessary political and judicial supervision.

The Legislative level, which consists of the Parliament and the Council, establishes the legal framework.

The Executive level, which consists of the various Member States, the Commission, the Agency and Industry, set up the binding standards and assesses conformity to the standards.

The Judicial level, which consists of the national Courts and the European Court of Justice, is responsible for enforcement and, when necessary, remedies.

But just as experience with the FAA has found, with centralized rulemaking and policy-making, physical con-

tact with the policy-makers is essential. E-mail alone cannot do it! The preamble to the regulations and policies become critical in determining the intent of the law-makers in mandating standards, and face-to-face contact is a necessity.

Simple explanations of regulations that nicely fit into transport-category aircraft and/or commercial airline applications seldom have a nice neat fit into general aviation. Most policy makers’ experience is not, generally, in small aviation maintenance businesses. Although they might have worked in GA at some time in their past—maybe before GA had matured; maybe before maintenance manuals matured; maybe before repair stations matured; or maybe before small businesses matured—these regulators need to be educated on the “new” GA and the “new” general aviation businesses.

In Australia, the regulations governing Maintenance and Maintenance Personnel Requirements are receiving a wholesale upgrade. The rules affected by the proposed CASR are Part 43 – Maintainers’ Responsibilities, Part 66 – Maintenance Personnel Licensing, Part 144 – Distribution Organizations, Part 145 – Maintenance Organizations, Part 147 – Maintenance Training

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Organizations, Part 183 – Authorized Representatives and Subpart 91.M – Airworthiness and Maintenance Control (General Operating and Flight Rules) (incorporating previously proposed 136.M and 137.M), 121.M, 133A.M, and 135.M.

Part of the upgrade is long overdue and will serve the aviation industry well, and part of the upgrade is for international recognition. This wholesale change consists of first, renumbering the Civil Aviation Safety Regulations following the JAR – FAR model. Then the regulations are updated to better harmonize with the international marketplace; this is a very dangerous activity for the Australian industry.

The Australian Government has been negotiating with the FAA on a bi-lateral aviation safety agreement which recognizes maintenance performed by either country on either country's aircraft. From a commercial perspective this is an essential element of the global aviation marketplace. However, the Australian Government must use caution to protect the general aviation operations during their rulemaking process. In the United States, Congress has been forced to become involved numerous times to protect the general aviation community in Alaska, an operation similar to the General Aviation operations in Australia. Without the intervention of Congress, the FAA would have destroyed the Alaskan operations. Blindly "getting in bed" with the FAA will condemn the Australian industry to the same peril.

Pacific Aviation Safety Office (PASO) is a new regional body that will supervise aviation safety and security in seven Pacific Island countries from its base in Port Vila, Vanuatu.

The PASO Treaty for Aviation Safety and Security Operations is

intended to provide for a common (harmonized) set of safety and security regulations for the Pacific Island nations of Fiji, Kiribati, Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu.

The PASO Treaty was necessary if the Pacific Aviation Safety Office is to operate effectively and efficiently and also provide legal recognition of the inspectors employed by PASO to perform their duties under jurisdiction of States using the PASO services.

When fully operational, PASO is expected to transform the regional operating environment by increasing availability of expertise within the region, harmonizing regulations, and lowering costs through economies of scale and leveraged use of regional resources. PASO is currently recruiting specialist aviation inspectors and establishing technical procedures. It is expected to be fully self-sufficient and financially sustainable within five years.

In the U.S., the FAA has introduced their guidance on developing a training program for repair station employees.

This draft guidance tells the industry to do what the FAA can't do for themselves. The regulators, the overseers, the technical experts, cannot afford training for their own employees. Though Congress has continually questioned the Administrator about employee proficiency, it is still considered a "nice-to-have" budget item, to be exercised only if the local FAA office has any surplus funds.

So while the Federal Government cannot afford a formal training program for their own employees, they fabricate the need for small businesses to implement a very costly program that they must approve.

The FAA's logic goes something like this: "Title 14 CFR part 121.375 or part 135.433 requires, however, that any person performing maintenance or preventive maintenance functions for a certificated-holder have a training program to ensure each person who determines the adequacy of the work performed is fully informed about the procedures, techniques, and new equipment in use and is able to perform all associated duties."

Then they argue that: "Today, many air carriers have emerged that do not perform their own heavy maintenance. As a result, several large repair stations have emerged, or existing repair stations have grown to accommodate the increased work from these air carriers. In addition, there has been a trend for established air carriers to contract out work to repair stations for heavy maintenance work in excess of what they can handle in house, for specific aircraft types of which few are in operation, or for a number of specific major repairs and alterations."

I'm sorry; didn't the FAA just argue that "Title 14 CFR part 121.375 or part 135.433 requires that any person performing maintenance or preventive maintenance functions for a certificated-holder have a training program...?"

The purpose of the repair station's training program is to: provide compliance with Section 145.163; provide—through initial and recurring training—a continuing education program enabling repair station employees to perform their job functions efficiently, safely, and correctly; and familiarize repair station employees with the repair station manual, quality control manual, and their procedures.

Each repair station's training program should address at least the following training courses of study for the different categories of employees:

- (1) Indoctrination training for new

employees covering the repair station's operations;

(2) Initial technical training to provide new and existing employees taking on new job functions with the appropriate technical skills;

(3) Recurrent technical training to ensure all employees remain current;

(4) Specialized technical training or advanced training for specific tasks or functions; and

(5) Remedial technical training for certain employees to correct training deficiencies

The FAA further proposes that each repair station should have well-defined processes for identifying its overall training requirements and assessing each individual's capabilities. The procedures should include the following: Determination of who needs training and what type of training, reassessment when changes occur at the repair station, ongoing review to ensure that training meets all the repair station's needs, evaluation of all new employees to determine their initial capability and training requirements, assessment of current repair station employees when they are assigned new job functions to determine their training requirements, and analysis of data from voluntary reporting systems, internal evaluations, or repair station rework after deliveries.

While much of the FAA proposal may be logical and to some extent just good business, the FAA's proposed bureaucracy is costly, inefficient, and burdensome.

So without exception, general aviation worldwide is under attack. The regulatory authorities are being pushed by the various legislative branches to reduce the aviation accident rate (of commercial aviation) and as a side note, general aviation and aviation small businesses are simply collateral damage.

As a result, it becomes imperative that as the aviation regulations world-

wide become harmonized, that general aviation band together to communicate with the policy-makers to ensure that general aviation is protected. We need to ensure that these new aviation regulations are translated into general aviation-ese.

General aviation businesses must take the time to communicate with regulators as they develop new regulations. When a local NAA regulator demands business-oriented actions which don't make sense for general aviation, the small businesses must know the regulations well enough to be able to discuss the regulations and the source of the regulation with the regulator.

Remember that, "The more things change, the more they are the same." Aviation small businesses can only survive through the vigilance and tenacity of the aviation entrepreneur. □

Regulatory Update

United States

Policy Statement; Installation of Electronic Engine Control for Reciprocating Engine; PS-ACE100-2004-10024

On December 2, 2004 the Federal Aviation Administration (FAA) published a notice which announced the issuance of policy statement PS-ACE100-2004-10024 on the installation of electronic engine control for reciprocating engines. This policy statement sets forth guidance on appropriate certification requirements for installation of an Electronic Engine Control (EEC) into a small airplane with a reciprocating engine. It includes guidance related to methods of compliance as well as potential Equivalent Level of Safety findings (ELOS) and special conditions.

The policy statement PS-ACE100-2004-10024 was issued by the Small Airplane Directorate, ACE-100, on November 18, 2004.

Announcement of FAA Advisory Circular (AC) 145-RSTP (Draft), Repair Station Training Program

On December 22, 2004 (FAA), announced the availability of and requests comments on AC 145-RSTP that provides guidance on eligibility, application, and selection for the repair station training program.

Comments must be submitted on or before January 21, 2005, or as soon as possible if you have already missed the due date.

Europe

NOTICE OF PROPOSED AMENDMENT (NPA) No. 15/2004

Draft decision of the Executive Director of the Agency, amending the annex to Decision No. 2003/2/RM on certification specifications, including airworthiness codes and acceptable means of compliance, for large airplanes (« CS-25 »).

The proposed text adds a new paragraph CS 25.1302 to existing Airworthiness Code. The proposal does not replace or modify any text that currently exists in the Airworthiness Code. The overall reason for adding this paragraph is as follows: the Airworthiness Code contains requirements for design of flight deck equipment that are system-specific (e.g. 25.777, 1321, 1329, 1543 etc.), generally applicable (e.g. 25.1301(a), 1309(c), 771(a)), and for establishing minimum flight crew in 25.1523 and Appendix D. The proposed

25.1302 augments the currently existing generally applicable requirements by adding more explicit requirements for design attributes related to flight crew performance, including avoidance and management of flight crew errors. In addition, other ways to avoid and manage flight crew error are regulated through the rules that govern licensing and qualification of pilots and aircraft operations (e.g. JAR FCL and JAR Ops for JAA countries). Taken together, the proposed requirement and existing requirements in the airworthiness code and rules as mentioned above represent complementary approaches to provide a high degree of safety.

Canada

Transport Canada Avionics Modification Workshop

TCCA held the annual TC/Industry Avionics Modification Workshop in Ottawa December 1-2, 2004. AEA was represented by Paula Derks, Ric Peri, Barry Aylward and John Carr. There were also many AEA Canada member companies represented. The workshop focused on actions arising from the previous workshops held in 2000 and 2003, and although many items still remain open, good progress was made on some of the lingering issues.

The following items from previous workshops were closed:

- Installation of 8.33 kHz VHF
- Compliance with 25.1333(c)
- Installation of additional ADC
- Standby Attitude Indicator power
- HIRF certification
- EMC compliance on FADEC rotorcraft

The following items were left open:

- Certification of equipment with complex logic devices (CPLD, FPGA, ASIC, etc.):

An FAA advisory circular is to be published shortly, and will state that RTCA DO-254 will only apply to complex logic devices. TCCA stated they will adopt FAA AC.

- Single Combi FDR/CVR in rotorcraft:

This will be allowable. TC position is posted on their website (Avionics FAQ).

- Human Factors (IFR GPS):

TCCA has published PL 523-008.

- **Transponder/Encoder Re-certification:**

An NPA is to be issued for CAR 571 Appendix F to require correlation check every 24 months. A basic check with ramp equip must be performed after re-installation. Relief to be provided for re-installation at remote locations.

- **Replacement Instrument Precision Bearings:**

PL 571-001 has been issued, similar to FAA policy, but an additional statement is required from the bearing manufacturer regarding them having no knowledge of the OEM altering bearing. The policy is acceptable to AEA provided bearing manufacturers will make additional statement. TCCA is to review PL with respect to need for additional statement.

- **Installation Approval of Non-Required Equipment:**

TCCA proposed 2 categories of non-required equipment: 1. Equipment in cockpit, interfaced to required systems, and used to operate or maintain aircraft; and 2. IFES, cabin electronics, etc. Guidance material is being drafted.

- **Supplemental Instructions for Continued Airworthiness:**

AEA position was that MSI 53 is causing confusion and delays in acceptance of Supplemental ICAs. TCCA must revise MSI 53 to address industry concerns over the lack of clarity of the guidance provided on the format and content of ICAs and the responsibilities for acceptance of ICAs within TCCA. TCCA acknowledged the need for revisions to the MSI.

- **Use of Specified Data for major modifications:**

TCCA committed to allowing the use of supplementary specified data for certain installations, e.g. IFR GPS, CVR, Simple Avionics. Initially this will be only for FAR 23/27 aircraft. TCCA is to review last year's decision record to confirm discussion on assessment criteria applicable to equipment required by operational rules. AEA need action for use also on FAR 25/29 aircraft. TCCA will establish an advisory panel and AEA will nominate representative(s) for advisory panel.

- **Electronic Flight Bags (EFB):**

PL 500-017 has been issued, harmonizes with the FAA. For Class 2 EFBs, airworthiness approval is required for the mounting, power, etc. Supplemental ICA and FM Supplement are required. Statement as follows may be appropriate: "Software applications and databases must be installed and used in accordance with the Instructions for Continued Airworthiness." A placard is not acceptable.

- **Wire Marking:**

TCCA is reviewing requirements for wire marking. AC43.13-1B states: "should" mark wire. FAR 23.1365(d) Amend. 23-49 states: "Means of identification must be pro-

vided." The ASTM F-39 WG (Ric Peri) is reviewing wiring standards for FAR 23 aircraft. If AEA members wish to provide any additional feedback or information to TCCA, please forward this to Barry Aylward or John Carr.

- **Approved Model List (AML) STCs:**

FAA has drafted AC 23-22 to provide guidance on AML STCs. TCCA can issue multi-model STC, per continuation sheet, but for a FAA STC the AML is contained on separate sheet. A Model Qualification Process is required to create/amend the AML TCCA position is to adopt a policy consistent with FAA, for FAR 23/27 only. Review of FAA AML STCs will be per ACSI 23 (same as STC process). An AN is to be issued to advise of special considerations when using an AML STC, and clarify when additional approvals required.

- **GPS:**

ACPL 17 is to be re-issued to simplify TCCA policy for IFR approvals; address use of Specified Data for some GPS installations (IFR, and may be used for stand-alone GPS in FAR 25 aircraft); adopt AC 20-138A, with exceptions (extend limit from 6000 lb to 12500 lb, include pressurized aircraft with evaluation per AC, TCCA human factors guidance, specific Flight Test and data requirements, and to address unique Canadian operating environment). TCCA is to review "VFR Only" placard terminology.

- **Delegation of Flight Manual Supplement Approvals:**

PL 500-003 is to be issued soon to allow delegation of FM Supplements for FAR 23 single installations; LSTC, not first installation; and only if there are no aircraft limitations.

- **Importation/Field Approval Review Process:**

TCCA will identify and implement changes to the guidance material and training provided to inspectors and engineers to standardize the practice of accepting the avionics installations approved by FAA field approval in aircraft being imported to Canada. AEA Canada is to conduct a member survey concerning difficulties in obtaining TCCA acceptance of FAA field approved avionics installations in aircraft imported to Canada.

- **Wire Flammability:**

In 2003, TCCA expressed concerns with flammability of MIL-W-22759/16 wire. A FAA Tech Centre report of July 2004 confirmed compliance of wire samples to FAR 25 Appendix F, and the FAA Small Airplane Directorate issued a Policy Memo confirming acceptability of wires identified in AC 43.13-1B for FAR 23 aircraft. TCCA has requested FAA Headquarters to provide an overall FAA policy statement,

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Frequently Asked Questions

TOPIC: Aircraft Certification Issue Papers.

The following information is from the FAA's Notice N 8110.99 titled: *How to Use Issue Papers in Aircraft Certification*.

QUESTION: Recently while working with my local Aircraft Certification Office (ACO), the FAA engineer kept referring to an "Issue Paper" on the installation of wireless devices in aircraft. What is an "Issue Paper"?

ANSWER: An Issue Paper is a document published by the responsible FAA Airplane Directorate which provides a simple, structured means of accomplishing several necessary steps in the type certification process.

The most common type of issue paper defines a particular method of compliance as a result of peculiarities in the type design or the need to define specific conditions and/or establish the environment under which substantiation must be shown. In addition to the "method of compliance" type issue papers, certain categories of issues, regardless of their inherent controversy, will also be resolved via issue papers. These types of issue papers are defined include.

(1) Equivalent Level of Safety - ELOS findings will be granted when literal compliance with a certification regulation cannot be shown and compensating factors exist which can be shown to provide an equivalent level of safety (see 14 CFR §21.21(b)(1)). An issue paper is the vehicle for documenting the evolution and conclusion of the request for an equivalent level of safety finding. Furthermore, we have determined that an acceptable way in which to document the finalized ELOS findings would be for the certification office to prepare a memorandum containing the needed information for review and approval by the accountable directorate. The development and processing of the ELOS memorandum should normally occur after the applicable issue papers have been finalized. It should be noted that the ELOS memo process is not in-

tended to take the place of the issue paper process. While an issue paper may be the vehicle for initially generating an ELOS finding by the FAA, the ELOS memorandum is the way to communicate to the public the technical details that are the rationale for the FAA's determination of equivalency to the level of safety intended by the regulations.

(2) Special Condition - The basis for issuance and amendment of special conditions is

14 CFR §21.16. Under the provisions of §21.16, a special condition is issued only if the existing applicable airworthiness standards do not contain adequate or appropriate safety standards for an aircraft, aircraft engine, or propeller because of novel or unusual design features of the product to be type certificated. The phrase "novel or unusual" applies to design features of the product to be certificated when compared to the applicable airworthiness standards. Special conditions will not be used to upgrade the applicable airworthiness standards when novel or unusual design features are not involved.

(a) The FAA develops issue papers to address novel or unusual design features for which there are no regulations or inadequate regulations. These issue papers are used for development of the basis, need and wording of special conditions. A special condition contains only such airworthiness standards as are necessary to establish a level of safety equivalent to that established by the intent of the applicable regulations. Special conditions are unique to the specific certification program in which they are issued, unless by special statement in the special condition. The Administrator has delegated authority for their issuance to the directorates or to the Aircraft Certification Service (AIR), for areas of responsibility not assigned to a directorate.

(3) Certification Basis (G-1) - designates the applicable airworthiness and environmental regulations (applicable noise and environmental findings), including Special Conditions, that must be met for certification as set forth by §§21.17, 21.27, 21.29 or 21.101, as applicable. It also designates applicable Special Federal Aviation Regulations. This issue paper should provide the definitive justification for selection of the certification basis, including specific amendment levels.

(4) Determination of Compliance (G-2) - provides a statement of the FAA procedural requirements, including those that define the applicant's responsibilities for showing compliance. For foreign manufactured airplanes to be eligible for an import type certificate, an applicant must show, and the FAA must find, that the type design complies with the U.S. type certification basis, G-1. Under the Bilateral Airworthiness Agreements the ECAA may be authorized to approve data used for showing compliance to the requirements in the G-1 issue paper. Therefore, the G-2 issue paper will also outline the responsibilities of the applicable ECAAs.

(5) Environmental Consideration (G-3) - designates the applicable environmental regulations, i.e., the regulations establishing standards for aircraft noise and for fuel venting and exhaust emissions for turbine engine powered airplanes.

(6) Export (Import) Requirements - Country (G-4) - For exported products the G-4 issue paper cites the extent of FAA findings of compliance with the country's airworthiness requirements on behalf of the ECAA. For imported products the G-4 issue paper serves to establish the function of the ECAA(s) for airworthiness certification, operating matters and additional compliance findings relative to those defined in the G-1 issue paper.

Note: AEA offers these Frequently Asked Questions (FAQs) in order to foster greater understanding of the Federal Aviation Regulations and the rules that govern our industry. AEA strives 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. AEA DISCLAIMS 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.

REGULATORY UPDATE

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and TCCA's intent is to harmonize their wire flammability policy with that of the FAA.

TCCA's workshop presentations are available through the AEA website, in the members-only section (Resource One) under Government and Industry Affairs, AEA Canada page.

TCCA policy documents may be viewed at:
<http://www.tc.gc.ca/CivilAviation/certification/guidance/menu.htm>

TCCA Avionics FAQs may be viewed at:
<http://www.tc.gc.ca/CivilAviation/certification/engineering/avionics/FAQ/menu.htm>

TCCA policy statements regarding previous workshop items may be viewed under each workshop page at:
<http://www.tc.gc.ca/CivilAviation/certification/engineering/avionics/workshops.htm>

For further information on workshop items and discussion, contact AEA's Canada Regulatory Consultant, John Carr at (250) 763-2232, email johnc@natech.com. □