



INTERNATIONAL NEWS AND REGULATORY UPDATES

F R O M R I C P E R I
VICE PRESIDENT OF GOVERNMENT & INDUSTRY AFFAIRS FOR AEA

The Aircraft Electronics Association's international membership continues to grow. Currently, the AEA represents avionics businesses in more than 35 countries throughout the world. To better serve the needs of the AEA's international membership, the "International News and Regulatory Updates" section of Avionics News offers a greater focus on international regulatory activity, international industry news, and an international "Frequently Asked Questions" column to help promote standardization. If you have comments about this section, send e-mails to avionicsnews@aea.net.

Your Association in Action Around the World

Work on the progressive avionics license for general aviation in Europe is proceeding at breakneck speed — from a regulatory perspective it's absolutely unbelievable.

This project started a few years ago and was the passion of a past AEA European director, Jim Herbert. He was passionate about the development and adoption of an avionics license for general aviation that did not compete with Lufthansa or British Airways, yet still provided a qualified, high-quality engineer. Jim, we are getting close.

But before I get too carried away with where we stand, let me provide a bit of background, starting about five years ago with the inception of the European Aviation Safety Agency. As you might remember, the European Commission chartered EASA to establish a pan-European aviation safety agency, and it was given only two years to open its doors.

To meet this deadline, it adopted the closest thing it had to a European standard, the Joint Aviation Regulations. They were focused primarily on the airline operations. As a result, Europe's technician licensing scheme basically was built around airline-type operations. This scheme does not promote a progressive career through general aviation, as the technician progresses through his or her career toward an airline maintenance career, if they choose.

Enter Jim Herbert, who was the AEA's representative on the EASA regulatory working group developing a light engine/airframe license called B-3. In its closing remarks to EASA, the B-3 working group recommended the need to review the avionics standards (B-2) to determine if there was an opportunity to advance the license and recognize the general aviation engineer.

EASA gave this task to the Engineering & Maintenance subcommit-

tee of its Safety Standards Consultative Committee. The AEA participates on this subcommittee though its cooperation with the General Aviation Manufacturers Association.

In partnership with the British Business and General Aviation Association, the AEA hosted a series of meetings and evaluated the entire B-2 training curriculum to determine where the applicant could defer his or her training while still providing acceptable training and knowledge for use in general aviation. After reviewing the Part 147 curriculum and the amount of time to complete each module, it was determined Modules 5, 7 and 13 provided the greatest opportunity for advancement. In the final analysis, only Module 13 provided any reasonable opportunity to segregate the training and knowledge in any meaningful way.

After the working group provided the briefing to the Safety Standards Consultative Committee through the

Engineering & Maintenance subcommittee, the proposal was adopted and EASA initiated a rulemaking committee to develop a proposal for a general aviation avionics license. The PowerPoint presentation is available on the AEA website, www.aea.net, through the "Government Affairs" tab, under "Europe."

The proposal was for an avionics license that would be task-based with the ability to achieve progressive return-to-service authority based on specific tasks rather than whole aircraft authority, such as nav/com, autoflight, surveillance, etc.

As I write this, we just finished our second EASA rulemaking committee meeting and have virtually completed our initial assessment and recommendations. The next meeting is scheduled for late November, at which time there should be a review of the NPA draft, which is scheduled for 2011, with final rule publication in 2012.

As we continue our work on this standard, our Australian members should review the B-4 presentation. While the EASA working group is still "behind closed doors," the presentation is pretty close to what the final proposal will look like. This can create the opportunity to recommend a harmonized avionics rating as we move forward with the Civil Aviation Safety Authority's new suite of maintenance regulations.

For AEA's European members, I expect the new avionics license to be a topic of discussion next year during the annual AEA Europe Meeting.

UNITED STATES News & Regulatory Updates

Revisions Made for U.S. Repair Stations Maintaining Canadian Aircraft

The FAA issued CHG 102 to FAA Order 8900.1, Volume 2, Chapter 11, regarding the certification of a Title 14 CFR Part 145 repair station. The following sections were revised:

- 2-1294: "Repair Station Authorization to Maintain Canadian Aircraft."

a) Maintenance, Preventative Maintenance and Modifications. The repair station may perform maintenance, preventative maintenance and modifications to aircraft certificated in Canada. To perform this work, the repair station must continue to comply with Part 145 and special conditions imposed by the Bilateral Aviation Safety Agreement maintenance implementation procedures.

b) Implementing Required Procedures. The MIP agreement requires United States air agencies and Canadian-approved maintenance organizations to develop and implement stringent controls and procedures at their repair stations. These procedures must become part of the repair station manual or a supplement to the manual. The requirements for the supplement are contained in the current U.S./Canadian Bilateral Aviation Safety Agreement MIPs.

c) Transport Canada Civil Aviation Inspections. The repair station must allow TCCA, or the FAA on behalf of TCCA, to inspect it for continued compliance with Part 145 and MIP special conditions. The repair station must make its manual and the required supplement available for inspection. Note: TCCA may undertake investigations and enforcement in accordance with TCCA rules and directives.

The repair station must cooperate with any investigation or enforcement action.

- 2-1287 8: "Procedures for Performing Maintenance, Preventive Maintenance, and Modifications on Canadian Aeronautical Products."

a) An FAA-certificated repair station may perform maintenance, preventive maintenance and modifications (with the exception of annual inspections) on a civil aeronautical product under the regulatory control of TCCA. The repair station may approve that product for return-to-service if the repair station complies with the special conditions stated in the Bilateral Aviation Safety Agreement MIPs between the United States and Canada.

b) In addition to the other requirements specified in the MIPs, a repair station performing maintenance, preventive maintenance or modifications on aircraft operating in commercial air service under TCCA CAR Part IV or Part VII must include in its manual a supplement describing the procedures listed in AC 43-10, Appendix 3, Paragraph 3.2, or explain where in the repair station manual those procedures are described. The FAA must accept these procedures.

- 2-1299 B 2: Accept the Canadian supplement or revision to the appropriate manual sections by sending the certificate holder a letter indicating the date; document, manual or revision number; and an acceptance statement. The aviation safety inspector should sign the transmittal document. If the repair station elects to imbed its Canadian MIP requirements in its manual, the acceptance conveyance letter must quote each section of the manual where the Canadian requirements are found. The ASI is only accepting the Canadian requirements of the manual.

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FREQUENTLY ASKED QUESTIONS

United States

Checks on Experimental Aircraft

The following information is from the Federal Aviation Regulations.

QUESTION:

My FAA inspector recently notified me that if I wanted to continue performing 14 CFR 91.411 and 14 CFR 91.413 checks on experimental aircraft, I would need my operations specification amended to reflect that. What changed? Why has this suddenly become an issue?

ANSWER:

First, let me tell you I have received various reports recently from AEA members, ranging from their inspectors being absolutely correct to their inspectors taking significant “literary license” in what they are demanding.

But let me answer your questions. The rules have not changed, at least not in the past eight or nine years; however, with the last 14 CFR Part 145 regulation change, the rules did change. The AEA has been working with FAA headquarters to resolve the conflict, and the new FAA policy does that, at least until the regulations can be amended.

So, what’s required?

Let’s review 14 CFR 91.413, “ATC Transponder Tests and Inspections.” Section 91.413(a) states, “No persons may use an ATC transponder that is specified in §91.215(a), §121.345(c) or §135.143(c) of this chapter unless, within the preceding 24 calendar months, the ATC transponder has been tested and inspected and found to comply with Appendix F of Part 43 of this chapter.”

This applies to amateur-built aircraft, as well as light sport aircraft, normal and utility category (Part 23) aircraft, Part 25 aircraft and rotorcraft.

Section 91.413(c) states the tests and inspections specified in this section must be conducted by a certificated (and appropriately rated) repair station properly equipped to perform those functions.

Now, we start finding conflicts. When we read 14 CFR 145.201, “Privileges and Limitations of certificate,” we find a certificated repair station may “perform maintenance, preventive maintenance or alterations in

accordance with Part 43 on any article for which it is rated and within the limitations in its operations specifications.” In addition, the repair station may “approve for return-to-service any article for which it is rated after it has performed maintenance, preventive maintenance or an alteration in accordance with Part 43.”

All of this information reads well, except for the fact amateur-built experimental aircraft are exempt from Part 43.

Section 43.1(b) makes it clear that Part 43 does not apply to any aircraft for which the FAA has issued an experimental certificate, unless the FAA previously issued a different kind of airworthiness certificate for that aircraft. Therefore, we had a dilemma: Part 91 requires the maintenance (91.413) be performed and, with a few exceptions, mandates the checks are performed by a properly rated repair station, which technically cannot perform work on aircraft that are exempt from Part 43.

The solution? Amend the repair station OpSpecs with the authority to perform 91.411 and 91.413 checks on experimental aircraft.

This does, however, create a problem. When you receive a “limited rating,” §145.215 specifies “a certificated repair station with a limited rating may perform maintenance, preventive maintenance or alterations on an article if the article is listed on a current capability list acceptable to the FAA or on the repair station’s operations specifications.”

As a result, to add experimental aircraft to a limited rating automatically comes with a request for each and every make and model of experimental aircraft to be listed. However, you only need the limited rating for those maintenance tasks that are mandated by Part 91 and that specifically mandate the work must be done by a repair station. For all other work, there is no need for the “repair station” to do the work.

For these maintenance tasks, we recommend your “non-certified” maintenance business perform these tasks and sign off on them in accordance with the owner’s requirements. These aircraft are outside of the record-keeping requirements of Part 43.

Remember, the builder is the manufacturer, so you need to work with your FAA inspector to list “all” for the manufacturer of a specific “make and model” of experimental aircraft; otherwise, your capability list will be hundreds of listings long—one for each of your customers.

CANADA

News & Regulatory Updates

TCCA Maintains Database of Approved Organizations

Transport Canada Civil Aviation maintains an online database of approved/accepted organizations, including approved maintenance organizations, manufacturers, distributors, EASA-approved AMOs in Canada, TCCA-approved EASA Part 145 organizations, approved training organizations, and foreign AMOs accepted by TCCA under a technical arrangement with the foreign authority.

A search of the database can be performed for each class of an approved/accepted organization by approval number, company name, class, limitation (type of product), TCCA region, or province/country of operation. From there, each organization is identified by its TCCA certificate approval number. Clicking on this number identifies the organization's address, with approved products or ratings and scope of work.

To access the database, visit <http://wwwapps.tc.gc.ca/saf-sec-sur/2/ao-oa/a.aspx?lang=eng>.

TCCA Engineers Have a 'Level of Involvement' Option

Applicants for STCs, RDAs and PDAs should be aware the TCCA Regional Aircraft Certification offices have the option to identify a "level of involvement" for each project. The LOI defines the extent to which the TCCA certification engineers wish to be involved in the project, which could include

test witnessing, delegate oversight, compliance report reviews and more.

It should be noted the LOI process is independent of the level of design approval delegation that may be granted a DAR or DAO for the project.

The LOI process is defined in a TCCA staff instruction, SI 500-003, which states: "Completion of the LOI process by TCCA specialists is required prior to issuing a design approval, whether or not the delegate is issuing the approval...The introduction of LOI does not impact the certificate issuance processes but will require the parties involved to ensure that LOI is complete before the approval document is issued."

According to TCCA, this is not meant to undermine the delegate and it is not an in-process audit of the delegate, rather it reflects the need of the Transport Canada specialist to learn more of the certification process for that item.

To formalize the process, TCCA will create an LOI document for a new certificate application that indicates what LOI each TCCA specialist is to have. This is separate from the compliance program the delegates and TCCA sign.

Applicants for design approvals should ensure they understand the LOI that TCCA has defined, and TCCA should sign off on the LOI concurrent with completion of the delegated activities; otherwise, delays will result in TCCA issuance of the approval.

SI 500-003 is available at www.tc.gc.ca/eng/civilaviation/opssvs/management-services-referencecentre-documents-500-500-003-230.htm.

EUROPE

News & Regulatory Updates

Eurocae, RTCA Issue New Standards for Unmanned Aircraft Systems

RTCA recently issued a new standard: DO-320, "Operational Services and Environmental Definition for Unmanned Aircraft Systems."

This document provides a basis for assessing and establishing operational, safety, performance and interoperability requirements for unmanned aircraft system operations in the U.S. National Airspace System.

Eurocae issued a new revised standard, ED-107A, which is necessary if the latest high-intensity radiated field requirements need to be applied on a new avionics installation. The document contains a guide to certification of aircraft in an HIFR environment.

EASA Hosts Design Organization Approval Implementation Workshop

EASA is hosting its Part 21 Design Organization Approval Implementation Workshop from Nov. 3-4, in Cologne, Germany. The aim of the workshop is to provide an update to staff of national aviation authorities and industry representatives regarding EASA design organizations.

For more information, visit www.easa.europa.eu.

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FREQUENTLY ASKED QUESTIONS INTERNATIONAL

U.S. Repair Stations Working on Canadian-Registered Aircraft

The following information is from the FAA/Transport Canada Bilateral Aviation Safety Agreement.

QUESTION:

What work can a U.S. repair station perform on a Canadian-registered aircraft, and how is the work to be documented?

ANSWER:

The objective of the Bilateral Aviation Safety Agreement maintenance implementation procedures is to outline the terms and conditions under which the FAA and TCCA can accept each other's inspections and evaluations of United States repair stations and Canadian aircraft maintenance organizations, along with FAA-certificated airmen and Canadian aviation maintenance engineers for findings of compliance, thereby reducing redundant regulatory oversight without adversely affecting aviation safety.

Maintenance and alterations performed on a civil aeronautical product under the regulatory control of TCCA may be accomplished and the product returned-to-service by an FAA-certificated repair station or FAA-certificated airman who is properly trained, qualified and authorized to perform the work when the product is in the United States.

In accordance with the special conditions identified in the MIP, only TCCA-approved, specified or acceptable parts or components as applicable may be used to perform maintenance, preventive maintenance or alterations to Canadian aeronautical products. Major alterations and repairs must be accomplished in accordance with TCCA "approved" or "specified" data.

"Approved" data includes type certificates, supplemental type certificates and repair design approvals issued by TCCA.

"Specified" data is information contained in authoritative documents that, although not approved, have been specified as appropriate for the purpose of major modifications and major repairs. Examples include:

- 1) Drawings or methods described or referenced in airworthiness directives.
- 2) Data issued by the manufacturer or type certificate holder

of the aircraft, component or appliance, such as modification orders, service bulletins or engineering orders, which include a statement of approval by the applicable regulatory authority or a delegated representative of such an authority.

3) Manufacturer's structural repair manuals.

4) FAA AC 43.13-1 and AC 43.13-2, subject to the following conditions:

a) The aircraft is a small aircraft, and the alteration does not affect dynamic components, rotor blades, structure that is subject to pressurization loads, or the primary structure of a rotorcraft.

b) The alteration does not affect an existing limitation (including the information contained on mandatory placards) or change any data contained in the approved sections of the aircraft flight manual or equivalent.

c) The data is appropriate to the product being altered and are directly applicable to the alteration being made.

d) The data is not contrary to the aircraft manufacturer's data.

Maintenance or alterations must be certified by an approval for return-to-service or a maintenance release meeting the requirements of 14 CFR Part 43, Sections 43.9 and 43.11, for aircraft and the use of the FAA Form 8130-3 for aircraft components, and any other information required by the owner or operator as appropriate.

Major repairs or alterations performed on a Canadian aeronautical product must be recorded on FAA Form 337 and sent to TCCA within 48 hours by mail or electronic means. The Canadian customer will be able to inform the U.S. repair station of the appropriate TCCA regional office.

The AEA presented the course "Canada Regulations for U.S. Repair Stations" during its 2010 annual convention. The presentation is available on the AEA website at www.aea.net/training/presentations.

Note: The AEA offers "Frequently Asked Questions" to foster greater understanding of the aviation regulations and the rules governing the industry. The AEA strives to ensure FAQs are as accurate as possible at the time of publication; however, rules change. Therefore information received from an AEA FAQ should be verified before being relied upon. This information is not meant to serve as legal advice. If you have particular legal questions, they should be directed to an attorney. The AEA disclaims any warranty for the accuracy of the information provided.

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Implementation of SMS in Canada

BY JOHN CARR, AEA CANADA REGULATORY CONSULTANT

Part IV: Documentation

This is the fourth in a series focusing on the implementation of safety management systems in Canadian AMOs to meet the upcoming Transport Canada regulatory requirements for SMS. Parts 1, 2 and 3 of this series, which were published in the August through October issues of *Avionics News*, explained how a comprehensive quality management system designed to meet CAR 573.09, “Quality Assurance Program,” requirements will form a sound basis for the future SMS program. TCCA’s requirement for a gap analysis also was discussed and a sample gap analysis for development of a safety management plan was provided.

This article continues with the illustration of the sample gap analysis to address the documentation elements of SMS. Where the SMS elements may be satisfied with the AMO’s existing quality assurance program, it is noted.

Sample Gap Analysis Form (573 AMOs)

Safety Management System Requirements	Response (Yes/No)	If yes, state where the requirement is addressed, If no, record SMS processes that need further development	
		Small AMO (1-10 persons) ¹	Large AMO (>10) ²

Component 2, Documentation – Element 2.1, Identification and Maintenance of Applicable Regulations and Standards (CAR 107, CAR/STD 573.16)

The organization must have a process for documenting the regulations, standards and exemptions by which it is regulated for the various activities it conducts. This documentation may reside in the approved manual or the organization’s safety management program documentation as appropriate, but must be available to employees. The important thing is to position the documentation in a manner that promotes its usage.

Has a documented procedure been established and maintained for identifying applicable regulatory requirements?	Yes	<i>The AMO’s quality management system as described in the MPM will have a system for documenting the regulations and standards applicable to the operation of the AMO. The SMS regulations and standards per CAR 107 and CAR 573.16 will be added to this system.</i>	
Are communication processes (written, meetings, electronic, etc.) commensurate with the size and scope of the organization?	No	<p>1- person AMO: A documented procedure has been established and maintained by the AMO for periodic review of applicable Regulations and Standards to ensure that the most current information is available. The SMS regulations and standards per CAR 107 and CAR 573.16 will be added to this system.</p> <p>2-10 person AMO: Additionally, all pertinent technical and regulatory information is to be readily accessible by personnel.</p> <p><i>Refer to AC 107-002, App. A, Sec. 2.1</i></p>	<p>AMO > 10 persons Per 2-10 person AMO process.</p> <p><i>Also refer to AC107-001, Sec 5.1.</i></p>

¹Not all SMS elements will be required for small AMOs. AC107-002 addresses alleviations for AMOs with 1-person and 2-10 persons.

²AC107-001 addresses requirements for large AMOs.

³CAR 573.16 will address SMS requirements for “573” AMOs. It has not yet been published. Requirements are taken from the NPAs for CAR 573.16 and STD 573.16.

Component 2, Documentation – Element 2.2, SMS Documentation (CAR 107, CAR/STD 573.16)

Documentation in the context of a SMS has two components: the description of the SMS itself, and the records or outputs from the SMS processes. The reports that are generated will be analyzed and stored as records.

One way of accomplishing the first component is by developing a corporate SMS policy manual. This could contain a description of the SMS itself, and provide detail that could be incorporated by reference into other company manuals to minimize repetition.. Companies may also incorporate their SMS requirements into existing approved documentation if this method works better for them. No matter which approach is taken, the document must be meaningful, explicit and utilized by the SMS user.

Is there consolidated documentation that describes the safety management system and the interrelationship between all of its elements?	No	1- person AMO: SMS documentation will ensure that there is controlled documentation that describes the SMS and the interrelationship between all of its elements; and there is a process to periodically review SMS documentation to ensure its continuing suitability, adequacy and effectiveness, and that changes to company documentation have been implemented;	AMO > 10 persons Per 2-10 person AMO process. Also refer to AC107-001, Sec 5.2.
Does this information reside or is it incorporated by reference into approved documentation, such as Company Operations Manual, Maintenance Control/Policy Manual, Airport Operations Manual, as applicable, and where these approved documents are not required by regulation, the organization includes the information in a separate, controlled document?	No	2-10 person AMO: Additionally, there are organizational charts, job descriptions and other descriptive written material that defines and clearly delineates the system of authority and responsibility within the organization for ensuring safe operation; and the organization has a process to identify changes within the organization that could affect company documentation. Refer to AC 107-002, App. A, Sec. 2.2	In cases where the SMS documentation is located in several manuals it should be noted that a table of concordance indicating where documentation can be found should be included in the approved manual. A brief description of the documentation should also be included.

Component 2, Documentation – Element 2.3, Records Management(CAR 107.03, CAR/STD 573.16)

Among the many fundamental corporate processes is the requirement for record keeping. While regulation directs the recording and retention of certain information, a corporate philosophy that addresses the importance of record keeping can embrace the regulatory elements and use the momentum to reinforce precision in other business documentation. This should include event reports, investigations, etc.

Does the organization have a records system that ensures the generation and retention of all records necessary to document and support operational requirements, and is in accordance with applicable regulatory requirements?	Yes	1- person AMO: The AMO has a records management system for maintenance and technical records as required by CAR 573.10 (1)(k). The AMO will ensure that the generation and retention of all records necessary to document and support the SMS are added to this system.	AMO > 10 persons Per 2-10 person AMO process. Also refer to AC107-001, Sec 5.3.
Does the system provide the control processes necessary to ensure appropriate identification, legibility, storage, protection, archiving, retrieval, retention time, and disposition of records?	Yes	2-10 person AMO: Same as for 1-person AMO. Refer to AC 107-002, App. A, Sec. 2.3	

SUMMARY

The SMS documentation elements of identification and maintenance of applicable SMS Regulations and Standards would be an addition to the AMO's existing regulatory documents system, and hence would not require a separate system.

The description of the SMS itself may be accomplished by developing a corporate SMS policy manual. Companies may also incorporate their SMS requirements into existing approved documentation (e.g. MPM) if this method works better for the particular operation. Small AMOs should take advantage of this methodology.

SMS records management will require the SMS records be added to the system already in place to manage maintenance and technical records.

The next article in this series will look at the safety oversight elements of the Safety Management System. □