INTERNATIONAL NEWS AND REGULATORY UPDATES

FROM RIC PERI
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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.*

FREQUENTLY ASKED QUESTIONS

United States

Contract Maintenance

The following information is from the FAA Advisory Circular 145-9, Chg 1.

QUESTION:

We continue to have challenges regarding what is and is not contract maintenance under 145.201. What is and what is not considered contract maintenance under this regulation?

ANSWER:

14 CFR Section 145.201 (a) (2) states that a certificated repair station may arrange for another person to perform the maintenance, preventive maintenance, or alterations of any article for which the certificated repair station is rated.

Advisory Circular 145-9 Chg 1 defines *contracting* as:

"Entering into an agreement between the originating certificated repair station and another person or people to perform maintenance functions on an article, and the originating repair station will exercise the privileges of its certificate and assume responsibility for the work performed by the contracted person(s)."

This definition basically requires two steps to satisfy the definition. First, entering into an agreement between the contractor repair station and a contracted person (including a business) to perform maintenance functions on an article.

Second, the contractor repair station, not the contracted person, will exercise the privileges of its certificate and assume responsibility for the work performed.

Both criteria must be met for it to be considered contract maintenance.

So, when a repair station sends a component to a certificated person (such as the equipment manufacturer's repair station) for maintenance or repair, and the certificated person returns the component to service, this is no longer defined as contract maintenance.

AC 145-9 Chg 1 continues in its description of what is and what is not contract maintenance with the following note:

Purchase of maintained parts from another repair station (including exchanges), brokerage and using another certificated repair station to perform work that is outside the original repair station's ratings are not maintenance functions requiring FAA approval. These are instances where the purchasing repair station is not exercising the privileges of its certificate.

When a repair station requests work or sells a previously maintained article (including type certificate products) it is acting solely as a distributor. Although the purchasing repair station may induct the part through its receiving inspection process, it is merely relying on the work previously performed at another certificated entity and is not exercising the privileges under 145.201(a)(2).

AC 145-9 Paragraph 4-7 (b) describes the requirements for a maintenance function list. In the AC the FAA states that the repair station must make a list of maintenance functions that it:

(a) Is certificated to perform but requests approval to contract out and,

(b) The contracting repair station takes regulatory responsibility for issuing an approval for return to service for the exact same work under its rating.

CANADA
News & Regulatory Updates

Transport Canada Provides Updates on SMS Implementation

In his opening address at the Transport Canada Civil Aviation Safety Management Systems information session on Nov. 24-25, 2010, the Director General, Civil Aviation, Martin Eley stated that TCCA is listening to the concerns of industry and making adjustments to the implementation of SMS. He stated the first adjustment was providing smaller operators, associations and approved maintenance organizations with additional time to prepare for the shift to a SMS program and he commended the industry associations for the work they have done in this respect. He continued that this adjustment has been made to ensure this move would be as seamless as possible; that many of these smaller operators have diverse and complex operations; and that TCCA needed to make sure that for these operators, the requirements are tailored to their operations.

Eley reiterated that TCCA still forecasts having SMS fully implemented by 2015. Until that time, TCCA will continue to listen to and consult with the aviation community on the front lines, and also will continue to use the information they gather from the assessments of large operators to review and modify their approach for the next phase, if necessary. This will give TCCA the time to make sure further implementation is right. Furthermore, TCCA is using this time to refine their surveillance procedures and provide additional training to new inspectors.

SMS regulations require a company to have a non-punitive internal reporting system. Companies also must have procedures for reporting and collecting data, making progress reports, and evaluating the results of corrective actions. Eley stated that TCCA has proposed amendments to the Aeronautics Act that would provide protection to employees who voluntarily report information by ensuring that the employer does not take disciplinary action against the employee, and also have proposed further amendments to the Act to strengthen the integrity of a company's safety data disclosed through SMS. TCCA believes this will protect that data from being used in situations other than improving safety.

EUROPE
News & Regulatory Updates

EASA Updates

In December 2010, the European Aviation Safety Agency issued ETSO Amendment 6 introducing a number of new standards. Quite important is a new general standard for articles containing a complex application-specific integrated circuit or complex programmable logic summarized as complex hardware to accomplish the function and develop the component according to EUROCAE/RTCA Document ED-80/DO-254. It will have to be applied throughout the whole range of ETSO articles when applicable. Prior to that, the compliance showing had to be done by the applicant who wanted to install the article.

Next to that, the Amendment included a number of minor and major updates to the wording and references of existing ETSOs such as ETSO C6 - gyro, C8 - vertical speed indicators, C112 - transponder (harmonized with FAA TSO) as well as C123 - CVR, C124 - DFDR, C144 - GPS antenna, C145 - GPS sensors, C146 - GPS stand-alone equipment and a number of newly issued ETSOs such as C139 - audio systems, C155 - recorder independent power supply, C165 - map display, C176 - cockpit image recorder systems, C177 - data link recorders, C190 - active GNSS antenna, and 2C169a - VHF communications transceiver, which replaces ETSOs 2C37/2C38.

EUROCAE/RTCA

RTCA has issued a number of new documents including the following:

• DO-160G - Environmental Conditions and Test Procedures for Airborne Equipment

This is the latest update to the well-known environmental testing procedure and environmental test criteria for testing airborne equipment. The document includes 26 sections and three appendices. Examples of tests covered include vibration, power input, radio frequency susceptibility, lightning and electrostatic discharge. The document is coordinated with EUROCAE, as such RTCA/DO-160G and EUROCAE/ED-14G are identically worded. DO-160G is recognized by the International Organization for Standardization as de facto international standard ISO-7137.

• DO-324 - Safety and Performance Requirements (SPR) for Aeronautical Information Services (AIS) and Meteorological (MET) Data Link Services

This document specifies minimal baseline operational safety and performance requirements for the data link delivery of AIS and MET information as the primary means of communications between air and ground.

• DO-325 - Minimum Operation Performance Standards (MOPS) for Automatic Flight Guidance and Control Systems and Equipment

This document contains Minimum Operational Performance Standards for Automatic Flight Guidance and Control Systems and applicable interfaces. These standards specify system characteristics that should be useful to designers, manufacturers, installers and users of the system and equipment. Standards are included for the automatic flight guidance and control functions consisting of two categories of aircraft (airplanes and rotorcraft) and four equipment classes:

- Class A, autopilot.
- Class B, yaw damper.
- Class C, flight director.
- Class D, auto-thrust/auto-throttle.

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AUSTRALIA
News & Regulatory Updates

New Maintenance Regulations

The maintenance suite of the Civil Aviation Safety Regulations was created by the Governor General in early December and formally registered Dec. 13, 2010. It covers continuing airworthiness requirements (Part 42), approved maintenance organisations (Part 145), maintenance personnel licensing (Part 66), and maintenance training organisations (Part 147).

The new regulations will be introduced beginning June 27, 2011. The rules covering continuing airworthiness and maintenance organizations only apply to regular public transport aircraft and operations, and are being phased in over two years. Revised maintenance regulations for other sectors of aviation such as charter, aerial work and private operations will be developed at a later date, after wide consultation with these sectors.

All licensed aircraft maintenance engineers will have their licenses re-issued under the new regulations, with current privileges retained.

CASA will begin a comprehensive information and education campaign early in 2011 to make sure the aviation industry is ready for the new regulations well before the commencement date.

CASA's Director of Aviation Safety, John McCormick, said the maintenance suite will bring real benefits to Australian aviation. "Safety will be enhanced by ensuring regular public transport operators have a continuing airworthiness management system," McCormick said.

The new rules will introduce safety systems and human factors training for maintenance organizations which support regular public transport operations. In addition, the new rules are more closely aligned with many other leading aviation nations, making it easier for Australia to do business with the rest of the world.

Find out more about the maintenance suite at www.casa.gov.au/maintenanceregs.

The AEA will be focusing on the new regulations at the annual 2011 AEA South Pacific Meeting scheduled for Nov. 2-4, 2011, in Auckland, New Zealand.

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FREQUENTLY ASKED QUESTIONS
New Zealand

New Zealand Acceptance of FAA A & P Licenses

The following information is from the Civil Aviation Authority of New Zealand information paper titled:
Recognition of Foreign AME Licenses

QUESTION:

Is an FAA issued Airframe and Powerplant certificate recognized by the Civil Aviation Authority of New Zealand, and does it serve as a basis to obtain a New Zealand AME license?

ANSWER:

Unfortunately, no. The FAA A&P certificate, or any other ICAO state certificates based on the FAA certificate, are not recognized. In addition, the EASA/JAA Category A licenses are not recognized by the CAA of New Zealand.

The CAA will recognize valid foreign AME Licenses issued by ICAO contracting states, as the basis for issue of a New Zealand Aircraft Maintenance Engineer License (AMEL) based on the following conditions:

The CAA has confidence in, and understands, the ICAO state's AMEL system, including meeting ICAO Annex 1 requirements.

The ICAO issuing state verifies with the CAA the authenticity and validity of the AMEL. (UK CAA AML holders need to apply directly to the UK CAA on their form SRG1160 for permission of this verification check.)

As part of the application, the applicant must have an "address for service" in New Zealand.

As a minimum, applicants will be required to pass Air Law written and oral examinations, and human factors. Other examinations may be required depending on applicant's foreign license requirements. (CASA AMEL holders are required only to pass Air Law written.)

Ratings are issued only for aircraft types on the New Zealand register.

New Zealand AC 66-1 details the requirements for the issue and recognition of an AMEL. The AC is an expansion of Civil Aviation Rules, Part 66 and outlines the subjects that are required for the issue of a license. The AC66-2xx series of advisory circulars contains the syllabus information for these subjects. ❑

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 VIII:
Training, Awareness and Competence

This is the eighth in a series of articles that will focus on the implementation of safety management systems in Canadian AMOs, to meet the upcoming Transport Canada regulatory requirements for SMS. This series, which commenced in the August 2010 issue of *Avionics News*, has 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 sample gap analyses for development of a safety management plan and the documentation elements of SMS are being provided.

This article will continue with an illustration of the sample gap analysis, to address the training, awareness and competence components of the SMS. Where these SMS elements may be satisfied by the AMOs existing quality assurance program, this will be 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.
Component 4, Training, Awareness and Competence (CAR 107, CAR/STD 573.16[3])		
In order for employees to comply with all safety requirements, they need the appropriate information, skills and training. To effectively accomplish this, the organization should document the training requirements for each area of work within the organization. The type of training to be offered is already mandated, via regulation for certain positions in the organization. This includes initial, recurrent and update training requirements and, where required, training specific to the operation of the SMS. These regulations will provide a good starting point to identify what training is required. It is recommended that a training file be developed for each employee, including management, to assist in identifying and tracking employee training requirements. All employees will require some level of SMS training; the extent to which they are trained will depend on their function in the SMS. For example, a line employee will need to be trained how to report into the SMS reporting system. This would include how, where and what to report. Additionally, employees should be given basic human factors training to develop an awareness of the individual factors that can impact human performance and lead to errors. This might include coverage of issues such as fatigue, communication, stress, human performance models and lack of awareness. Employees with an assigned function in the SMS should receive more in-depth training. Training should include: ***1. Event investigation and analysis techniques*** ***2. Hazard identification*** ***3. Audit principles*** ***4. Communication techniques*** ***5. System analysis and implementation*** ***6. Emergency response preparedness*** ***7. Human and organizational factors*** *Senior executives and the accountable executive should receive general awareness training related to all aspects of the SMS. The accountable executive is responsible for the establishment and maintenance of the SMS.*		

		Small AMO (1 person)[1]	2-10 person AMO[1] and Large AMO (>10)[2] *In addition to the SMS training requirements identified for a 1-person AMO, the following should be identified:*
Is there a documented process to identify training requirements so that personnel are competent to perform their duties?	No	In order to meet additional SMS training requirements, I have implemented the following: **Initial SMS training :** The accountable executive has developed and implemented the organization's SMS, therefore, this meets the intent of initial SMS training requirements.	All personnel are qualified in accordance with applicable CARs training requirements. In order to meet additional SMS training requirements we have implemented the following: **Initial SMS training :** The person responsible for safety will receive additional trend monitoring and root cause analysis training; and will provide all organization personnel with an initial training session on the SMS.
Is there a validation process that measures the effectiveness of training?	Yes	**Training validation/performance measurement:** Assessment of the overall effectiveness of training will be determined by the internal audit process already in place for our quality assurance system. Any initial findings will be identified through a corrective action plan. Subsequent audits will validate the effectiveness of the training provided.	**Training validation/performance measurement:** Assessment of the overall effectiveness of training shall be determined by the person responsible for safety evaluating the level of learning through verbal or written quizzes; and any internal audit finding that identifies additional training in the corrective action plan.
Does the training include recurrent and update training as applicable?	No	**Update SMS training:** When regulatory changes have been identified, such changes will be reviewed and incorporated, if applicable, and SMS documents will be updated as required. **Additional SMS training:** Where it is shown to be necessary by findings identified during the internal quality assurance audit, additional training will be undertaken; and when any new requirement arises, for example, new or modified equipment. **Training records:** A record of all training completed is kept on file.	**Update SMS training:** Once each year, or as required, all personnel will receive update training to include information on changes to the SMS; and a review of all reported occurrences and hazards, including recommended mitigations and corrective or preventative actions. **Additional SMS training:** As per 1-person AMO. **Training records:** A record of all training completed will be kept in personnel files.
Is the organization's safety management training incorporated into indoctrination training upon employment?	No	N/A	**Indoctrination Training:** All new employees will undergo initial SMS training as required by their function within the organization.
Does the training include human and organizational factors?	No	N/A	**Human Factors Training:** Human factors training will be provided to develop an awareness of the individual factors that can impact human performance and lead to errors. This might include coverage of issues such as fatigue, communication, stress, human performance models and lack of awareness. **Organizational Factors Training:** Organizational factors training will target the supervisory and management levels. The organizational issues are generally out of the control of the individual; and require a management decision to effect a change in policy, procedure, process, working environment, etc.
Is there emergency preparedness and response training for affected personnel?	No	**Emergency preparedness & response training:** I have briefed local emergency service providers on the organization's operation, and participate in emergency response exercises.	**Emergency preparedness & response training:** The person responsible for safety will ensure that all personnel are trained in, and aware of, their duties and responsibilities within the organization's emergency response plan; and the organization has briefed local emergency service providers on its operation, and participates in emergency response exercises.

SUMMARY

The specific SMS components of training, awareness and competence would generally be additions to the AMOs existing quality management system, however both systems have a common goal of managing training, and therefore, the AMOs existing quality management system processes may be used. The next article in this series will look at the quality assurance component of a SMS.

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

[2] AC107-001 addresses requirements for large AMOs.

[3] CAR 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.