



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.

What is the Difference Between an A&P Mechanic and an Avionics Repairman?

The AEA is supporting a European meeting on Feb. 12, in London, to begin the process of investigating an alternative approach to EASA B-2 licensing, which supports and promotes general aviation career paths.

Before we get into the actual alternative means of compliance the AEA is proposing for achieving B-2 licensing throughout Europe and Australia, this might be a good time to discuss

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some of the differences between the United States licensing system and the European licensing system.

The two systems are not the same. One way to think about the two systems is: The United States licenses apprentices, while Europe licenses journeymen. As you look toward the career timeline, when a technician has full return-to-service authority,

both systems are nearly identical.

The primary difference: The FAA system considers a career path that progresses from an "entry-level" light general aviation aircraft to medium GA aircraft to either heavy business aircraft or commercial (airline) employment. The European approach views all technicians the same regardless of the complexity of the aircraft systems. There are no "entry-level" jobs in the European system.

However, when you compare the authority of each technician, the systems become much closer in application. A U.S. mechanic gains qualification following certification through subsequent completion of training and demonstration of task competency. A European mechanic isn't licensed until he or she has completed the knowledge, skill requirements and field experience ranging from two years to five years, depending on previous academic background.

Under the U.S. regulatory system, Part 65, the licensed mechanic only has two ratings: airframe and powerplant. The airframe mechanic has

nearly full avionics capabilities, although he or she seldom competes in the marketplace because of the specialized training necessary for avionics capabilities.

The one area in which an airframe mechanic cannot perform "repairs" is in regards to instruments. And, with modern avionics, the displays in primary flight displays and electronic flight instrument systems are considered (by definition) "instruments."

Because of the technology issues and certain regulatory issues limiting some maintenance functions to only repair stations, the A&P system is augmented by avionics repair stations and their technicians, classified as "repairmen."

The A&P Mechanic

The A&P mechanic must meet specific knowledge, experience and skill requirements before certification. Once certificated, they have no return-to-service authority. Yes, you read that correctly: They have no authority to return to service any aviation product. Not large aircraft, not

small aircraft, nothing — not without subsequent training and competency evaluations.

Part 65 requires each applicant for a mechanic certificate or rating to pass a written test covering the construction and maintenance of aircraft appropriate to the rating he or she is seeking. Keep in mind, under the U.S. system, the two ratings are “airframe” and “powerplant.”

To meet the experience requirements specified in 14 CFR, Section 65.77, each applicant must present either an appropriate graduation certificate or certificate of completion from a certificated aviation maintenance technician school or documentary evidence of at least 18 months of practical experience. The practical experience must include the procedures, practices, materials, tools, machine tools and equipment generally used in constructing, maintaining or altering airframes or powerplants appropriate to the rating sought.

If a person is seeking both ratings, he or she can show at least 30 months (rather than 36 months) of practical experience concurrently performing the duties appropriate to both the airframe and powerplant ratings.

Once the applicant meets the experience requirements and passes the knowledge tests, each applicant must pass an oral test and a practical test. The tests cover the applicant’s basic skill in performing practical projects on the subjects covered by the written test for that rating.

Assuming the applicant satisfactory completes all of these requirements, he or she will become a licensed airframe mechanic, powerplant mechanic or both. However, he or she is a certificated “apprentice.”

Following basic certification, a me-

chanic can perform the maintenance or alteration of an aircraft, but he or she cannot perform major repairs to or major alterations of propellers. The mechanic also is restricted from performing any repair to or alteration of instruments.

The basic certificated mechanic cannot supervise the maintenance or alteration of any aircraft or appliance unless he or she has satisfactorily performed the work concerned at an earlier date under the supervision and training of a previously qualified mechanic.

The basic certificated mechanic also cannot approve and return to service any aircraft following maintenance unless he or she has satisfactorily performed the task at an earlier date under the supervision of a properly qualified mechanic.

The Avionics Repairman

Avionics is a specialized skill learned either in addition to the basic airframe knowledge or, in some cases, independent of an airframe certificate. For the independent avionics technician, he or she obtains a license through what is known as a repairman’s certificate.

To qualify for an avionics (radio or instrument) repairman’s certificate, the technician must be qualified specifically to perform avionics maintenance and must be employed by a Part 145 repair station to perform avionics maintenance. The technician’s job assignments must require those special qualifications by a certificated repair station (or, in some cases, an air carrier) and the technician’s employer must be recommend him or her for certification.

In addition, the technician must have at least 18 months of practical

experience in the procedures, practices, inspection methods, materials, tools, machine tools and equipment generally used in the specific maintenance duties or he or she must have

The repairman does not have any independent return-to-service authority; his or her authority is only through, and limited by, the repair station’s authority.

completed formal training specifically designed to qualify the applicant for the job for which the applicant is to be employed.

Following certification, the repairman can perform or supervise the maintenance or alteration of aircraft or component appropriate to the job for which the repairman was employed and certificated. One limitation a repairman has that a mechanic does not is the transportability of his or her certificate: A repairman’s certificate is valid only while employed by the repair station that recommended the technician for certification. The repairman does not have any independent return-to-service authority; his or her authority is only through, and limited by, the repair station’s authority.

The challenge in Europe, Australia and other countries choosing to adopt the EASA Part 66 licensing system is developing an approach to support general aviation businesses by promoting a career path that transitions from “entry-level” employment in general aviation to senior career paths in business and commercial aviation.

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UNITED STATES News & Regulatory Updates

FAA Extends Guidance for Airworthiness Safety Inspectors

FAA Notice 8900.24, which provided guidance to FAA airworthiness safety inspectors (ASI) on approving flight manual supplements for many of the modern avionics systems, expired Nov. 5, 2008. To resolve this issue, the FAA issued FAA InFO 08047, dated Aug. 28, 2008, in which the FAA's Flight Standards Service extends indefinitely the information contained in FSAW 94-32C, FSAW 94-41, FSAW 95-09E, FSAW 97-09, FSAW 98-04 D and FSAW 02-03A.

According to the FAA, this InFO (information for operators) captures Flight Standards information bulletins for airworthiness (FSAW), which contain historical information useful in understanding how the FAA resolved past policy issues.

The listed FSAWs were not included in Order 8900.1, Flight Standards Information Management System (FSIMS). According to the InFO, the expiration dates for the listed FSAWs now are considered to be none. As such, they will not expire until they have been incorporated into FSIMS, superseded by another bulletin or order, or cancelled if no longer available.

While InFOs usually are addressed to the operators (public), most important for the FAA workforce is the last sentence of this InFO, which reads: "ASIs may use these policies and practices to assist them in the performance of their duties."

FAA Releases Random Drug, Alcohol Testing Percentage Rates

On Dec. 19, 2008, the FAA released its minimum random drug and alcohol testing percentage rates for the period Jan. 1, 2009 to Dec. 31, 2009. The minimum remains at 25 percent of safety-sensitive employees for random drug testing and 10 percent of safety-sensitive employees for random alcohol testing.

For more information, contact Jeff Stookey, Office of Aerospace Medicine, Drug Abatement Division, Program Administration Branch (AAM-810), Federal Aviation Administration, 800 Independence Ave. SW., Washington, D.C. 20591; 1-202-267-8442.

FREQUENTLY ASKED QUESTIONS

United States

Type Design Changes

The following information is from FAA Order 8110.4 and 14 CFR, Part 21.

QUESTION:

What is a change to a type design?

ANSWER:

This question really asks two questions: What is a type design, and what is a change to the type design?

- What is a type design?

The type design is the engineering definition of a particular product, and it includes the drawings, specifications, dimensions, materials, processes, airworthiness limitations and any other data used to describe the product's design or to determine the airworthiness, noise characteristics,

fuel venting or exhaust emissions (where applicable).

- What is a change to the type design?

Any change to a product that is different from the original drawings, specifications, dimensions, materials, processes, airworthiness limitations or other data used to describe the product design or used to determine the airworthiness, noise characteristics, fuel venting or exhaust emissions of the product.

CANADA News & Regulatory Updates

Transport Canada Provides Update on Regulations, Exemptions for 406 MHz ELTs

Transport Canada Civil Aviation (TCCA) is proposing the mandatory installation of 406 MHz emergency locator transmitters (ELTs) or an alternate means of compliance onto Canadian-registered aircraft and foreign-registered aircraft operating in Canadian airspace as a result of the withdrawal of COSPAS/SARSAT monitoring of 121.5 MHz ELT transmissions, effective Feb. 1, 2009.

Amendments to the Canadian Aviation Regulations (CARs) are being processed to go into effect Feb. 1, 2009. A phased-in approach is to be taken, which would be enabled by the publication of an exemption.

Currently, the proposed regulations are worded as such that all Canadian aircraft operating internationally and domestically would be required to carry a 406 MHz ELT or an alternate ELD (emergency locator device) system, except those specifically excluded, such as ultra-lights,

training operations within 25 nm of an airport, flight tests, parachute operations, etc. These exclusions are the same as currently provided under the existing CARs. Internationally registered aircraft operating in Canadian airspace would be subject to the same requirements.

TCCA has advised the AEA there is a possibility the new ELT requirements might not make it through the legal process in time to take effect in February as planned. However, the intent is still to aim for publication of the amended CARs at the earliest opportunity and proceed with the exemption at the same time. The exemption would provide relief until the first annual or 100-hour inspection in the second year following introduction of the 406 MHz ELT requirements for existing operators who do not fly north of 55 (when west of 80) or north of 50 (when east of 80).

The exemption would not apply to imported aircraft or aircraft that change ownership. The exemption also applies to U.S. operators who operate in the areas described — because of the wording of the exemption, in their case (the description of the annual inspection), they would get a full two years before compliance is required. Technically, U.S. aircraft flying from the lower 48 to Alaska would be subject to the new requirements on the effective date; however, there is no way to know whether they comply or not because, at the present time, flight plans do not distinguish between 121.5 MHz ELTs and 121.5/243/406 MHz ELTs.

The AEA has made comments to TCCA on the proposed regulations and is maintaining contact with specialists at TCCA to ensure AEA members are kept up-to-date on the

status of the proposed regulations and the exemption.

Transport Canada Revises Policy of Acceptance, Approval of Foreign Design Changes

TCCA recently issued Staff Instruction SI 513-003, “Acceptance and Approval of Foreign Design Changes.” This SI replaces ACSI 23 and AC 513-006, and it includes revised policy relating to TCCA classification of design changes approved by foreign authorities and the level of review to be conducted.

Points of note are:

Levels of Review — The existing Levels 1, 2 and 3 are maintained; however, TCCA may choose to apply a higher level of review. Appendix A of the SI provides guidance on some situations where this may be applied.

Some examples applicable to avionics installations are:

- Approved model list approvals
- New or novel technologies
- Night-vision-related approvals
- Complex avionics and/or advanced technology systems with which TCCA has little experience. The definition of “complex avionics” is meant to include systems that integrate multiple subsystem inputs into a flight-critical display, control or protective device, such as an electronic flight instrument system that includes basic essential flight information as well as terrain and aircraft threat information.

FAA STCs on FAR 23 Airplanes — FAA STCs applicable to Normal, Utility and Aerobatic category airplanes, including VLA designs for which the U.S. is the state of design, that were type certified on the basis of FAR 23 or equivalent standards and are not subject to a type-design examination, whether or not additional

Canadian technical conditions are implicated.

TCCA Details Acceptability of FAA Field Approvals for Major Repairs, Alterations

TCCA recently provided details regarding how a major repair or alteration recorded on a FAA Form 337 may be accepted. However, there might be cases in which the modification would be considered “minor” by TCCA in accordance with Section 101.01 of the CARs and “major” by the FAA.

The FAA definition and interpretation of “major” and “minor” is slightly different than TCCA’s definition. Similarly, some of the data classified as “approved” under the FAA system might be classified as “specified” or “acceptable” by TCCA. When assessing the acceptability of design data, the Canadian definitions must take precedence over the FAA classification of the change and its substantiating data.

Major repairs and alterations that include data approved by the FAA using the field approval process may be accepted in the following manner:

- With the exception mentioned in paragraph (b), FAA-approved or accepted alterations per 14 CFR, Part 43, installed on a product exported from the U.S., regardless of the state of design of the product, are considered approved by TCCA at the time of import to Canada. TCCA will accept such FAA alteration data when substantiated via an appropriately executed FAA Form 8110-3, FAA Form 8100-9, FAA Form 337 (Block 3) or logbook entry.
- Certain aircraft operated in the

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state of Alaska had alterations incorporated via field approval between Oct. 1, 2003 and May 21, 2005, which might have resulted in the aircraft airworthiness certificate having an operating limitation — limiting future operation of the aircraft only within the boundaries of the state of Alaska. This is discussed in detail in FAA Order 8130.32, “Airworthiness Certification Requirements for Certain Aircraft Operated in the State of Alaska.” An applicant intending to import these aircraft into Canada must comply with the criteria to remove the operating limitation as specified in the procedural requirements of the FAA order.

In the case of FAA field approvals from the state of Alaska, a type-design examination would be conducted and a Canadian design approval issued.

SI 513-003 can be viewed or downloaded from: www.tc.gc.ca/civilaviation/IMSdoc/IMSDocuments/500/513-003.htm.

The AEA continues to encourage TCCA to develop an approved model list STC process in Canada, and to accept FAA AML STCs on Canadian state-of-design aircraft, citing that Canadian applicants for a STC are at a competitive disadvantage in not having a Transport Canada policy on AML STCs equivalent to that of the FAA.

EUROPE News & Regulatory Updates

EASA Hosts Workshops for Industry Stakeholder

A large number of industry stakeholders and authorities, including the FAA, attended the ETSO Workshop and the Rotorcraft Symposium, hosted by the European Aviation Safety Agency, in December 2008. More than 150 people attended each EASA meeting.

Both meetings aimed to provide information regarding new developments in requirements and standards as well as to keep the agency in close contact with the industry. The meeting also served as a platform of discussion between the industry and stakeholders.

Individual presentations can be downloaded from the EASA “Events” web link at www.easa.europa.eu.

EASA Issues Amendment 3 to CS-ETSO

In an effort to continuously amend the ETSOs, EASA issued Amendment 3 to CS-ETSO in late November 2008.

The new CS-ETSO includes both revised ETSOs as well a number of newly released ETSOs, including:

- ETSO C142a, regarding non-rechargeable lithium cells and batteries,

- C161, regarding ground-based augmentation system positioning and navigation equipment.

- C166a, regarding NiCd and lead-acid batteries.

- C174, regarding battery-based emergency power units.

For more information, read ED Decision 2008/12/R.

EUROCAE Launches New Website

The European Organization for Civil Aviation Equipment (EUROCAE) recently went public with its new website. In addition to more information, the website also allows users to check for publication lists and their issue dates.

The new website address is www.eurocae.eu.

JAA Approves News Memberships, Expands Training Courses

The Joint Aviation Authorities (JAA) unanimously approved the candidate membership of Montenegro and the full membership of the former Yugoslav Republic of Macedonia and Bosnia, and Herzegovina. The JAA Board approved the membership status of these countries during its meeting in December, in Paris, France.

The JAA now has 43 members — 37 of which are full members and six of which are candidate members.

The JAA Training Office is constantly expanding into the field of aviation training. Currently, the JAA-TO is offering various train-

ing courses at its training facilities throughout Europe, including Amsterdam, Vienna and London. The courses include topics such as accident and incident investigation; airworthiness; auditing techniques; aviation English; human factors; aviation regulations; safety management systems; and more.

For more information, visit the JAA website at www.jaa.nl.

FREQUENTLY ASKED QUESTIONS

International: South Pacific

Approved Model List STCs

QUESTION:

Why can't I use an AML-STC in Australia?

ANSWER:

You can — sort of. However, it requires approved engineering support data.

An AML-STC is a misleading name, causing significant confusion.

FAA Advisory Circular AC 21-40A classifies STCs as “one-only” STCs for modification of a specific serial numbered aircraft, aircraft engine or propeller, or as “multiple” STCs when the applicant intends to modify two or more aircraft, aircraft engines or propellers.

The “Industry and FAA Avionics Approval Guide,” co-authored by the Aircraft Electronics Association, described the certification process for design and installation approval of modern avionics systems and suggested the expanded use of a simplified process to streamline Part 23 avionics installation approvals.

The recommendation was to create an approval process to act as a bridge between the simplified generic approach of a follow-on field approval and the complexity of the multi-model STC. This approval process is the modern approved model list STC.

The AML-STC is a hybrid STC. It offers the generic approach of the base-line STC with some of the general procedures for installation and interface that would be included in a follow-on field approval with the ease of installation and approval of a multi-model STC.

It isn't without some unique requirements for the installer, however. Ultimately, the installer is responsible for the installation of the equipment and the interface of all systems. The AML-STC assumes the installer will evaluate the general data contained in the AML-STC and amend it as necessary for the specific installation using acceptable data, such as AC 43.13-1B.

The generic approach to AML-STCs is uniquely different than the specific nature of multiple-model STCs, which contain explicit direc-

tions applicable to each model of aircraft.

Because the AML-STC expects the installer to make minor amendments to the AML-STC data so the installation is specific to the aircraft being modified, this raises the issue that any modification to approved data in Australia requires engineering approval. While the AML-STC is, in fact, an STC, it cannot be used as a normal STC because of the additional data requirements.

Note: The AEA offers “Frequently Asked Questions” to foster greater understanding of 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. □