



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.

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If You Knew Then What You Know Now, Would You Still Be in the Industry?

Imagine if you could bring yourself back to the time when you were just about to graduate from high school and ask yourself: "What do I want to do for a living?" If we knew then how much regulation we'd be facing now, I wonder how many of us would still choose to enter into the avionics industry?

Sure, all industries have red tape, but it certainly becomes apparent when training new apprentices in our particular industry just how complicated it can be — at least from an administration and paperwork point of view.

Sit down in front of a pile of avionics and instrument installation manuals, and starting with a pen and paper we can integrate the manufacturers' data into something magnificently installed into a cockpit. That's certainly the fun part, but there is a dark side to all this — by dark, I mean not as fun as the fun part.

Upon completing an installation,

there is a mound of paperwork to be evaluated, and sometimes by several people, for relevance and completeness to get the aircraft back in the air: weight and balance reports; electrical load analyses; equipment lists; ground-test procedures; flight-test procedures; instructions for continued airworthiness; wiring diagrams; structural diagrams; engineering reports; structural load analyses; damage tolerance analyses; compliance programs; flight manual supplements; engineering orders; STCs; major modification forms; journey log entries; tech log entries; work orders; work sheets; etc. — oh, and did you remember to complete a compass swing?

Let's not forget about tracking and amending test-equipment calibrations, licenses, stamps, technical training, human factors training, policy manuals, quality manuals, technician qualifications, libraries, purchase orders, airworthiness directives, internal audits, the

FARs and the CARs, etc.

The irony here is, your actual on-aircraft work is rarely audited. When the auditors come, we can't show off our masterpiece, we only can show them the easel we used to create the work. The final product is off flying somewhere while you're left explaining your artists are well-trained, your manual amendments are in order, your shelf-life items aren't expired, and the paper trail left in your wake is as perfect as the aircraft that left your facility months ago.

When I take my mind back to career day at high school, even with all the administrative work I now know about, I'm still in. I will tackle the red tape. I will show the auditors what they want to see. I will do my best at being patient, knowing tomorrow I will be back in another program designing and integrating a new masterpiece — for the time being.

Now, to my point. Regulators, please

understand one thing: We already are creating amazingly safe and efficient cockpit environments under the current system, but industry is indeed worried about the increased burden your safety management systems' plans will bring.

Already at the tipping point, you still have to convince most of us that SMS, in the long run, will improve AMO safety and our businesses. You should know many of your own inspectors candidly admit they do not believe it will. On top of this, you once proudly told us SMS in maintenance organizations will reduce controlled flight into terrain — a total contradiction indicating confusion in your own SMS message.

To date, not all maintenance organizations in Canada have, or are required to have, SMS programs in place; however, you already have begun to suspend our customers' operating certificates under the SMS banner. With mixed messages from our governing body, and negative industry feedback, one must wonder if our current degree of aviation safety actually will fall behind modern-day levels?

There are apparently a few of the dirty dozen human factors at play on this topic. It would be appreciated if you would please take the time to communicate to us how your knowledge and assertiveness of SMS will improve our industry so we can continue to perform our duties without its negative effects on fatigue, stress, pressure and distraction.

How can you guarantee the extra time, effort and money spent by industry to implement and maintain a valid SMS program will indeed increase flight safety from an AMO perspective — especially if it's not something in which all partners believe?

Your investment in SMS continues to grow, but the return seems insignificantly small. We await your enlightenment.

UNITED STATES News & Regulatory Updates

Assessing the Relative Risk of Title 14 CFR Parts

On May 18, the FAA published FAA Order 8110.106, which provides guidance on assessing risk. This is a first step toward implementation of safety management systems within the Aircraft Certification Service.

With this order, the Aircraft Certification Service introduces a risk assessment process for the parts of Title 14 of the Code of Federal Regulations for which the AIR headquarters and national staff are responsible.

Risk assessment, applied to operational and manufacturing processes, shows businesses where to concentrate their efforts. Similarly, the FAA can assess its regulations for safety risk. The results can be applied to support safety by applying scarce resources to discerning and mitigating risk. Non-compliance with some regulations (or parts of them) poses a greater threat to safety than does non-compliance with others. While all applicable regulations must be complied with, certain regulations have more impact than others from a safety-risk perspective.

The FAA order can be found in the FAA's Regulatory and Guidance Library at www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgOrders.nsf/MainFrame?OpenFrameSet.

Flight Standards Service Organizational Handbook Published

On July 17, the FAA published FAA Order FS1100.1B, "Flight Standards Service Organizational Handbook." While the handbook describes the entire Flight Standards organization, the following are the most critical and most used branches of the division:

- The Aircraft Maintenance Division is responsible for regulations and national policy governing the certification, inspection and surveillance of the maintenance aspects of general aviation air carrier and commercial operators, airmen (mechanics, repairmen, designees, parachute riggers), avionics and air agencies (aviation maintenance technician schools and repair stations) as well as maintenance requirements, performance standards and practices applied to ensure the airworthiness of civil aircraft.

- The Special Programs Branch (AFS-320) is responsible for the following functions:

1. Provides technical assistance and support for special programs, such as aging aircraft, rulemaking projects, damage tolerance, repair-assessment programs, corrosion prevention and control programs, structural maintenance programs, Department of Defense programs, commercial aerial refueling, unmanned aircraft systems, safety management systems, and other programs and/or reviews mandated by Congress.

2. Provides technical support and guidance in the development of regulations, standards, policies, procedures, letters, notices, orders, handbook change and advisory circulars in this area of responsibility.

3. Sponsors and provides oversight of safety and educational programs related to its area of specialization for aging aircraft rulemaking projects to include an enhanced airworthiness program for airplane safety, widespread fatigue damage, damage tolerance, repair-assessment programs, a corrosion prevention and control program, structural maintenance programs, and inspections and records reviews required by Congressional mandate.

- The Air Carrier Maintenance Branch (AFS-330) is the principal element in the division for all air-carrier maintenance

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related to technical training, regulations, policies and procedures, including development of certification, inspection and surveillance policy for 14 CFR, Parts 119, 121, 135 and 136 maintenance operations.

- The Repair Station Branch (AFS-340) is the principal element in the division for all repair station maintenance related to technical training, regulations, policies and procedures, including development of certification, inspection and surveillance policy for 14 CFR, Part 145 repair stations.

- The General Aviation Branch (AFS-350) is the principal element in the division for all general aviation maintenance as related to technical training, regulations, policies and procedures. This includes development of certification, inspection and surveillance policy of the following:

1. Airmen: mechanic certificate, repairman certificate, inspection authorization and parachute riggers.

2. Aviation maintenance technical schools.

3. Various designated representatives of the Administrator (designees) to include designated airworthiness representatives and organization designation authorities.

4. Designated maintenance examiners and designated parachute rigger examiners.

5. Ensures course sponsors and mentors coordinate with AFS-500 to ensure new and existing courses are accurate, kept current and meet AFS objectives and the organization's needs.

6. General aviation maintenance operations under 14 CFR, Parts 43 and 91.

7. Malfunction or defect reporting systems.

- The Avionics Branch (AFS-360) is the principal element in the division for all avionics and instruments as related to technical training, policies and procedures, including development of certification, inspection and surveillance policy.

FREQUENTLY ASKED QUESTIONS

United States

Inoperative Equipment

The following information is from the Federal Aviation Regulations.

QUESTION:

I received a phone call from a customer asking for advice on how to handle an FAA inspector who was insisting that an autopilot system be completely removed from one of their Cessna 182s if they were not going to repair it.

They had done a panel placard and banded the circuit breaker, and they did not want to remove it because someday they might want to fix it — at the very least, it would enhance the resale value if it were still in the airplane.

Could you help both of us understand this so my customer can respond properly to this request? By the way, the aircraft operates under Part 91.

ANSWER:

The regulatory basis for your inspector's view is an incomplete reading of 14 CFR, 91.213. I have cited the portion of §91.213 most likely to apply to this situation.

- §91.213–Inoperative instruments and equipment:

- (d) Except for operations conducted in accordance with paragraph (a) or (c) of this section, a person may takeoff an aircraft in operations conducted under this part with inoperative instruments and equipment without an approved Minimum Equipment List provided:

- (1) The flight operation is conducted in a:

- (i)...non-turbine-powered airplane...for which a master minimum equipment list has not been developed; and

- (2) The inoperative instruments and equipment are not:

- (i) Part of the VFR-day type certification instruments and equipment prescribed in the applicable airworthiness regulations under which the aircraft was type-certificated;

- (ii) Indicated as required on the aircraft's equipment list or on the Kinds of Operations Equipment List for the kind of flight operation being conducted;

- (iii) Required by §91.205 or any other rule of this part for the specific kind of flight operation being conducted; or

- (iv) Required to be operational by an airworthiness directive; and

- (3) The inoperative instruments and equipment are:

- (i) Removed from the aircraft, the cockpit control placarded, and the maintenance recorded in accordance with §43.9 of this chapter; or

- (ii) Deactivated and placarded "inoperative." If deactivation of the inoperative instrument or equipment involves maintenance, it must be accomplished and recorded in accordance with Part 43 of this chapter; and

- (4) A determination is made by a pilot, who is certificated and appropriately rated under Part 61 of this chapter, or by a person who is certificated and appropriately rated to perform maintenance on the aircraft, that the inoperative instrument or equipment does not constitute a hazard to the aircraft.

Now, the inspector might be ar-

going that because the autopilot is directly connected to the flight control system, §91.213(d)(4) cannot be completely eliminated. However, because the autopilot does not constitute a hazard to the aircraft when not engaged, it could certainly be argued the autopilot does not constitute a hazard when deactivated.

So, using §91.213(d), the justification would flow like this:

Because the Cessna 182 is a light aircraft and does not have a published Minimum Equipment List, and:

The autopilot is not:

(i) Part of the VFR-day type certification instruments and equipment prescribed in the applicable airworthiness regulations under which the aircraft was type-certificated;

(ii) Indicated as required on the aircraft's equipment list, or on the Kinds of Operations Equipment List for the kind of flight operation being conducted;

(iii) Required by §91.205 or any other rule of this part for the specific kind of flight operation being conducted; or

(iv) Required to be operational by an airworthiness directive; and

The autopilot is deactivated and placarded "inoperative," and

A person, who is certificated and appropriately rated to perform maintenance on the aircraft made a determination the inoperative instrument or equipment does not constitute a hazard to the aircraft.

Therefore, the Cessna 182 with the inoperative autopilot is considered to be in a properly altered condition acceptable to the Administrator.

CANADA News & Regulatory Updates

Transport Canada Updates Guidance Material for MMELs

Transport Canada Civil Aviation's Master Minimum Equipment Lists guidance book provides a centralized source of guidance information to facilitate the review and standardization of TCCA MMELs and MMEL supplements.

This guidance material is made available to the aviation community at-large to encourage feedback and to provide guidance to operators, maintainers and manufacturers when seeking relief. Transport Canada issued Revision 7 of its MMEL guidance book in April 2009 (the previous revision was in 2002).

Revision 7 includes:

Renumbering of all items in accordance with ATA Spec 2200 (such as GB Item 25.1 renumbered as 25-60-1). The new system addresses previous requests/comments from industry and TCCA staff, as well as ensures better consistency with the format in which MELs are written.

Revision of all items to conform to the latest issue of FAA policy letters and CAR amendments.

TCCA also has issued the second edition of TP9155, "Master Minimum Equipment List/Minimum Equipment List Policy and Procedures Manual." This manual contains all the relevant information with respect to the philosophy, development and approval of the Master Minimum Equipment List and Minimum Equipment List.

The Transport Canada MMEL web page provides electronic access to the MMEL/MEL manual (TP9155E), the MMEL guidance book, the list of MMELs and the MMELs available in electronic format, the TC supplements and other related information. On this page, TCCA cautions the Generated Minimum Equipment List (GMEL) program is under review, and issuance of generic MELs are not being processed. Its states, if your company has

a Transport Canada GMEL, amendments are no longer being sent to support these documents. Air operators now are responsible to review their GMELs against changes to the MMEL and Transport Canada supplement, and amend them as necessary.

On the MMEL web page, TCCA announces the introduction of a ListServ automatic e-mail notification system for the TCCA MMEL and TCCA supplements. This notice is for announcement-only purposes, such as messages sent by the list editor to the list members. Instructions for sign-up to the notification system are provided on the web page.

Existing MMELs and TCCA supplements can be viewed through a drop-down menu listing by aircraft manufacturer. The MMEL web page can be accessed at www.tc.gc.ca/CivilAviation/certification/Projects/MMEL/menu.htm.

TCCA Delegates Conference Addresses STC Applicants

During the TCCA Delegates Conference in May, TCCA identified issues to be addressed by STC applicants for modifications on aircraft where MMELs are applicable.

TCCA reminded applicants it is not permitted for the MEL to provide more relief than the MMEL; therefore, unless there is relief in the MMEL for a new system installed by an STC, the aircraft cannot be dispatched until the modified installation is repaired. Should MMEL relief for the new system be proposed, the request for relief must be submitted with the STC application documentation, with details of the proposed repair interval category, and relief conditions.

This will require a safety assessment to identify the criticality of the failure condition vs. the exposure to risk. If the proposal is acceptable to TCCA, a TCCA MMEL addendum will be issued with the STC approval.

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EUROPE News & Regulatory Updates

EASA Releases Comment Response Document

EASA released a comment response document in regards to the airworthiness and operational approval for on-board equipment related to required navigation performance/area navigation (RNP/RNAV) approach operation.

Comments to NPA 2008-14 triggered the document. The comment response document contains 253 pages of comments. The final draft of both AMC20-26 and AMC 20-27 should be issued within the next two months.

Agency Publishes 2008 Annual Safety Review

EASA has published the 2008 Annual Safety Review to inform the public of the general safety level in the field of civil aviation.

The agency provides this review on an annual basis as required by Article 15(4) of Regulation No 216/2008 of the European Parliament and of the Council of Feb. 20, 2008. Analysis of information received from oversight and enforcement activities might be published separately.

This annual safety review presents statistics on European and worldwide civil aviation safety. The statistics are grouped according to type of operation; for instance, commercial air transport and aircraft categories, such as airplanes, helicopters and gliders. The agency had access to accident and statistical information

collected by the International Civil Aviation Organization. States are required, according to ICAO Annex 13, "Aircraft Accident and Incident Investigation," to report to ICAO information on accidents and serious incidents to aircraft with a maximum certificated takeoff mass over 2,250 kg. Therefore, most statistics in this review concern aircraft above this mass.

The annual safety review is based on the data available to EASA as of March 9, 2009. The report can be downloaded at www.easa.eu.int/ws_prod/g/doc/COMMS/Annual%20Safety%20Review%202008_en.pdf.

EASA also has published Amendment 6 to "Certification Specifications for Large Aeroplanes (CS-25)." CS-25 can be viewed at www.easa.eu.int/ws_prod/g/doc/Agency_Mesures/Certification_Spec/CS-25%20Amendment%206.pdf. □

FREQUENTLY ASKED QUESTIONS International

Classification of Avionics Changes

The following information is derived from EASA General Aviation Frequently Asked Questions.

QUESTION:

How does EASA classify single and dual GNS 400/500 series installations?

ANSWER:

EASA publishes a sample table of avionics changes for

general aviation aircraft, which includes single and dual GNS 400/500 series installations as well as most avionics systems.

The table provides typical examples for which an applicant or DOA holder gets help in the decision process to classify a design change as "minor" or "major." As this is a living document, changes can be made without expressive notice. Operational aspects are not subject to this table, such as a change from VFR to IFR.

The table should be referenced regularly for the latest update. The table can be downloaded at www.easa.eu.int/ws_prod/c/doc/Table-for-Change_Classification_Issue%201b.pdf.

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.