INTERNATIONAL NEWS AND REGULATORY UPDATES

FROM RIC PERI
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.

UNITED STATES
News & Regulatory Updates

FAA Issues New Rule Requiring Damage Tolerance Data for Repairs and Alterations

The FAA issued a final rule requiring holders of design approvals to make available to operators damage tolerance data for repairs and alterations to fatigue critical airplane structure.

This rule will support operator compliance with the Aging Airplane Safety final rule with respect to the requirement to incorporate into the maintenance program a means for addressing the adverse effects repairs and alterations may have on fatigue critical structure. The intent of this final rule is to ensure the continued airworthiness of fatigue critical airplane structure by requiring design approval holders to support operator compliance with specified damage tolerance requirements.

These amendments became effective Jan. 11, 2008.

Fatigue cracking has been a major aviation safety concern for many years. Unless detected and repaired, fatigue cracks can grow to the point of catastrophic failure. Since 1978, the FAA has required new types of airplanes to meet damage tolerance requirements to ensure their continued airworthiness. The industry also has used this method successfully to develop inspection programs for older airplanes. Since the 1980s, the FAA has mandated operators of most large transport airplanes to carry out these programs.

While these programs have been largely effective, the industry has not carried out damage tolerance methods comprehensively. In particular, while these programs apply to the airplane "baseline" structure (the airplane structure as originally manufactured), they often do not apply to repairs and alterations. This omission is important because airplanes are subject to many repairs and alterations throughout their operational lives. If fatigue cracking occurs in a repaired or altered area, the results can be just as catastrophic as if it had occurred in the baseline structure.

The FAA adopted the Aging Airplane Safety final rule in early 2005. Among other things, this final rule requires airline operators of certain large transport category airplanes to implement damage tolerance-based inspection programs for airplane structure — that is, structure susceptible to fatigue cracking, which could contribute to a catastrophic failure. In this final rule, this structure is referred to as "fatigue critical structure."

Most importantly, the Aging Airplane Safety final rule requires these inspection programs to "take into account the adverse effects repairs, alterations and modifications may have on fatigue cracking and the inspection of this airplane structure."

With the Aging Airplane Safety final rule, the FAA has in place the regulatory means to provide for comprehensive implementation of damage tolerance methods on all large transport airplanes used by air carriers. To carry out these requirements fully, however, it is necessary to place corresponding requirements on the holders of FAA design approvals for these airplanes. Otherwise, the operators may not be able to obtain the data and documents they need to comply with the final rule.

As the owners of the data for these airplanes, the design approval holders are in the best position to identify the fatigue critical structure, as well as the methods and frequency of inspections needed. Therefore, this final rule requires design approval holders to develop and make available to operators the data and documents needed to support compliance with the damage tolerance requirements of the Aging Airplane Safety final rule.

Specifically, this final rule requires design approval holders to develop

and make available the following four types of documents to operators:

1) Lists of fatigue critical structure (to aid operators in identifying repairs and alterations needing to be addressed for damage tolerance).

2) Damage tolerance inspections to provide operators with the necessary inspection times and methods for the following:

• Repair data published by type certificate holders.

• Type certificate holder's future repair data not published for general use.

• Repair data developed by supplemental type certificate holders.

• Alteration data developed by type certificate and supplemental type certificate holders.

3) Damage tolerance evaluation guidelines for all other repairs (to enable operators to obtain the necessary damage tolerance inspections).

4) Implementation schedules (to define the necessary timing for performing damage tolerance evaluations and developing damage tolerance inspections and for incorporating the damage tolerance data into the operator's maintenance program).

This final rule transfers the responsibility for developing damage tolerance-based data from operators to design approval holders, and therefore, has minimal to no societal costs. The aviation industry as a whole also would benefit because design approval holders could amortize their development costs for damage tolerance data over a larger fleet.

Change of Address for the Department of Transportation

On Dec. 5, 2007, the Federal Aviation Administration issued a final rule, technical amendment, which updates the Department of Transportation addresses; changes references from the Docket Management System to the Federal Docket Management System; and removes obsolete information listed in FAA regulations as a result of the DOT's relocation, migration to the federal electronic docket system, and closure of the DOT's branch library.

The intended effect of this action is to ensure the regulated public is informed of address changes, electronic docket changes and other administrative matters. This technical amendment addresses the following administrative changes:

1) The Department of Transportation relocation of its entire headquarters to 1200 New Jersey Ave., SE, Washington, D.C.

2) The DOT migration to the government-wide electronic Federal Document Management System, which replaces the old DOT Docket Management System.

3) Closure of the DOT Branch Library.

As a result of these changes, the FAA is amending 14 CFR Parts 11, 13, 17, 36, 91, 139, 150, 193, 404 and 406.

FAA Extends Comment Period for ADS-B Out Performance Requirements

The FAA extended the comment period to March 3, 2008, for an NPRM (72FR 56947) published Oct. 5, 2007, which was scheduled to close on Jan. 3, 2008. In this document, the FAA proposed performance requirements for certain avionics equipment on aircraft operating in specified classes of airspace within the United States National Airspace System.

The extension of the comment period is a result of requests from the Air Transport Association of America, Air Carrier Association of America, Civil Aviation Aerospace Industries Association, National Air Carrier Association, Regional Airline Association, Aircraft Owners and Pilots Association, and Cargo Airline Association.

To access an electronic copy of the proposal, visit the AEA's members-only website, Resource One, at www.aea.net/R1.

FAA Publishes Random Drug, Alcohol Testing Percentage Rates

The FAA determined the minimum random drug and alcohol testing percentage rates of covered aviation employees, for the period Jan. 1, 2008 through Dec. 31, 2008, will remain at 25 percent of safety-sensitive employees for random drug testing and 10 percent of safety-sensitive employees for random alcohol testing.

FREQUENTLY ASKED QUESTIONS

United States

TOPIC:

References Listed in Previous Editions of *Avionics News*

The following information is from the FAA Flight Standards Information Management System, FAA Order 8900.1.

QUESTION:

References in previous editions of *Avionics News* referred to various chapters and volumes of FAA Order 8300.10. This order has been canceled; what should be used to replace the reference on all of the previously issued FAQs?

ANSWER:

FAA Flight Standards Information Management System, FAA Order 8900.1.

This order establishes the Flight Standards Information Management System (FSIMS) as the repository of all Flight Standards policy and guidance concerning aviation safety inspector job tasks. Technically speaking, FSIMS is a Flight Standards directive,

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which aviation safety inspectors use as the system of record for all Flight Standards policy and guidance.

As indicated in the question, this order cancels the following Federal Aviation Administration orders and incorporates their entire content into this directive:

- FAA Order 8300.10, "Airworthiness Inspector's Handbook," and all numbered changes.
- FAA Order 8400.10, "Air Carrier Operations Inspector's Handbook," and all numbered changes.
- FAA Order 8700.1, "General Aviation Operations Inspector's Handbook," and all numbered changes.

The director of Flight Standards Service intends for FSIMS to be the sole source of policy and guidance for aviation safety inspectors:

1) The establishment of FSIMS as an agency directive does not mean the FAA has removed the contents of the canceled directives. Although there have been a couple of oversights, in general, they have included the contents of the canceled orders in this directive.

2) The functional capabilities of FSIMS, such as searches conducted according to inspector specialty, have not changed. Rather, to simplify coordination, to eliminate confusion between electronic and printed versions of various orders, and to confirm FSIMS as the single Flight Standards policy document, FSIMS has been made a stand-alone, electronic directive.

3) Flight Standards will continually review its other directives, both technical and administrative, and incorporate them into this directive when they are due for revision.

While there is a new reference, the intent was not to change any technical content of either the base FAA orders or any of the bulletins issued as an appendix to the original orders.

The new Flight Services Information Management System can be viewed at http://fsims.faa.gov/home.aspx.

CANADA
News & Regulatory Updates

Transport Canada: New Regulations for Manufacturing Issued

On Dec. 1, 2007, the new Canadian Aviation Regulation CAR 561 came into effect. The new requirements are similar to those of the previous "Airworthiness Manual," Chapter 561; however, being regulations, they are more formal in structure and are directly enforceable. Many of the sections have been identified as designated provisions, with maximum penalties established for both individuals and corporations.

Along with the introduction of CAR 561, there are associated standards, Standard 561, and changes in Part I of the CARs to require holders of a manufacturer certificate to identify the accountable executive. The new regulations are intended to apply in such a way there will be no conflict between the requirements of Standard 561 and CAR 571.

CAR 561 applies to any work performed on an aircraft prior to the first issuance of a standard certificate of airworthiness or export airworthiness certificate. Following the issuance of either of these certificates, CAR 571 will apply. For example, the making of a repair part under CAR 571.06(4) will be exempt from any of the provisions of CAR 561.

The privilege of a manufacturer certificate is not actually to manufacture aeronautical products but rather to authorize the issuance of a statement of conformity, attesting the products conform to the approved data indicated and are in a condition for safe operation. In the case of a complete aircraft, a statement of conformity is required for a certificate of airworthiness to be issued.

In the case of parts, CAR 571 prohibits their installation, except for commercial or standard parts and parts made during the course of a repair, unless they have been certified with such a statement. The statement in question usually takes the form of the authorized release certificate, Form One, which has replaced the previous 24-0078 Form. The repair parts mentioned above may not be released on a Form One, but instead are certified by means of the maintenance release covering the repair for which they were created.

The new regulations follow the same general format as the approved maintenance organization requirements of CAR 573. They provide for separate production control and quality audit systems, and include requirements for training and record keeping. Issuance of a manufacturer certificate is tied directly to the applicable aeronautical product type certificate.

Applicants must hold either the type certificate personally or have entered into a licensing agreement with the holder. A limited approval may be granted if the type certificate has not yet been issued, or if the licensing agreement is still being negotiated. In such cases, however, the finished products may not be released until the type certificate provisions have been fully met.

The regulations specify the manufacturer's responsibility for the control of suppliers, making a clear distinction between the oversight of suppliers who are approved in their own right and suppliers who work under the umbrella of the prime manufacturer. This should facilitate the control of "direct delivery" authorizations, which only may be applied in conjunction with the autho-

rization to issue a release certificate.

Manufacturer facilities may be located in a foreign state subject to the agreement of the foreign authority, but the applicant must undertake to allow Transport Canada inspectors access to the foreign facilities and pay for the expenses incurred.

The manufacturer's means of compliance with the various requirements must be set out in a manual signed by the accountable executive and approved by TCCA.

TCCA Revises Policy for Review of FAA Field Approvals

Section III paragraph 3.3.3 of the current "Implementation Procedures–Airworthiness," between Canada and the United States provides for the review by TCCA of FAA field approvals (Form 337 with Block 3 completed) on aircraft imported into Canada on a case-by-case basis.

TCCA recently completed a risk assessment to determine if major alterations and repairs approved by the FAA using the field approval process can be accepted without review. Based on the risk assessment decision and discussions with the FAA, Transport Canada will apply Section III paragraph 3.3.3 of the IPA as follows:

• Regardless of the product's state of design, FAA-approved or FAA-accepted alterations per 14 CFR Part 43 on a product exported from the U.S. are considered to be Transport Canada-approved at the time of import to Canada.

• An exception to this policy is: Certain aircraft operated in the state of Alaska had alterations incorporated using the FAA field approval process between Oct. 1, 2003 and May 21, 2005, which may have resulted in the aircraft airworthiness certificate having an operating limitation imposed. This operating limitation may have limited 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.

• TCCA will accept such FAA alteration data when substantiated via an FAA Form 8100-9, Form 8110-3 or Form 337, with Block 3 completed, and properly recorded in a logbook entry.

• This decision will be incorporated into TCCA Aircraft Certification Staff Instruction No. 23 upon its republication.

EUROPE
News & Regulatory Updates

EASA: Various Revisions, Amendments, Opinions Issued

• The European Aviation Safety Agency issued a new Revision 2 of the Internal Working Procedure for Supplemental Type Certification (STCP). The main changes are in the update of related references to board decisions and regulations, which have been changed since the STCP was first issued in 2005.

• Change 1 to CS-Definition was issued late last year as Decision 2007/016/R to amend and revise the definitions with some new terms. The related CS is available from the EASA website at www.easa.eu.int.

• CS-27 Amendment 1 for small rotorcraft and CS-29 Amendment 1 for large rotorcraft were issued in November 2007 to amend the related certification basis of such rotorcraft. The amendment only includes minor changes to avionics-related paragraphs.

• Draft Opinion No. 04/2007 in regards to the permit to fly and the privileges for continuing airworthiness management organizations (CAMOs) was issued in December 2007 to clarify the possible privileges of such organizations. The main privilege for the CAMO will be the issuance of the permit to fly after the flight conditions are approved by the appropriate authority or approved organization.

In addition, the privilege to approve flight conditions also is foreseen; however, this will be limited to cases in which such approval is not related to the safety of the design. This may be the case for flights necessary to demonstrate continuing conformity with the design standard previously approved by EASA for the aircraft to qualify or re-qualify for a certificate of airworthiness.

Related European Community Regulations amending EC1702/2003 and EC2042/2003 should be issued early this year.

• A new Opinion 03/2007 for a new regulation was drafted by EASA to introduce a common certification of aerodromes to meet common essential requirements, including physical characteristics, infrastructure, aerodrome equipment, operations, management, and mitigation of hazards originating in the immediate vicinity of aerodromes.

Aerodrome owners, aerodrome operators, organizations or personnel providing services or equipment that could affect the safety of aerodrome operations shall be responsible for the implementation of these essential requirements under the control and oversight of member states. The new regulation will be issued as an amendment to the basic regulation EC1592/2002.

• An amendment to the AMC and GM to Part 21 was issued in November 2007. Decision No. 2007/012/R amends the original document issued as Decision No. 2003/01/RM in the area of defining materials, parts and appliances. Furthermore, it clarifies the scope of Part 21 Subpart F and Subpart G production organization in relation to

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the showing of conformity of products, parts and appliances with applicable design data.

JAA: Moldova Joins as Full Member State

• In December 2007, Moldova became the newest full member state of the Joint Aviation Authorities. Currently, JAA has 42 full members, including all 27 European Union (EASA) members.

• JAA has withdrawn Section 4 Leaflet 33, "Counter Drum Pointer Altimeter" temporary exemption policy, because the exemption policy period expired March 31, 2007.

The Other AEA in Europe: Your Organization

BY JIM HERBERT
AEA BOARD OF DIRECTORS

The past few years have seen spectacular changes in European aviation legislation. No doubt much of this legislation was desperately needed to make an ever increasingly large industry and crowded airspace a safer place in which to operate.

Unfortunately, during the process to provide common rules and practices, the whole of the aviation industry has been subjected to the same treatment. In legislative terms, this makes it much easier for the authority to apply those rules across many different countries. In practice, we in general aviation know this cannot possibly work.

During the initial rulemaking process, the Aircraft Electronics Association told the European Aviation Safety Agency its proposal for general aviation was flawed. The result of our comments was a five-year delay in implementing the light GA rules and a revised set of maintenance regulations for general aviation.

But we still haven't said enough. Why is it the general aviation industry knows the large air carrier structure won't work for GA, but the legislators appear to be oblivious? While the AEA has been a voice for GA, we have not told them enough and we haven't been loud enough. This poses a very simple question: Why not?

Unfortunately, the answer also is simple: We are all too busy fighting our own everyday issues, trying to keep our heads above the water, trying to earn a living "all hands to the pumps." We are a host of small, or relatively small, uncoordinated businesses trying to survive, but without the time to spare to get to know those making the new rules that would dramatically impact our way of life.

Conversely, big airlines had the wealth and capacity to install their people on the rulemaking committees with the end result being a set of rules to suit their interests but not those of GA.

General aviation in Europe is represented by only a few organizations: the AEA, EBAA, BBGA, ECOGAS and a few type clubs. While there are other specific clubs and flying organizations, the bulk of rulemaking really is left to only a few. While these organizations "open the doors" to rulemaking and committee work, it is the individuals from the actual shops and maintenance organizations who must participate on the rulemaking working groups.

Here we are, several years later, and we are now paying for our lack of coordination and involvement. New legislation is bearing down heavily on our sector of the business and is due to exert more pressure. This is not a one-off event. It will be continuing, and there is only one way our industry can mitigate these effects and obtain the sort of flexibility in working practices this industry requires.

What can be done?

You all know what must be done. We have to join forces and apply group pressure if we are going to achieve anything. We need a strong coordinated opinion on what our industry in Europe requires to be able to go forward in this new century. Your opinions and, more importantly, your participation are desperately needed.

We need a strong European organization, and certainly the AEA has put those foundations in place. But it is the actual membership at the end of the day that will drive the policies forward.

During the past six months, I have been involved in a working group at EASA headquarters in Cologne, Germany, representing the AEA. This group, comprising four legislators and four industry representatives, was working on a notice of proposed amendment to try to reduce the burden of the current B1 license requirements for general aviation. Soon, the NPA will be released and, in brief, it proposes a reduced level B1 license for aircraft below 2000kg, cutting the training requirements in half.

We need to be able to make it attractive for young people to come into this industry to be able to achieve something in a reasonable time span, while at the same time, giving them a stepping stone to the more difficult and time-consuming B1 license.

At the first meeting, this group identified a similar requirement existing for the B2 license. A proposal for a reduced level B2 license (B4 has been suggested) for general aviation has been submitted to the Safety Standards Consultative Committee, and it has been agreed a working group should be formed to produce an NPA. Here is a chance for all of you avionics engineers to use your wealth of knowledge and assist in formulating these requirements. Your voice can be heard, but only if you speak up.

A couple of caveats exist here. You can be heard only if your voice is one