



The View from Washington

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The View from Washington this month is from everywhere except Washington. The Association is in the middle of the Regional Meeting schedule and as I conduct training at these meetings the general response from members can be categorized into three general comments, “My inspector wants...;” “The customer wants...;” “The customer won’t pay for...” Each of these comments can be addressed from the Federal Aviation Regulations.

I’d like to address each of these comments separately.

First, “My inspector wants...” I hear this statement probably once a week. It is not necessarily a bad comment. But it is a statement that must be evaluated based on the Federal Aviation Regulations (FARs). Is the inspector acting on behalf of the Administrator or are they acting as a concerned bystander? The FAA inspectors often alternate between roles without the repair station knowing or understanding that the inspector has made this transition.

It is essential that the repair station personnel understand the basis of what the inspector wants. Is the “want” necessary to ensure compliance with the FARs? To make this determination, ask the inspector to cite the regulation for the particular “want.” Everyone in aviation maintenance should be constantly learning, learning new maintenance techniques, learning about new technology, or re-learning about long forgotten regulation.

Asking the inspector to cite the reference for a particular “want” is not questioning their authority, but rather an essential step in constantly learning and re-learning the FARs. When the inspector’s “wants” are based in the FARs, they are acting as a representative of the FAA Administrator, when the “wants” are not based in the FARs, but rather are offering general business advice, the inspector is acting as a concerned bystander.

Most inspectors will occasionally offer “brother-in-law” advice; advice about how to run the business of the repair station. This is not necessarily wrong. The inspector has a wonderful opportunity to see various repair stations and the ability to see what works and what doesn’t work in various maintenance settings. The challenge for the repair station management is to understand that these particular inspector “wants” are just recommendations from a concerned “bystander.” Then, the management personnel can evaluate the recommendation as they would a recommendation from their “brother-in-law,” and determine the applicability of the recommendation to the repair station’s unique operations, evaluate the costs associated with the recommendation, and decide whether or not to implement the recommendation.

The second comment, “My customer wants...” This is a little more difficult, everyone in business has been taught from the beginning that the customer is always right and our

business is to provide the customer with what they want.

In today’s avionics market, there are more products and “gee-wiz” gadgets for a pilot to install in their aircraft than most aircraft have room for. The influx of products and technologies has created a solid market for the avionics industry, but at the same time has created new challenges for the avionics shops.

When the pilot says “I want...” what they usually mean is “I think I want...” It is up to the avionics shop to help the pilot understand the costs associated with the product so the pilot can make an informed, educated decision about what he or she may actually want and determine if the desired product meets the regulatory requirements for the intended operation. Not all products are appropriate for every aircraft in every type of operation. The shop personnel need to be aware of the limitation of the equipment and, at the same time, they need to understand the certification requirements in addition to the operational equipment requirements of Part 91 and Part 135 for general aviation aircraft.

Part 43, Appendix A, Paragraph 4 states that changes in the basic design of radio communication and navigation equipment approved under type certification or a Technical Standard Order that have an effect on frequency stability, noise level, sensitivity, selectivity, distortion, spurious radiation, AVC characteristics, or ability to meet environmental test conditions are

major alterations. In addition, any other changes that have an effect on the performance of the equipment are also considered major appliance alterations.

Most avionics manufacturers provide data that shows the compatibility of their components with various other manufacturers' equipment. But in some instances, the interface between components has not been proven and may have an effect on the performance of the aircraft's communication and/or navigation systems or display. In these cases, while the pilot may be interested in a particular article, they don't want the article so badly that they are willing to pay the additional cost of developing the approved data to show that the interface between systems does not degrade the performance of the article that the pilot initially wanted or the performance of any other system in the aircraft which the article is interfaced to.

Subpart C of both Part 91 and Part 135 defines the minimum criteria for equipment and instruments necessary for general flight operations and air charter operations respectively. To assist AEA member facilities, the Association has developed and published a required avionics guide that identifies required avionics and instruments that are required by the design and certification regulations of Part 23 and Part 25 plus the avionics and instruments required by the operating rules of Part 91 and Part 135.

Helping the pilot-customer to evaluate their "wants" to determine the compatibility of the "wanted" article to their existing avionics systems, the continued performance of the article after installation and the compatibility of the article to the current certification basis of the aircraft and the operational use of the aircraft has become a critical task of the avionics shop in support of the pilot community.

The last statement is: "My customer won't pay for...." A customer typically wants the best product for the least price. But the successful business includes the cost of doing business when they bill the customer. Most aviation businesses readily identify and, in many cases, itemize the typical overhead expenses of hangar rent, labor, lights and insurance. But do they accurately account for the government imposed costs? What costs have the FAA imposed upon the repair station? And why shouldn't the customer expect that the repair station would include the overhead costs imposed by the FAA and the compliance with the Federal Aviation Regulations as part of the final bill?

Compliance with the FARs certainly increases the cost of any avionics installation. The FARs generates a significant increase in the overall sales price the OEMs charge for new avionics. The additional costs of TSO certification along with the additional costs generated because of the high cost of liability insurance of aviation products are readily passed on by the OEM to the consumer. Why then does a repair station operate with the misunderstanding that the aviation customer won't pay for the cost of the regulatory burden placed on the repair station for general operations and specifically for the cost of the regulatory burden associated with the avionics installation?

Many repair stations are hesitant to charge the customer for those little "minor" discrepancies that almost always appear during inspections or installations and the administrative cost of dealing with the FAA and their regulations. Identifying and fixing those minor discrepancies are supported by the FARs and the Advisory Circulars.

The FAA's Advisory Circular 43.13-1B states that "The satisfactory

performance of an aircraft is dependent upon the continued reliability of the electrical system." The AC goes on to state that "damaged wiring or equipment in an aircraft, regardless of how minor it may appear to be, cannot be tolerated." The customer brings the aircraft to the repair station for professional work with the understanding that a quality organization produces quality work, and with quality work comes reliability of the installed system.

Sure, the customer wants the least expensive job they can negotiate and a good customer can be expected to question discrepancies and the cost of correcting those discrepancies. But a good repair station can defend their findings and the cost to ensure the reliability of the aircraft and their avionics systems. □

Regulatory Update

Washington

The FAA has published Flight Standards Handbook Bulletin for Airworthiness (HBAW) 03-05: Acceptance of Data Approved by the Civil Aviation Authority of the United Kingdom for U.S. State of Design Transport Category Airplanes

This bulletin advises Flight Standards Service Aviation Safety Inspectors (ASI) and maintenance Designated Airworthiness Representatives (DAR) that certain data approved under the system used by the Civil Aviation Authority of the United Kingdom (UK CAA) is considered Federal Aviation Administration (FAA)-approved for the purpose of United States airworthiness certification of U.S. State of Design transport category airplanes when they are moved from UK registry to U.S. registry.

The FAA and UK CAA mutually recognize each other's delegation, designee, and organization approval systems as part of their overall aircraft certification systems. This recognition is identified in the U.S./UK Bilateral Aviation Safety Agreement Implementation Procedures for Airworthiness (BASA IPA). The fundamental principle of the BASAIPA is to maximize the use of the exporting civil airworthiness authority's aircraft certification system to ensure the airworthiness standards of the importing authority are satisfied. The FAA and UK CAA have entered into a special arrangement for the U.S. acceptance of certain UK CAA-approved service change data in accordance with Section V of the BASA IPA.

The FAA has evaluated the UK CAA system of data approval for serv-

ice changes on transport category airplanes and has found that approvals made under that system are equivalent to approvals made under the FAA system. The FAA has therefore determined that data that is CAA-approved can be considered FAA-approved for the purpose of U.S. airworthiness certification when transport category airplanes are moved to U.S. registry. The FAA's acceptance of UK CAA-approved repair and alteration data will apply to U.S. State of Design transport category airplanes when the data has been approved by the UK CAA itself or an approved design organization in the United Kingdom.

The FAA has published structural criteria for repairs and modifications to airplanes certified for high altitude operation.

Flight Standards Information Bulletin for Airworthiness (FSAW) 03-06 informs airworthiness inspectors about the requirements of special conditions applied to various airplanes certified for operation at high altitude. These special conditions include pressurization system requirements, damage tolerance, and other failure criteria applied to the pressure vessel. Therefore, any changes to the pressurization system or modifications or repairs to the pressure vessel must be approved in accordance with the requirements defined in the special conditions.

Because the high altitude special conditions are included in the type certification (TC) basis of the affected airplanes, the damage tolerance and other failure criteria defined therein must also be considered for modifications or repairs to those airplanes. An appropriate damage tolerance evaluation or failure assessment is not

always completed for modifications or repairs to the affected airplanes, particularly when performed by non-Original Equipment Manufacturer (OEM) repair facilities or Designated Engineering Representatives (DER).

This evaluation is not always completed because the applicable requirements are often unknown or misunderstood by non-OEM repair facilities and DERs. To address this issue, the type certificate data sheets (TCDS) of several of the high altitude airplanes have been updated to include information regarding the applicable special conditions.

FAA Airworthiness inspectors have been made aware of the requirements of high altitude special conditions applicable to certain airplanes. Modifications to the pressurization system or repairs of the pressure vessel require engineering approval, including damage tolerance approval, in accordance with the special conditions.

Inspectors have been instructed to review the applicable TCDS for information on the special conditions.

The FAA's Small Airplane Directorate, ACE-100 has issued draft policy Regarding Circuit Breakers and Fuses

PS-ACE100-2002-005; Proposed Policy Statement; Clarification on Policy on 14 CFR Part 23, § 23.1357(d) Regarding Circuit Breakers and Fuses provides clarification of 14 CFR Part 23, § 23.1357(d), for normal, utility, acrobatic, and commuter category airplanes.

It is applicable for all installed fuses or circuit breakers, including those used for primary and/or secondary (in-line) circuit protection.

This policy statement incorporates,

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REGULATORY UPDATE

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and therefore supersedes, the previously issued policy applicable to this subject contained in Advisory Circular, AC 23-17A. This policy statement is also applicable to conventional, near-equilibrium, non-rigid airships. These criteria are applicable to airships certificated in the normal category under 14 CFR Part 21, § 21.17(b) for special classes of aircraft that have a passenger seating configuration, excluding pilot seats, of nine seats or less. For airships containing larger numbers of passengers, these criteria would require further consideration.

All AEA member repair stations are encouraged to review this policy. It is applicable to the installation of circuit protection in Part 23 aircraft.

Australia

The chart below itemizes the status of Australian maintenance regulations.

Europe

Even though the European Aviation Safety Agency (EASA) is quickly approaching, JAA is continuing to introduce new regulations. The following Notices of Proposed Amendments were published by the Joint Aviation Authority on August 1, 2003. Comments must be received before November 1, 2003.

NPA 20-11: Advisory Material for the Approval for use of Initial Services for Air-Ground Data Link in Continental Airspace.

This proposed Advisory Material is issued in response to the EUROCON-

TROL Convergence and Implementation Plan (ECIP) that has the objective of implementing the first set of non-time critical ATC air ground data link services with voluntary carriage of data link equipment.

The proposed ACJ is for aircraft operators seeking early approval to use initial data link services in continental airspace. It may also be of interest to avionics shops and other stakeholders such as communication services providers, and aircraft and equipment manufacturers to advise them of the aircraft requirements and operator procedures, and the related assumptions.

NPA 20-12: Enhanced Surveillance with SSR Mode S

Operating regulations require that an operator shall not operate an airplane unless it is equipped with a pressure altitude reporting SSR transponder and any other SSR transponder required for the route being flown.

In accordance with the European Air Traffic Management Plan, implementation of Mode S Enhanced Surveillance with requirements for the capability to down-link aircraft derived parameters is proposed.

The NPA 20-12 introduces advisory material to provide guidance for the installation, certification and maintenance of Mode S SSR transponder systems for Enhanced Surveillance.

This proposed ACJ addresses only the Mode S transponder for Enhanced Surveillance purposes used in conjunction with interrogating ground stations. It does not deal with elementary surveillance or automatic dependent surveillance or the use of the transponder as a data link component of the Aeronautical Telecommunication Network, or security aspects relating to unlawful interference with aircraft operations.

CASR Parts	Status
43 - Maintainers responsibilities	Comments to NPRM 0109MS evaluated, SOR being prepared. Rule being finalized.
47 - Registration of aircraft and related matters	Original rule was disallowed by Senate 8 November 2000, withdrawn for further consideration. Comments to NPRM 0212MS evaluated, SOR being prepared. Rule being finalized.
144 - Product distribution organizations	Comments to NPRM 0217MS being evaluated. SOR being prepared. Rule being finalized.
145 - Maintenance organizations	Comments to NPRM 0110MS evaluated, SOR being prepared. Rule being finalized.
183 - Authorized representatives - airworthiness	Comments to NPRM 0103MS evaluated, SOR being prepared. Rule relating to AAR being finalized.

NPA 20-13: Digital ATIS via Data Link Over ACARS

This proposed Advisory Material is issued in response to the EUROCONTROL Convergence and Implementation Plan (ECIP) that recommends an interim deployment of air-to-ground and ground-to-air data link applications based on the existing airline ACARS technology. One such application is Digital ATIS (D-ATIS) now planned to be operational at various airports in Europe. Aircraft operators, on a voluntary basis, may take advantage of D-ATIS where it is available, provided the service is verified in accordance with operational procedures acceptable to the responsible operations authority.

The proposed ACJ is for aircraft operators intending to use Digital ATIS over ACARS as described in document EUROCAE ED-89. It may also be of interest to avionics shops and other stakeholders such as communication services providers, and aircraft and equipment manufacturers to advise them of the airborne requirements and procedures, and the related assumptions.

NPA TSO-10: JAR-TSO 2003 Update

This NPA proposes the modification to JTSO-2C112b: Air Traffic Control Radar Beacon System/Mode Select (ATCSBS/MODE S) Airborne Equipment.

The minimum performance standards is being updated from EUROCAE ED-73A dated February 1999 (JTSO-2C112a) to EUROCAE ED-73B dated January 2003 (JTSO-2C112b). The major reason to update the performance criteria was the inclusion of optional provisions for operations under hijack conditions.

These NPAs can be visited on the JAA website, www.jaa.nl □

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