USAF AIRWORTHINESS NEWSLETTER

July 2017

Executive Summary

By David Bushroe

It has been quite a hectic time for USAF Airworthiness since my arrival in April 2016. During this time, the USAF AW Office processed and issued over 60 Airworthiness Approvals (MFRs/MTCs), 30 Delegation Letters, 8 Airworthiness Publications and conducted 8 recognitions of foreign military airworthiness authorities. In addition, Contractor Owned, Contractor Operated (COCO) programs conducted outside the purview of a Program Office have swelled, driving a significant workload.

We are focused on updating process, policy, and publications to reflect current practices, address problem areas, and to simplify where practicable. As these policies are circulated for coordination, it is your chance to offer corrections, recommendations, and concerns – I encourage you to capitalize on this opportunity. Note that providing your sage advice can be a contributing factor considered when assessing skill levels in the Competency Management database.

Recently, Bob FitzHarris was selected to be the Office's Technical Advisor which is effectively the Deputy Chief, USAF Airworthiness Office. One of his tasks is to drive me to write newsletters more frequently than once every 18 months!

As we continue this adventure, I'd like to thank you for your support and look forward to continued success together--We all win together or we all lose together.



Approved for public release; distribution is unlimited.
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AW TOOLS

By Bob Fitzharris

Airworthiness Certification Tool (ACT) - Over the past several years the USAF Airworthiness Office has worked with the AFLCMC/EN-EZ MIS group (and more recently, the AFLCMC Center IT Office) to develop and beta test/demo ACT, an in-house developed and maintained SharePoint-based approach to documenting, communicating, approving, and archiving airworthiness certifications. The ACT was initially demo'd internally with multiple projects during the fall/winter of 2016-2017. Eventually, we hope to deploy ACT to all programs, but we know we need to walk before we run, so with Mr. Gonzalez' direction, we are hosting initial implementation on a relatively low risk project during the summer of 2017. We are providing training for both the responsible program office POCs and our SMEs, as well as assigning dedicated focal points for both the software (Jeff Carson) and the airworthiness project (Calenia Franklin).

Will it be perfect right out of the box? Not likely, but we will roll what we learn from our initial efforts back into the tool and hopefully will be ready to declare something akin to full IOC sometime in the next year. Obviously, more details and training will be provided as we move towards IOC, but suffice it to say for now that we are excited to see ACT moving forward. Jeff and Calenia will be keeping us posted on how this initial effort goes.

PROCESS CHANGES

By Leisa Lemaster

The Airworthiness Office has implemented new procedures for execution of the TD-TIMs and ABs. Program Offices are now required to provide final charts to the Airworthiness Office two (2) working days prior to the scheduled meeting. Providing the charts early will allow our TDs and SMEs time to review and prepare for the
meeting as well as allow for combining the program office and Airworthiness Office slides into one complete slide deck. Re-structure of the slide deck will facilitate a smooth transition between sections that is currently lacking and improve the overall flow of the meeting.

AIRWORTHINESS PUBLICATIONS

By Graham Burdette

AW Publications (Bulletins, Advisories, Circulars, and Directives) provide requirements, procedures, guidance, and information relating to AW. The following is a summary of recently published and currently in-work AW Publications

Published Bulletins:

1. AWB-1009, AW Flight Authorizations – Clarifies rules and expectations for issuing AW Flight Authorizations, and provides instructions for consistent execution.
2. AWB-320, Aerial Refueling (AR) – Provides instructions for obtaining proper authorizations for AR (both new and modified systems).
3. AWB-210, AW Publications – Refreshes existing instructions regarding types, development, and issuance of AW publications.

Published Advisories:

1. AA-16-01, Lightning Protection – Provides guidance for compliance with Lightning Protection aspects of MIL-HDBK-516C, Section 13.
2. AA-16-02, AW Impacts of GPS – Provides information needed to manage risks associated with GPS sensor use.
3. AA-16-03, Samsung Galaxy Note7 – Recommends the prohibition of use and transport of Samsung Galaxy Note7 devices on USAF aircraft.
4. AA-17-01, Cabin Depressurization & Hypoxia - Identifies hazard to aircrew from inadequate alerting of off-schedule cockpit pressure, and provides recommendations

Published Circulars:

1. AC-17-01, Verification Expectations for Select Section 15 Criteria – Identifies expectations for compliance with MIL-HDBK-516C, Section 15.

In-Work Publications:

1. AFLCMC CNS/ATM Compliance Assessment Process: This bulletin will provide instructions for assessing CNS/ATM performance requirements within the AW process.
2. Airworthiness Risk Assessment and Acceptance: This bulletin will refresh instructions for AW risk assessment and acceptance
3. Propulsion System Type Certification: This bulletin will provide procedures for evaluating and approving propulsion system type designs and changes to approved type designs.

Foreign Military Recognitions

By Deken Keil

DoD Directive 5030.61 *DoD Airworthiness Policy* and Air Force Instruction 10-4201 volume 3 *Air Advising Operations* require airworthiness assessments prior to approving flight in foreign-owned military aircraft by DoD military, DoD civilians, and DoD contractors. There are 2 methods to conduct assessments and satisfy policy.

The preferred method is a Military Airworthiness Authority (MAA) Airworthiness System Assessment of the foreign MAA that oversights the foreign aircraft. These assessments are performed under the auspices of the National Airworthiness Council (NAC) and may satisfy DoD and AF policy for four years for all flights on aircraft oversighted by the foreign MAA. A positive assessment results in a recognition, confirming that operations over-sighted by the foreign MAA meet an acceptable (or at least known) level of safety and that a sufficient level of rigor and diligence has been applied. To date, 20 foreign MAAs have been assessed and recognized by the NAC as shown below.

The alternate method is for the requesting organization to perform an operational airworthiness appraisal to identify areas of risk associated with the mission and secure formal risk acceptance at the General/Flag Officer level for the mission.

For flight in foreign-owned military aircraft, contact the USAF Airworthiness Office to determine which method you should employ to satisfy policy.

Airworthiness System Assessments and recognitions may also be performed on the USAF TAA by foreign MAAs to satisfy their own laws/policy/regulations when acquiring new aircraft or modifying existing aircraft through Foreign Military Sales (FMS) programs. To date, the USAF TAA has been assessed and recognized by 13 foreign MAAs as shown in the table to the right, with the most recent recognitions coming from the Canadian and Croatian MAAs. For more information on MAAs that have assessed and recognized the USAF TAA, contact the USAF Airworthiness Office.



Canadian MAA Mr. André Pelchat provides USAF TAA Mr. Jorge Gonzalez with Canada's formal recognition of USAF at the International Military Airworthiness Regulation Conference, Melbourne Australia, November 2016.

Country	NAC	Recognitions of USAF TAA
Australia	X	X
Israel	X	
UK	X	X
Czech Rep.	X	
New	X	X
Singapore	X	
Sweden	X	X
Italy	X	X
Canada	X	X
France	X	ECD 3Q '17
Norway	X	X
Germany	X	X
Netherlands	X	X
South Korea	X	X
Finland	X	
Taiwan	X	
Slovakia	X	
Croatia	X	X
Denmark	X	X
Greece	X	
Turkey		X

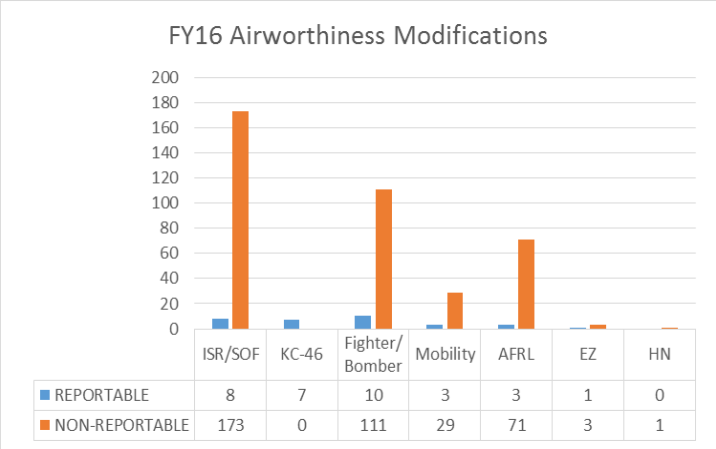
Risk assessment

By Sam Wright

An update to the Airworthiness Bulletin for Risk Identification and Acceptance (AWB-013A) is currently in work. The update will introduce a standardized framework for performing risk assessments that program offices can use for (1) system safety risk assessments (for both aircraft and non-aircraft systems) and (2) TAA use when performing independent airworthiness assessments. The recently released AFMC supplement to AFI 91-202 *The USAF Mishap Prevention Program* permits implementation of this standardized framework without contradiction.

Programs offices are encouraged to consult with the Airworthiness Office when preparing SSRAs for Airworthiness Boards. The USAF AW Office's broad experience in historical risk assessments and statistical methods can help ensure SSRAs are effective and defendable.

USAF Airworthiness Office "roadshow" visits are being planned to provide program offices with training on SSRA preparation as well as methods and tools for aggregating individual risks to an overall system-level risk.



Metrics

By Mark Mueller

The Director of Engineering level Delegated Technical Authorities (DOE level DTAs) provided an annual summary of the reportability determinations they made throughout FY16. As shown in the above chart, the number of non-reportable modifications make up 92% of the airworthiness impact modifications across the USAF.

AW Training

By Mark Mueller

AFIT SYS 116 (online training)

This course presents an Air Force policy overview and provides introductory knowledge on the importance of applying airworthiness principles and practices, a basic understanding of that process during the acquisition and sustainment lifecycle, nomenclature, and an overview of the responsibilities each functional area has in implementing airworthiness.

Register at:
http://www.afit.edu/LS/courselist.cfm?courseType=SYS

EZS-161 AW Policy and Implementation

The Policy and Implementation course covers details of the Air Force Directives, Instruction and Airworthiness Bulletins used by AFMCLC and teaches students how the Independent Airworthiness process is executed to certify Air Force platforms and platform modifications to issue a flight authorization for the technical design.

Register at:
https://www.atrrs.army.mil/channels/acqnowcl/

Next class: Week of 23 Oct 17, WPAFB

NOTE: Offered at WPAFB every Focus Week (4 times/ year). Contact the USAF Airworthiness Office to discuss bringing the class to your location.

AFIT SYS 316: Advanced Airworthiness Certification

This course will provide personnel with the knowledge to properly assess a new weapon system's airworthiness; a weapon system modification, its impact to Airworthiness, make a reportability determination; and assess the technical interrelationships of MIL-HDBK-516 to develop the Certification Basis and Compliance Report. This application-level course will use examples, case studies, and exercises based on actual experiences with the USAF weapon systems to allow the student to develop the skills required to support the Airworthiness Certification process.

Register at:
http://www.afit.edu/LS/courselist.cfm?courseType=SYS

FY18 class schedule:

31 Oct – 09 Nov 17
06 – 15 Mar 18
10 – 19 Jul 18

Find this and other AW training information on the AW SharePoint site at:

https://cs.eis.afmc.af.mil/sites/AeroEngDisciplines/Systems/Airworthiness/pages/EDandTraining.aspx

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