



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE LIFE CYCLE MANAGEMENT CENTER
WRIGHT-PATTERSON AIR FORCE BASE OHIO

BULLETIN
AWB-110
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United States Air Force Airworthiness Bulletin 110

Subject: Airworthiness Planning

Attachments: (1) References and Supporting Information
(2) Airworthiness Certification Process Timeline

1. Purpose. Provide instructions for developing Airworthiness (AW) Plans for air systems requiring a United States Air Force (USAF) AW approval.

2. Office of Primary Responsibility (OPR). USAF AW Office, AFLCMC/EZZ
(USAF.Airworthiness.Office@us.af.mil).

3. Applicability. All air systems the USAF owns, leases, uses, operates, designs, or modifies.

4. Policy. Air Force Instruction (AFI) 62-601, *USAF Airworthiness*, establishes responsibilities for the Technical AW Authority (TAA), chief engineers (CEs), and program managers (PMs) to support AW planning and defines the required AW Plan content. CEs are required to develop and obtain TAA approval of AW Plans prior to contract award.

5. Background. The AW Plan is an agreement between a program office (PO) and the TAA that defines the approach to obtain and maintain an air system's AW approval throughout its service life (or period of use). The PO may require a "bidder" to develop an AW Plan that supports, but does not replace, the PO's AW Plan. USAF organizations that are not acquisition POs (in accordance with [IAW] AFI 63-101/20-101) shall assign personnel to develop the AW Plan and contact the USAF AW Office for guidance.

6. AW Planning. AF Policy requires PMs to design and/or modify air systems to comply with appropriate airworthiness criteria by incorporating AW and substantiating data requirements into contractual documents. As such, AW planning must begin prior to source selection and/or contract award. Attachment 2 illustrates a generic program schedule and the timing of AW activities. POs should also work with their Delegated Technical Authority (DTA) or the USAF AW Office when planning for AW. Additional planning requirements for POs utilizing contracted air systems and/or conducting security cooperation (e.g., foreign military sales) activities are addressed respectively in AWB-340, *USAF Airworthiness Requirements for Contractor-Owned and Contractor-Operated Air Systems*, and AWB-345, *USAF Airworthiness (AW) Policy for Security and Cooperation (SC) Programs*. The PO should seek guidance pertaining to AW Plans for Commercial Derivative Aircraft (CDA) from the USAF Airworthiness Office.

7. AW Plan. The AW Plan includes the following:

7.1. Project Information. Document information that identifies the project such as the managing PO (or organization), project title, PO and/or AW Office tracking numbers, applicable platform, etc.

7.2. Detailed System Description. Include a detailed system description of the new air system or the air system under modification and the intended use.

7.2.1. For new air systems, this description defines the configuration for the AW assessment.

7.2.2. For modifications, this description defines the baseline configuration(s) assumed in the AW assessment. It also includes a description of the modification with as much detail as available (new designs, technology, materials, processes, etc.) The description focuses on AW-related aspects and contains sufficient detail for a person unfamiliar with the modification to understand the impact to AW certification criteria (i.e., MIL-HDBK-516).

7.3. Reportability Determination (Modifications only). Document the modification's reportability determination: reportable or non-reportable. The reportability determination establishes the authorities (ref. AWB-225, *Airworthiness Delegated Technical Authorities*) for executing AW activities (i.e., approving AW products). AWB-120, *Modification Airworthiness Relatedness and Reportability Determination*, contains instructions for establishing modification reportability.

7.4. AW Approach. Include the approach for the AW assessment(s), to include the required number of AW assessments anticipated for the project. The AW approach, at a minimum, addresses the following:

7.4.1. Planned deviations from the standard AW process and associated justification.

7.4.2. Plans for leveraging existing or planned AW approvals/certifications issued by the USAF or an AW authority recognized by the National AW Council. The AW Plan must identify aspects of the design that will be addressed by other approvals/certifications and the approach for addressing compatibility. Common examples include, but are not limited to, Federal Aviation Administration (FAA) Type Certificates (TCs) or Supplemental Type Certificates (STCs), and USAF AW approvals for modification designs on another aircraft type or variant. For modifications, this always includes, at a minimum, the baseline air system AW approval.

7.4.3. Source document(s) for the certification basis (e.g., MIL-HDBK-516) and a summary of expected tailoring. Provide justification if planning to utilize a source document other than the current revision of MIL-HDBK-516.

7.4.4. Identify the arrangements for data review, to include review by the TAA's Technical Experts (TEs).

7.4.5. PO personnel and their qualifications (i.e., AW Endorsements) that will create and review the certification basis (ref. AWB-130, *Certification Basis*) and compliance report (ref. AWB-140, *Compliance Report*).

7.4.6. Expected non-compliances with AW criteria, resulting hazard(s), and risk mitigation plan(s) (ref. AWB-150, *Airworthiness (AW) Risk Assessment and Acceptance*).¹

7.4.7. Incremental AW assessment and approval details. For example, if a program intends to conduct multiple developmental flight test phases, each test phase potentially requires a separate AW assessment and approval, followed by an AW assessment and approval to support operations.

7.4.8. Authority for coordinating on and approving AW products. For modifications, authority is based on the reportability determination documented in Section 7.3 herein.

7.4.9. Unique program AW elements or complexities.

7.5. Approach to Maintain AW Throughout Service Life. Include a plan for developing operating and maintenance instructions for the air system and/or modification design. NOTE: The USAF addresses operations and maintenance (continuing) AW in 10/11- and 20/21- series publications, respectively.

7.6. Approach to Maintain Substantiating Data. Describe the approach to maintain substantiating data for future AW assessments and inquiries throughout the system's service life.

7.7. Utilization of Digital Engineering. If Digital Engineering is utilized, the Airworthiness Plan should address utilization of digital tools during the airworthiness process, including: definition of the tools, use of the tools for criteria compliance and requirement verification, and USAF access to the tools.

7.8. Other Certifications: Describe other AW-related approvals, certifications, and/or recommendations. Common products include, but are not limited to Air Force SEEK EAGLE recommendations and assessments, Non-nuclear Munitions Safety Board assessments, Primary Flight Reference Endorsement, AIMS, and/or Spectrum Authorization.

7.9. Risk Acceptance Authorities. Identify the appropriate acceptance authorities for each risk level.

7.10. Schedule. Include a schedule of all AW-related activities. This includes, but is not limited to, interactions with the TAA and/or other AW authorities, interactions with test processes (e.g., technical and safety review boards), flight test and/or fielding dates, and other AW-related certifications. For AW assessments that require TAA approval, contact the USAF AW Office to obtain the *Airworthiness Project Tracker* to assist in developing the schedule for TAA interactions. The schedule should highlight and justify any deviations from the standard timeline identified in the *Airworthiness Project*

¹ AFI 62-601 establishes that air systems are to be designed and/or modified to comply with AW criteria. This section addresses specific instances where full compliance is impractical.

Tracker. Attachment 2 provides the recommended relationship between AW-related activities and program office activities.

8. Format. An AW Plan template is available from the USAF AW SharePoint site (see AWB-100 for a link to the site). POs should contact the USAF AW Office to obtain concurrence on alternate formats.

9. Approval. POs shall obtain coordination and approval of the AW Plan IAW AWB-225. For organizations without a DTA or for AW Plans requiring TAA approval, contact the USAF AW Office.

10. Reviewing and Updating. The PO should review its approved AW Plan on a quarterly basis. Significant changes may require an updated AW Plan to be re-approved by the TAA. For example, a significant change to the planned design, identification of a significant deficiency that requires an alternate AW approach, and/or the restart of a previously suspended program may require an updated AW Plan to be re-approved. At a minimum, notify the USAF AW Office of schedule changes related to airworthiness (e.g., certification basis or compliance report delivery dates). For non-reportable modifications, contact the DTA to determine if an updated AW Plan requires re-approval.

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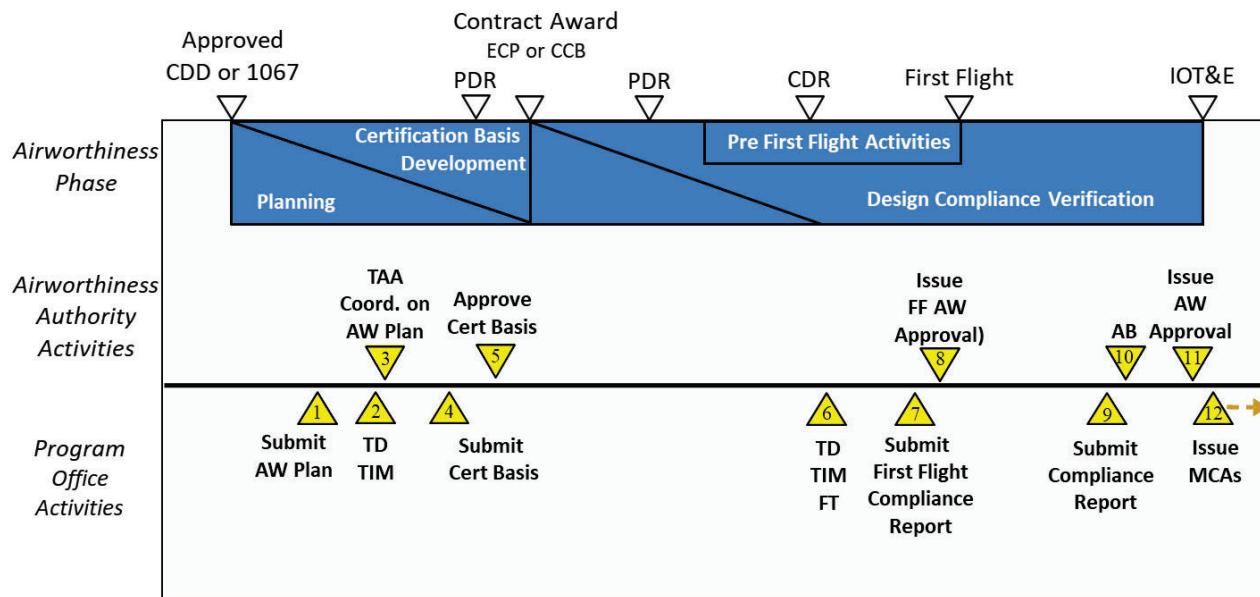
Attachment 1**REFERENCES AND SUPPORTING INFORMATION*****References***

Department of Defense Directive, DODD 5030.61C3, *DOD Airworthiness Policy*, 31 Aug 2018
 Air Force Policy Directive (AFPD) 62-6, *USAF Airworthiness*, 16 Jan 2019
 Air Force Policy Instruction (AFI) 62-601, *USAF Airworthiness*, 11 Jun 2010
MIL-HDBK-516, Airworthiness Certification Criteria
AFI 63-101/20-101, Integrated Life Cycle Management
AWB-100, Airworthiness Process Overview and Terminology
AWB-120, Modification Airworthiness Relatedness and Reportability Determination
AWB-130, Certification Basis
AWB-140, Compliance Report
AWB-150, Airworthiness Risk Assessment and Acceptance
AWB-225, Airworthiness Delegated Technical Authorities
AWB-340, USAF Airworthiness Requirements for Contractor-Owned and Contractor-Operated Air Systems
AWB-345, USAF Airworthiness Policy for Security and Cooperation (SC) Programs

Abbreviations and Acronyms

AFI – Air Force Instruction
AFPD – Air Force Policy Directive
AFLCMC – Air Force Life Cycle Management Center
AIMS – Aircraft Traffic Control Radar Beacon System Identification Friend or Foe Mark XII Systems
AW – Airworthiness
AWB – Airworthiness Bulletin
CDA – Commercial Derivative Aircraft
CE – Chief Engineer
DODD - Department of Defense Directive
DTA – Delegated Technical Authority
FAA – Federal Aviation Authority
OPR – Office of Primary Responsibility
PM – Program Manager
PO – Program Office
STC – Supplemental Type Certification
TA – Technical Airworthiness Authority
TC – Type Certification
USAF – United States Air Force

Attachment 2
AIRWORTHINESS CERTIFICATION PROCESS TIMELINE



1. Program Manager (PM) requests review of airworthiness planning in Life Cycle Management Plan (LCMP), Systems Engineering Plan (SEP), etc. Guidance on contract language is available in the USAF SharePoint Site.
2. PM/CE meet with Tech Directors to assess readiness and suggest changes to PM's plan for certification basis approval
3. Technical Airworthiness Authority (TAA) approves the AW Plan
4. PM submits Certification Basis document for approval
5. TAA approves certification basis
6. PM/CE meet with Tech Directors to review plans for issuance of Military Flight Release (MFR) for First Flight, review certification basis changes, and plan for Compliance Report approval
7. PM submits Compliance Report for First Flight
8. TAA issues MFR for First Flight; equivalent local flight release for non-reportable modifications.
9. PM submits Compliance Report
10. Conduct Airworthiness Board
11. TAA issues AW Approval
12. PM issues Military Certificate of Airworthiness (MCA) with acceptance of individual operational aircraft