



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

BULLETIN
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Subject: Modification Airworthiness, Relatedness and Reportability Determination

Attachments: (1) References and Supporting Information

1. Purpose. Provide a process for assessing whether modifications are airworthiness (AW) related and, if so, determining their reportability.

2. Office of Primary Responsibility. United States Air Force (USAF) AW Office, AFLCMC/EZZ (USAF.Airworthiness.Office@us.af.mil).

3. Applicability. This Airworthiness Bulletin (AWB) applies to all modifications to air systems with previously issued USAF AW approvals in accordance with (IAW) AFI 62-601, *USAF Airworthiness*.¹ Modifications include permanent or temporary changes to an approved configuration (i.e., removing or adding a capability or function, enhancing technical performance or suitability, to include form, fit, function, and interfaces (F3I) replacement²). These changes may include changes to hardware, software, technical data, and/or mission usage.

4. Policy. AFI 62-601, *USAF Airworthiness*, requires Chief Engineers (CEs) to assess and document whether a modification is AW related and obtain Technical Airworthiness Authority (TAA) approval of the assessment prior to contract award. All AW-related modifications require an AW assessment.³ The TAA may delegate specific authorities for executing AW activities to Delegated Technical Authorities (DTAs).

5. Background. AWB-110, *Airworthiness Planning*, provides instructions for developing AW Plans (AWPs). For AW-related modifications, the AWP contains the reportability determination utilizing the methodology herein. The appropriate approval authorities for the AW products are documented IAW AWB-225, *Airworthiness Delegated Technical Authorities*. Organizations without a DTA should contact the USAF AW Office for a determination of the appropriate approval authority.

6. Methodology.: Program offices (POs), CE-Level DTAs and Director of Engineering (DOE)-Level DTAs use the methodology below to assess whether modifications are AW related and, if so, to determine their reportability. USAF organizations that are not acquisition POs (IAW AFI

¹ This bulletin does not apply to activities conducted in accordance with AFMCMAN 63-1202, *Air Force Materiel Command Engineering Technical Assistance Request (ETAR) Process*, and T.O. 00-25-107, *Maintenance Assistance*.

² Changes that do not affect F3I may be AW related.

³ An AW assessment, as defined in AWB-100, *Airworthiness Process Overview and Terminology*, is distinct from the initial assessment of whether a modification is AW related.

63-101/20-101, *Integrated Life Cycle Management*) should assign an individual(s) to accomplish this process.⁴

6.1. Relatedness Determination.

6.1.1. Determine if the modification is AW related. A modification is AW related if it requires verification of compliance to any criterion in MIL-HDBK-516, *Airworthiness Certification Criteria*, (or other appropriate AW criteria) with the exception of criteria in the Systems Engineering and System Safety disciplines (e.g., Sections 4 and 14). Compliance verification status (complete or incomplete, planned or unplanned) shall not be considered when determining if a modification is AW related. When determining if a modification is AW related, use MIL-HDBK-516 at the sub-section level (IAW the AWB-110 templates) as a checklist to ensure all aspects of an air system's design are considered.

6.1.2. For modifications determined to be unrelated to AW, documentation and approval IAW Section 7 completes the AW process.

6.1.3. For modifications determined to be related to AW, determine the reportability IAW Section 6.2.

6.2. Reportability Determination.

6.2.1. For modifications that are AW-related, conduct a hazard assessment of the entire modification effort to determine the reportability. Identify the credible potential hazard(s) for each applicable MIL-HDBK-516 sub-section, with the exception of Sections 4 and 14, and assess the unmitigated risk using AWB-150, *Airworthiness Risk Assessment and Acceptance*. The PO may use existing documentation such as a Preliminary Hazard Analysis, as described in MIL-STD-882E, to aid in identifying potential AW-related hazards.

6.2.2. The PO must evaluate risks as unmitigated risks for AW compliance activities that have not occurred at the beginning of a modification.⁵

6.2.3. Personnel with AW Subject Matter Expert Endorsements or validated Competency Management Skill Level of Intermediate, Advanced, or Expert in related Technical Disciplines should be consulted when identifying hazards and assessing unmitigated risk.⁶

6.2.4. The modification is reportable if the conditions described in 6.2.4.1 or 6.2.4.2 are met; otherwise, it is non-reportable.

⁴ Contact the USAF AW Office to obtain the appropriate training.

⁵ The hazard assessment may account for compliance data previously approved by a USAF-recognized AW authority or delegate (e.g., environmental qualification testing completed on a non-developmental item that was previously approved via a USAF MFR or MTC for a different air system type or variant).

⁶ Refer to AWB-1011, *Airworthiness Expert Endorsement*, and the *Air Force Life Cycle Management Center (AFLCMC) Standard Process for Competency Management* for additional information.

6.2.4.1. The overall, unmitigated risk (based on the hazard with the greatest risk) is Serious or High.

6.2.4.2. The modification is a material, product form, and/or process substitution for an aircraft part, the complexity level of the substitution is assessed as Level I IAW AFLCMC/EZ Structures Bulletin EZ-SB-13-001, *Requirements for Substitution of New Material, Product Form, and Processes for Aircraft Metallic Parts*, and the substitution has a potential severity category of Catastrophic or Critical IAW AWB-150, *Airworthiness Risk Assessment and Acceptance*, Attachment 2, Table 1.

6.2.5. The CE-Level DTA or DOE-Level DTA may identify circumstances (e.g., program complexity, lack of suitably qualified engineers to conduct the AW process) that drive them to determine an otherwise non-reportable modification to be reportable, but not vice versa.

7. Approval and Documentation.

7.1. Document a modification's relatedness to AW and, if appropriate, the modification's Reportability Determination within the AWP, as instructed in AWB-110. For modifications unrelated to AW, documentation may differ from the format prescribed in AWB-110 but must include a modification description, an assertion that the modification is unrelated to AW, and signature by the appropriate approval authority IAW AWB-225.

7.2. Approvals for determinations of relatedness and reportability must be obtained from the appropriate authority IAW AWB-225.

7.3. POs shall maintain the official record of all AW documentation. This includes AW Relatedness Determination, Reportability Determinations, and supporting data.^{7, 8}

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⁷ AFI 62-601 requires all records created as a result of the AW process be maintained in accordance with Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*.

⁸ AWB-225 requires DOE-Level DTAs to provide an annual report summarizing AW-related activities, which includes a list of all AW Relatedness Assessments and Reportability Determinations.

Attachment 1 REFERENCES AND SUPPORTING INFORMATION

References

AFI 33-322, *Records Management and Information Governance Program*
 AFI 62-601, *USAF Airworthiness*
 AFI 63-101/20-101, *Integrated Life Cycle Management*
 AFMCMAN 63-1202, *Air Force Materiel Command Engineering Technical Assistance Request (ETAR) Process*
 AWB-100, *Airworthiness Process Overview and Terminology*
 AWB-110, *Airworthiness Planning*
 AWB-150, *Airworthiness (AW) Risk Assessment and Acceptance*
 AWB-225, *Airworthiness Delegated Technical Authorities*
 AWB-1011, *Airworthiness Expert Endorsement*
Air Force Life Cycle Management Center (AFLCMC) Standard Process for Competency Management
 MIL-HDBK-516, *Airworthiness Certification Criteria*
 EZ-SB-13-001, *Requirements for Substitution of New Material, Product Form, and Processes for Aircraft Metallic Parts*
 T.O. 00-25-107, *Maintenance Assistance*

Abbreviations and Acronyms

AFI – Air Force Instruction
AFMAN – Air Force Manual
AW – Airworthiness
AWB – Airworthiness Bulletin
CE – Chief Engineer
DOE – Director of Engineering
DTA – Delegated Technical Authority
IAW – In Accordance With
MIL-HDBK – Department of Defense Handbook
MIL-STD – Department of Defense Standard Practice
PO – Program Office
SB – Structures Bulletin
TAA – Technical Airworthiness Authority
TO – Technical Order
USAF – United States Air Force