



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AERONAUTICAL SYSTEMS CENTER (AFMC)
WRIGHT-PATTERSON AIR FORCE BASE OHIO

BULLETIN
AWB-006
13 April 2011

USAF Airworthiness Bulletin AWB-006

Subject: Military Flight Release (MFR)

Attachments: (1) Glossary of References and Supporting Information
(2) Military Flight Release Template

1. **Purpose:** This bulletin provides the template and instructions for issuance of Military Flight Release (MFR) documents. The MFR document replaces the Military Experimental Flight Release (MEFR), Military Restricted Flight Release (MRFR), and Special Flight Release (SFR) addressed in AFI 62-601 paragraphs 1.7.1.1, 1.7.1.4, and 1.7.2, respectively. Only the USAF Technical Airworthiness Authority (TAA) or delegates (when authorized) may issue or update MFRs.
2. **Office of Primary Responsibility (OPR):** USAF Airworthiness Office (ASC/EN) is the OPR. Comments, suggestions, or questions on this bulletin should be emailed to the USAF Airworthiness Office Mailbox (ASC.ESI.Mailbox@wpafb.af.mil).
3. **Discussion:** MFRs typically define conditions, limitations, and restrictions for specific tail-numbered aircraft that must be observed in order to maximize safe flight operations within acceptable risk. An MFR may be issued for aircraft pursuing a design-based airworthiness certification or for aircraft that have completed the non-design-based airworthiness assessment. Further, MFRs document the assessed and accepted risks when an aircraft must be operated without a Military Type Certificate (MTC) and the associated Military Certificate of Airworthiness (MCA).
 - a. **Design-based MFRs:** The TAA may issue MFRs for aircraft whose type designs have not yet shown full compliance to their TAA-approved certification basis as a means to deploy the aircraft operationally. MFRs are also issued to aircraft that have demonstrated a level of compliance to either a TAA-approved military experimental flight release basis (EFRB) or to an aircraft level military type design certification basis document.
 - (1) For programs requiring an MFR to conduct development flight test for establishing certification basis compliance, the Chief Engineer (CE) shall create an EFRB against which readiness to initiate flight test may be assessed. The EFRB is constructed by tailoring the aircraft's TAA-approved military type certification basis, including tailoring the methods of compliance and required substantiating data to reflect those elements necessary to safely conduct the planned flight test program. For example, if no stores are to be carried during flight testing, the stores criteria would be marked as "Not Applicable" and justification would be provided. Alternatively, if a store was to be carried but not dropped during flight test, it would be marked as "Applicable" but the standard would reflect captive carriage parameters as opposed to reflecting release parameters. The EFRB's required methods of compliance for entrance into flight test

generally reflect items such as analysis, component test, subsystem test, etc., but do not include flight test results as those would be gathered during the flight test program itself.

For reportable modifications, the EFRB shall be submitted for TAA approval no later than the system Critical Design Review (CDR) in the format specified in AWB-005. When the program preflight test airworthiness activities identified in the flight release basis have been completed, the Program Manager (PM) shall submit a compliance report (per format in AWB-005) for review using the process outlined in AWB-003. After establishment of level of compliance to the EFRB, formal risk acceptance by the appropriate risk acceptance authority, and coordination with the Airworthiness Board (AB) members, the TAA may issue an MFR.

The Chief Engineer/Delegated Technical Authority (CE/DTA) approves nonreportable modifications and issues associated MFRs.

(2) MFRs are also issued when criteria noncompliance results in serious or high risk hazards. Discovery of noncompliance may occur during the “show compliance” data review by the PM or during the “find compliance” review by the TAA. Refer to the aforementioned bulletins and other bulletins for instructions on the handling of certification basis noncompliance, risk assessment, and acceptance processes, etc.

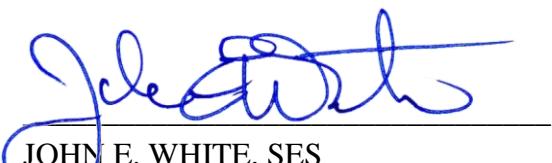
b. **Non-Design-Based MFRs.** *Seeking to acquire and operate an aircraft under a non-design-based flight release is not an acceptable acquisition strategy for establishing airworthiness certification.* With this in mind, non-design-based MFRs may be issued when the TAA has determined that the standard United States Air Force (USAF) design-based airworthiness certification process is not feasible.

Data required for non-design-based MFRs may vary extensively and the content and scope of required data will be tailored to fit the situation and aircraft. Hazard risk identification and airworthiness assessment will be performed by the PM using MIL-HDBK-516 and all available certification data, technical data, safety analysis, system description, and other relevant information. It will be validated by the TAA assessment. Given that no TAA-approved certification basis exists, the amount and quality of data available directly impacts the assessed operational risk, limitations, operating restrictions, and environment.

TAA issuance of an MFR is based on agreement with the assessment of operational risk documented in an operational-command-generated Hazard Risk Assessment (HRA).

4. Determination of MFR Expiration Date: The PM should propose an expiration date to ASC/ENSI to be presented to the AB for TAA approval. Depending upon the MFR, the proposed date should consider the risk assessment, the risk exposure, and the time necessary to complete outstanding verification activities leading to issuance of an MTC, or completion of the flight test program, or the required operational activities. The TAA will determine the appropriate MFR expiration date or alternate expiration criteria (completion of flight test phase, program milestone, etc.).

- 5. MFR Updates:** The TAA may approve removal of or updates to flight restrictions after evidence of appropriate risk mitigation is provided by the PM. If an MFR is set to expire before completion of required activity, the PM must notify the USAF Airworthiness Office (ASC.ESI.Mailbox@wpafb.af.mil) and request an MFR reissuance. Ensure that all risk assessments are current and still applicable/accepted for the duration of the requested extension. Sufficient time must be allocated for reviews and subsequent TAA approval.
- 6. Issuance of MTC:** For design-based aircraft that have previously been issued an MFR due to certification basis noncompliance, when all noncompliant criteria have been shown to be compliant, the PM may request the TAA issue an MTC. The PM must submit all required documentation in accordance with an Airworthiness Board (AB) action plan or as negotiated with the TAA (POC: ASC/ESI Mailbox) prior to the expiration date of the military flight release (MFR) to allow sufficient time for an airworthiness subject matter expert's (SME) review, AB (if required), and MTC issuance.
- 7. Template:** Attachment 2 provides the template and instructions for an MFR. An editable version of the MFR can be found in the USAF Airworthiness SharePoint website and AFKN USAF Airworthiness Community of Practice (CoP).



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

AFI 62-601, *USAF Airworthiness*
AFPD 62-6, *USAF Airworthiness*
AWB-003, *TACC/MACC Document Submittal and Review Process*
AWB-005, *TACC/MACC Document Construction and Format*
MIL-HDBK-516, *Airworthiness Certification Criteria*
MIL-HDBK-516B Expanded, *ASC/EN Airworthiness Certification Criteria* (Expanded Version of MIL-HDBK-516B)
USAF Airworthiness SharePoint website,
<https://cs.eis.afmc.af.mil/sites/AeroEngDisciplines/Systems/Airworthiness/default.aspx>
AFKN USAF Airworthiness CoP,
<https://afkm.wpafb.af.mil/community/views/home.aspx?Filter=OO-EN-KO-11>

Abbreviations and Acronyms

AB – Airworthiness Board
CDR – Critical Design Review
CE – Chief Engineer
CoP – Community of Practice
DTA – Delegated Technical Authority
EFRB - Experimental Flight Release Basis
HRA – Hazard Risk Assessment
MACC – Modification Airworthiness Certification Criteria
MCA – Military Certificate of Airworthiness
MDS – Mission Design Series
MEFR – Military Experimental Flight Release
MFR – Military Flight Release
MRFR – Military Restricted Flight Release
MTC – Military Type Certificate
PM – Program Manager
SFR – Special Flight Release
SME – Subject Matter Expert
SSRA – System Safety Risk Assessment
TA – Technical Airworthiness Authority
TACC – Tailored Airworthiness Certification Criteria

Terms

Experimental Flight Release Basis (EFRB) — The limited set of approved airworthiness certification criteria, standards, and methods of compliance tailored to reflect the exact configuration and capabilities of the flight test or developmental aircraft. It is derived from the approved airworthiness certification basis documented in the TACC/MACC document and serves as a checklist against which readiness to initiate flight test may be assessed.

Military Type Certificate (MTC) — The TAA issued document which provides evidence that the aircraft system type design is in full compliance with its approved certification basis.

Military Flight Release (MFR) - Documentation which authorizes flight of specific aircraft at specific locations under approved conditions and limitations.

Attachment 2
Military Flight Release Template

AWB-006

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|  <p>DEPARTMENT OF DEFENSE UNITED STATES AIR FORCE</p> | |
| MILITARY FLIGHT RELEASE No. _____ | |
| 1. MANUFACTURER / MDS: [MDS] | 4. SERIAL / TAIL NUMBER (s): [Tail #s] |
| 2. ISSUE DATE: [Date] | 3. EXPIRATION: [Exp Date / Service Life or Alt Exp Criteria] |
| 5. TERMS AND CONDITIONS: This flight release is issued pursuant to United States Air Force Policy Directive 62-6 and Air Force Instruction 62-601 and authorizes flight in accordance with approved Technical Orders unless rescinded by the Technical Airworthiness Authority (TAA). The operational risks have been accepted by the United States Air Force. | |
| 6. SUPPORTING DOCUMENTATION: _____ _____ _____ _____ _____ | |
| 7. SIGNATURE | 8. ORGANIZATION |

Instructions for completing this form:

MILITARY FLIGHT RELEASE No: This number is a unique number that identifies the specific flight release and will be obtained from ASC/ENSI.

Block 1: Airframe prime contractor model type and/or the designated Mission Design Series (MDS).

Block 2: The date of issuance of the flight release.

Block 3: Enter the expiration date and the number of hours allowed as determined by the Technical Airworthiness Authority (TAA). Alternate expiration criteria may be defined by the TAA.

Block 4: Tail number or Air Force serial number of the aircraft. If multiple aircraft in sequence are being certified, list the applicable tail numbers, e.g., "93-01 through 93-12."

Block 5: As stated above.

Block 6: Include list of documents that support this flight release.

Mandatory Documents:

1. Compliance or Assessment Report
2. Signed Airworthiness Risk Acceptance Letter with System Safety Risk Assessment (SSRA)
3. As-Built Configuration Description Package

As applicable:

1. Approved Certification Basis
2. Flight Envelope and Aircraft Operating Limitations
3. Engineering Inspection Requirements
4. Operator and Maintenance Technical Data
5. Other technical data, restrictions, and operational limitations as required

Block 7: Signature, name, and title of the TAA or Chief Engineer/Delegated Technical Authority (CE/DTA). Electronic signature is acceptable.

Block 8: Enter the TAA or CE/DTA organization.

DISTRIBUTION STATEMENT: The appropriate distribution statement for this document IAW DODD 5230.24 shall be added by the Program Office.