

Administrative Changes to AFI 21-123 AFRC SUP, *Air Force Repair Enhancement Program (AFREP)*

OPR: HQ AFRC/A4MM

OPR reference in title to “HQ AFRC/A4OP” is hereby changed to ‘HQ AFRC/A4MM’.

Except OPR in title, references throughout to “HQ AFRC/A4OP” are hereby changed to “HQ AFRC/A4M”.

References throughout to “afrc.a4op@us.af.mil” are hereby changed to “afrc.a4m@us.af.mil”.

References throughout to SharePoint address

“<https://afrc.eim.us.af.mil/sites/A4/A4O/A4OP/MPAP/SitePages/Home.aspx>” are hereby changed to “<https://afrc.eim.us.af.mil/sites/A4/A4M/AFREP1/Forms/AllItems.aspx>”

12 July2016

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**



AIR FORCE INSTRUCTION 21-123

27 SEPTEMBER 2012

**AIR FORCE RESERVE COMMAND
Supplement**

25 JULY 2013

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Maintenance

**AIR FORCE REPAIR ENHANCEMENT
PROGRAM (AFREP)**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFD 21-1, *Air and Space Maintenance*. It provides guidance and procedures governing the initiation, transmission, and tracking of field-generated suggestions related to repair of aerospace parts and equipment. It also restricts field unit or AFREP work center conversion of non-reparable items to repairable items to the processes described in this AFI. This instruction applies to Air Force Major Commands (MAJCOMs) and the Air National Guard (ANG). Lead Command supplements to this document will be submitted to AF/A4L for approval prior to publication. For the purposes of policy the ANG is recognized as a MAJCOM. Refer recommended changes and questions about this publication to AF/A4LM using AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional chain of command. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in the publication does not imply endorsement by the Air Force. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*,

and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>.

(AFRC) This supplement implements and extends the guidance of Air Force Instruction (AFI) 21-123, *Air Force Repair Enhancement Program (AFREP)*, Dated 27 September 2012. This supplement describes Air Force Reserve Command (AFRC) procedures to be used in conjunction with the basic instruction. This supplement applies to AFRC unit equipped (UE) organizations as well as Active and Air Reserve Component Associates when AFRC is the lead. Requests for waivers must be submitted through chain of command to the OPR listed above for consideration and approval. Refer recommended changes, supplements, and questions concerning this publication to HQ AFRC/A4OP (afrc.a4op@us.af.mil) from the field through the appropriate functional chain of command and NAF. Unit supplements to this instruction will be submitted to HQ AFRC/A4OP (afrc.a4op@us.af.mil) for approval prior to publication. Send comments, questions, and suggested improvements to this publication on AF Form 847, *Recommendation for Change of Publication*, to HQ AFRC/A4OP (afrc.a4op@us.af.mil). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, Management of Records, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed in its entirety, it eliminates outdated and conflicting requirement.

1. Program Objectives. The Air Force Repair Enhancement Program (AFREP) optimizes Air Force resources and repair capability of aerospace parts and equipment by increasing the wing-level participation with the appropriate Program Office (PO). This is accomplished by field level identification and recommendation of candidates for reparability consideration by the appropriate PO. The concept is to make recommendations to the program manager of consumable/expendable items which the field has identified as desirable candidates to be considered for conversion to field-level repair, limited repair or even full depot level repair, contract or organic as directed by the DSOR process in AFI 63-101. The approval to change the SMR/ERRC codes, or select, use, arrange for, contract with , qualify sources of repair, or authorize the initiation of any local or other repair action rests solely with the program manager.

1.1. In accordance with AFI 63-1201, *Life Cycle Systems Engineering*, personnel must coordinate any operational change to the system or end item or modified configuration or maintenance procedure (i.e., additional base-level repair or contract repair of any item beyond the provisions which already exist in field Technical Orders (TOs)) prior to implementation. **NOTE:** Field personnel including AFREP work centers shall not contract or arrange for repair services without prior written authorization by the appropriate program manager for the item recommended for repair. The appropriate PO responsible for the system or end item shall retain responsibility for making any decision stemming from such a recommendation. Field TOs do not give permission for local contract or off-base repair of any item, only on-base repair to the extent specified by the SMR code for a given item.

1.2. Operational Safety, Suitability & Effectiveness (OSS&E) is an outcome of properly planned and applied systems engineering. Organizations responsible for preserving OSS&E of Air Force systems or end items must ensure that operational use, configuration changes, maintenance repairs, aging, part substitutions, and similar activities and events do not degrade baselined characteristics of systems or end items over their operational life. It is an integrated effort to ensure items are not allowed to degrade as a result of maintenance, repairs, parts substitutions, and similar activities. The program manager is responsible for the assurance of OSS&E throughout the life cycle of each configuration of each component of each system. Only the program manager may convert an item from non-reparable to reparable.

2. AFREP Requirements.

2.1. Given authorized repair of a consumable/expendable item, the program manager will determine the SMR/ERRC code validity. All resulting changes are linked with Supply Chain Manager consideration for that item. Supply Chain Management issues must be considered as a matter of law, given these issues affect Congressionally Authorized budget authority and funds allocated to accomplish specifically different supply chain functions (spares buys versus repairs).

2.1.1. Any personnel, organization or AFREP work center may request SMR/ERRC code changes in accordance with TO 00-25-195, *AF Technical Order System Source, Maintenance, and Recoverability Coding of Air Force Weapons, Systems, and Equipments*, Chapter 4 and AFMAN 23-110, Volume 1, Part 4, Chapter 1, Attachment 1A-27.

2.2. Items repaired in accordance with Technical Data will be turned in to the supply system following guidance in AFMAN 23-110, Volume 2, Part 2, Chapter 13 and Technical Order (TO) 00-20-3, *Maintenance Processing of Repairable Property and The Repair Cycle Asset Control System*.

3. Roles and Responsibilities.

3.1. AF/A4L Responsibilities:

3.1.1. Prepares, publishes and reviews AF-level policy and guidance for AFREP.

3.2. Program Manager Responsibilities:

3.2.1. Maintains responsibility for applying integrated systems engineering principles, processes, and practices to ensure the OSS&E of systems and end-items.

3.2.2. Evaluates and approves Lead Command-validated item repair process requests.

3.2.3. Selects and qualifies sources when the selection authority. When not the selection authority; provides selection criteria guidance and recommendation related to maintenance, supply, and repair sources to the selection authority.

3.2.4. Designates a focal point within the program office for the Lead Command and end users to contact regarding AFREP recommendations and OSS&E issues.

3.3. Lead Command:

3.3.1. Coordinates and issues Lead Command supplement, as required, to this AFI pertaining to identification of candidate items for consideration, and transmission of recommendations to the appropriate PO.

3.3.2. Designates a Lead Command AFREP Manager for complying with AFREP responsibilities.

3.3.2. (AFRC) HQ AFRC/A4M (afrc.lgm@us.af.mil) is designated as the AFREP manager for AFRC.

3.3.3. Establishes and maintains an AFREP Recommendation Submittal site, (e.g., SharePoint) for tracking recommendations submitted to appropriate POs (N/A to AFSPC).

3.3.3. (AFRC) Access the AFRC Recommendation Submittal site at <https://afrc.eim.us.af.mil/sites/A4/A4O/A4OP/MPAP/SitePages/Home.aspx>.

3.4. Lead Command AFREP Manager:

3.4.1. Administers/manages the Lead Command AFREP.

3.4.2. Maintains the AFREP central information site which shall only include:

3.4.2.1. Recommendations to the appropriate PO for repair considerations and their status (part identification, initiation date, submittal date, closure date).

3.4.3. Maintains, updates and distributes list of Wing/Unit AFREP POCs to include representatives from other agencies (e.g., Defense Logistics Agency (DLA), Air Logistics Centers (ALCs), MAJCOMs).

3.4.4. Reviews item repair /SMR code change requests and forwards to the appropriate PO responsible for the item, IAW TO 00-25-195 and TO 00-20-3.

3.4.5. Ensures the Wing/Unit coordinates recommendations for consideration to recode SMR/ERRC of any item with the appropriate PO responsible for the system or end item.

3.5. Wing/Unit:

3.5.1. Participates in AFREP, based on Lead Command guidance.

3.5.1.1. MXG/CC or equivalent assigns a unit AFREP Manager/Section functionally aligned under the MXG QA.

3.5.1.1. (AFRC) Assign the AFREP Manager responsibilities to the Product Improvement Manager (PIM) within the MXG QA Section. (T-2).

3.5.1.2. Manpower for AFREP section will be authorized, unfunded and reflected on the MXG Unit Manning Document (UMD).

3.5.1.2. (AFRC) AFRC units will not establish an AFREP section. Assigned maintenance backshops will be responsible for carrying out actions prescribed in this AFI. (T-2).

3.5.1.3. Provides resources for program to ensure compliance with this AFI.

3.6. Wing/Unit AFREP Manager:

3.6.1. Submit recommendations to the appropriate PO for SMR/ERRC changes are submitted as required, IAW TO 00-25-195, AFI 21-101 and this AFI. **NOTE:** Field TOs do not give authorization for local contract repair of any item, only on-base repair to the extent specified by the SMR code for a given item. AFREP work centers or any other field personnel shall not perform repairs not authorized by Technical Data.

3.6.1. (**AFRC**) Recommendations will be submitted to the MAJCOM AFREP Manager for review, posted on the AFRC AFREP Recommendation Submittal Site, and forwarded to the appropriate PO. (T-2).

3.6.1.1. Prior to submitting a recommendation, AFREP work centers will coordinate with appropriate PO to determine the Critical Application Items (CSI) and Critical Safety Items (CAI) designation of the item. CAIs, CSIs, or elements of a system which the program manager has designated as a CAI system or a CSI system are prohibited from consideration under the AFREP program unless authorization is given by a competent engineering authority. All Electronic Warfare (EW) Systems are CAI-designated systems. See **Attachment 2**, CAI & CSI for additional information.

3.6.1.2. Contractor repairs of any item are not allowed without prior written authorization from the program manager. **NOTE:** AFREP work centers are prohibited from entering into repair source contractual/obligation relationships with contractors. DoD regulations exist to assign such actions (finding and qualifying repair sources) to the competent engineering authority.

3.6.1.3. Repair items in accordance with Technical Data. **NOTE:** Restricted use of systems will result from use of components which have been repaired as described immediately above, without prior written authorization from the program manager.

3.6.2. Enter data in the AFREP Recommendation Submittal database.

3.6.3. Assist technicians by interfacing with ES and Engineering, LRS and Transportation, QA and other agencies.

3.6.4. Accumulate and forwards data requested by Lead Command concerning AFREP.

3.6.5. Maintain repair authorizations in accordance with records disposition schedule.

3.6.6. Ensure individuals assigned to AFREP are trained, qualified and maintains a minimum five-skill level in their Air Force Specialty Code (AFSC) IAW AFI 36-2201, *Air Force Training Program*.

3.6.7. Submit and monitors Deficiency Reports (DR) for deficiencies discovered during a Wing/Unit AFREP initiative, IAW TO 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*.

3.6.8. Review Awaiting Parts (AWP) and Mission Capable (MICAP) lists from maintenance activities to determine if the AFREP office can recommend to the appropriate PO, items from those lists.

3.6.9. Attend the IREP meeting.

3.6.10. **(Added-AFRC)** Submit Wing/Unit AFREP Manager unit POC information to HQ AFRC/A4M (afrc.lgm@us.af.mil). (T-2).

JUDITH A. FEDDER, Lieutenant General, USAF
DCS/Logistics, Installations and Mission Support

(AFRC)

GARY C. BLASZKIEWICZ, Brig Gen, USAFR
Director of Logistics

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

AFI 20-106IP, *Management of Aviation Critical Safety Items*, 25 January 2006

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 July 2010

AFI 63-1201, *Life Cycle Systems Engineering*, 23 July 2007

AFMAN 23-110, *USAF Supply Manual*, 1 April 2009

AFMAN 33-363, *Management of Records*, 1 March 2008

AFPD 21-1, *Air and Space Maintenance*, 25 February 2003

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*, 8 March 2007

DOD 4140.1-R, *DOD Supply Chain Materiel Management Regulation*, 14 December 2011

DODD 5000.01, *The Defense Acquisition System*, 12 May 2003

PUBLIC LAW 108-136, Sec 802, *Quality Control In Procurement Of Aviation Critical Safety Items And Related Services*

TO 00-20-3, *Maintenance Processing of Reparable Property and the Repair Cycle Asset Control System*, 1 November 2008

TO 00-25-195, *AF Technical Order System Source, Maintenance, and Recoverability Coding of Air Force Weapons, Systems, and Equipments*, 6 May 2011

TO 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*, 1 October 2009

Prescribed Forms

None

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

ACAT—Acquisition Category

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFREP—Air Force Repair Enhancement Program

AFSPC—Air Force Space Command

ALC—Air Logistics Center

ANG—Air National Guard

APML—Acquisition Program Master List
AWP—Awaiting Parts
CAI—Critical Application Items
CSI—Critical Safety Items
DCA—Design Control Activity
DCMA—Defense Contract Management Agency
DIFM—Due-In From Maintenance
DLA—Defense Logistics Agency
DoD—Department of Defense
DR—Deficiency Report
ERRC—Expendability, Recoverability, Reparability, Category (Code)
ES—Equipment Specialist
ESS—Environmental Stress Screening
EW—Electronic Warfare
IAW—In Accordance With
IREP—Intermediate Repair Enhancement Program
LRS—Logistics Readiness Squadron
MAJCOM—Major Command
MDA—Milestone Decision Authority
MICAP—Mission Capability
MML—Material management Liaison
MXG—Maintenance Group
OSS&E—Operational Safety, Suitability & Effectiveness
PEO—Program Executive Officer
PM—Program Manager
PO—Program Office
POC—Point of Contact
QA—Quality Assurance
SAE—Service Acquisition Executive
SBSS—Standard Base Supply System
SMR—Source, Maintenance, Recoverability
SPM—System Program Manager

SPML—Sustainment Program Master List

TO—Technical Order

UMD—Unit manning Document

Terms

Awaiting Parts—The condition or status of an item (equipment) needing additional part(s) to repair it or make it serviceable for use. Also sometimes used to describe the elapsed time a repairable item spends awaiting parts while in the repair cycle.

Critical Application Item—An item that is essential to weapon system performance or operation, or the preservation of life or safety of operating personnel, as determined by the military services. The subset of CAI whose failure could have catastrophic or critical safety consequences is called CSIs.

Consumable Items—Also known as “Consumption” or “Expendable” Items designated XB3. Items which are consumed in use or which lose their original identity during periods of use by incorporation into or attachments upon another assembly. Issued on an as required basis and consist of such supplies as maintenance parts or office supplies.

Critical Safety Item—A part, assembly, installation equipment, launch equipment, recovery equipment, or support equipment for an aircraft or aviation weapons system that contains a characteristic any failure, malfunction, or absence of which could cause a catastrophic or critical failure resulting in the loss or serious damage to the aircraft or weapons system, an unacceptable risk of personal injury or loss of life, or an uncommanded engine shutdown that jeopardizes safety. Damage is considered serious or substantial when it would be sufficient to cause a "Class A" accident or a mishap of severity category I. The determining factor in CSIs is the consequence of failure, not the probability that the failure or consequence would occur. For the purpose of this instruction "Critical Safety Item", "Flight Safety Critical Aircraft Part", "Flight Safety Part", "Safety of Flight Item", and similar terms are synonymous.

Expendability, Recoverability, Reparability, Category (ERRC)—Used to categorize Air Force inventory into various management groupings. The grouping determine the type of management used throughout the logistics cycle, designates the process to be used in computing requirements and are used in the correction and reporting of asset and usage data. (e.g., XB3, XF3, XD2, NF2, NF4).

Program Manager—the DoDD 5000.01 designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user's operational needs. PM for sub-systems shall support overall system objectives as required by the SPM. The PM for acquisition programs shall be accountable for credible cost, schedule, performance, and materiel readiness to the MDA. The PM for sustainment programs shall be accountable for credible cost, schedule, performance, and materiel readiness to the AFMC/CC, AFSPC/CC, or designee. ACAT I and ACAT II PM shall be chartered by the SAE and the PEO. Delegated ACAT II and III PM shall be chartered by the PEO.

Repairable—Unserviceable items that can be economically repaired and restored to a serviceable condition.

Repair Recommendation—An idea or proposal to repair an item that is not currently repaired or is beyond the capability of the work center. An AFREP initiative is generated when an asset has a demand level of "greater than three" per calendar year. All new AFREP initiatives will be staffed through the applicable organizations.

Recoverability Code—A one position code assigned to end items and support items to indicate the recoverability intention and the level of maintenance authorized disposition action on unserviceable support items; and for reparables, it is used to indicate the lowest maintenance level responsible for repair/condemnation and disposition of the item.

Source Code—Codes assigned to end items and support items to indicate the manner of acquiring items for the maintenance, repair, or overhaul of end items.

Non—Consumable Item—Also referred to as a “Non-expendable or Equipment” item. Durable items that are capable of continuing or repetitive use by an individual or organization.

Operational Safety, Suitability & Effectiveness (OSS&E)—Operational Safety, Suitability & Effectiveness is an outcome of properly applied systems engineering principles, processes, and practices. Well-integrated configuration management and control, deficiency reporting and response, reliability, maintainability, integrity, and other engineering practices ensure that base-lined engineering characteristics of systems and end items are not allowed to degrade as a result of maintenance, repairs, parts substitutions, and similar activities. The program manager is responsible for the assurance OSS&E throughout the life cycle of each configuration of each component of each system.

Source, Maintenance, Recoverability (SMR) Code—A code assigned to parts/assemblies that provides maintenance activities with repair level responsibilities, support method and disposition instructions. The SMR codes are also input into the supply and maintenance automated data system. The uniform SMR code is composed of three parts, consisting of a two position source code, a two position maintenance code, and one position recoverability code.

Program Manager—The DODD 5000.01 designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user’s operational needs. PM for sub-systems shall support overall system objectives as required by the SPM. The PM for acquisition programs shall be accountable for credible cost, schedule, performance, and materiel readiness to the MDA. ACAT I, ACAT IA, and ACAT II PM shall be appointed by the SAE and the PEO. Delegated ACAT II and III PM shall be appointed by the PEO or DAO.

Standard Base Supply System (SBSS)—A unified management system that accomplishes all Logistics Readiness Squadron/supply activity and service workloads. The Standard Base Supply System operates through the collective interactions of supply procedures, service procedures, processing routines, and the SBSS computers.

Supply Reports—There are many examples of “Supply Reports” used to record supply transactions. The Daily Document Register (D04) provides a means for organizations to review all document numbers processed during the day by the SBSS. The PFMR and Organization Cost Center Record Update and Reconciliation (D11) show the current status and internal balance of the PFMR by supplies and equipment. The Repair Cycle Asset Management Listing (D23) is used to monitor repair cycle assets and as a management product to monitor the stock position

and repair cycle status of repairable (DIFM) assets. It may be produced in several sequences and is provided to the customer daily.

Technical data—Information (regardless of the form or method of the recording) of a scientific or technical nature, including computer software documentation. As applied in this publication, it includes information required for the design, development, production, manufacture, assembly, operation, training, testing, repair, maintenance, or modification of defense articles.

Attachment 2

CRITICAL APPLICATION ITEMS & CRITICAL SAFETY ITEMS

A2.1. CRITICAL APPLICATION ITEMS (CAIs). For the purpose of this instruction, it is an item that is essential to weapon system performance or operation, or the operating personnel as determined by AFI 20-106, *Management of Aviation Critical Safety Items*.

A2.1.1. Includes flight/safety critical, life support, critical safety items (CSI), and nuclear hardened items. For systems including radar, avionics, munitions, etc, contact the PO for the system to obtain the CAI designation.

A2.1.2. The management of CAIs (contains unique repair and manufacturing qualifications; material/manufacturing process requirements; and extensive testing requirements after repair) is a complex process. These specified procedures rest with the program manager.

A2.1.3. Other than TO and PO approved repairs, Electronic Warfare (EW) Systems are Critical Application Items and prohibited from consideration under the AFREP program. Performing repairs on EW system components may render the entire EW system degraded. Environmental Stress Screening (ESS) of repaired EW components is mandatory. Many EW components cannot be repaired due to electrical characteristics that are not visible or evident without special test facilities and procedures, none of which are available to field personnel or unqualified contractors.

A2.2. CRITICAL SAFETY ITEMS (CSIs). For the purpose of this instruction, CSIs are items whose failure may cause loss of life, permanent physical disability or major injury, loss of a system, or significant damage to equipment.

A2.2.1. Special attention is placed on CSIs due to potential catastrophic or critical consequences of failure; Public Law 108-136, sec 802 was enacted to address aviation CSIs. The public law addresses three concerns:

A2.2.1.1. The Design Control Activity (DCA) is responsible for processes related to identification and management of CSIs used in procurement, modification, repair, and overhaul of aviation systems. The DCA is defined as the systems command of a military Service responsible for the airworthiness certification of the system in which a CSI is used.

A2.2.1.2. For contracts involving CSIs, DoD is restricted to DCA approved sources.

A2.2.1.3. The law requires that CSI deliveries and services meet the technical and quality requirements established by the DCA.

A2.2.2. DoD 4140.1, *DoD Supply Chain Materiel Management Regulation*, establishes procedures for the management of aviation CSIs. AFI 20-106IP, *Management of Aviation Critical Safety Items*, addresses requirements for identification, acquisition, quality assurance, management, repair, and disposition of aviation CSIs.