

TECHNICAL MANUAL

AF TECHNICAL ORDER SYSTEM SOURCE, MAINTENANCE, AND RECOVERABILITY CODING OF AIR FORCE WEAPONS, SYSTEMS, AND EQUIPMENTS

PREPARED BY AFSC COMMODITY TEAM

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INTRODUCTION

1 PURPOSE.

This technical manual provides procedures for establishing uniform Source, Maintenance, and Recoverability (SMR) codes for the Air Force (AF). The Illustrated Parts Breakdown (IPB) Technical Order (TO) for AF weapons, systems and equipment, provides a breakdown of the assemblies and parts contained in the end item. An SMR code is assigned to each assembly and part identified in the IPB. The SMR code provides maintenance activities with repair level responsibilities, support method (that is, procure, manufacture, etc.), and disposition instructions. A table of approved SMR codes for all Services and Participating Agencies (PAs) is located in Army Regulation (AR) AR 700-82/SECNAVINST 4410.23A/AF-MAN 21-106, *Joint Regulation Governing the Use and Application of Uniform Source, Maintenance, and Recoverability Codes*. This AR will be referred to AR 700-82 throughout the rest of this TO.

NOTE

When using another branch of services technical manuals, if SMR codes appear that are not covered in this TO, use AR 700-82 for their meaning. An Army to AF SMR crossreference list is available in Table 1-1 of this TO.

2 ARRANGEMENT.

This manual is arranged into four chapters as follows:

- Chapter 1 contains general information and the assignment of SMR codes
- Chapter 2 outlines the policy and procedures for the assignment and use of the AF uniform services SMR codes
- Chapter 3 defines unique SMR codes which appear in older IPBs and are used for reference only
- Chapter 4 contains the instructions for initiating a SMR code change request.

3 SCOPE.

The SMR codes are input into the supply and maintenance automated data system used by the AF, DoD agencies, other military services, and contractors involved in the repair and support of AF equipment. The assignment of SMR codes is the responsibility of the Equipment Specialists (ES) and Engineering, or for those items managed by the Air Force Cryptologic Support Center (AFCSC), the Maintenance Engineering Branch. Any SMR decisions required prior to the appointment of an Item Management (IM) will be the responsibility of the applicable weapon system Program Manager (PM). The SMR code assignments will be based on the Logistics Support Analysis (LSA), in conjunction with the experience and judgement of the best qualified AF personnel, and when applicable, contractor specialists in the logistics technical, production, and engineering disciplines.

4 USE OF THIS MANUAL.

The table of contents indicates chapter, paragraph, title, and page numbers to facilitate location of information. Illustrations, tables, and diagrams, when applicable, are located throughout the publication to supplement the text material. A list of illustrations and a list of tables indicate the number, title, and location. Abbreviations, phrases, and words which are on a decal, a placard or an engraving are set forth in the text exactly as they appear on the decal, the placard or the engraving.

5 DEFINITIONS.

The word SHALL is used to express a provision that is binding. The words SHOULD and MAY are used when it is necessary to express nonmandatory provisions. WILL may be used to express a mandatory declaration of purpose or when it is necessary to express a future event.

6 ABBREVIATIONS AND ACRONYMS.

All abbreviations used in this manual are In Accordance With (IAW) abbreviations per ASME Y14.38, *Abbreviations and Acronyms for Use in Product Definition and Related Documents*, for use on drawings and related documents: Use acronym list from Appendix A.

NOTE

Acronyms used only once in the TO are not included in this list.

7 LIST OF RELATED PUBLICATIONS.

These publications contain information in support of this technical manual.

List of Related Publications

Number	Title
AFI 23-101	Air Force Materiel Management
AFMAN 21-106	Joint Regulation Governing the Use and Application of Uniform Source, Maintenance, and Recoverability Codes
AFMCMAN 23-3	Cataloging and Standardization
AR 700-82	Joint Regulation Governing the Use and Application of Uniform Source, Maintenance, and Recoverability Codes
ASME Y14.38	Abbreviations and Acronyms for Use in Product Definition and Related Documents
DoDD 5330.03	Defense Logistics Agency (DLA) Document Services
GEIA-STD-0007	Logistics Product Data Handbook
MIL-DTL-38807	Manuals, Technical - Illustrated Parts Breakdown
MIL-HDBK-502	Product Support Analysis
TO 00-20-3	Maintenance Processing of Repairable Property and Repair Cycle Asset Controls System
TO 00-5-1	Air Force Technical Order System

8 IMPROVEMENT REPORTS.

Recommendations for improvements to prescribed requirements and procedures will be submitted by a Recommended Change (RC) or AFTO Form 22, *Technical Order System Publication Improvement Report*, IAW TO 00-5-1.

CHAPTER 1

UNIFORM SOURCE, MAINTENANCE, AND RECOVERABILITY (SMR) CODES GENERAL INFORMATION

1.1 PURPOSE.

This chapter establishes uniform Source, Maintenance, and Recoverability (SMR) codes for AF usage.

1.1.1 SMR Code Policy. Uniform SMR codes are used to identify the source of spares, repair parts, and end items of support equipment, and the maintenance authority to use, maintain, overhaul, rework, rebuild, condemn, or dispose of them. The initial assignment and subsequent changes to SMR codes significantly impact funding appropriations, requirements determination, and all of the elements of logistics.

1.1.1.1 The SMR code provides maintenance activities with repair-level responsibilities, support method (e.g. procure, manufacture, etc.), and disposition instructions. An AF SMR coding matrix is illustrated in Table 1-1.

1.1.1.2 The Illustrated Parts Breakdown (IPB) for AF weapons, systems and equipment provides a breakdown of the assemblies and parts contained in the end item. An SMR code is assigned to each assembly and part identified in the IPB.

NOTE

When using another branch of services technical manuals, if SMR codes appear that are not covered in this TO, use Army Regulation (AR) 700-82 for their meaning.

1.1.1.3 The SMR codes are also inputted into the supply and maintenance automated data system used by the AF, DoD agencies, other military services, and contractors involved in the repair and support of AF equipment.

Table 1-1. AF SMR Coding Matrix

MAINTENANCE						
SOURCE		USE	REPAIR	RECOVERABILITY	ERRC CODE	
1st Position	2nd Position	3rd Position	4th Position	5th Position	6th Position	
P	Procurable	A Stocked	O Remove/Replace by Organizational Level	Z No Repair	Z Nonreparable Condemn by 3rd Position Level	N Nonrecoverable XB3 Condemn by Any Level
		B Insurance		B Recondition		P Recoverable XF3 Condemn by Field
		C Deteriorative			O Reparable Condemn by Organizational (or Field or Depot)	C Recoverable XC1 (SCARS) Condemn by Depot
		E Support Equipment Stocked				
		F Support Equipment Nonstocked				
		G Life of System Support				
K	Component of a Repair Kit	F Intermediate Kit	F Remove/Replace by Intermediate Level (Note 1)	O Repair by Organizational	F Reparable Condemn by Intermediate (or Depot)	T Recoverable XD2 Condemn by Depot
		D Depot Kit		F Repair by Intermediate		
		B In Both Kits				
M	Manufacture	O Organization	D Remove/Replace by Depot Level	D Limited Repair by O or F Level	D Reparable Condemn by Depot Only (Note 2)	S Nonexpendable Support Equipment Depot ND2
		F Intermediate				
		D Depot				
A	Assemble	O Organizational	L Repair by Depot	D Overhaul by Depot	A Special Handling	U Nonexpendable Support Equipment, Organizational, Intermediate and Non-prime Depot NF2
		F Intermediate				
		D Depot				
X	Non-procured	A Requisition NHA	L Repair by Depot	L Repair by Depot	A Special Handling	U Nonexpendable Support Equipment, Organizational, Intermediate and Non-prime Depot NF2
		B Reclamation or Requisition by Part Number				
		C Mfg Drawings				

NOTE: Recoverability Code "L" is no longer valid. When this code is encountered in existing TOs, apply this definition. Repairable item. Condemn and dispose of at Depot Level only.

1. Organizational level maintenance activities operating under the two-level maintenance concept may perform limited intermediate level maintenance when the proper test equipment, trained personnel, and current technical data are available.
2. Items with a recoverability code of "D" can be condemned at field level if the item is damaged or worn totally beyond repair; directed condemned, nonlisted in USAF Federal Supply Catalog, coded "DSP" or normal source of supply is local purchase or local manufacture.

1.1.2 SMR Code Assignment Responsibilities. The assignment of SMR codes is the responsibility of the Equipment Specialist (ES) and Engineering, or for those items managed by the Air Force Cryptologic Support Center (AFCSC), the Maintenance Engineering Branch. Any SMR decisions required prior to the appointment of an Item Management (IM) will be the responsibility of the Program Manager (PM). The SMR code assignments will be based on the Logistics Support Analysis (LSA), in conjunction with the experience and judgement of the best qualified AF personnel, and when applicable, contractor specialists in the logistics technical, production, and engineering disciplines.

1.1.2.1 Assigned SMR codes may require revision after weapons, systems and equipment are in operational use. Changes may also become necessary when new decisions are made in regard to repair concepts and support responsibilities. Users of these items are in a position to detect opportunities for improved SMR codes. Requests for SMR code changes will be submitted on a Recommended Change (RC) through Enhanced Technical Managements Information System (ETIMS) in accordance with TO 00-5-1.

1.1.2.1.1 Rationale for changing the SMR code along with the expected savings, benefits and cost comparisons shall be included in the request. The RC shall fully consider the impact on related resources structure (support equipment repair procedures, personnel, facilities, etc.), as well as the item for which a change is anticipated.

1.1.2.1.2 The lead command shall ensure submitted RC SMR code change proposals transferring maintenance workload from Depot Level to Field Level Maintenance can be accomplished by all Field users; failure by one unit will be justification to disapprove the SMR Code Change.

1.1.3 SMR Code Designation. Maintenance repair codes designate the lowest level of maintenance authorized to repair an item, but does not specify a physical location. Maintenance repair codes will be assigned to items source coded "P". Components of an item source coded "A" must be available to the levels of maintenance authorized to assemble the item. These components can be made available through the supply system, by manufacture, or in some situations, by reclamation.

1.1.3.1 It is acceptable to procure on a one time basis, items source coded "A" or "X". Complete justification must be furnished by the equipment specialist before these types of procurement are initiated. This method of support must be determined to be the most efficient means of providing corrective maintenance action. When known requirements develop or anticipated needs are recognized which may degrade the capability for providing effective support, the source code should be changed to "P".

1.1.3.2 Decals, name plates, and instructive placards are normally depot manufactured items and are source coded as such in all IPBs. These items cannot be obtained through normal supply channels, but must be ordered in accordance with Department of Defense Directive (DoDD), 5330.03, *Defense Logistics Agency (DLA) Document Services*.

1.1.3.3 The AF Expendability, Recoverability, Repairability Category (ERRC) codes act in conjunction with the SMR coding structure and will be determined from the initial assignment of the SMR codes. ERRC codes are used by inventory management personnel to categorize Air Force inventory (reference AFI 23-101, *Air Force Materiel Management*).

1.2 SMR CODING ASSIGNMENT.

Uniform SMR codes will be assigned to support items during the initial acquisition phase of end items of materiel. These codes may also be applied to end items already in the supply system, to support items already in the supply system, or to support items entering the supply system after initial acquisition of the end item.

1.2.1 Levels of Assignment. The SMR code will be assigned in agreement with AF levels of maintenance as set forth in AFMAN 21-106, *Joint Regulation Governing the Use and Application of Uniform Source, Maintenance, and Recoverability Codes*.

1.2.1.1 Organizational. The level consisting of those on-equipment tasks normally performed using the resources of an operating command at an operating location.

1.2.1.2 Intermediate. The level consisting of those off-equipment tasks normally performed using the resources of the operating command at an operating location or at a centralized intermediate repair facility.

NOTE

Organizational level maintenance activities at those installations that have implemented the two-level maintenance concept and retained the proper test equipment, trained personnel and current technical data may perform limited intermediate level maintenance. They will consider the SMR code "PAF" the same as "PAO". The fourth and fifth positions of the SMR code are to remain unchanged.

1.2.1.3 Depot. The level consisting of those on and off-equipment tasks performed using the highly specialized skills, sophisticated shop equipment, or special facilities of a supporting command; commercial activity; or inter-service agency at a technology repair center, centralized repair facility, or, in some cases, at an operating location. Maintenance performed at a depot may also include organizational or intermediate level maintenance as negotiated between operating and supporting commands.

1.2.1.4 The full use of logistics analysis techniques is an indispensable requirement to the assignment of SMR codes. When a Level of Repair Analysis has been used to identify resource requirements and related maintenance alternatives, the result of such analysis will be used as guidance when making SMR code decisions. Reference GEIA-STD-0007, *Logistics Product Data Handbook*, and MIL-HDBK-502, *Product Support Analysis*, for additional detail.

1.2.1.5 Commercial Information SMR Codes. These codes will be assigned to all part numbered items, (including dash numbers of a basic part number) listed in the Maintenance Parts Lists (MPL) section of the IPB TO and all parts manuals for commercial end items and equipment brought into the AF inventory. The SMR coding of commercial items apply only to those acquired 1 October 1984 and thereafter.

1.2.1.5.1 The SMR coding of commercial parts manuals prior to their acceptance by the AF in no way changes the provisioning policy as set forth in AFI 23-101.

1.2.1.5.2 The SMR coding of commercial manuals and/or TOs will establish maintenance policy for commercially acquired items. Further, it will designate those spares and/or repair parts authorized for use by the organizational and intermediate levels of maintenance.

1.2.1.6 The Technical Order Management Agency (TOMA) is responsible for the publication of the SMR codes in the applicable TOs. The system or item management is responsible for the initial assignment and updating of the SMR codes and providing those codes to the various systems in which they are required.

1.2.1.7 Prior to the development of the uniform coding system, the AF used a "unique" SMR coding system. Since the total conversion of the AF codes cannot be performed economically, the changeover is being accomplished on an evolutionary basis. To aid in the changeover process, the following policy is provided.

1.2.1.7.1 Recoverable items procured to support inventoried end items coded prior to July 1972 and requiring new and separate IPBs will utilize the uniform SMR coding system. The IPB format for the uniform SMR codes is described in specification MIL-DTL-38807, *Manuals, Technical - Illustrated Parts Breakdown*.

1.2.1.7.2 Mixed coding will typically occur as a result of the evolutionary changeover policy. For example, modular additions to an existing commodity IPB will retain the unique AF codes.

CHAPTER 2

ASSIGNMENT AND USE OF AIR FORCE UNIFORM SMR CODES

2.1 PURPOSE.

This chapter identifies and defines the uniform codes authorized for AF use. These codes are made available to intended users by means of the Illustrated Parts Breakdown (IPB) and various mechanized systems used in the management of AF weapons, systems, and equipment.

2.2 DEFINITIONS.

2.2.1 Source Code. Code assigned to items to indicate the manner of acquiring these items for the maintenance, repair, and overhaul of end items.

2.2.2 Maintenance Code. Code assigned to indicate the lowest level of maintenance authorized to perform the required repair functions.

NOTE

These codes do not preclude a higher level of maintenance from performing the required actions if the capability exists.

2.2.3 Recoverability Code. Code assigned to reflect the disposition of unserviceable items.

2.2.4 Support Items. Items subordinate to or associated with an end item (i.e., spares, repair parts, and Support Equipment (SE)).

2.2.5 End Items. A final combination of end products, component parts, and/or materials which is ready for its intended use (e.g., aircraft, mobile machine shops, support equipment, etc.).

2.2.6 Repair Part. Material capable of separate supply and replacement which is necessary for the maintenance, overhaul, or repair of a weapon, system, or equipment. This excludes SE, but does include repair parts for SE.

2.2.7 Spare. An article which is procured for follow-on support in a quantity over and above that required for initial installation. This item is identical to (or interchangeable with) the article on contract. This includes major recoverable components and assemblies.

2.2.8 SE. That equipment to make an end item, system, or facility operational in its intended environment. Covers all depot recoverable equipment items managed within the Defense Property Accountability System (DPAS).

2.3 UNIFORM SMR CODE FORMAT.

The uniform SMR code is composed of four parts, consisting of a two position source code, a two position maintenance code, a one position recoverability code, and a one position Service option code with the AF entering the appropriate ERRC code. See Table 2-1.

Table 2-1. Uniform Source, Maintenance, and Recoverability Code Format

Source Code	Maintenance Code		Recoverability Code	Service Option Code
Position (1) and (2)	Position (3) Use Code	Position (4) Repair Code	Position (5)	Position (6)
Indicates the manner of acquisition for support items.	Indicates the Level of Maintenance (LOM) and/or maintenance activity authorized to use, remove, and replace the item.	Indicates whether the item is to be repaired and identifies the LOM and/or maintenance activity with the capability to perform a complete repair action.	Indicates the LOM and/or maintenance activity authorized to dispose of the item. If the item is repairable, it also indicates repair as applicable under the progressive maintenance concept.	The AF will enter the ERRC code in the sixth position and will only be assigned to items that have a SMR first position code of P (see AFMAN 23110).
See Paragraph 2.6	See Paragraph 2.7.1.1	See Paragraph 2.7.1.3	See Paragraph 2.8.1	See Paragraph 2.9

2.3.1 Source Code (Two Positions). The codes entered in the first and second positions of the uniform SMR coding format indicate the source for acquiring the item for replacement or support purposes (i.e., stocked, manufactured, assembled, etc.). See Paragraph 2.6.

2.3.2 Maintenance Code (Two Positions). Maintenance codes are assigned to reflect the levels of maintenance “USE” and “REPAIR” items. The codes are entered in the third and fourth positions of the SMR coding format. See Paragraph 2.7.

2.3.2.1 Third Position. The code entered in the third position will indicate the lowest level of maintenance authorized to remove and/or replace the item. The decision to code the item for removal and replacement by the indicated maintenance level will require all maintenance capabilities.

2.3.2.2 Fourth Position. The code entered in the fourth position indicates whether an item is to be repaired and identifies the lowest maintenance level with all capabilities to perform the necessary repairs. The decision to code an item for repair at the stated maintenance level will require that all maintenance capabilities are provided.

2.3.3 Fifth Position. The one-position recoverability code is assigned to reflect the disposition action to be taken on all unserviceable items. See Paragraph 2.8.

2.3.4 Sixth Position. Reserved for internal management purposes of each service. The AF will enter the appropriate ERRC code (see Paragraph 2.9).

NOTE

The AF will no longer use recoverability code “L”. When this code is encountered in existing TOs, apply the following definition: “Reparable item. Repair, condemnation, and disposal not authorized below the Technology Repair Center (TRC) level.”

2.4 SMR CODE ASSIGNMENT.

The assignment of an SMR code establishes a record of a technical decision. The decision must consider the design of the item, manufacturers technique, and supply practices. It will also reflect the operational requirements of the item and present and programmed capabilities of maintenance organizations supporting the end item.

2.5 SMR CODE APPLICATIONS.

2.5.1 SMR Code Variances. SMR codes assigned to a specific support item may vary, depending on the particular application of the item. Variances can be within an end item or between different weapons, systems, or equipment, or using commands maintenance philosophy.

2.5.1.1 Because the maintenance and operational requirements differ between the services, the SMR code assignments for the same support item may vary. To promote joint utilization of support facilities, effort must be made to keep these differences to a minimum.

2.5.1.2 While SMR codes may vary between weapons, systems, equipment, commands, and services they shall remain compatible with the initially assigned ERRC code. In the rare cases where SMR codes are not compatible with the ERRC codes, the SMR code will govern maintenance policy, while the ERRC will dictate the final disposition of items that cannot be repaired or reconditioned. The incompatibility of SMR and ERRC codes demands that one or both codes be updated.

2.6 SOURCE CODE APPLICATION AND DEFINITION.

Source codes are entered in the first and second positions of the uniform SMR coding format.

<u>CODE</u>	<u>DEFINITION</u>
PA	Item procured and stocked for known or anticipated usage.
PB	Item procured and stocked for insurance purposes. Essentiality dictates a minimum quantity be available in the supply system.
PC	Item procured and stocked which would otherwise be coded PA, except it is deteriorative in nature.
PE	SE procured and stocked for initial issue and spares which are designated for specific repair activities.
PF	SE which will not be stocked, but will be procured on demand.
PG	Item peculiar to the equipment which is procured and stocked to provide sustained support. Normally applied to an item which will prove uneconomical to reproduce after discontinuance or shut down of production facilities.
KD	An item of depot overhaul and/or repair kit and not purchased separately. (Depot kit is defined as a kit which provides items required at the time of overhaul or repair.)
KF	Identifies an item of a maintenance kit and not purchased separately. (Maintenance kit is defined as a kit that provides an item (or items) to be replaced at organizational or intermediate levels of maintenance.)
KB	Item included in both depot overhaul and/or repair kit and maintenance kit.

NOTE

- Items source coded “KD”, “KF”, or “KB” and peculiar to repair kits will not be stocked separately.
- Items source coded “KD”, “KF”, or “KB” and followed by the letter “P” refers to items which are normally procured and stocked as “bulk” (i.e., O-rings, bearings, lubricants, sealants, etc.). These items are common to other repair kits, as well as other repair and overhaul applications. Such items will be stocked separately in the appropriate commodity class.

MO*	An item to be manufactured or fabricated at the organizational maintenance level.
MF	An item to be manufactured or fabricated at the intermediate maintenance level.
MD	An item to be manufactured or fabricated at the depot maintenance level.
AO*	Item to be assembled at the organizational maintenance level.
AF	Item to be assembled at the intermediate maintenance level.
AD	Item to be assembled at the depot maintenance level.
XA	Item is not procured or stocked, because requirement for the item would result in the replacement of the next higher assembly.
XB	Item is not procured or stocked. If not available through salvage, requisition through normal supply channels with supporting justification.
XC	Assigned to installation drawings, diagrams, instruction sheets, field service drawings, etc., which are identified by a manufacturer’s part number.

CODE

DEFINITION

NOTE

- Drawings, instruction sheets, diagrams, etc., will not be procured during the provisioning process. The “XC” code is assigned as a means of identification only.
- *Source codes “MO” and “AO” will not be assigned without the agreement and coordination on each code application with the weapon, system, or equipment user.

2.7 MAINTENANCE CODES APPLICATION AND DEFINITION.

2.7.1 Maintenance Codes. Maintenance codes are assigned to reflect the levels of maintenance “USE” and “REPAIR” items. The codes are entered in the third and fourth positions of the SMR coding format.

2.7.1.1 Use (Third Position). The maintenance “USE” code entered in the third position indicates the lowest level of maintenance authorized to remove, replace, and use the item. The decision to code an item for removal and replacement at the indicated level of maintenance requires all maintenance capabilities to be provided. These capabilities include but are not limited to the following:

- Tools
- Test Equipment
- Technical Data
- Skills

2.7.1.1.1 The code entered in this position will be one of the following levels of maintenance:

<u>CODE</u>	<u>DEFINITION</u>
O	Support item is removed, replaced, and used at the organizational level of maintenance.
F	Support item is removed, replaced, and used at the intermediate level of maintenance.
D	Support item is removed, replaced, and used at the depot level of maintenance.

EXAMPLE

If the removal and replacement of a Line Replaceable Unit (LRU) is to be performed by the organizational level maintenance technicians, the correct maintenance code would be “O”.

2.7.1.2 SMR Coding of Depot SE for Non-Prime Users.

2.7.1.2.1 Depot SE is unique and does not readily lend itself to established SMR coding procedures. In most cases, the user is not the prime class manager or TRC although the necessary facilities and capabilities exist. In the past, SMR code “D” was used in the third position of the SMR code for all depot SE, making it necessary to send the equipment elsewhere for maintenance.

2.7.1.2.2 This policy was modified to use code “F” in the third position of the SMR code. It was used when the user is identified as a non-prime user with management responsibility prior to the assignment of a Material Management Code (MMC). The use of the “F” to identify the non-prime facility is unacceptable as a double meaning exists (PEFFFU - PEFDDS). Early actions in acquisition and LSA require a unique code for when a reparable SE item remains at the non-prime facility.

EXAMPLES

- If SE is to be totally used, repaired, and condemned at a facility other than prime, the SMR and/or ERRC will be “PEDDDU”.
- If SE is to be returned to the prime depot and/or TRC for overhaul and/or condemnation, the SMR codes will be “PEDDDS”.

2.7.1.3 **Repair (Fourth Position).** The code entered in the fourth position indicates whether the item is to be repaired. It also identifies the lowest level of maintenance with all the capabilities to perform the necessary repair functions. Necessary repair functions are those authorized to be done.

2.7.1.3.1 The decision to code an item for repair at the stated maintenance level will require that all maintenance capabilities are provided for those authorized repairs. These capabilities include but are not limited to the following:

- Tools
- Test Equipment
- Technical Data
- Skills

2.7.1.3.2 This does not preclude limited repair which may be accomplished at a lower level of maintenance unless specifically excluded by the appropriate code (e.g., “L”).

<u>CODE</u>	<u>DEFINITION</u>
Z	Non-repairable. No repair authorized.
B	Item may be reconditioned by adjusting, lubricating, straightening, etc. at the user level. No parts, tools, technical repair instructions, test equipment, etc., will be provided for returning item to a serviceable condition. However, limited repair is authorized if within the scope of general purpose TOs and common sense maintenance.
O	The organizational level is the lowest level of maintenance capable of complete repair of the support item.
F	The intermediate level is the lowest level of maintenance capable of repair of the item. (Limited repair may be authorized at the organizational level if capabilities exist.)
D	The depot is the lowest level of maintenance capable of complete repair and/or overhaul of the item. (Limited repair may be authorized at the organizational or intermediate levels of maintenance if capabilities exist.)
L	The depot is the lowest level of maintenance capable of complete repair and/or overhaul of the item.

EXAMPLE

If the repair of an LRU is to be performed by intermediate level maintenance technicians, the correct maintenance code would be “F”.

2.8 RECOVERABILITY CODES APPLICATION AND DEFINITION.

2.8.1 **Recoverability Codes.** Recoverability codes (fifth position) are assigned to “P” source coded items to indicate the disposition action when becoming unserviceable.

<u>CODE</u>	<u>DEFINITION</u>
Z	Non-repairable item. When unserviceable, condemn, and dispose of at the level indicated in position three.

<u>CODE</u>	<u>DEFINITION</u>
O	Repairable item. When beyond economical repair, condemn at organizational maintenance level.
F	Repairable item. When beyond economical repair, condemn at intermediate maintenance level.
D	Repairable item. When beyond economical repair, condemn at depot maintenance level.
A	Item requires special handling because of specific reasons, (i.e., condemnation procedures, precious metal content, high dollar value, critical material or hazardous material). See appropriate manuals or directives for detailed instructions.

2.9 AIR FORCE ERRC CODES.

2.9.1 ERRC Code Assignments. The ERRC code will be entered in the sixth position and will only be assigned to items that have a SMR first position code of "P". The fourth position of the SMR code reflects the decision made on both maintenance and supply management of an item and will determine the proper ERRC code (see AFI 23-101 and TO 00-20-3, *Maintenance Processing of Repairable Property and Repair Cycle Asset Controls System*).

CHAPTER 3

UNIQUE AIR FORCE SOURCE AND MAINTENANCE REPAIR CODES

3.1 PURPOSE.

Prior to July 1972, the AF used a “unique” SMR coding system which appears in older IPBs. Since conversion to the uniform codes cannot be accomplished economically, the unique codes are defined in this chapter for reference use only.

3.2 UNIQUE SOURCE CODES.

This section provides the definitions of existing “unique” AF source codes.

<u>CODE</u>	<u>DEFINITION</u>
P	Assigned to parts which may be acquired and installed by any activity within the authorized scope of maintenance. Code “P” is applied to items which have known or expected regular and frequent usage. Service manufacture is allowed for immediate support after confirming non-availability from supply sources.
PD	Assigned to parts which may be acquired and installed by authorized depot level maintenance activities. This code is applied to parts which have known or anticipated regular and frequent usage. Emergency service manufacture is allowed after conforming non-availability from supply.
P1	Assigned to parts which may be acquired and installed by an activity within the scope of maintenance. This code is applied to parts which have known or expected regular and frequent usage. Service manufacture is believed impractical.
P1D	Assigned to parts which may be acquired and installed by authorized depot level maintenance activities only. Code “P1D” is applied to parts which have known or anticipated regular and frequent usage. Service manufacture is impractical.
P2	Assigned to insurance type items which can be installed by any activity within the scope of maintenance. It is applied to parts which have limited and infrequent usage. These parts are uneconomical and impractical to manufacture. These items are not subject to periodic replacement or frequent wear-out due to equipment operation. Infrequent replacement may result from unexpected deterioration, mishandling, accidental damage, or other rare occurrences. Long service items are also included under this code.
P2D	Identifies insurance items which may be installed by authorized depot level maintenance only. This code is applied to parts as described under “P2”.
M	Identifies insurance items which can be manufactured and installed within the capabilities of intermediate maintenance activities. All of the following must apply: <ol style="list-style-type: none"> a. Procurement is not justified because of low usage or peculiar storage and installation factors. Needs are to be met by local manufacture only as required. b. Manufacture does not require tools, technical data, equipment, or skills not normally authorized at the intermediate level of maintenance. c. Requires no test equipment other than that normally authorized at the intermediate level of maintenance. d. Requires no material other than that normally available in Air Force inventory.
MI	Identifies parts which can be manufactured at authorized depot level maintenance activities. All the following conditions must apply: <ol style="list-style-type: none"> a. Procurement is not authorized because of low usage or peculiar storage and installation factors. The needs of base level activities are to be met by requisitioning from the SPD or End Article Item Manager (EAIM). b. Manufacture is beyond the capabilities of intermediate maintenance activities. c. Manufacture requires no tools or equipment not normally authorized at depot level maintenance facilities.
A	Assigned to items capable of being assembled at any level of maintenance. This code is applied to assemblies consisting of two or more parts, the majority of which are purchased or service manufactured.

<u>CODE</u>	<u>DEFINITION</u>
A1	Identifies items to be assembled at Air Force depot activities only applied to assemblies of two or more parts, the majority of which are purchased or service manufactured.
X	Applied to main structural part members or similar parts which, if required, would suggest extensive repair. The need of an "X" coded item (i.e., wing spares, center section structure, etc.), should normally result in recommendation to retire the article from service.
X1	Code applies to any level of maintenance and identifies parts for which it is more feasible to obtain the next higher assembly. Example; an integral detail part (i.e., a welded segment inseparable from the assembly). In some cases, this code may be used to indicate an integral part of an assembly which has no anticipated usage and was coded "M" or "MP".
X1D	Assigned to parts described under "X1" code but are applicable to authorized depot level maintenance activities only.
X2	Assigned to parts applicable to any level maintenance, which have no anticipated usage, and will not be procured or stocked. These items normally require no supporting spare parts and service manufacture is considered impractical. Any future requirement will be satisfied through reclamation. If unavailable, the item will be requisitioned through normal channels with supporting justification. A "repeat" requirement will justify an SMR code change to a "P" series if considered economical to procure and stock.
X2D	Identifies parts as described under "X2", but applicable to depot level maintenance only. Repeated requirements for such parts shall justify an SMR code change as applicable. Any change must be considered economically feasible.
U	Applied to any drawing, instruction sheet, field service drawing, or part number of no supply significance. Also includes obsolete parts which cannot be procured, stocked, or service manufactured.
F	Identifies kits which are available to all maintenance activities authorized to perform intermediate level of repair of the end item.
D	Applied to kits available only to activities authorized to perform depot level maintenance.
KF	Code identifies items which are components of a field parts kit (code "F").
KD	Code assigned to items which are components of a depot parts kit (code "D").
KB	Code identifies items which are components of both the field and depot parts kits.

NOTE

Items coded "KD", "KF", or "KB" and peculiar to repair kits will not be stocked separately. Items source coded "KD", "KF", or "KB" and followed by the letter "P", refers to items normally procured and stocked as "bulk" (i.e., O-rings, seals, bearings, lubricants, sealants, etc.). These items are common to both repair kits, as well as other overhaul and/or repair applications. Such items will be stocked separately.

3.3 UNIQUE MAINTENANCE REPAIR CODES.

This section defines the "unique" AF Maintenance Repair Codes.

<u>CODE</u>	<u>DEFINITION</u>
S	No repair. Identifies items which are not repairable or are considered uneconomical to repair. These parts will be disposed of at user level upon failure.
B	Recondition. No repair authorized. Assigned to items to be reconditioned at user level by adjusting, cleaning, welding, straightening, etc. No repair parts or tools are procured for maintenance support. Reconditioning will be achieved by using common bench stock parts, materials, standard tools, and shop equipment. If beyond restoration by these means, items will be condemned and disposed of at user level.
F	Intermediate Repair. Identifies items to be repaired at the intermediate level of maintenance. Selected parts, tools, technical data, and test equipment are provided for repair support. If the item cannot be repaired with authorized parts and tools, it will be disposed of as condemned material. If repair cannot be accomplished due to the absence of parts, tools, etc., disposition instructions will be requested from the responsible IM. Critical and potentially critical items will be returned to base supply for disposition as directed by the IM. (NOTE: No TRC is established for "F" coded items.)

<u>CODE</u>	<u>DEFINITION</u>
D	<p>Limited Field Repair and/or Depot Overhaul. Identifies items on which a limited degree of repair can be achieved by intermediate level of maintenance activities. Normal servicing will be done at the organizational level. Repair parts, tools, technical data, etc., are procured and provided to the applicable maintenance activities. The amount and depth of repair to be accomplished by intermediate maintenance is based on the following factors:</p> <ul style="list-style-type: none"> • Mobility and/or deployment requirements • Design characteristics • Complexity of repair • Skills required • Cost of special tools, test equipment, etc • Predicted failure rate <p>If item cannot be repaired it will be returned to supply for disposition. TRC is established for overhaul procedures.</p>
DM	<p>Limited Field and/or Mobile Depot Overhaul. Assigned to items to which the same conditions of code “D” apply. Only items which require repair beyond the intermediate level capability will be overhauled by the Mobile Depot Activity (MDA). If the MDA cannot repair, disposition instructions will be requested from the IM.</p>
L	<p>Depot maintenance only applied to items that will be repaired only at a designated TRC. Parts and repair equipment may be provided to the organizational or intermediate activities for calibration purposes and serviceability checks. Items found unserviceable will be returned to supply for disposition instructions.</p>
LM	<p>Depot Maintenance and/or Mobile Depot Activity. Identifies items to which the same conditions of code “L” apply. Repair will be accomplished by MDA. If the MDA cannot repair, disposition instructions will be requested from the IM.</p>

3.3.1 Changes to Unique SMR Codes. If and when it becomes necessary to change a “unique” AF SMR code, the new code shall be in the same format as the old unless the entire IPB is to be updated. If the entire IPB is updated the SMR codes shall be in agreement with the Uniform Coding Policy set forth in AR 700-82 and this TO.

CHAPTER 4

SOURCE, MAINTENANCE, AND RECOVERABILITY (SMR) CODE CHANGE REQUEST

4.1 PURPOSE.

This chapter outlines the instructions for base initiated Source, Maintenance, and Recoverability (SMR)/ Expendability, Recoverability, Repairability Category (ERRC) changes using the Recommended Change (RC) process outlined in TO 00-5-1. The RC shall include current and proposed process data listed below for evaluation:

- Test equipment
- Technical data requirements
- Spare parts which must possibly be provisioned
- Cost to provide the capability to perform the new repair suggested
- Personnel required

The economics of implementing new repair concepts is very important. These are the same type of items evaluated in the development of a SMR code during acquisition. However, mobility or operational requirements may override economics. The evaluator should keep in mind that changing the SMR code (maintenance concept) affects most users of the item, not just one unit. Acceptable SMR and/or ERCC code combinations are outlined in Table 4-1. If an Army and/or Air Force cross-reference ERCC and Not Repairable This Station (NRTS) is required for the SMR 4th position, utilize the chart in Table 4-2.

NOTE

SMR code changes will result in a review of the ERRC codes for possible change. If the ERRC must be changed, the SMR code approval must also be based on the evaluation and approval of the new ERRC code, AFI 23-101. As a minimum, the ERRC change must be approved at the center level prior to the Equipment Specialist (ES) approving the RC.

4.2 RESPONSIBILITIES.

Failure to include justification will result in disapproval of the SMR/ERRC change. Base initiated AF Form 86, Request for Cataloging Data/Action is no longer a recommended way to submit ERRC changes. The ES/Item Manager (IM) will generate a PICA or SICA Management Level Change or Reassignment Request Worksheet (Replaces Joint Logistics Commanders (JLC) Form 19, *PICA/SICA Management Level Change and/or Reassignment Request*), AFMCMAN 23-3, *Cataloging and Standardization*, for final authorization to change the codes and/or organizations. The ES will then approve the RC and submit a Publication Change Request (PCR) (replaces an AFTO Form 252, *Technical Order Publication Change Request*) to the appropriate office for TO corrections, once the recommendation is approved.

Table 4-1. Acceptable SMR and/or ERRC Code Combinations

Stocked	Insurance	Deteriorative	SE (Stocked)	SE (Non-Stocked)	Lifetime System Support	Misc
PADBAN	PBDBAN	PCDBAN			PGDBAN	ADD
PADBZN	PBDBZN	PCDBZN			PGDBZN	ADF
PADDAC	PBDDAC	PCDDAC	PEDDAS	PFDDAS	PGDDAC	ADO
PADDAT	PBDDAT	PCDDAT	PEDDDS	PFDDDS	PGDDAT	AFF
PADDDC	PBDDDC	PCDDDC	PEDLAS	PFDLAS	PGDDDC	AFO
PADDDT	PBDDDT	PCDDDT	PEDLDS	PFDLDS	PGDDDT	AOO
PADLAC	PBDLAC	PCDLAC			PGDLAC	MDD
PADLAT	PBDLAT	PCDLAT			PGDLAT	MDF
PADLDC	PBDLDC	PCDLDC			PGDLDC	MDO
PADLDT	PBDLDT	PCDLDT			PGDLDT	MFF
PADZAN	PBDZAN	PCDZAN	PEFDAS	PFFDAS	PGDZAN	MFO
PADZZN	PBDZZN	PCDZZN	PEFDDS	PFFDDS	PGDZZN	MOO
PAFBAN	PBFBAN	PCFBAN	PEFFAU	PFFFAU	PGFBAN	KB
PAFBZN	PBFBZN	PCFBZN	PEFFFU	PFFFFU	PGFBZN	KD
PAFDAC	PBFDAC	PCFDAC	PEFLAS	PFFLAS	PGFDAC	KF
PAFDAT	PBFDAT	PCFDAT	PEFLDS	PFFLDS	PGFDAT	XA
PAFDDC	PBFDDC	PCFDDC			PGFDDC	XB
PAFDDT	PBFDDT	PCFDDT			PGFDDT	XC
PAFFAP	PBFFAP	PCFFAP			PGFFAP	
PAFFFP	PBFFFP	PCFFFP			PGFFFP	
PAFLAC	PBFLAC	PCFLAC	PEODAS	PFODAS	PGFZAN	
PAFLAT	PBFLAT	PCFLAT	PEODDS	PFODDS	PGFZZN	
PAFLDC	PBFLDC	PCFLDC	PEOFAU	PFOFAU	PGFLAC	
PAFLDT	PBFLDT	PCFLDT	PEOFFU	PFOFFU	PGFLAT	
PAFZAN	PBFZAN	PCFZAN	PEOLAS	PFOLAS	PGFLDC	
PAFZZN	PBFZZN	PCFZZN	PEOLDS	PFOLDS	PGFLDT	
PAOBAN	PBOBAN	PCOBAN	PEOOAU	PFOOAU	PGOBAN	
PAOBZN	PBOBZN	PCOBZN	PEOOOU	PFOOOU	PGOBZN	
PAODAC	PBODAC	PCODAC			PGODAC	
PAODAT	PBODAT	PCODAT			PGODAT	
PAODDC	PBODDC	PCODDC	PEDBAU	PFOBAU	PGODDC	
PAODDT	PBODDT	PCODDT	PEDBZU	PFDBZU	PGODDT	
PAOFAP	PBOFAP	PCOFAP	PEDZAU	PFDZAU	PGOFAP	
PAOFFP	PBOFFP	PCOFFP	PEDZZU	PFDZZU	PGOFFP	
PAOLAC	PBOLAC	PCOLAC	PEFBAU	PFFBAU	PGOLAC	
PAOLAT	PBOLAT	PCOLAT	PEFBZU	PFFBZU	PGOLAT	
PAOLDC	PBOLDC	PCOLDC	PEFZAU	PFFZAU	PGOLDC	
PAOLDT	PBOLDT	PCOLDT	PEFZZU	PFFZZU	PGOLDT	
PAOOAP	PBOOAP	PCOOAP	PEOBAU	PFOBAU	PGOOAP	
PAOOOP	PBOOOP	PCOOOP	PEOBZU	PFOBZU	PGOOOP	
PAOZAN	PBOZAN	PCOZAN	PEOZAU	PFOZAU	PGOZAN	
PAOZZN	PBOZZN	PCOZZN	PEOZZU	PFOZZU	PGOZZN	
			PEDDDU	PFDDDU		

• SMR codes reflecting no repair and ERRC code U (NF2) will be used for non-reparable, non-expendable SE. Do not update existing technical orders solely to change the deleted SE SMR codes. If maintenance is being accomplished on a technical order, change the SMR for support equipment accordingly, if required.

Table 4-2. Army and/or Air Force Cross-Reference Chart

SMR 4TH POSITION	AIR FORCE MAINTENANCE CONCEPTS	AIR FORCE ERRC	AIR FORCE NRTS
O...ORGANIZATIONAL MAINTENANCE	ORGANIZATIONAL MAINTENANCE - REPAIR IN ACCORDANCE WITH TO AND MAINTENANCE ALLOCATION CHART	...XF3 (P)	...N/A
F...FIELD MAINTENANCE	LIMITED MAINTENANCE - BY MAINTENANCE ALLOCATION	XF3 (P)	...N/A
H...GENERAL SUPPORT	CHART AND INTERSERVICE SUPPORT AGREEMENTS	...XD2 (T)1
I...SPECIALIZED REPAIR ACTIVITY	RETURN TO DEPOT OR NEXT HIGHER ECHELON IN ACCORDANCE WITH INTERSERVICE SUPPORT AGREEMENTS	...XD2 (T)1
...DEPOT MAINTENANCE			

APPENDIX A

LIST OF ACRONYMS

A.1 LIST OF ACRONYMS.

AFCSC	Air Force Cryptologic Support Center
AFMAN	Air Force Manual
DPAS	Defense Property Accountability System
EAIM	End Article Item Manager
ERRC	Expendability, Recoverability, Repairability Category
ES	Equipment Specialist
IM	Item Management
IPB	Illustrated Parts Breakdown
LRU	Line Replaceable Unit
LSA	Logistics Support Analysis
MDA	Mobile Depot Activity
MMC	Material Management Code
MPL	Maintenance Parts List
PAs	Participating Agencies
PCR	Publication Change Request
RLA	Repair Level Analysis
SE	Support Equipment
SMR	Source Maintenance, and Recoverability
PM	Program Manager
TO	Technical Order
TOMA	Technical Order Management Agency
TRC	Technology Repair Center

