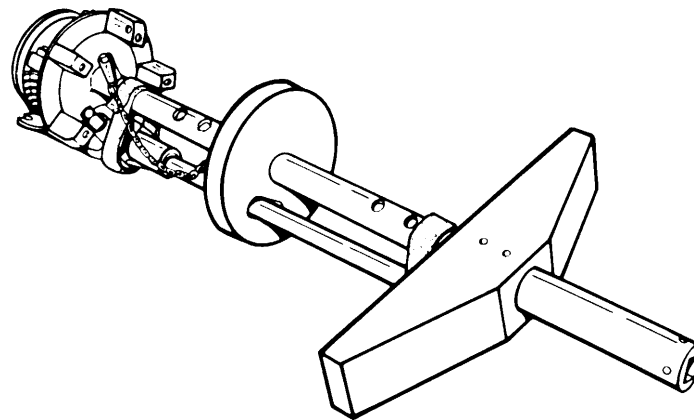


---

TECHNICAL MANUAL

ORGANIZATIONAL AND DIRECT SUPPORT  
MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)  
FOR  
EXTRACTOR ASSEMBLY  
(1025-01-082-3586)  
(FOR PROJECTILE, 155MM:  
M712 CANNON LAUNCHED GUIDED PROJECTILE  
AND M823 TRAINING PROJECTILE)



**WARNING**

**First Aid**

**For further information on first aid, see FM 21-11.**

CHANGE }  
No. 2 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 9 December 1988

**Unit and Direct Support Maintenance Manual  
(Including Repair Parts and Special Tools List)  
for**

**EXTRACTOR ASSEMBLY  
(1025-01-082-3586)  
(FOR PROJECTILE, 155MM: M712 CANNON LAUNCHED  
GUIDED PROJECTILE AND M823 TRAINING PROJECTILE)**

TM 9-1025-212-23&P, 15 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Changed illustrations are indicated by a miniature pointing hand highlighting the general area of the change.

Remove pages

i and ii  
1-1 and 1-2  
A-1 and A-2

Insert pages

i and ii  
1-1 and 1-2  
A-1 and A-2

2. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO  
General, United States Army  
Chief of Staff

Official:

R.L. DILWORTH  
Brigadier General, United States Army  
The Adjutant General

**Distribution:**

To be distributed in accordance with DA Form 12-37-R, unit, direct, and general support maintenance requirements for Howitzer, 155MM: M109, M109A1, and M109A3; Plus: DA Form 12-40A-R, unit, direct, and general support maintenance requirements for artillery ammunition.

**TM 9-1025-212-23&P  
C1**

CHANGE }  
No. 1 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 23 August 1984

**Organizational and Direct Support Maintenance Manual  
(Including Repair Parts and Special Tools List)  
for  
  
EXTRACTOR ASSEMBLY  
(1025-01-082-3586)  
(FOR PROJECTILE, 155 MM: M712 CANNON LAUNCHED  
GUIDED PROJECTILE AND M823 TRAINING PROJECTILE)**

TM 9-1025-212-23&P, 15 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Changed illustrations are indicated by a miniature pointing hand highlighting the general area of the change.

Remove Pages

i and ii  
iii and 1-0  
1-1 thru 1-4  
2-3 thru 2-6  
3-1 thru 3-6  
A-1 and A-2  
C-8  
Cover 1 and a

Insert Pages

i and ii  
iii and 1-0  
1-1 thru 1-4  
2-3 thru 2-6  
3-1 thru 3-6  
A-1 and A-2  
C-8  
Cover 1 and a

2. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.  
General, United States Army  
Chief of Staff

Official:

ROBERT M. JOYCE  
Major General, United States Army  
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-37, organizational, direct and general support maintenance requirements for Howitzer, 105mm: M108; 155mm: M109, M109A1, and M109A3; Plus: DA Form 12-40, organizational, direct, and general support maintenance requirements for artillery ammunition.

**Unit and Direct Support  
Maintenance Manual  
(Including Repair Parts and Special Tools List)  
for  
EXTRACTOR ASSEMBLY  
(1025-01-082-3586)  
(FOR PROJECTILE, 155 MM:  
M712 CANNON LAUNCHED GUIDED PROJECTILE  
AND M823 TRAINING PROJECTILE)**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to publications and Blank Forms), or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAY-T(D), Picatinny Arsenal, NJ 07806-5000.

	<b>Page</b>
HOW TO USE THIS MANUAL.....	iii
<b>CHAPTER 1. INTRODUCTION</b>	
Chapter Overview .....	1-1
Section I. General Information .....	1-1
Section II. Equipment Description and Data .....	1-2
Section III. Principles of Operation .....	1-3
<b>CHAPTER 2. ORGANIZATIONAL MAINTENANCE INSTRUCTIONS</b>	
Chapter Overview .....	2-1
Section I. Repair Parts, Special Tools, TMDE, and Support Equipment .....	2-1
Section II. Service Upon Receipt .....	2-2
Section III. Maintenance Procedures .....	2-3
Section IV. Preparation for Storage or Shipment .....	2-6

CHAPTER 3. **DIRECT SUPPORT MAINTENANCE INSTRUCTIONS**

Chapter Overview ..... 3-1

Section I. Repair Parts, Special Tools, TMDE, and Support Equipment ..... 3-1

Section II. Maintenance Procedures ..... 3-2

APPENDIX A. **REFERENCES** ..... A-1

APPENDIX B. **MAINTENANCE ALLOCATION CHART**

Section I. Introduction ..... B-1

Section II. Maintenance Allocation Chart ..... B-3

APPENDIX C. **ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST**

Section I. Introduction ..... C-1

Section II. Repair Parts List ..... C-8

Group 00. Extractor Assembly 9305465 ..... C-8 C-1

Section III. Special Tools List ..... C-10

Section IV. National Stock Number and Part Number Index ..... C-10

APPENDIX D. **EXPENDABLE SUPPLIES AND MATERIALS LIST**

Section I. Introduction ..... D-1

Section II. Expendable Supplies and Materials List ..... D-2

**ALPHABETICAL INDEX** ..... INDEX 1



## HOW TO USE THIS MANUAL

### MANUAL OVERVIEW

This manual contains maintenance procedures for the extractor assembly. Illustrations are provided for the maintenance procedures.

### GENERAL

In order to use this manual efficiently, there are several things to know.

- a. Read the entire maintenance procedure before beginning the maintenance task.
- b. References in the manual are to pages, other parts of the manual, or to other publications.

### INDEXES

This manual has several useful indexes to help the user quickly find the information needed:

- a. **Table of Contents.** Lists in order all chapters, sections, appendixes, and alphabetical indexes. Gives page references.
- b. **Nomenclature Cross-Reference List and List of Abbreviations.**
  - (1) **Nomenclature Cross-Reference List.** Gives an alphabetical list of common names and official nomenclature used in the manual.
  - (2) **List of Abbreviations.** Is an alphabetical list of uncommon abbreviations used in the manual.

c. **Chapter Indexes.** At the beginning of each chapter. List paragraphs in alphabetical order. Reference pages.

d. **Chapter Overviews.** Summarize material covered in the chapter. Are located next to chapter indexes at the beginning of each chapter.

e. **Alphabetical Index.** Located at the end of the manual. An index for everything in the manual. Gives page references.

### MAINTENANCE PROCEDURES

Maintenance procedures found in chapters 2 and 3 are in the detailed procedures. Procedures are in disassembly sequence as authorized in the maintenance allocation chart, appendix B.

### DETAILED PROCEDURES

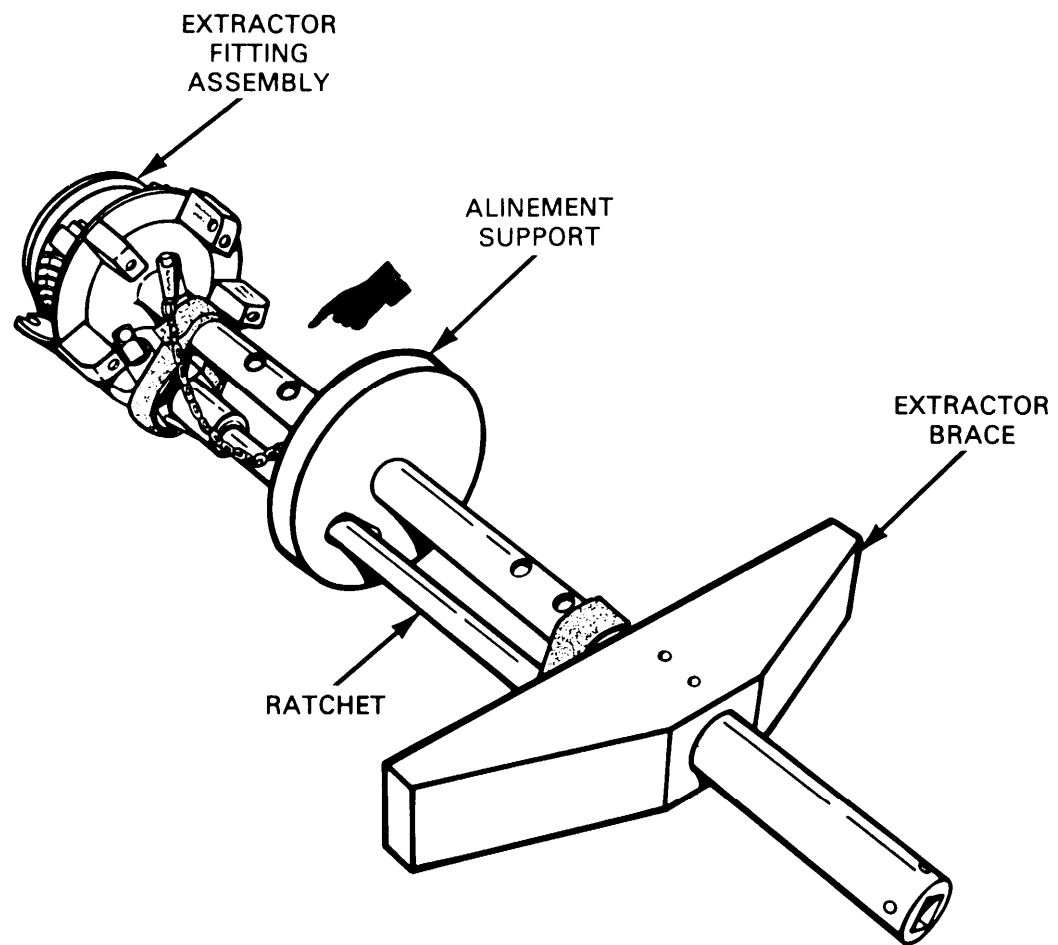
Contain an initial setup plus step-by-step procedures.

a. **Initial Setup.** Is a list of everything needed in order to do the maintenance on the extractor assembly.

Materials/Parts—Lists expendable materials. Each material is followed by an appendix reference.

References—Lists appendixes in this manual containing necessary information.

b. **Step-By-Step Procedures.** Are illustrated procedures for maintenance authorized in the maintenance allocation chart, appendix B.



EXTRACTOR ASSEMBLY

# CHAPTER 1 INTRODUCTION

## CHAPTER INDEX

	Page		Page
Destruction of Army Materiel to Prevent Enemy Use .....	1-1	Reporting Equipment Improvement Recommendations (EIR) .....	1-2
Equipment Characteristics, Capabilities, and Features .....	1-2	Safety, Care, and Handling .....	1-2
General Operation .....	1-3	Scope .....	1-1
Maintenance Forms, Records, and Reports .....	1-1		
Nomenclature Cross-Reference List and List of Abbreviations .....	1-2		
Preparation for Storage or Shipment .....	1-2		

## CHAPTER OVERVIEW

This chapter contains general information and equipment description and data useful in maintaining the extractor assembly.

## Section I. GENERAL INFORMATION

### 1-1. SCOPE

- a. Type of manual:** Organizational and direct support maintenance.
- b. Equipment name:** Extractor assembly.
- c. Purpose of equipment:** To provide a means of removing the M712 cannon launched guided projectile and the M823 training projectile from the Self Propelled M109A1, M109A2, M109A3, M198 Towed, or M114A2 howitzer.

### 1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS)

### 1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

For a description of methods and procedures used in the destruction of materiel to prevent enemy use, refer to TM 750-244-7, Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1015, 1020, 1025, 1030, 1055, 1090, and 1095 to Prevent Enemy Use.

**1-4. PREPARATION FOR STORAGE OR SHIPMENT**

Refer to page 2-6 for storage or shipment procedures.

**1-5. NOMENCLATURE CROSS-REFERENCE LIST AND LIST OF ABBREVIATIONS**

This listing includes the nomenclature cross-reference list and the list of abbreviations used in this manual.

**a. Nomenclature Cross-Reference List.**

Common Name	Official Nomenclature
Alcohol .....	Isopropyl alcohol
Chain .....	Chain, weldless
Insert sleeve .....	Block, guide
Lubricating oil .....	General purpose lubricating oil
Primer .....	Sealing compound
Ratchet .....	Handle, socket wrench

Common Name	Official Nomenclature
Solvent .....	Cleaning compound, solvent
Threaded rod .....	Threaded end rod

**b. List of Abbreviations**

Abbreviation	Definition
MTOE .....	Modified Table of Organization and Equipment
TMDE .....	Test, Measurement, and Diagnostic Equipment

If your extractor assembly needs improvements, let us know Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design Put it on an SF 368 (Quality Deficiency Report). Mail it to us at Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-DSM-A, Picatinny Arsenal 07806-5000.

**Section II. EQUIPMENT DESCRIPTION AND DATA**

**1-7. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES**

**a. Characteristics.** Is portable and lightweight. Provides a means of extracting the M712 and the M823 projectiles from either the M114A2, tje M198 Towed or the M109A1, M109A2, or M109A3 Self Propelled howitzer.

**b. Capabilities and Features.** Is easily maintained with simple operation.

**1-8. SAFETY, CARE, AND HANDLING**

There are no special safety, care, or handling requirements.

### Section III. PRINCIPLES OF OPERATION

#### 1-9. GENERAL OPERATION

a. The extractor assembly is the only authorized piece of equipment to be used to remove a rammed M712 projectile or M823 training projectile from the Self Propelled M109A1, M109A2, M109A3, M198 Towed, or M114A2 howitzer. The extractor assembly is extended and then inserted into the breech of the howitzer where it engages the base of the projectile. The ratchet is turned and the projectile is pulled free of the forcing cone and can be removed.

b. For operating procedures for the extractor assembly, refer to the appropriate operator's manual for your weapon system.

WEAPON SYSTEM	TM NUMBER
M114A2 Howitzer	TM 9-1025-200-12
M198 Howitzer	TM 9-1025-211-10
M109A1/M109A3 Howitzer	TM 9-2350-217-10N
M109A2 Howitzer	TM 9-2350-303-10



# CHAPTER 2

## ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

---

### CHAPTER INDEX

	Page		Page
Checking Unpacked Equipment .....	2-2	Service Upon Receipt of Materiel .....	2-2
Common Tools and Equipment .....	2-1	Special Tools, TMDE, and Support Equipment .....	2-1
Extractor Assembly – Maintenance Instructions .....	2-3		
Preparation for Storage or Shipment .....	2-6		
Repair Parts .....	2-1		
Scope .....	2-2		

### CHAPTER OVERVIEW

This chapter contains organizational maintenance instructions for the extractor assembly.

### Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

#### 2-1. COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

#### 2-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

There are no special tools, TMDE, or support equipment authorized.

#### 2-3. REPAIR PARTS

Repair parts are listed and illustrated in appendix C of this manual.

## Section II. SERVICE UPON RECEIPT

### 2-4. SCOPE

This section contains instructions for services to be performed by the using organization upon the receipt of a new or overhauled extractor assembly. These services include unpacking, reprocessing, and checking the extractor assembly.

### 2-5. SERVICE UPON RECEIPT OF MATERIEL

The table below contains instructions for performing those services required upon the receipt of this equipment.

#### SERVICE UPON RECEIPT – EXTRACTOR ASSEMBLY

Location	Item	Action	Remarks
Extractor assembly	Extractor assembly	a. Unpack. b. Inspect for broken, cracked, rusted, corroded, or missing parts. c. Lubricate. d. Repack.	page 2-3 page C-9 page 2-4 page 2-5

### 2-6. CHECKING UNPACKED EQUIPMENT

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DF Form 364, Report of Discrepancy (ROD).

b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions of TM 38-750.

c. Check to see whether the equipment has been modified.



## Section III. MAINTENANCE PROCEDURES

### 2-7. EXTRACTOR ASSEMBLY – MAINTENANCE INSTRUCTIONS

#### THIS TASK COVERS:

- a. Unpacking
- b. Touching-up
- c. Lubrication
- d. Adjustment
- e. Replacement
- f. Repacking

#### INITIAL SETUP

##### Materials/Parts

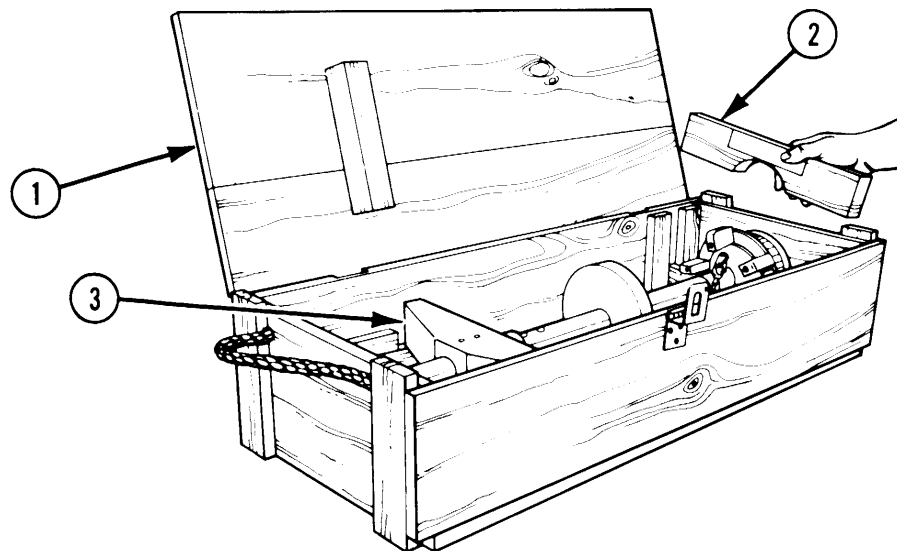
- Enamel (item 3, app D)
- Lubricating oil (item 5, app D)

##### Reference

Appendix D

### UNPACKING

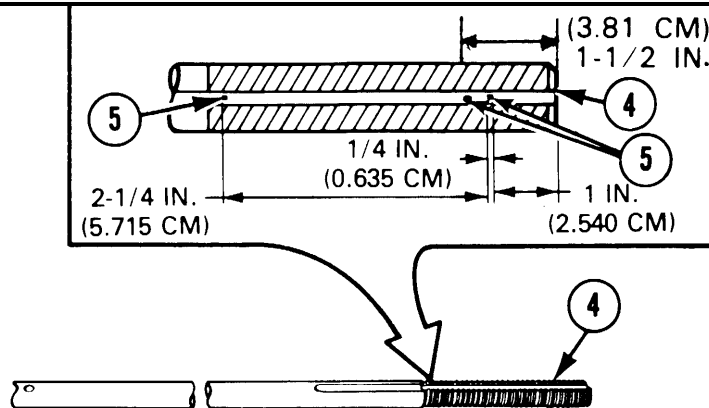
- 1 CONTAINER (1). Open.
- 2 WOOD BLOCK (2). Remove.
- 3 EXTRACTOR ASSEMBLY (3). Remove.



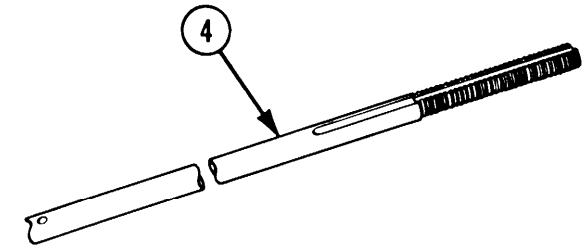
**2-7. EXTRACTOR ASSEMBLY-MAINTENANCE INSTRUCTIONS (cont)**

**TOUCHING-UP**

THREADED ROD (4). Apply two guide marks (5) with enamel (item 3, app D) as illustrated.



**LUBRICATION**

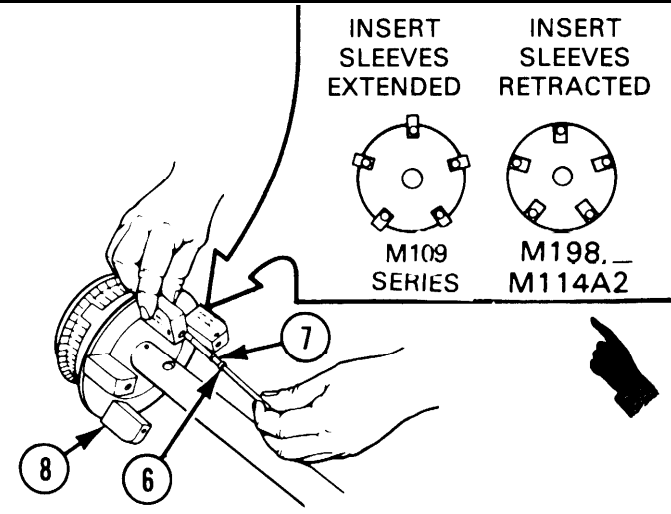


THREADED ROD (4). Lubricate groove and threads with lubricating oil (item 5, app D).

**NOTE**

The insert sleeves must be adjusted as illustrated to allow the extractor assembly to be used on either the M114A2, M198 Or the M109A1, M109A2, and M109A3 howitzers

- 1 FIVE SCREWS (6) AND FIVE LOCK-WASHERS (7). Remove.
- 2 FIVE INSERT SLEEVES (8). Remove, reverse position as illustrated, and install.
- 3 FIVE LOCKWASHERS (7) AND FIVE SCREWS (6). Install.



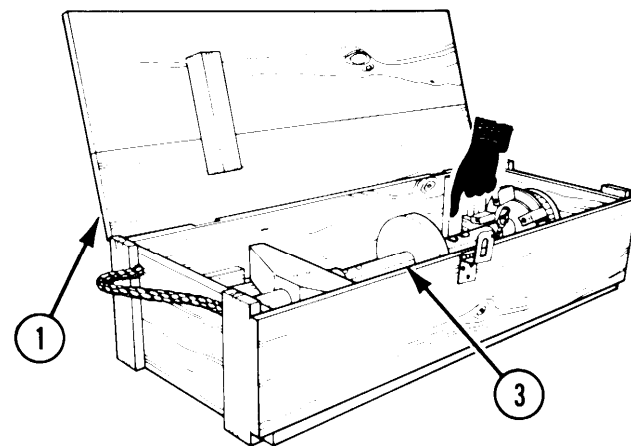
## REPLACEMENT

### NOTE

Replace entire extractor assembly as required. No further maintenance is authorized at organizational maintenance.

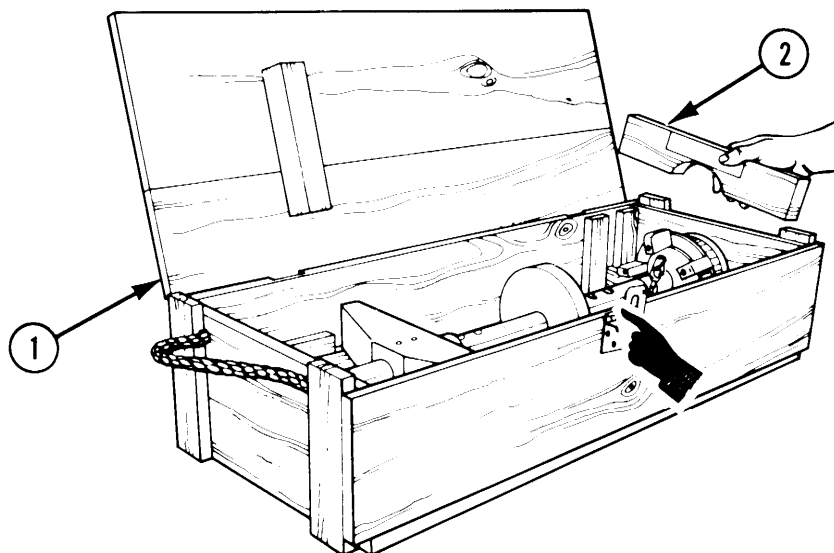
## REPACKING

1 EXTRACTOR ASSEMBLY (3). Install in container (1).



2 WOOD BLOCK (2). Install.

3 CONTAINER (1). Close and secure lid.



## Section IV. PREPARATION FOR STORAGE OR SHIPMENT

### 2-8. PREPARATION FOR STORAGE OR SHIPMENT

a. When material is inactivated for a limited time (not to exceed 90 days), it will be processed in accordance with TM740-90-1. For M114A2, M198 or M109A1 howitzer only, if possible, store extractor assembly in original container.

b. For M109A2 or M109A3 howitzer only, store extractor assembly over right-side sponson.

c. For M198 or M114A2 howitzer only, the socket wrench extension is stored in the container with the extractor assembly. One end is in the alignment support and the other end is secured with a retaining strap assembly.

d. Prepare all Army shipping documents in accordance with AR 55-355.

# CHAPTER 3

## DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

---

### CHAPTER INDEX

	<b>Page</b>
Common Tools and Equipment .....	3-1
Extractor Assembly–Maintenance Instructions .....	3-2
Repair Parts .....	3-1
Special Tools, TMDE, and Support Equipment .....	3-1

### CHAPTER OVERVIEW

This chapter provides direct support maintenance instructions for the extractor assembly.

## Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

### 3-1. COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

### 3-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

There are no special tools, TMDE, or support equipment authorized.

### 3-3. REPAIR PARTS

Repair parts are listed and illustrated in appendix C of this manual.

## Section II. MAINTENANCE PROCEDURES

### 3-4. EXTRACTOR ASSEMBLY—MAINTENANCE INSTRUCTIONS

#### THIS TASK COVERS:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>a. Disassembly</li> <li>b. Repair</li> </ul> | <ul style="list-style-type: none"> <li>c. Reassembly</li> </ul> |
|---|---|

#### INITIAL SETUP

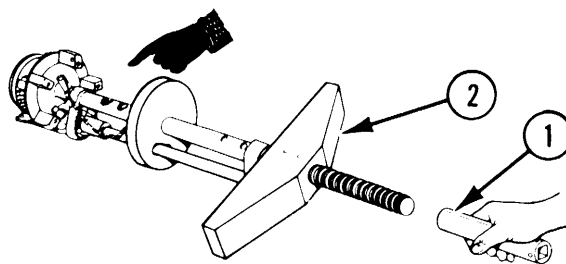
##### Materials/Parts

- Adhesive (item 1, app D)
- Alcohol (item 4, app D)
- Primer (item 7, app D)
- Sealing compound (item 6, app D)
- Solvent (item 2, app D)

##### References

- Appendix C
- Appendix D

#### DISASSEMBLY

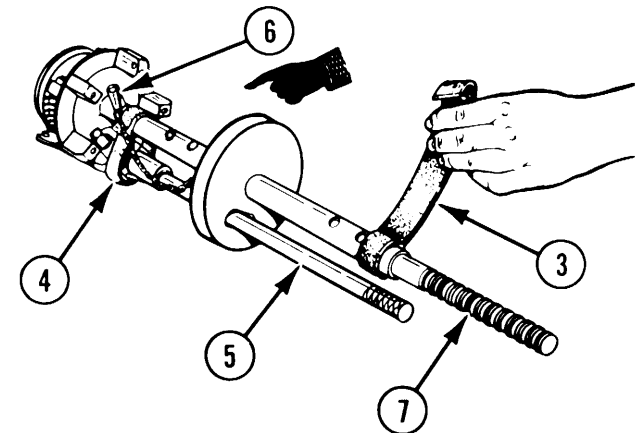


#### NOTE

Drive nut has left-hand threads.

- 1 DRIVE NUT (1) AND EXTRACTOR BRACE (2). Remove.

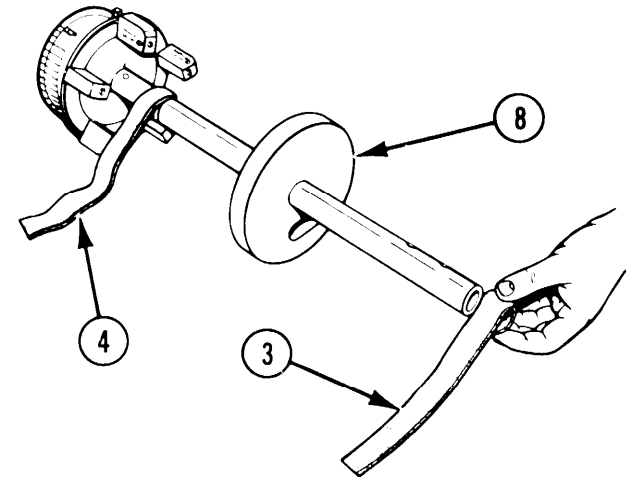
- 2 TWO RETAINING STRAP ASSEMBLIES (3 AND 4). Open and remove ratchet (5),
- 3 QUICK RELEASE PIN (6). Disengage by pressing in.
- 4 THREADED ROD (7). Remove.



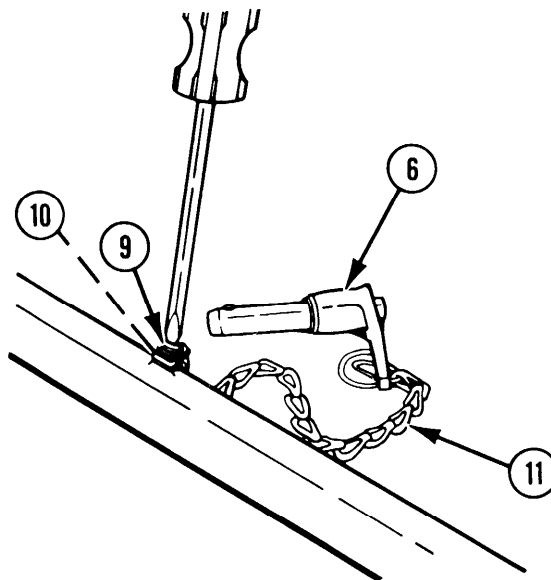
**NOTE**

Do not remove retaining strap assemblies unless necessary to replace authorized parts.

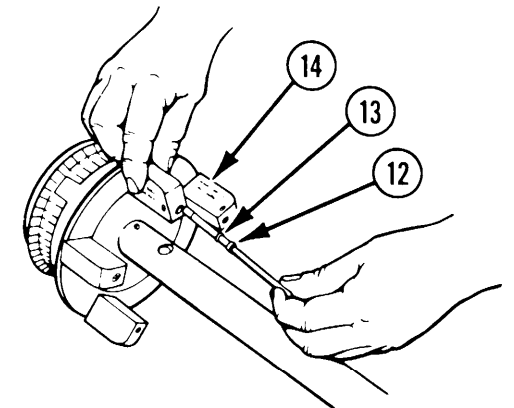
- 5 RETAINING STRAP ASSEMBLY (3)  
Remove by cutting.
- 6 ALINEMENT SUPPORT (8). Remove.
- 7 RETAINING STRAP ASSEMBLY (4).  
Remove by cutting.



- 8 SCREW (9) AND LOCKWASHER (10). Remove.
- 9 QUICK RELEASE PIN (6) AND CHAIN (11). Remove.
- 10 QUICK RELEASE PIN (6). Remove from chain (11).

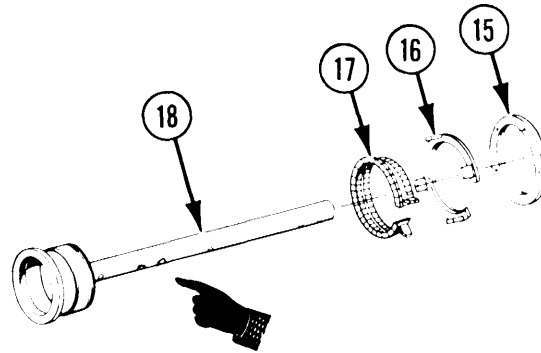


- 11 FIVE SCREWS (12) AND FIVE LOCKWASHERS (13). Remove.
- 12 FIVE INSERT SLEEVES (14). Remove.



**3-4. EXTRACTOR ASSEMBLY—MAINTENANCE INSTRUCTIONS (cont)****DISASSEMBLY (cont)**

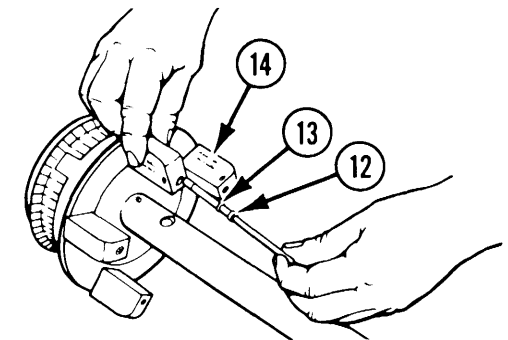
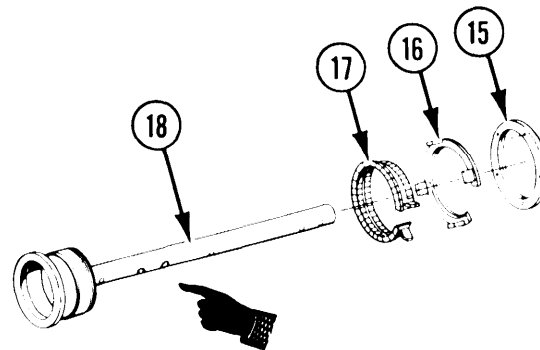
- 13 SUPPORT RING (15). Unscrew and remove. Apply heat if necessary.
- 14 RETAINING RING (16) AND EXPANSION RING (17). Remove from extractor fitting assembly (18).

**REPAIR**

Repair is by replacement of authorized parts (app C) as required.

**REASSEMBLY**

- 1 EXPANSION RING (17) AND RETAINING RING (16). Install on extractor fitting assembly (18).
- 2 SUPPORT RING (15) AND EXTRACTOR FITTING ASSEMBLY (18).
  - a. Apply primer (item 7, app D) to mating threads, and allow to dry.
  - b. Apply sealing compound (item 6, app D) to mating threads.
- 3 SUPPORT RING (15). Install.

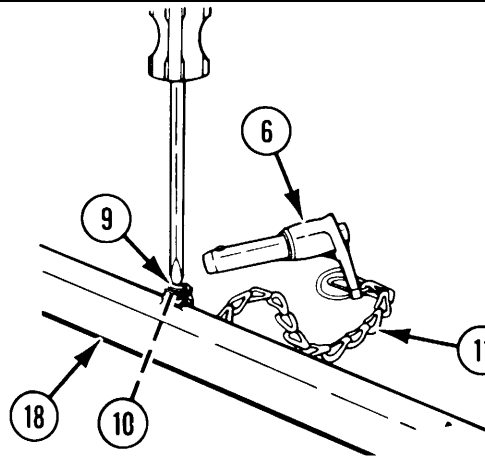


- 4 FIVE INSERT SLEEVES (14), FIVE LOCKWASHERS (13), AND FIVE SCREWS (12). Install.



5 QUICK RELEASE PIN (6). Install on chain (11).

6 QUICK RELEASE PIN (6) AND CHAIN (11). Install on extractor fitting assembly (18) and secure with lock-washer (10) and screw (9).



#### NOTE

Perform step 7 only if either retaining strap assembly has been removed.

One retaining strap assembly will be installed approximately 1/4 in. (0.635 cm) from open end of extractor fitting assembly, and the other will be installed approximately 2-1/2 in. (6.350 cm) from the closed end.

7 EXTRACTOR FITTING ASSEMBLY (18).

- Wipe installation area with alcohol (item 4, app D).
- Clean installation area with solvent (item 2, app D) and wipe off before solvent dries.
- Apply 1-in. (2.540-cm) wide strip of primer (item 7, app D) to installation area, and allow to set up.
- Apply 1-in. (2.540-cm) wide strip of adhesive (item 1, app D) to installation area.

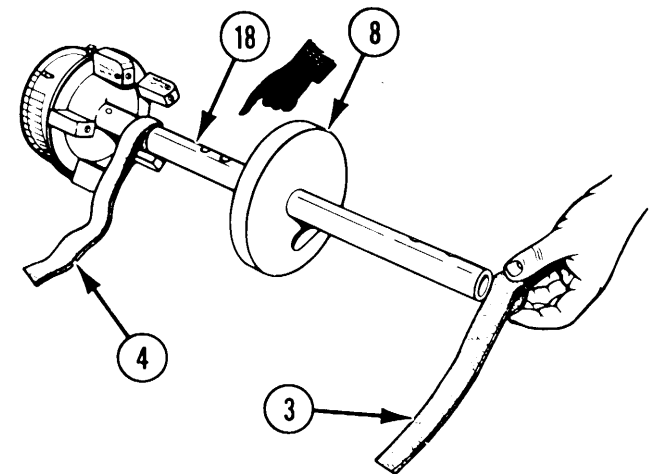
8 RETAINING STRAP ASSEMBLY (4). Install and allow adhesive (item 1, app D) to cure.

9 ALINEMENT SUPPORT (8). Install.

#### NOTE

Repeat step 7 before installing retaining strap assembly (3).

10 RETAINING STRAP ASSEMBLY (3). Install and allow adhesive (item 1, app D) to cure.



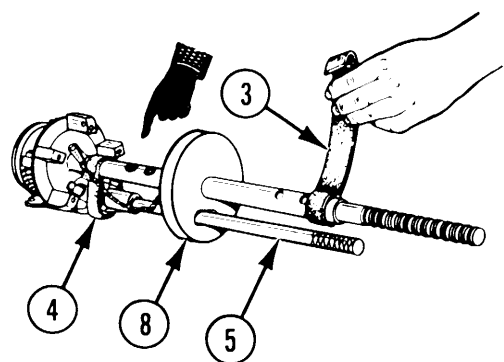
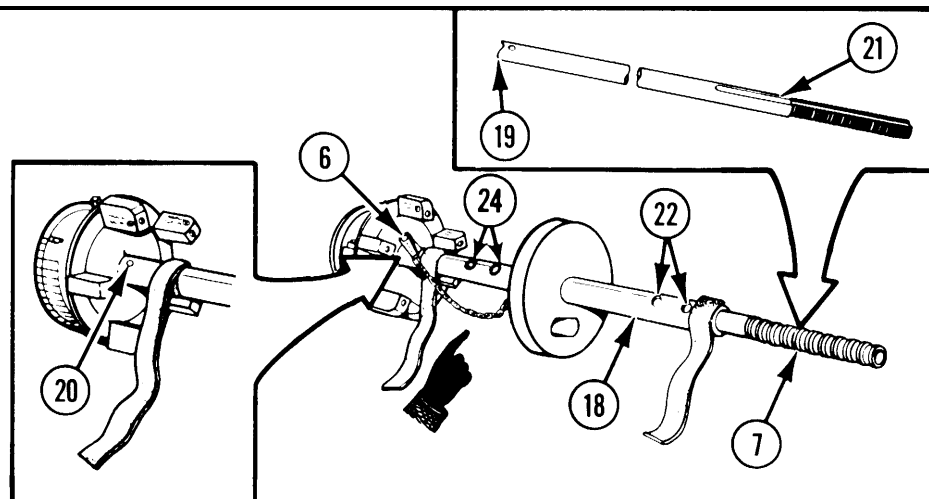
**3-4. EXTRACTOR ASSEMBLY – MAINTENANCE INSTRUCTIONS (cont)**

**REASSEMBLY (cont)**

**11 THREADED ROD (7).**

- a. Aline dovetail (19) so that it will engage pin (20) in extractor fitting assembly (18).
- b. Aline groove (21) with two adjacent holes (22 or 24) in extractor fitting assembly (18).
- c. Install.

**12 QUICK RELEASE PIN (6).** Insert in extractor fitting assembly (18).



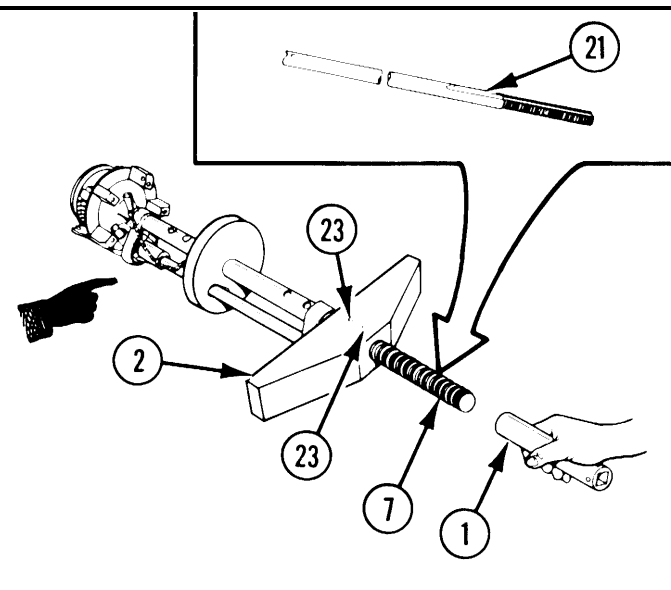
**13 RATCHET (5).** Insert through alignment support (8) and secure with two retaining strap assemblies (3 and 4).

**14 EXTRACTOR BRACE (2)** Aline two pins (23) with groove (21) in threaded rod (7), and install.

**NOTE**

Drive nut has left-hand threads.

**15 DRIVE NUT (1).** Install.



# APPENDIX A

## REFERENCES

### A-1. TECHNICAL MANUALS (TM)

TM 9-1025-200-12 . . . . .	Operator and Organizational Maintenance Manual for Howitzer, Medium, Towed: 155-mm, M114A2	TM 9-2350-217-10N . . . . .	Operator's Manual: Howitzer, Medium, Self-propelled: 155-mm, M109 (2350-00-440-8811); Howitzer, Medium, Self-propelled: 155-mm, M109A1 (2350-00-485-9662) and Howitzer, Medium, Self-propelled: 155-mm, M109A3 (2350-01-031-8851).
TM 9-1025-211-10 . . . . .	Operator's Manual (Crew) for Howitzer, Medium, Towed: 155-mm, M198 (1025-01-026-6648).	TM 9-2350-303-10 . . . . .	Operation and Maintenance Manual (Crew): Howitzer, Medium, Self-propelled: 155-mm, M109A2.
TM 9-1300-251-20 . . . . .	Organizational Maintenance Manual (Including Repair Parts and Special Tools Lists): Artillery Ammunition for Guns, Howitzers, Mortars, Recoilless Rifles, and 40-mm Grenade Launchers.	DA PAM 738-750	The Army Maintenance Management System (TAMMS).
TM 9-1300-251-34 . . . . .	Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools Lists): Artillery Ammunition for Guns, 40-mm Grenade Launchers.	TM 740-90-1 . . . . .	Administrative Storage of Equipment.
		TM 750-244-7 . . . . .	Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1020, 1025, 1030, 1055, 1090, and 1095 to Prevent Enemy Use.

AR 55-355 ..... Military Traffic Management.

CTA 50-970 ..... Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

DA Form 2028 ..... Recommended Changes to Publications and Blank Forms.

DA Form 2028-2 ..... Recommended Changes to Equipment Technical Manuals.

DF Form 364 ..... Report of Discrepancy (ROD).

FM 21-11 ..... First Aid for Soldiers.

SB 708-42 ..... Federal Supply Code for Manufacturers—United States and Canada—Code to Name (cataloging handbook H4-2).

SF 368 ..... Quality Deficiency Report.

☆U.S. GOVERNMENT PRINTING OFFICE: 1989 643-046/00034

# APPENDIX B

## MAINTENANCE ALLOCATION CHART

---

### Section I. INTRODUCTION

#### B-1. GENERAL

- a. The Maintenance Allocation Chart designates responsibility for the performance of maintenance functions.
- b. Only the lowest level of maintenance authorized to perform a maintenance function is indicated.
- c. A maintenance function assigned to a maintenance level will automatically be authorized to be performed at any higher maintenance level.
- d. A maintenance function that cannot be performed at the assigned level of maintenance for any reason may be evacuated to the next higher maintenance organization. Higher maintenance levels will perform the maintenance functions of lower maintenance levels when required or directed by the appropriate commander.
- e. The unpack and repack maintenance functions of packaging for cartridge for each type of ammunition are specified to be performed at the direct support levels of maintenance. This refers to unpacking and repacking of bulk packaging material only. Direct support is the lowest level of maintenance that will normally receive the bulk packaging materials (lower levels use salvage cannibalization). The unpacking and repacking of the complete round is included in the maintenance function for Cartridge (Complete Round).

#### B-2. MAINTENANCE FUNCTIONS

The implementation of maintenance tasks will be consistent with the assigned maintenance in accordance with the following definitions:

- a. **Inspect.** To determine the serviceability of an item by comparing its physical or mechanical characteristics with established standards through examination.
- b. **Test.** To verify serviceability and to detect incipient failure by measuring the mechanical characteristics of an item and comparing those characteristics with prescribed standards.
- c. **Service.** Operations required periodically to keep an item in proper operating condition.
  - (1) **Unpack.** To remove from packing box for service or for the performance of other maintenance operations.
  - (2) **Repack.** To return item to packing box after service or other maintenance operations.
  - (3) **Clean.** To rid the item of contamination.
  - (4) **Lubricate.** To apply a lubricant.

**B-2. MAINTENANCE FUNCTIONS (cont)**

(5) **Touch-up.** To spot paint scratched or blistered surfaces.

(6) **Mark.** To restore obliterated identification.

**d. Install.** To emplace, seat, or fix into position an item in a manner to allow the proper functioning of the equipment; also to assemble one component of an end item with another.

**e. Adjust.** To maintain within prescribed limits by bringing into proper or exact position, or by setting the operating characteristics to the specified parameters.

**f. Renovate.** To restore item to serviceable condition.

(1) **Paint.** To repaint as required.

(2) **Repair.** To restore serviceability to an item by correcting specific damage, fault, malfunction, or failure through the application of maintenance services or other maintenance actions.

(3) **Replace.** To substitute a serviceable component in a manner to allow the proper functioning of equipment.

**B-3. EXPLANATION OF FORMAT**

**a. Group Number.** Column 1 lists the group numbers, the purpose of which is to identify components and assemblies with the next higher assembly.

**b. Functional Group.** Column 2 lists the item names of parts and assemblies on which maintenance is authorized.

**c. Maintenance Function.** Column 3 lists the 13 maintenance functions defined in B-2 above. Capital letters are inserted under appropriate maintenance functions, on line with each functional group, to indicate the lowest level of maintenance authorized to perform that function. Symbols used and the maintenance category each represents are as follows:

<b>Symbol</b>	<b>Explanation</b>
C .....	Operator/Crew
O .....	Organizational
F .....	Direct Support

**d. Tools and Equipment.** Column 4 lists the special tools by item number specified in appendix C, section III, required to perform the maintenance function.

**e. Remarks.** Column 5 is self-explanatory.

## Section II. MAINTENANCE ALLOCATION CHART

(1)	(2)	(3)												(4)	(5)	
Group no.	Functional group	Inspect	Test	Service						Install	Adjust	Renovate			Tools and equipment	Remarks
				Unpack	Repack	Clean	Lubricate	Touch-up	Mark			Paint	Repair	Replace		
00	Extractor Assembly	C	-	O	O	C	O	O	-	C	O	-	F	O		Retaining strap assembly is authorized to M198 battalion for retention of 16 in. (40.64 cm) socket wrench extension.





# APPENDIX C

## ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Current as of May 15, 1981

---

### Section I. INTRODUCTION

#### C-1. SCOPE

This appendix lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of organizational and direct support maintenance of the extractor assembly. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

#### C-2. GENERAL

This repair parts and special tools list is divided into the following sections:

**a. Section II. Repair Parts List.** A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence. Bulk materials are listed in NSN sequence.

**b. Section III. Special Tools List.** A list of special tools, special TMDE, and other special support equipment authorized for the performance of maintenance.

**c. Section IV. National Stock Number and Part Number Index.** A list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. This index is followed by a cross-reference list of reference designators to figure and item numbers.

**a. Illustration.** This column is divided as follows:

**(1) Figure Number.** Indicates the figure number of the illustration on which the item is shown.

**(2) Item Number.** The number used to identify item called out in the illustration.

**b. Source, Maintenance, and Recoverability (SMR) Codes.**

**(1) Source Code.** Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

<b>C-3 EXPLANATION OF COLUMNS (cont)</b>
--

<b>Code</b>	<b>Definition</b>	<b>Code</b>	<b>Definition</b>
PA .....	Item procured and stocked for anticipated or known usage.	PG .....	Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
PB .....	Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply system.	KD .....	An item of a depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
PC .....	Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.	KF .....	An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
PD .....	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.	KB .....	Item included in both a depot overhaul/repair kit and a maintenance kit.
PE .....	Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.	MO .....	Item to be manufactured or fabricated at organizational level.
PF .....	Support equipment which will not be stocked but which will be centrally procured on demand.		

Code	Definition
MF .....	Item to remanufactured or fabricated at the direct support maintenance level.
MH .....	Item to be manufactured or fabricated at the general support maintenance level.
MD .....	Item to be manufactured or fabricated at the depot maintenance level.
AO .....	Item to be assembled at organizational level.
AF .....	Item to be assembled at direct support maintenance level.
AH .....	Item to be assembled at general support maintenance level.
AD .....	Item to be assembled at depot maintenance level.
XA .....	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB .....	Item is not procured or stocked. If not available through salvage, requisition.

Code	Definition
XC .....	Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD .....	A support item that is not stocked. When required, item will be procured through normal supply channels.

**NOTE**

Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA and aircraft support items as restricted by AR 700-42.

**(2) Maintenance Code.** Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

**(a)** The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code	Application/Explanation
C .....	Crew or operator maintenance performed within organizational maintenance.

**C-3. EXPLANATION OF COLUMNS (cont)**

<b>Code</b>	<b>Application/Explanation</b>
O.....	Support item is removed, replaced, used at the organizational level.
F.....	Support item is removed, replaced, used at the direct support level.
H.....	Support item is removed, replaced, used at the general support level.
D.....	Support items that are removed, replaced, used at depot, mobile depot, or specialized repair activity only.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i. e., all authorized maintenance functions). This position will contain one of the following maintenance codes.

<b>Code</b>	<b>Application/Explanation</b>
O.....	The lowest maintenance level capable of complete repair of the support item is the organizational level.

<b>Code</b>	<b>Application/Explanation</b>
F.....	The lowest maintenance level capable of complete repair of the support item is the direct support level.
H.....	The lowest maintenance level capable of complete repair of the support item is the general support level.
D.....	The lowest maintenance level capable of complete repair of the support item is the depot level.
L.....	Repair restricted to applicable designated repair activity.
Z.....	Nonreparable. No repair is authorized.
B.....	No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc, at the user level. No parts or special tools are procured for the maintenance of this item.

**(3) Recoverability Code.** Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

<b>Recoverability Codes</b>	<b>Definition</b>
Z .....	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O .....	Reparable item. When uneconomically reparable, condemn and dispose at organizational level.
F .....	Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.
H .....	Reparable item. When uneconomically reparable, condemn and dispose at the general support level.
D .....	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L .....	Reparable item. Repair, condemnation, and disposal not authorized below depot/specialized repair activity level.

**Recoverability Codes**

**Definition**

A.....Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

**c. National Stock Number.** Indicates the National stock number assigned to the item and which will be used for requisitioning.

**d. Federal Supply Code for Manufacturer (FSCM).** The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

**NOTE**

When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

**e. Part Number.** Indicates the primary number used by the manufacturer (individual, company, firm, corporation or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

### C-3 EXPLANATION OF COLUMNS (cont)

**f. Description.** Indicates the Federal item name and, if required, a minimum description to identify the item. The physical security classification of the item is indicated by a parenthetical entry which is a physical security classification abbreviation, e.g., Phy Sec C1 (C)-Confidential, Phy Sec C1 (S)-Secret, Phy Sec C1 (T)-Top Secret. Items that are included in kits and sets are listed below the name of the kit or set with the quantity of each item in the kit or set indicated in the quantity incorporated in unit column. When the part to be used differs between serial numbers of the same model, the effective serial numbers are shown as the last line of the description. In the Special Tools List, the initial basis of issue (BOI) appears as the last line in the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased accordingly.

**g. Unit of Measure (U/M).** Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e. g., ea, in., pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

**h. Quantity Incorporated in Unit.** Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, (e. g., shims, spacers, etc).

### C-4. HOW TO LOCATE REPAIR PARTS

#### a. When National Stock Number or Part Number is Unknown:

**(1) First.** Using the table of contents, determine the functional group within which the item belongs. This is necessary since illustrations are prepared for functional groups and listings are divided into the same groups.

**(2) Second.** Find the illustration covering the functional group to which the item belongs.

**(3) Third.** Identify the item on the illustration and note the illustration figure and item number of the item.

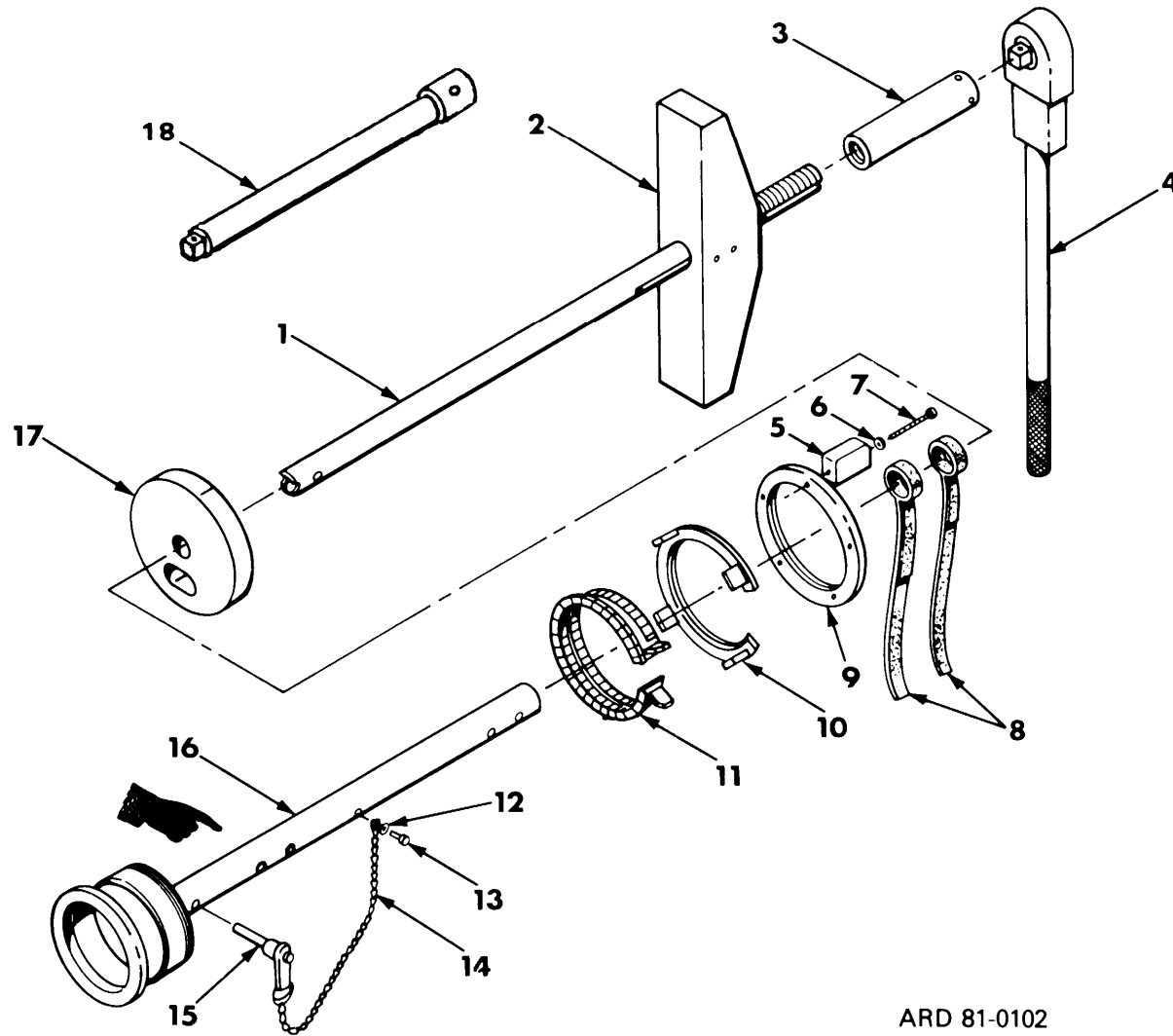
**(4) Fourth.** Using the repair parts listing, find the figure and item number noted on the illustration.

#### b. When National Stock Number or Part Number is Known:

**(1) First.** Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

**(2) Second.** After finding the figure and item number, locate the figure and item number in the repair parts list.

### Section II. REPAIR PARTS LIST



ARD 81-0102

Figure C-1. Group 00 Extractor Assembly 9305465.





(1) ILLUSTRATION (A) FIG NO	(2) (B) ITEM NO	(3) SMR CODE	(4) NATIONAL STOCK NUMBER	(5) FSCM	(6) PART NUMBER	TM9-1025-212-23&P (6) DESCRIPTION	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 EXTRACTOR ASSEMBLY 9305465			
C-1	1	PGFZZ	5306-01-083-8014	19200	9305471	ROD, THREADED END		EA	1
C-1	2	PGFZZ	1025-01-082-9135	19200	9305431	BRACE, EXTRACTOR		EA	1
C-1	3	PAFZZ	1025-01-082-9139	19200	9305467	NUT,DRIVE		EA	1
C-1	4	PAFZZ	5120-01-091-5106	19200	9300464	HANDLE, SOCKET WRENCH		EA	1
C-1	5	PAFZZ	1025-01-082-9137	19200	9305429	BLOCK, GUIDE		EA	5
C-1	6	PAFZZ	5310-00-933-8120	96906	MS35338-138	WASHER, LOCK		EA	5
C-1	7	PAFZZ	5306-01-030-2650	80205	NAS1351-3-32	BOLT, INTERAL WRENCH		EA	5
C-1	8	PAFZZ	1025-01-082-9136	19200	9305474	STRAP ASSEMBLY, RETAINING		EA	2
C-1	8	PAFZZ	1025-01-082-9136	19200	9305474	STRAP ASSEMBLY, RETAINING		EA	1*
C-1	9	PGFZZ	1025-01-082-9140	19200	9305473	RING, SUPPORT		EA	1
C-1	10	PAFZZ	5365-01-084-1466	19200	9305469	RING, RETAINING		EA	1
C-1	11	PAFZZ	1025-01-082-9141	19200	9305470	RING, EXPANSION		EA	1
C-1	12	PAFZZ	5310-00-933-8119	96906	MS35338-137	WASHER, LOCK		EA	1
C-1	13	PAFZZ	5305-00-984-6189	96906	MS35206-241	SCREW, MACHINE		EA	1
C-1	14	PAFZZ	4010-01-052-4506	80205	NAS1455C35-10	CHAIN, WELDLESS		EA	1
C-1	15	PAFZZ	5340-00-943-2054	96906	MS17986C813	PIN, QUICK RELEASE		EA	1
C-1	16	PGFZZ	1025-01-082-9138	19200	9305472	FITTING ASSEMBLY, EXTRACTOR		EA	1
C-1	17	PAFZZ	1025-01-101-4645	19200	9340541	SUPPORT, AILINEMENT		EA	1
C-1	18	PAFZZ	5120-00-227-8079	55719	L122	EXTENSION, SOCKET WRENCH, 16 INCH		EA	1**
SEE PG 1-0	NA	PAOZZ	1025-01-082-3586	19200	9305465	EXTRACTOR ASSEMBLY		EA	1
						* ONE ADDITIONAL STRAP M198 HOWITZER USE ONLY			
						** M198 HOWITZER USE ONLY			

## C-5 SPECIAL TOOLS

THERE ARE NO SPECIAL TOOLS REQUIRED TO SUPPORT OPERATOR/CREW, ORGANIZATIONAL, OR DIRECT SUPPORT MAINTENANCE OF THE EXTRACTOR ASSEMBLY.

## SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
5310-00-933-8119	C-1	12	MS17986C813	96906	C-1	15
5310-00-933-8120	C-1	6	MS35206-241	96906	C-1	13
5340-00-943-2054	C-1	15	MS35338-137	96906	C-1	12
5305-00-984-6189	C-1	13	MS35338-138	96906	C-1	6
5306-01-030-2650	C-1	7	NAS1351-3-32	80205	C-1	7
4010-01-052-4506	C-1	14	NAS1455C35-10	80205	C-1	14
1025-01-082-9135	C-1	2	9300464	19200	C-1	4
1025-01-082-9136	C-1	8	9305429	19200	C-1	5
1025-01-082-9137	C-1	5	9305431	19200	C-1	2
1025-01-082-9138	C-1	16	9305467	19200	C-1	3
1025-01-082-9139	C-1	3	9305469	19200	C-1	10
1025-01-082-9140	C-1	9	9305470	19200	C-1	11
1025-01-082-9141	C-1	11	9305471	19200	C-1	1
5306-01-083-8014	C-1	1	9305472	19200	C-1	16
5365-01-084-1466	C-1	10	9305473	19200	C-1	9
5120-01-091-5106	C-1	4	9305474	19200	C-1	8
1025-01-101-4645	C-1	17	9340541	19200	C-1	17

# APPENDIX D

## EXPENDABLE SUPPLIES AND MATERIALS LIST

---

### Section I. INTRODUCTION

#### D-1. SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain the extractor assembly. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

#### D-2. EXPLANATION OF COLUMNS

**a. Column 1 — Item Number.** This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e. g., "Use cleaning compound, item 5, app D.").

**b. Column 2—Level.** This column identifies the lowest level of maintenance that requires the listed item.

O..... Organizational Maintenance  
F..... Direct Support Maintenance

**c. Column 3 — National Stock Number.** This is the National stock number assigned to the item; use it to request or requisition the item.

**d. Column 4 — Description.** Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

**e. Column 5 — Unit of Measure (U/M).** Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e. g., ea, i n., pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

SECTION II. EXPENDABLE SUPPLIES AND MATERIALS LIST				
(1)	(2)	(3)	(4)	(5)
ITEM NUMBER	LEVEL	NATIONAL STOCK NUMBER	DESCRIPTION	U/M
1	F	8040-00-598-8065	ADHESIVE: LIQUID 1 PT (0.473 L) (76381) 1711	CN
2	F	6850-00-105-3084	CLEANING COMPOUND, SOLVENT: TYPE 2 16 OZ (453.6 GRAMS) (81349) MIL-C-83360	CN
3	0	8010-00-117-8431	ENAMEL: LUSTERLESS, COMP G, COLOR, WHITE, 37875 1 QT (1.101 I) (81348) TT-E-516	CN
4	F	6810-00-753-4993	ISOPORPLY ALCOHOL: GRADE A 8 OZ (226.8 GRAMS) (81348) TT-I-735	CN
5	0	9150-00-231-6689	LUBRICATING OIL, GENERAL PURPOSE 1 QT (1.101 I) (81348) VVL800	CN
6	F	8030-00-081-2339	SEALING COMPOUND: GRADE A 0.3381 OZ (10 CC) (81349) MIL-S-22473	BT
7	F	8030-00-900-2373	SEALING COMPOUND: GRADE N, FORM R 4 OZ (113.4 GRAMS) (81349) MIL-S-22473	BT

# ALPHABETICAL INDEX

Subject	Page	Subject	Page
<b>A</b>			
Abbreviations, list of . . . . .	1-2	Extractor assembly (cont):	
Adjustment (See extractor assembly)		Disassembly . . . . .	3-2
<b>C</b>			
Checking unpacked equipment . . . . .	2-2	Lubrication . . . . .	2-4
Common tools and equipment:		Reassembly . . . . .	3-4
Direct support . . . . .	3-1	Repacking . . . . .	2-5
Organizational . . . . .	2-1	Repair . . . . .	3-4
<b>D</b>			
Destruction of Army materiel to prevent enemy use . . . . .	1-1	Replacement . . . . .	2-5
Disassembly (See extractor assembly)		Service upon receipt . . . . .	2-2
<b>E</b>			
Equipment characteristics, capabilities, and features . . . . .	1-2	Touching-up . . . . .	2-4
Equipment description and data . . . . .	1-2	Unpacking . . . . .	2-3
Equipment improvement recommendations (EIR), reporting . . . . .	1-2	<b>H</b>	
Expendable supplies and materials list, appendix D . . . . .	D-1	How to use this manual . . . . .	iii
Extractor assembly:		<b>L</b>	
Adjustment . . . . .	2-4	List of abbreviations . . . . .	1-2
<b>M</b>			
<b>N</b>			
<b>M</b>			
		MAC . . . . .	B-3
		Maintenance allocation chart, appendix B . . . . .	B-1
		Maintenance forms, records, and reports . . . . .	1-1
		<b>N</b>	
		Nomenclature cross-reference list and list of abbreviations . . . . .	1-2

# ALPHABETICAL INDEX (cont)

Subject	Page	Subject	Page
<b>O</b>			
Operation, general .....	1-3	Reporting equipment improvement recommendations (EIR) .....	1-2
<b>P</b>			
Preparation for storage or shipment .....	2-6	Reporting errors and recommending improvements .....	i
Principles of operation .....	1-3	<b>S</b>	
<b>R</b>			
Reassembly (See extractor assembly)		Safety, care, and handling .....	1-2
References, appendix A .....	A-1	Service upon receipt—extractor assembly .....	2-2
Repacking (See extractor assembly)		Special tools, TMDE, and support equipment:	
Repair (See extractor assembly)		Direct support .....	3-1
Repair parts:		Organizational .....	2-1
Direct support .....	3-1	<b>T</b>	
Organizational .....	2-1	Table of contents .....	i..
Repair parts and special tools list, appendix C .....	C-1	Touching-up (See extractor assembly)	
Repair parts, special tools, TMDE, and support equipment:		<b>U</b>	
Direct support .....	3-1	Unpacking (See extractor assembly)	
Organizational .....	2-1	<b>W</b>	
Replacement (See extractor assembly)		Warning page .....	a.

By Order of the Secretary of the Army:

E. C. MEYER  
General, United States Army  
Chief of Staff

Official:

R. M. JOYCE  
Brigadier General, United States Army  
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-37, organizational, and direct support and general support maintenance requirements for Howitzer, 105MM, M108; 155MM, M109, M109A1, and M109A3; Plus: DA Form 12-40, organizational and direct support and general support maintenance requirements for artillery ammunition.





RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

Your mailing address

DATE SENT

Date you filled out this form

PUBLICATION NUMBER

TM 9-1025-212-23&P

PUBLICATION DATE

PUBLICATION TITLE Org. and DS Maintenance Manual (including RPSTL) for Extractor Assembly

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA. GRAPH	FIGURE NO	TABLE NO
---------	-------------	-----------	----------

1-1	1-3		
3-3	3-4		

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

The reference to TM should be TM 750-244-6 instead of TM 750-244-7.

Callout 6 should be callout 5.

SAMPLE

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

Your name

DA FORM 2028-2  
1 JUL 79

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

FILL IN YOUR  
UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY  
DOD 314




TEAR ALONG PERFORATED LINE

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

Commander  
US Army Armament Materiel Readiness Command  
ATTN: DRSAR-MAS-M  
Dover, NJ 07801

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN JOT DOWN THE DOPE ABOUT IT ON THIS FORM CAREFULLY TEAR IT OUT FOLD IT AND DROP IT IN THE MAIL

## SOMETHING WRONG

WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

---

DATE SENT

PUBLICATION NUMBER

TM 9-1025-212-23&P

PUBLICATION DATE

PUBLICATION TITLE **Org. and DS Maintenance Manual (including RPSTL) for Extractor Assembly**

BE EXACT PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO	PARA GRAPH	FIGURE NO	TABLE NO	

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

FILL IN YOUR  
UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY  
DOD 314




TEAR ALONG PERFORATED LINE

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

Commander  
US Army Armament Materiel Readiness Command  
ATTN: DRSAR-MAS-M  
Dover, NJ 07801

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



*THEN JOT DOWN THE DOPE ABOUT IT ON THIS FORM CAREFULLY TEAR IT OUT FOLD IT AND DROP IT IN THE MAIL*

## SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

---

DATE SENT

PUBLICATION NUMBER

TM 9-1025-212-23&P

PUBLICATION DATE

PUBLICATION TITLE **Org. and DS Maintenance Manual (including RPSTL) for Extractor Assembly**

BE EXACT PIN POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO.	PARA GRAPH	FIGURE NO.	TABLE NO.	

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

FILL IN YOUR  
UNIT'S ADDRESS



FOLD BACK

DEPARTMENT OF THE ARMY

---

---

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300


POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY  
DOD 314



TEAR ALONG PERFORATED LINE

Commander  
US Army Armament Materiel Readiness Command  
ATTN: DRSAR-MAS-M  
Dover, NJ 07801

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



## SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

---

DATE SENT

PUBLICATION NUMBER  
**TM 9-1025-212-23&P**

PUBLICATION DATE

PUBLICATION TITLE **Org. and DS Maintenance Manual (including RPSTL) for Extractor Assembly**

BE EXACT PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO	PARA GRAPH	FIGURE NO	TABLE NO	

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

FILL IN YOUR  
UNIT'S ADDRESS

FOLD BACK

TEAR ALONG PERFORATED LINE

DEPARTMENT OF THE ARMY

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY  
DOD 314



OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

Commander  
US Army Armament Materiel Readiness Command  
ATTN: DRSAR-MAS-M  
Dover, NJ 07801





