

**Changes in Force: C1, C2**

CHANGE }  
No. 2 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, DC, 7 April 1972

**Operator, Organizational, Direct Support, General Support**

**and Depot Maintenance Manual**

**ADAPTER, LINE FILLING, 1-TON CONTAINER, M1**

**(END ITEM CODE 641)**

TM 3-4730-200-15, 29 June 1964, is changed as follows:

*Page 1.* Title is superseded as follows:  
OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT,  
GENERAL SUPPORT, AND DEPOT MAINTENANCE  
MANUAL (INCLUDING REPAIR PARTS AND SPECIAL  
TOOLS LIST)  
ADAPTER, LINE FILLING, ONE-TON CONTAINER,  
M1 FSN 4730-368-6188

*Page 2.* The following is added to Table of Contents:

Appendix IV. ORGANIZATIONAL, DIRECT  
SUPPORT, AND GENERAL SUPPORT  
MAINTENANCE REPAIR PARTS AND  
SPECIAL TOOLS LIST (INCLUDING  
DEPOT MAINTENANCE REPAIR  
PARTS AND SPECIAL TOOLS

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**\*This change supersedes TM-3-4730-200-25P, 31 January 1963.**

The following is added *after page 12*:

**APPENDIX IV**  
**ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT**  
**MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST**  
**(INCLUDING DEPOT MAINTENANCE REPAIR PARTS**  
**AND SPECIAL TOOLS)**

**Section I. INTRODUCTION**

**1. Scope**

This appendix lists repair parts required for the performance of organizational, direct support, general support, and depot maintenance of the M1 line filling adapter.

**2. General**

This Repair Parts and Special Tools List is divided into the following sections:

*a. Repair Parts List-Section II.* A list of repair parts authorized at the organizational, direct support, general support, and depot levels for the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts are listed in figure and item number sequence.

*b. Special Tools List-Section III.* Not applicable.

*c. Federal Stock Number and Reference Number Index-Section IV.* A list, in ascending numerical sequence, of all Federal stock numbers appearing in the listings, followed by a list, in alphanumeric sequence, of all reference numbers appearing in the listings. Federal stock numbers and reference numbers are cross-referenced to each illustration figure and item number appearance.

**3. Explanation of Columns**

The following provides an explanation of columns found in the tabular listings.

*a. Source, Maintenance, and Recoverability Codes (SMR), (5 Positions).*

(1) *Source codes (positions 1 and 2).* Indicates the source for the listed items. Applicable source code is:

Code	Explanation
PA -----	Item procured and stocked for anticipated or known usage.

**NOTE**

**Cannibalization or salvage may be used as a source of supply for any item source coded PA.**

(2) *Maintenance codes (positions 3 and 4).*

(a) *Position 3.* The maintenance code entered in the third position indicates the lowest maintenance level authorized to remove, replace, and use the support item. Capabilities of higher maintenance categories are considered equal or better. Applicable maintenance code is:

Code	Explanation
O -----	Organizational maintenance

*c. Description.* Indicates the Federal item name and a minimum description required to identify the item. The last line indicates the reference number followed by the applicable Federal Supply Code for Manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate manufacturer or distributor or Government agency. etc. and is identified in SB 708-42.

d. *Unit of Measure (U/M).* Indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, e.g., ea, in., pr, etc., and is the basis used to indicate quantities and allowances in subsequent columns. 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.

e. *Quantity Incorporated in Unit.* Indicates the quantity of the item used in the breakout shown on the illustration figure. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, e.g., shims, spacers, etc.

f. *Organizational Maintenance Allowances.*

(1) An asterisk (\*) entered in the organizational (org) allowance subcolumn indicates that the repair part is authorized for use at the organizational level, and will be requisitioned on an "as required" basis until stockage is based on demand in accordance with AR 710-2.

(b) *Position 4.* 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). Capabilities of higher maintenance categories are considered equal or better. Applicable codes are:

Code	Explanation
O-----	Organizational maintenance
Z-----	Non-repairable. No repair is authorized.

(3) *Recoverability code (position 5).* Indicates whether unserviceable items should be returned for recovery or salvage. Applicable recoverability codes are:

Code	Explanation
Z-----	Non-repairable item. When unserviceable, condemn and dispose at the level indicated in position 3.
F-----	Repairable item. When uneconomically repairable, condemn and dispose at the direct support level.

b. *Federal Stock Number.* Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

(2) Major Army commanders are authorized to approve reductions in the range of support items authorized for use in units within their commands. Recommendations for increases, in range of items authorized for use, should be forwarded to the Commanding Officer, Edgewood Arsenal, ATTN: SMUEA-DE-ETL, Edgewood Arsenal, MD 21010, for action on such recommendations. Changes approved will be reflected in a revision to the manual.

g. *DS/GS Maintenance Allowances.*

(1) An asterisk (\*) entered in the direct support (DS) and general support (GS) subcolumn indicates that the repair part is authorized for use at that level, and will be requisitioned on an "as required" basis.

(2) The repair parts authorized at the DS/GS levels are for the maintenance mission at these levels.

(3) Requirements for repair parts stockage and for distribution to supported units will be based on demand and determined in accordance with AR 710-2.

h. *1-Year Allowances Per 100 Equipments/Contingency Planning Purposes.* An asterisk (\*) entered in the contingency (cntgcy) column indicates that the total quantity of the repair part required for distribution and contingency planning purposes will be based on demand data.

i. *Depot Maintenance Allowance Per 100 Equipments.* An asterisk (\*) entered in the depot column indicates that the repair part is authorized for use at the depot level, and will be requisitioned on an "as required" basis.

j. *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. Indicates the callout number used to reference the item on the illustration.

#### 4. Special information

a. Usable on codes are included in Column 3. Uncoded items are applicable to entire as-

sembly. Identifications of the usable on codes used in this publication are:

<i>Code</i>	<i>Used On</i>
A -----	Valve adapter assembly for angle valves.
B -----	Angle valve adapter for Chlorine Institute valves.

*b.* Action change codes indicated in the left-hand margin of the listing page denote the following:

- N-Indicates an added item.
- C-Indicates a change in data.
- R-Indicates a change in FSN only.

## 5. How to Locate Repair Parts

*a.* When Federal stock number or reference number is unknown:

(1) *First.* Find the illustration on which the repair part is shown and note the item number assigned the part.

(2) *Second.* Using the Repair Parts Listing, locate the illustration figure and item number noted on the illustration.

*b.* When Federal stock number or reference number is known:

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

(2) *Second.* Using the Repair Parts Listing, find the illustration figure number and item number referenced in the Index of Federal Stock Numbers and Reference Numbers.

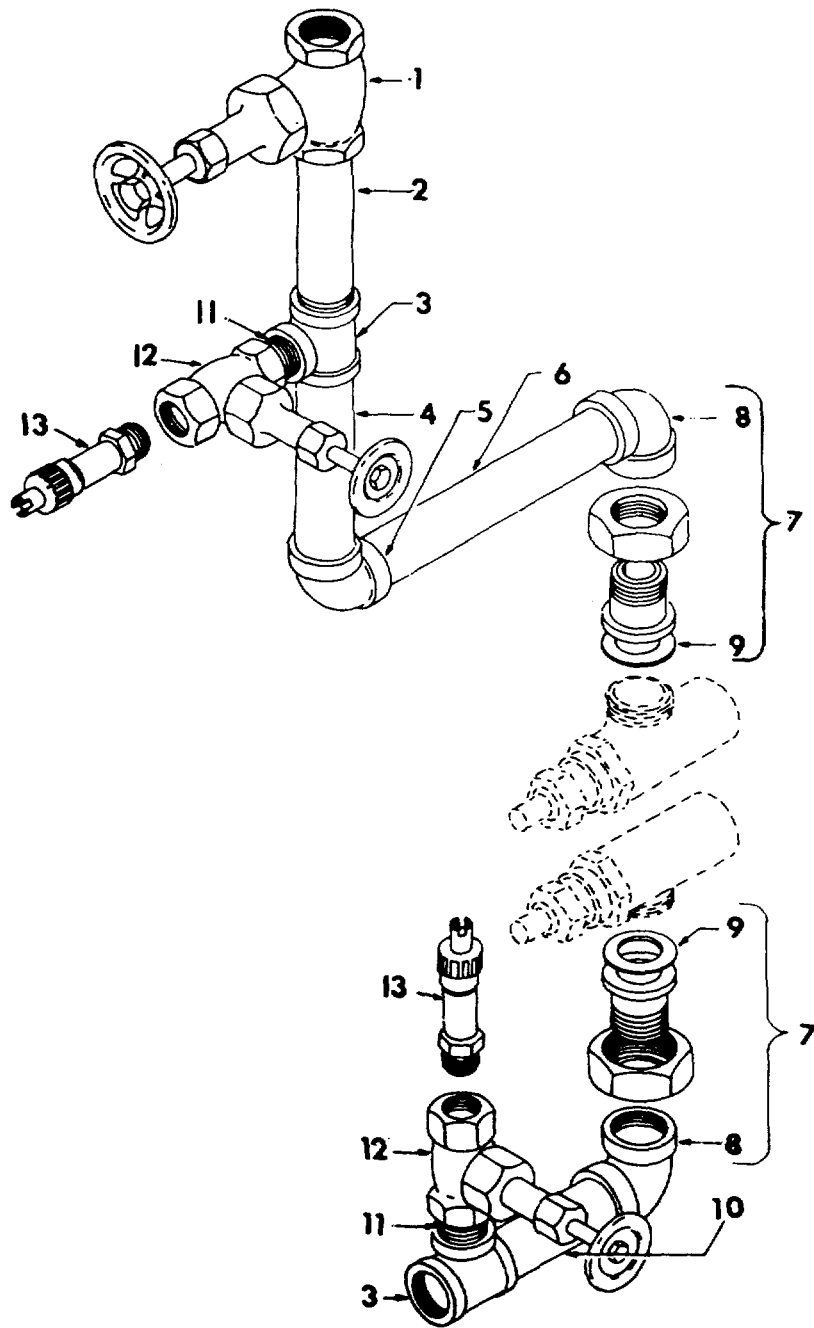
## 6. Abbreviations

<i>Abbreviations</i>	<i>Explanation</i>
conec -----	connector

## Section II. REPAIR PARTS LIST

(1) SMR Code	(2) Federal stock No.	(3) Description  Reference Number & Mfr Code      Usable on Code	(4) Unit of Meas	(5) Qty Inc in Unit	(6) 15-Day Organizational Maintenance Alw				(7) Illustration	
					(a) 1-5	(b) 6-20	(c) 21-150	(d) 51-100	(a) Figure No.	(b) Item No.
C	PA OZ Z	4820-227-0167	VALVE, GLOBE bronze, 3/4-14 NPT, rh, 125 to 200 psi WWV51TYPEICLASSA (81348)	ea	1	*	*	*	1	1
C	PA OZ Z	4730-188-1897	NIPPLE, PIPE stl, 3/4-14 NPT, rh, 4.000 in. nom lg WWN351TYPE1 (81348)	ea	1	*	*	*	1	2
C	PA OZ Z	4730-266-9715	TEE, PIPE malleable iron, 150 to 300 psi, 3/4-14 NPT, rh, 1.050 in. nom leg lg, first end conec 1/4-18 NPT, rh, 1.080 in. nom leg lg, third end conec WWP521TYPE1 (81348)	ea	2	*	*	*	1	3
C	PA OZ Z	4180-188-1899	NIPPLE, PIPE stl, 3/4-14 NPT, rh, 5.000 in. nom lg WWN351TYPE1 (81348)	ea	1	*	*	*	1	4
C	PA OZ Z	4730-249-1478	ELBOW, PIPE malleable iron, 3/4-14 NPT, 1.31 in. leg lg, 90 deg WWP521TYPE2 (81848)	ea	1	*	*	*	1	5
C	PA OZ Z	4730-277-9966	NIPPLE, PIPE stl, 3/4-14 NPT, rh, 8.000 in. lg WWN351TYPE1 (81348)	ea	1	*	*	*	1	6
C	PA OZ Z	4730-192-6309	ADAPTER, ANGLE E6-19-1 (81361)	ea	2	*	*	*	1	7
C	PA OO F	4780-377-4075	ADAPTER, VALVE B6-19-5 (81361)	ea	2	*	*	*	1	7
C	PA OZ Z	4780-253-5751	ELBOW, PIPE brass, 3/4-14 NPT, rh, 125 to 175 lb psi, 90 deg WWP460 (81348)	ea	1	*	*	*	1	8
C	PA OZ Z	4780-199-5484	ELBOW, PIPE brass o0 bronze, 3/8-18 NPT, rh, 90 deg WWP4M 0 (81348)	ea	1	*	*	*	1	8
C	PA OZ Z	5310-639-2634	WASHER, FLAT lead, 0.813 in. id, 1.3906 in. od, 0.625 in. thk A6-19-4 (81361)	ea	1	*	*	*	1	9
C	PA OZ Z	5310-368-6237	WASHER, FLAT lead, 0.562 in. max id, 0.922 in. max od, 0.078 in. max thk A6-19-8 (81861)	ea	1	*	*	*	1	9

(1)  SMR Code	(2)  Federal stock No.	(3)  Description  Reference Number & Mfr Code	(4)  Unit of Meas	(5)  Qty Inc in Unit	(6)  15-Day Organizational Maintenance Alw				(7)  Illustration		
					(a) 1-5	(b) 6-20	(c) 21-150	(d) 51-100	(a) Figure No.	(b) Item No.	
C	PA OZ Z	4780-196-1498	NIPPLE, PIPE stl, 3/4-14 NPT, 3.000 nom lg WWN351TYPE1 (81348)	ea	1	*	*	*	*	1	10
C	PA OZ Z	4730-278-3553	NIPPLE, PIPE stl, 1/4-18 NPT, 7/8 in. lg o/a WWN351TYPEB (81348)	ea	2	*	*	*	*	1	11
C	PA OZ Z	4820-262-7020	VALVE, GLOBE bronze, 150 to 300 psi, 1/4-18 NPT, rh WWV51 (81348)	ea	2		*	*	*	1	12
C	PA OZ Z	4820-826-8880	VALVE, PNEUMATIC TANK brass, 1/4-18 NPT outlet, 0.302-32 thd size, tire and rim assoc, inlet rh 1498E6 (53477)	ea	2	*	*	*	*	1	13



MU-E-641-1

Figure 1. M1 adapter repair parts.

**Section IV. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER  
CROSS-REFERENCE TO FIGURE AND ITEM NUMBER**

<i>Stock Number</i>	<i>Figure No.</i>	<i>Item No.</i>	<i>Stock Number</i>	<i>Figure No.</i>	<i>Item No.</i>
4730-188-1897	1	2	4730-277-9966	1	6
4730-188-1899	1	4	4730-278-3553	1	11
4730-192-6309	1	7	4730-377-4075	1	7
4730-196-1498	1	10	4820-227-0167	1	1
4730-199-5484	1	8	4820-262-7020	1	12
4730-249-1478	1	5	4820-826-8880	1	13
4730-253-5751	1	8	5310-368-6237	1	9
4730-265-9715	1	3	5310-639-2634	1	9

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**Section IV. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER  
CROSS-REFERENCE TO FIGURE AND ITEM NUMBER**

<i>Reference No.</i>	<i>Mfg Code</i>	<i>Fig No.</i>	<i>Item No.</i>	<i>Reference No.</i>	<i>Mfg Code</i>	<i>Fig No.</i>	<i>Item No.</i>
A6-19-4	81361	1	9			1	10
A6-19-8	81361	1	9	WWP460	81348	1	8
B6-19-5	81361	1	7	WWP521TYPE1	81348	1	3
E6-19-1	81361	1	7	WWP521TYPE2	81348	1	5
WWN351TYPEB	81348	1	11	WWV51	81348	1	12
WWN351TYPE1	81348	1	2	WWV51TYPE1			
		1	4	CLASSA	81348	1	1
		1	6	1498E6	53477	1	13

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By Order of the Secretary of the Army:

Official:

W. C. WESTMORELAND,  
*General, United States Army,*  
*Chief of Staff.*

VERNE L. BOWERS,  
*Major General, United States Army,*  
*The Adjutant General.*

Distribution:

To be distributed in accordance with DA Form 12-28, (qty rqr block No. 61) Operator maintenance requirements for Handling and Service Equipment.



Change }  
No. 1 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, D.C., 4 February 1972

**Operator, Organizational, Direct Support, General Support  
and Depot Maintenance  
ADAPTER, LINE FILLING, 1-TON CONTAINER, M1  
(END ITEM CODE 641)**

TM 3-4730-200-15, 29 June 1964, is changed as follows:

*Page 2*, paragraph 2. Paragraph 2 is deleted.

*Page 2*. Paragraph 3 is superseded as follows:

**3. Record and Report Forms.**

a. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750.

b. Use DD Form 6 (report of Packaging and Handling Deficiencies) to report damaged or improper shipment of materiel.

c. The reporting of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to: Commanding Officer, Edgewood Arsenal, ATTN: SMUEA-DE-ET, Edgewood Arsenal, Md. 21010.

d. Refer to TM 740-90-1 for administrative storage instructions on this equipment.

*Page 3*. Paragraph 3. Paragraph 4 is deleted.

*Page 10*, appendix 1, references.

Delete the following:

TM 3-304  
TM 5-461

Add the following:

TM 740-90-1 Administrative Storage of Equipment

Title of AR 740-12 is changed to read:

"Covered and Open Storage of Supplies"

Title of TM 38-750 is changed to read:

"The Army Maintenance Management System (TAMMS)."

*Page 12*, appendix III. Appendix is superseded as follows:



DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT, GENERAL SUPPORT,  
AND DEPOT MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

ADAPTER, LINE FILLING, ONE-TON CONTAINER, M1  
FSN 4730-368-6188

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Headquarters, Department of the Army, Washington, D. C.  
29 June 1964

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**SAFETY PRECAUTIONS**

Wear protective masks and protective Clothing when venting or filling 1-ton containers.

Some of the liquid agent in the 1-ton container may have settled in the upper tube. If there is pressure in the 1-ton container, the liquid that is in the upper tube will be forced out through the venting assembly when the  $\frac{3}{4}$ -inch globe valve is opened. To drain the upper tube, turn the venting assembly outlet downward and insert its open end into a container filled with decontaminating agent. The liquid that is forced out when the globe valve is opened will be neutralized by the decontaminating agent.

When clearing clogged valves or eduction tubes, the air pressure must be regulated not to exceed 375 pounds per square inch (psi). Pressure greater than 375 psi will blow out the safety plugs in the 1-ton container.

Decontaminate contaminated line filling adapter equipment inside and out after each use. After decontamination, clean thoroughly with soap and water, dry, and lubricate with a thin film of engine oil (OE) applied to the interior and exterior parts of the line filling adapter.

Conduct all filling operations *downwind* from nearby friendly personnel and away from buildings to protect friendly personnel from toxic fumes.

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**\*This manual supersedes so much of TM 3-255. 16 September 1955, as pertains to the M1 1-ton container line filling adapter.**

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## SECTION I INTRODUCTION

### 1. Scope

This manual describes the Adapter, Line Filling, 1-Ton Container, M1 and gives instructions on its use, operation, and maintenance. Hereinafter this equipment will be referred to as the line filling adapter.

Paragraph 2 deleted.

a. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750.

b. Use DD Form 6 (report of Packaging and Handling Deficiencies) to report damaged or improper shipment of materiel.

### 3. Record and Report Forms.

AGO 5012A

c. The reporting of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to: Commanding Officer, Edgewood Arsenal, ATTN: SMUEA-DE-ET, Edgewood Arsenal, Md. 21010.

d. Refer to TM 740-90-1 for administrative storage instructions on this equipment.

Paragraph 4 deleted.

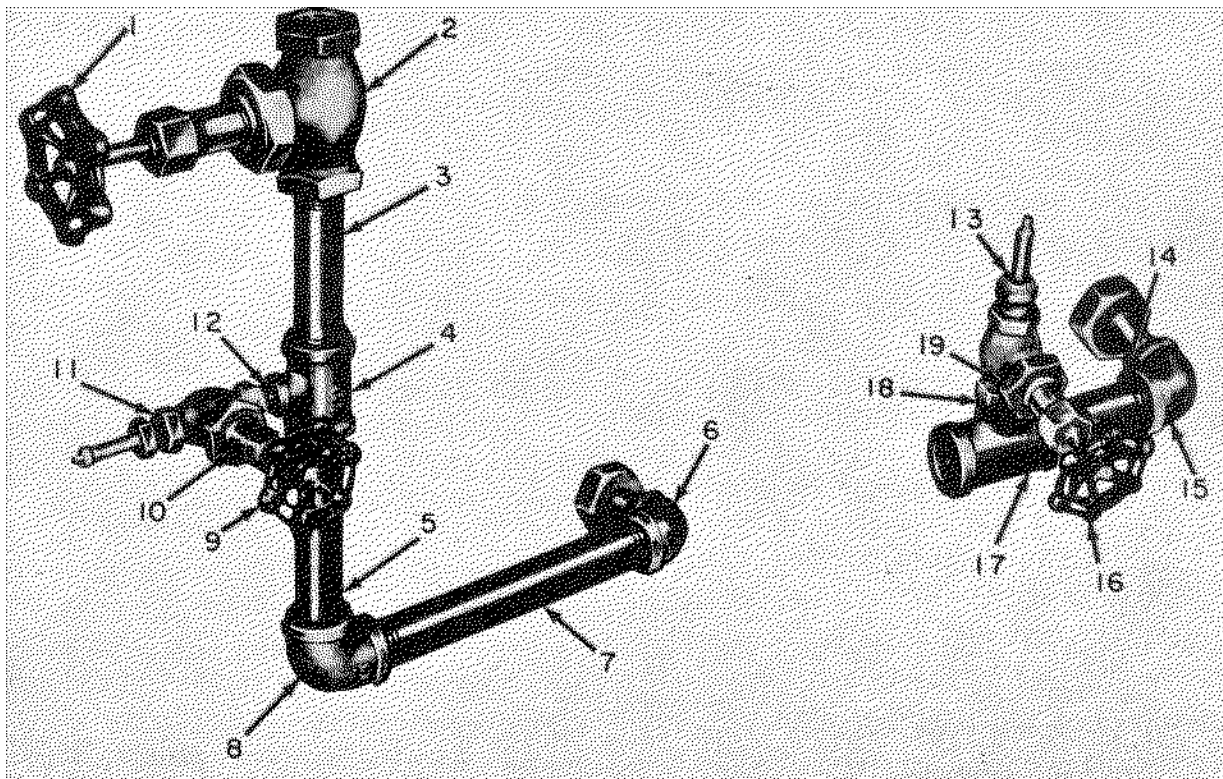
## SECTION II

### USE AND DESCRIPTION

#### 5. Use

The line filling adapter (fig. 1) is used for adapting the M3 airplane smoke tank filling line to the valves in 1-ton

containers, for venting 1-ton containers, for starting the flow from partly filled 1-ton containers, and for clearing clogged tubes and valves.



#### A. VENTING ASSEMBLY

- 1 Handwheel
- 2 Globe valve ( $\frac{3}{4}$ -in.)
- 3 Pipe nipple ( $\frac{3}{4}$ - by 4-in.)
- 4 Reducing pipe tee ( $\frac{3}{4}$ - by  $\frac{3}{4}$ - by  $\frac{1}{4}$ -in.)
- 5 Pipe nipple ( $\frac{3}{4}$ - by 5-in.)
- 6 Angle valve adapter
- 7 Pipe nipple ( $\frac{3}{4}$ - by 8-in.)
- 8 Pipe elbow ( $\frac{3}{4}$ -in. by 90°)
- 9 Handwheel
- 10 Globe valve ( $\frac{1}{4}$ -in.)

A-Venting assembly

#### B. FILLING ASSEMBLY

- 11 Pneumatic tank valve
- 12 Pipe nipple ( $\frac{1}{4}$ - by  $\frac{7}{8}$ -in.)
- 13 Pneumatic tank valve
- 14 Pipe nipple ( $\frac{3}{4}$ - by 3-in.)
- 15 Angle valve adapter
- 16 Handwheel
- 17 Reducing pipe tee ( $\frac{3}{4}$ - by  $\frac{3}{4}$ - by  $\frac{1}{4}$ -in.)
- 18 Pipe nipple ( $\frac{1}{4}$ - by  $\frac{7}{8}$ -in.)
- 19 Globe valve ( $\frac{1}{4}$ -in.)

B-Filling assembly

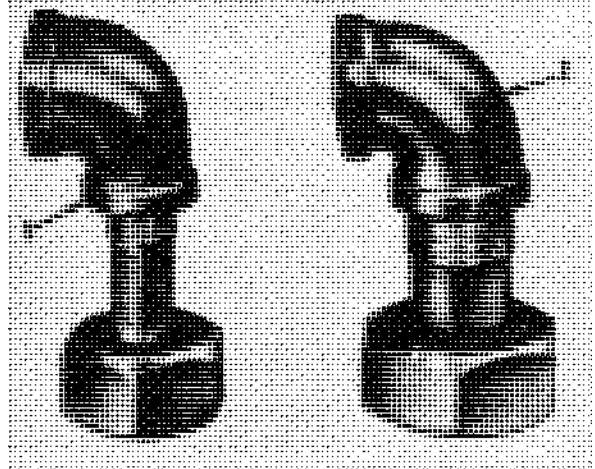
Figure 1. M1 1-ton container line filling adapter.

## 6. Description

The line filling adapter (fig. 1) consists of a venting assembly (A) and a filling assembly (B).

*a. Venting Assembly.* The venting assembly (A) consists of a  $\frac{3}{4}$ -inch globe valve (2), a  $\frac{3}{4}$ - by 4-inch pipe nipple (3), a  $\frac{3}{4}$ - by  $\frac{3}{4}$ - by  $\frac{1}{4}$ -inch reducing pipe tee (4), a  $\frac{1}{4}$ - by  $\frac{7}{8}$ -inch pipe nipple (12), a pneumatic tank valve (11), a  $\frac{1}{4}$ -inch globe valve (10), a  $\frac{3}{4}$ - by 5-inch pipe nipple (5), a  $\frac{3}{4}$ -inch by 90° pipe elbow (8), a  $\frac{3}{4}$ - by 8-inch pipe nipple (7), and two angle valve adapters (6).

- (1) The  $\frac{3}{4}$ -inch globe valve controls the flow of air through the venting assembly. Turning the handwheel (1) counterclockwise opens the valve; turning it clockwise closes the valve.
- (2) The pneumatic tank valve consists of a tire valve core and a tire valve cap in a housing. The valve is used to introduce air pressure from an external source through the  $\frac{1}{4}$ -inch globe valve into the venting assembly and to stop the flow of air from the venting assembly.
- (3) The  $\frac{1}{4}$ -inch globe valve controls the flow of air or liquid between the pneumatic tank valve and the venting assembly. A handwheel (9) is used to open or close the valve in the same way as the handwheel on the  $\frac{3}{4}$ -inch globe valve.
- (4) The four pipe nipples, the 90° pipe elbow, and the reducing pipe tee are standard galvanized pipe fittings.
- (5) Two angle valve adapters (1, fig. 2) and two valve adapter assemblies (2) are furnished with each line filling adapter. One angle valve adapter (1) is used to adapt the venting assembly to a  $\frac{3}{4}$ - or 1-inch Chlorine Institute valve. One valve adapter assembly (2) is used to adapt the venting assembly to the angle valve on the 1-ton container. Each valve adapter assembly consists of a  $\frac{3}{4}$ -inch by 90° pipe elbow, a nipple, a nut, and a



1 Angle valve adapter for Chlorine Institute valves  
2 Valve adapter assembly for angle valves

*Figure 2. Valve adapter assemblies for 1-ton containers.*

washer. The washer is made of lead; all other parts are made of bronze.

*b. Filling Assembly.* The filling assembly (B, fig. 1) consists of a  $\frac{3}{4}$ - by  $\frac{3}{4}$ - by  $\frac{1}{4}$ -inch reducing pipe tee (17), a  $\frac{1}{4}$ - by  $\frac{7}{8}$ -inch pipe nipple (18), a pneumatic tank valve (13), a  $\frac{1}{4}$ -inch globe valve (19), a  $\frac{3}{4}$ - by 3-inch pipe nipple (14), and an angle valve adapter (15).

- (1) The pneumatic tank valve is the same as the one furnished with the venting assembly (a(2) above). It is used to introduce air pressure from an external source through the  $\frac{1}{4}$ -inch globe valve into the filling assembly.
- (2) The  $\frac{1}{4}$ -inch globe valve is the same as the one furnished with the venting assembly (a(3) above) and serves the same purpose.
- (3) The  $\frac{3}{4}$ - by  $\frac{3}{4}$ - by  $\frac{1}{4}$ -inch reducing pipe tee and the two pipe nipples are standard galvanized pipe fittings.
- (4) Two angle valve adapters (1, fig. 2) and two valve adapter assemblies (2) are furnished with each line filling adapter. One angle valve adapter (1) is used to adapt the filling assembly to a  $\frac{3}{4}$ - or a 1-inch Chlorine Institute valve. One valve adapter assembly is used to adapt the filling assembly to the angle valve on the 1-ton container



## SECTION III

## OPERATING INSTRUCTIONS

## 7. General

This section covers the operation of the line filling adapter.

## 8. Connecting Venting Assembly to 1-Ton Container

a. Place the 1-ton container on an improvised stand (or on the vehicle on which the 1-ton container was transported) and remove the protective cover (or shipping bonnet) that protects the angle valves on the 1-ton container.

b. Roll the 1-ton container until the angle valves are aligned vertically and check it in place to prevent further rolling. When the angle valves are aligned one above the other, the end of the eduction tube leading from the upper angle valve on the 1-ton container is above the level of the liquid in the 1-ton container. (The upper angle valve is to be used to attach the venting assembly to the 1-ton container.)

c. Be sure that the upper angle valve on the 1-ton container is closed. Remove the cap from the angle valve outlet.

d. Apply luting compound to the male threads on the angle valve adapter coupling nut and connect this end into the angle valve outlet and draw the coupling nut up tight.

**Note**

**The venting assembly has been preassembled (para. 18) with the parts described in paragraph 6a.**

## 9. Connecting Filling Assembly to 1-Ton Container

a. First perform the procedure in paragraph 8.

b. Be sure that the lower angle valve on the 1-ton container is closed. Then remove the cap from the angle valve outlet.

c. Apply luting compound to the male threads on the angle valve adapter coupling nut and connect this end into the angle valve outlet and draw the coupling nut up tight.

**Note**

**The filling assembly has been preassembled (para. 18) with the parts described in paragraph 6b.**

## 10. Venting 1-Ton Container

To vent a 1-ton container using the line filling adapter, perform the following steps.

AGO 5012A

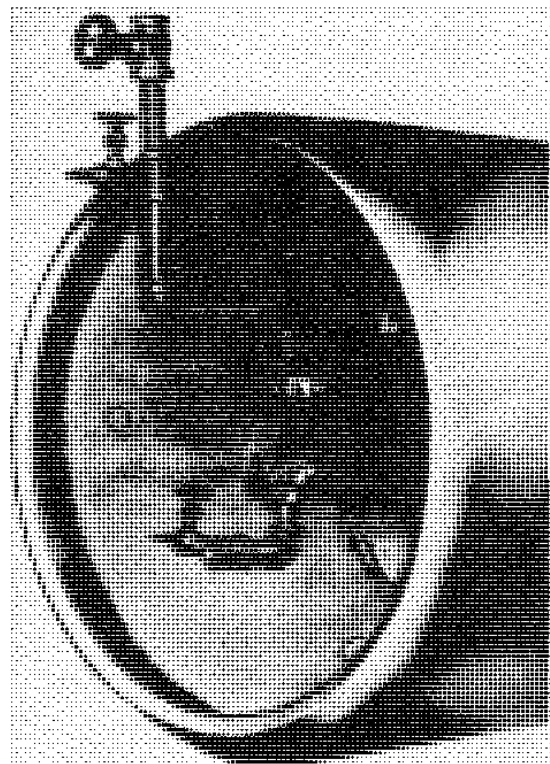


Figure 3. Line filling adapter installed in 1-ton container.

a. Open the upper valve on the 1-ton container.

b. Slowly open the  $\frac{3}{4}$ -inch globe valve in the venting assembly.

**Warning**

**Some of the liquid agent in the 1-ton container may have settled in the upper tube. If there is pressure in the 1-ton container, the liquid will be forced out through the venting assembly when the  $\frac{3}{4}$ -inch globe valve is opened. To drain the upper tube, turn the venting assembly outlet downward and insert its open end into a container filled with decontaminating agent. The liquid that is forced out when the globe valve is opened will be neutralized by the decontaminating agent.**

c. When there is a vacuum in the 1-ton container, leave the  $\frac{3}{4}$ -inch globe valve open until

air stops flowing into the 1-ton container, then close the globe valve.

d. Close the upper angle valve on the 1-ton container also.

### 11. Adapting M3 Airplane Smoke Tank Filling Line to Line Filling Adapter

a. Hold the nut on the hose side of the M3 airplane smoke tank filling line union coupling with a standard open end wrench. Uncouple the union coupling by unscrewing the large nut on the union coupling with a second wrench. (Doing this separates the adapter assembly, retaining valve, pipe nipple, and a union coupling half as a unit from the hose assembly).

b. Apply soft graphite grease (GG) to the threads of the pipe nipple on the adapter assembly threads and screw the adapter assembly end of the unit (a above) tightly into the reducing pipe tee (17, fig. 1).

c. Couple the halves of the union coupling. Turn the M3 hose assembly so that the nozzle points downward and tighten the union coupling by holding the nut on the hose side of the union coupling with a wrench while tightening the large nut on the union coupling with a second wrench.

### 12. Starting Flow of Liquid Agent From 1-Ton Container

When the level of the liquid in a 1-ton container that is not under pressure falls below the lower angle valve, pressure must be built up in the 1-ton container to start the flow of the liquid. This is done by forcing compressed air into the 1-ton container through the pneumatic tank valve on the venting assembly.

#### Caution

**When transferring VX and GB-agents, undried compressed air may be used if receptacle being filled is to be used promptly (within 1 or 2 wk) and if the remaining agent is not to be left in the 1-ton container longer than 2 weeks. If longer storage is anticipated, dried compressed air must be used to prevent hydrolysis of the agent in the filled receptacle as well as prevent hydrolysis of the agent in the 1-ton container.**

a. Close the upper and lower angle valves on the 1-ton container and close all globe valves on the line filling adapter.

b. Connect a low-pressure source of compressed air to the pneumatic tank valve on the venting assembly.

c. Open the upper angle valve on the 1-ton container.

d. Open the  $\frac{1}{4}$ -inch globe valve on the assembly and pump air into the 1-ton container until the pressure reaches 3 to 5 psi.

e. Close the upper angle valve on the 1-ton container and close the  $\frac{1}{4}$ -inch globe valve on the venting assembly.

f. The liquid will flow when the lower angle valve in the 1-ton container is opened.

### 13. Clearing Clogged Angle Valves or Eduction Tube of 1-Ton Containers

Clogged angle valves or eduction tubes can be cleared by forcing compressed air from an external source through the pneumatic tank valve in the line filling adapter and then through the pneumatic tank valve in the line filling adapter and then through the clogged angle valve or eduction tube.

#### Warning

**The air pressure must be so regulated not to exceed 375 psi. Pressure greater than 375 psi will blow out the safety plugs in the 1-ton container.**

#### Caution

**When clearing clogged angle valves or eduction tubes of 1-ton containers filled with VX or GB-agents, undried compressed air may be used if the 1-ton container being cleared is to be used promptly (within 1 or 2 wk) and if the remaining agent is not to be left in the 1-ton container longer than 2 weeks. If longer storage is anticipated, dried compressed air must be used to prevent hydrolysis of the agent in the 1-ton container.**

a. *Clearing Upper Angle Valve or Eduction Tube.*

- (1) Close the upper and lower angle valves on the 1-ton container and close all globe valves in the line filling adapter.
- (2) Connect a source of compressed air to the pneumatic tank valve on the venting assembly (fig. 4).
- (3) Open the upper angle valve on the 1-ton container.

- (4) Slowly open the  $\frac{1}{4}$ -inch globe valve on the venting assembly. This will admit compressed air into the venting assembly and apply pressure to the clogged angle valve or eduction tube.
- (5) When air is heard flowing into the 1-ton container, quickly close the  $\frac{1}{4}$  inch globe valve in the venting assembly, close the upper angle valve in the 1-ton container, and disconnect the source of compressed air from the pneumatic tank valve.
- (6) Vent the 1-ton container (para. 10).

*b. Clearing Lower Angle Valve or Eduction Tube.*

- (1) Close the upper and lower angle valves on the 1-ton container and close all globe valves in the line filling adapter.
- (2) With the M3 airplane smoke tank filling line connected to the filling assembly of the line filling adapter (para. 11), close both valves on the airplane smoke tank filling line.
- (3) Connect a source of compressed air to the pneumatic tank valve on the filling assembly.
- (4) Open the lower angle valve on the 1-ton container.

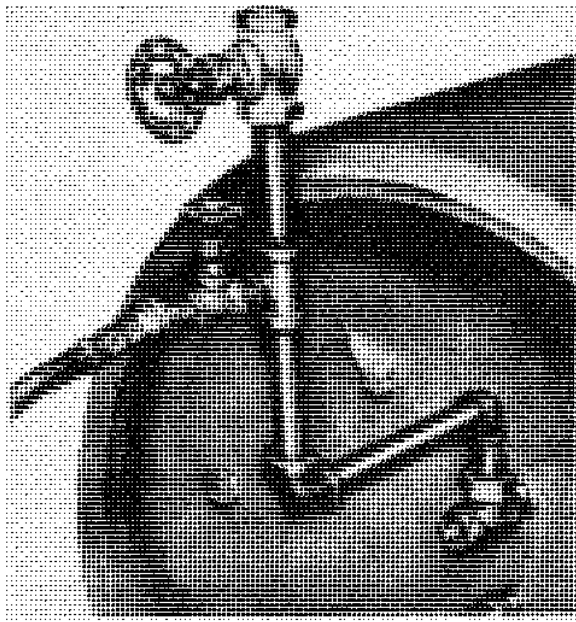


Figure 4. Air pressure line connected to pneumatic tank valve on venting assembly.

- (5) Slowly open the  $\frac{1}{4}$ -inch globe valve in the filling assembly. This will admit compressed air into the filling assembly and pressure will be applied to the clogged angle valve or eduction tube.
- (6) When air is heard flowing into the 1-ton container, quickly close the  $\frac{1}{4}$ -inch globe valve in the filling assembly. Close the lower angle valve on the 1-ton container and disconnect the source of compressed air from the pneumatic tank valve.
- (7) Vent the 1-ton container (para. 10).
- (8) Bleed the air pressure from the filling assembly by slowly opening, first, the filling valve, then the retaining valve on the M3 airplane smoke tank filling line. Close the valves when the air pressure has been bled.

#### 14. Removing Line Filling Adapter From 1-Ton Container

Close both angle valves on the 1-ton container, empty the filling assembly, and remove the airplane smoke tank filling line if it is connected to the filling assembly. Open the  $\frac{3}{4}$ -inch globe valve on the venting assembly. Disconnect the line filling adapter from the angle valves of the 1-ton container by unscrewing the angle valve adapters from the angle valves.

#### 15. Emptying 1-Ton Container Through Plug Opening

When neither angle valve in a 1-ton container can be used to withdraw the contents of the container, the venting assembly of the line filling adapter can be connected to one of the plugholes in the 1-ton container and the contents can be withdrawn through the venting assembly.

- a. Roll the 1-ton container until one of the plugs in the front container head is uppermost.
- b. Disconnect the angle valve adapter from the venting assembly of the line filling adapter and close both globe valves on the venting assembly.
- c. Unscrew the uppermost plug from the plughole (a above). Keep this plug nearby so that it can be replaced after the 1-ton container is empty.

d. Connect the  $\frac{3}{4}$ -inch by 8-inch pipe nipple 7, (fig. 1) into the open plughole in the 1-ton container (fig. 5). Then connect the venting assembly (b above) to the pipe nipple.

e. Roll the 1-ton container until the plughole that holds the venting assembly is at its lowest position.

### Caution

**Be careful not to damage the venting assembly while rolling the 1-ton container.**

f. Connect an M3 airplane smoke tank filling line (para. 11) to the  $\frac{3}{4}$ -inch globe valve in the venting assembly. To withdraw the contents of the 1-ton container, open the  $\frac{3}{4}$ -inch globe valve in the venting assembly. It may be necessary to tilt the 1-ton container to allow the last of the contents to flow out through the venting assembly.

g. When it is necessary to vent the 1-ton container to relieve a vacuum created by withdrawing the contents, admit air into the 1-ton container by unscrewing one of the plugs in the front container head until the vacuum is relieved. Screw in the plug when air stops flowing into the 1-ton container.

h. When the 1-ton container is empty, close the  $\frac{3}{4}$ -inch globe valve in the venting assembly, disconnect the M3 airplane smoke tank filling line, roll the 1-ton container until the venting assembly is at the top, unscrew the venting assembly from the plughole, and screw in the plug.

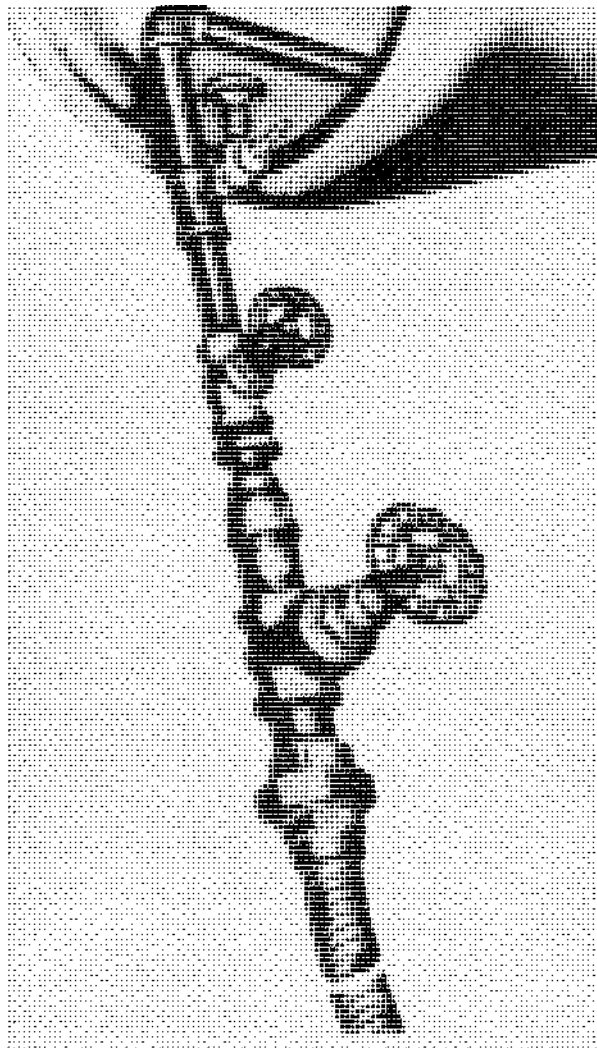


Figure 5. Venting assembly connected to plughole in 1-ton container.

## SECTION IV

### ORGANIZATION, DIRECT SUPPORT, GENERAL SUPPORT, AND

#### DEPOT MAINTENANCE INSTRUCTIONS

#### 16. General

All authorized maintenance can be accomplished by organizational maintenance personnel. Direct support, general support, and depot maintenance, including overhaul, will follow these same procedures.

#### 17. Inspection

After unpacking the components of the line filling adapter, inspect for completeness of the components

(para. 6), and for rust, corrosion, and broken or crossed threads. Test globe valves for ease of operation. Use DD Form 6 to report damaged or improper shipment.

#### 18. Assembling Line Filling Adapter

a. *General.* The line filling adapter when assembled makes up into a venting assembly and a filling assembly.

*b. Venting Assembly.*

- (1) Apply luting compound to all male threads before screwing the parts of the venting assembly in place.
- (2) Screw the valve angle adapter in the 90° pipe elbow and draw it up tight.
- (3) Thread the  $\frac{3}{4}$ - by 8-inch pipe nipple into the 90° pipe elbow and draw it up tight.
- (4) Connect a 90° pipe elbow into the other end of the  $\frac{3}{4}$ - by 8-inch pipe nipple and draw it up tight.
- (5) Connect the  $\frac{3}{4}$ - by 5-inch pipe nipple into the 90° pipe elbow and draw it up tight.
- (6) Connect the pipe tee into the  $\frac{3}{4}$ - by 5-inch pipe nipple and draw it up tight.
- (7) Connect the  $\frac{1}{4}$ - by  $\frac{7}{8}$ -inch pipe nipple into the pipe tee and also connect the  $\frac{3}{4}$ - by 4-inch pipe nipple into the pipe tee and draw these up tight.
- (8) Connect the  $\frac{1}{4}$ -inch globe valve to the  $\frac{1}{4}$ - by  $\frac{7}{8}$ -inch pipe nipple and draw it up tight.
- (9) Connect the  $\frac{3}{4}$ -inch globe valve to the  $\frac{3}{4}$ - by 4-inch nipple and draw it up tight.
- (10) Connect the pneumatic tank valve to the  $\frac{1}{4}$ -inch globe valve and draw it up tight.

*c. Filling Assembly.*

- (1) Apply luting compound to all male threads before screwing the parts of the filling assembly in place.
- (2) Connect the valve angle adapter to the 90° pipe elbow and draw it up tight.
- (3) Connect the  $\frac{3}{4}$ - by 3-inch pipe nipple to 90° pipe elbow and draw it up tight.

- (4) Connect the pipe tee to the  $\frac{3}{4}$ - by 3-inch pipe nipple and draw it up tight.
- (5) Connect the  $\frac{1}{4}$ - by  $\frac{7}{8}$ -inch pipe nipple to the pipe tee and draw it up tight.
- (6) Connect the  $\frac{1}{4}$ -inch globe valve to the  $\frac{1}{4}$ - by  $\frac{7}{8}$ -inch pipe nipple and draw it up tight.
- (7) Connect the pneumatic tank valve to the  $\frac{1}{4}$ -inch globe valve and draw it up tight.

**19. Lubrication**

Lubricate the line filling adapter after each use. Apply a thin film of engine oil (OE) to the interior and exterior of all pipe nipples, valves, and fittings. Oil the valve stems with engine oil.

**20. Decontamination**

After each use, decontaminate the line filling adapter inside and out. Be sure that the decontaminating material is applied to the insides of the globe valves and the pneumatic tank valves. Refer to TM 3-220 for detailed instructions in decontamination procedure. After decontaminating, clean thoroughly with soap and water, dry, and lubricate (para. 19).

**21. Replacing Damaged Parts**

If parts are damaged during use, replace damaged or unserviceable pipe nipples, adapters, elbows, pneumatic tank valves, and globe valves. Apply luting compound to all male threads before screwing replacement parts into place in the line filling adapter.

**22. Sealing Leaking Connections**

When a threaded connection leaks, unscrew the male end from the female end, apply luting compound to the threads on the male end, and screw the connection firmly together.

**SECTION V****SHIPMENT, LIMITED STORAGE, AND DEMOLITION TO****PREVENT ENEMY USE****23. Shipment**

Prepare the line filling adapter for shipment by leaving the item assembled as a venting assembly and a filling

assembly. Empty all liquid from the assemblies and dry out all parts of the venting assembly and the filling assembly. Cover the open ends of the pipes with pressure sensitive adhesive tape. Crate the

line filling adapter, its technical manuals, and its log book in a box made of plywood and secure with meta straps. Mark the outside of the box with a stencil that identifies the contents of the box. Stencil the name of the line filling adapter and its stock number (FSN 4730-368-6188) on the outside of the box.

## 24. Limited Storage

*a. General.* Refer to AR 740-12 for information on storage of equipment and supplies. It is the responsibility of the unit commander to determine the preventive maintenance needs when placing the line filling adapter in limited storage. Climate and anticipated weather conditions are factors which will determine the extent of protection required.

*b. Cleaning and Painting.* Wash off the line filling adapter and flush away all foreign matter. Cap all open ends to prevent entry of dust and foreign matter. Touch

up any scratched surfaces with paint. If the equipment is being stored outside, follow the procedures listed in *a* above and cover the line filling adapter with canvas. Post a marker or sign to identify the line filling adapter.

## 25. Demolition to Prevent Enemy Use

If circumstances force abandonment of the line filling adapter to the enemy, it must be destroyed or rendered useless to prevent its use or study by the enemy. This action will be taken only when in the judgment of the military commander concerned it is deemed necessary. Complete destruction of an end item includes the end item itself, its technical manuals, and its logbook. For destruction of the line adapter use a sledge hammer, or any other heavy tool to smash the pipe nipples, adapters, valves, and elbows. Other methods that can be used are scattering and concealment, submersion in a deep body of water, or by use of explosives.

## APPENDIX I

### REFERENCES

AR 740-12	Cover and Open Storage of Supplies
TM 3-215	Military Chemistry and Chemical Agents
TM 3-220	Chemical, Biological, and Radiological (CBR) Decontamination
TM 3-250	Storage, Shipment, and Handling of Chemical Agents and Hazardous Chemicals.
TM 3-4730-200-25P	Organizational, Field and Depot Maintenance Repair Parts and Special Tool Lists-Adapter, Line Filling, One-Ton Container, M1 (FSN 4730-368-6188).
TM 38-230	Preservation, Packaging, and Packing of Military Supplies and Equipment
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 3-1040-208-25P	Filling Line. Metal. Airplane Smoke Tank, M3
TM 740-90-1	Administrative Storage of Equipment

## APPENDIX II

### MAINTENANCE ALLOCATION CHART

#### 1. Explanation of Columns

*a. Column 1, Index Number.* Column 1 lists the number which is assigned to each group, component, assembly, or subassembly to facilitate references. The numbers are identical to and in the same sequences as those assigned to the same group, component,

assembly, or subassembly in the repair parts and special tool lists.

*b. Column 2, Components and Related Maintenance Operations.* Column 2 lists groups, components, assemblies, and subassemblies on

which maintenance can be performed; and the maintenance operations which are authorized to be performed on each.

c. *Columns 3, 4, 5, 6, and 7, Maintenance Echelon.* An X indicates the lowest echelon authorized to perform the prescribed maintenance operation.

d. *Column 8, Remarks.* Column 8 is used for special instructions.

## 2. Use of Chart

Determine from the chart the echelon that is authorized to perform the required maintenance operation. Refer to the next in the appropriate part of the maintenance manual for instructions in performing the authorized maintenance operations as defined.

INSPECT To verify serviceability and to detect incipient electrical or mechanical failure by scrutiny.

REPLACE To substitute serviceable assemblies and subassemblies for unserviceable component parts.

REPAIR To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This function includes but is not limited to, inspecting, cleaning, preserving, adjusting, replacing, welding, riveting, and straightening.

SYMBOL X The symbol X placed in the appropriate column indicates the echelon responsible for performing that particular maintenance operation, but does not necessarily indicate that repair parts will be stocked at that level. Echelons higher than that echelon marked by "X" are authorized to perform the indicated operation.

*Maintenance Allocation Chart*

Index No. (1)	Component and related maintenance operation (2)	Maintenance echelon					Remarks (8)
		1st (3)	2d (4)	3d (5)	4th (6)	5th (7)	
2	Adapter, Angle, Valve, Type D and E Containers						
	Inspect-----	X					
	Repair-----	---	X				
5	Adapter, Valve, Type A, D, and E Containers						
	Inspect-----	X					
	Repair-----	---	X				
8	Elbow, Pipe						
	Replace-----	---	X				
9 to 13	Nipples, Pipe						
	Replace-----	---	X				
14	Tee, Pipe						
	Replace-----	---	X				
15, 16	Valve Globe						
	Inspect-----	X					
	Replace-----	---	X				
17	Valve, Pneumatic Tank						
	Inspect-----	X					
	Repair-----	---	X				
	Replace-----	---	X				

## APPENDIX III

## BASIC ISSUE ITEM LIST

## Section I. INTRODUCTION

## 1. Purpose and Scope

This appendix furnishes the user of the Adapter, Line Filling, One-Ton Container, M1 with a list of the major components and the supplies, tools, and repair parts that comprise the end item.

## 2. Explanation of Columns

*a. Federal Stock Number.* Federal stock numbers are assigned by Federal Cataloging Program and are to be used in accordance with AR 708-15.

*b. Description.* The approved Federal item name appears with modifiers necessary for proper identification.

*c. Unit of Issue.* The unit of issue for each item is indicated in this column.

*d. Expendability.* The symbol NX indicates that an item is nonexpendable. When no symbol appears, the item is expendable.

*e. Quantity Authorized.* Quantities listed represent the repair parts, spare assemblies, supplies, and special tools authorized for first echelon maintenance. The authorized quantities for each item must be on hand or on order at all times.

*f. Illustrations.* This column contains the figure number of each illustration and the item number on that illustration for indicated components.

## 3. Abbreviations

ea -----each  
fig. -----figure  
in. -----inch (es)  
No. -----number  
N -----nonexpendable

## Section II. BASIC ISSUE ITEM LIST

Federal stock No.	Description	Unit of issue	Expendability	Quantity authorized	Illustrations	
					Figure No.	Item No.
4730-368-6188	Adapter, line filling one-ton container, M1-----	ea	NX	----	1	
	MAJOR COMPONENTS					
4730-192-6309	Adapter, angle valve-----	ea	----	2	1	6
4730-377-4075	Adapter, angle valve-----	ea	----	2	1	15
4820-227-0167	Valve, globe, 3/4-in. -----	ea	----	1	1	2
4820-262-7020	Valve, globe, 1/4-in. -----	ea	----	2	1	10, 19
4820-699-8100	Valve, pneumatic tank -----	ea	----	2	1	11, 13
	MAINTENANCE MATERIAL REPAIR PARTS GROUP					
4730-249-1478	Elbow, pipe-----	ea	----	1	1	8
4730-265-9715	Tee, reducing pipe-----	ea	----	2	1	4,17



**APPENDIX IV**

**ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT**

**MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST**

**(INCLUDING DEPOT MAINTENANCE REPAIR PARTS**

**AND SPECIAL TOOLS)**

---

**Section I. INTRODUCTION**

**1. Scope**

This appendix lists repair parts required for the performance of organizational, direct support, general support, and depot maintenance of the M1 line filling adapter.

**2. General**

This Repair Parts and Special Tools List is divided into the following sections:

*a. Repair Parts List-Section II.* A list of repair parts authorized at the organizational, direct support, general support, and depot levels for the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts are listed in figure and item number sequence.

*b. Special Tools List-Section III.* Not applicable.

*c. Federal Stock Number and Reference Number Index-Section IV.* A list, in ascending numerical sequence, of all Federal stock numbers appearing in the listings, followed by a list, in alphanumeric sequence, of all reference numbers appearing in the listings. Federal stock numbers and reference numbers are cross-referenced to each illustration figure and item number appearance.

**3. Explanation of Columns**

The following provides an explanation of columns found in the tabular listings.

*a. Source, Maintenance, and Recoverability Codes (SMR), (5 Positions).*

(1) *Source codes (positions 1 and 2).* Indicates the source for the listed items. Applicable source code is:

<i>Code</i>	<i>Explanation</i>
PA -----	Item procured and stocked for anticipated or known usage.

**NOTE**

**Cannibalization or salvage may be used as a source of supply for any item source coded PA.**

(2) *Maintenance codes (positions 3 and 4).*

(a) *Position 3.* The maintenance code entered in the third position indicates the lowest maintenance level authorized to remove, replace, and use the support item. Capabilities of higher maintenance categories are considered equal or better. Applicable maintenance code is:

<i>Code</i>	<i>Explanation</i>
O -----	Organizational maintenance

*c. Description.* Indicates the Federal item name and a minimum description required to identify the item. The last line indicates the reference number followed by the applicable Federal Supply Code for Manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate manufacturer or distributor or Government agency. etc. and is identified in SB 708-42.

*d. Unit of Measure (U/M).* Indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, e.g., ea, in., pr, etc., and is the basis used to indicate quantities and allowances in subsequent columns. 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.

*e. Quantity Incorporated in Unit.* Indicates the quantity of the item used in the breakout shown on the illustration figure. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, e.g., shims, spacers, etc.

*f. Organizational Maintenance Allowances.*

(1) An asterisk (\*) entered in the organizational (org) allowance subcolumn indicates that the repair part is authorized for use at the organizational level, and will be requisitioned on an "as required" basis until stockage is based on demand in accordance with AR 710-2.

(b) *Position 4.* 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). Capabilities of higher maintenance categories are considered equal or better. Applicable codes are:

Code	Explanation
------	-------------

O-----	Organizational maintenance
Z-----	Non-repairable. No repair is authorized.

(3) *Recoverability code (position 5).* Indicates whether unserviceable items should be returned for recovery or salvage. Applicable recoverability codes are:

Code	Explanation
------	-------------

Z-----	Non-repairable item. When unserviceable, condemn and dispose at the level indicated in position 3.
F-----	Reparable item. When uneconomically repairable, condemn and dispose at the direct support level.

*b. Federal Stock Number.* Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

(2) Major Army commanders are authorized to approve reductions in the range of support items authorized for use in units within their commands. Recommendations for increases, in range of items authorized for use, should be forwarded to the Commanding Officer, Edgewood Arsenal, ATTN: SMUEA-DE-ETL, Edgewood Arsenal, MD 21010, for action on such recommendations. Changes approved will be reflected in a revision to the manual.

*g. DS/GS Maintenance Allowances.*

(1) An asterisk (\*) entered in the direct support (DS) and general support (GS) subcolumn indicates that the repair part is authorized for use at that level, and will be requisitioned on an "as required" basis.

(2) The repair parts authorized at the DS/GS levels are for the maintenance mission at these levels.

(3) Requirements for repair parts stockage and for distribution to supported units will be based on demand and determined in accordance with AR 710-2.

*h. 1-Year Allowances Per 100 Equipments/Contingency Planning Purposes.* An asterisk (\*) entered in the contingency (cntgcy) column indicates that the total quantity of the repair part required for distribution and contingency planning purposes will be based on demand data.

*i. Depot Maintenance Allowance Per 100 Equipments.* An asterisk (\*) entered in the depot column indicates that the repair part is authorized for use at the depot level, and will be requisitioned on an "as required" basis.

*j. 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. Indicates the callout number used to reference the item on the illustration.

#### 4. Special information

a. Usable on codes are included in Column 3. Uncoded items are applicable to entire as-

sembly. Identifications of the usable on codes used in this publication are:

<i>Code</i>	<i>Used On</i>
A -----	Valve adapter assembly for angle valves.
B -----	Angle valve adapter for Chlorine Institute valves.

*b.* Action change codes indicated in the left-hand margin of the listing page denote the following:

- N-Indicates an added item.
- C-Indicates a change in data.
- R-Indicates a change in FSN only.

## 5. How to Locate Repair Parts

*a.* When Federal stock number or reference number is unknown:

(1) *First.* Find the illustration on which the repair part is shown and note the item number assigned the part.

(2) *Second.* Using the Repair Parts Listing, locate the illustration figure and item number noted on the illustration.

*b.* When Federal stock number or reference number is known:

(1) *First.* Using the Index of Federal Stock Numbers and Reference Numbers, find the pertinent Federal stock number or reference number. This index is in ascending FSN sequence followed by a list of reference numbers in ascending alphanumeric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second.* Using the Repair Parts Listing, find the illustration figure number and item number referenced in the Index of Federal Stock Numbers and Reference Numbers.

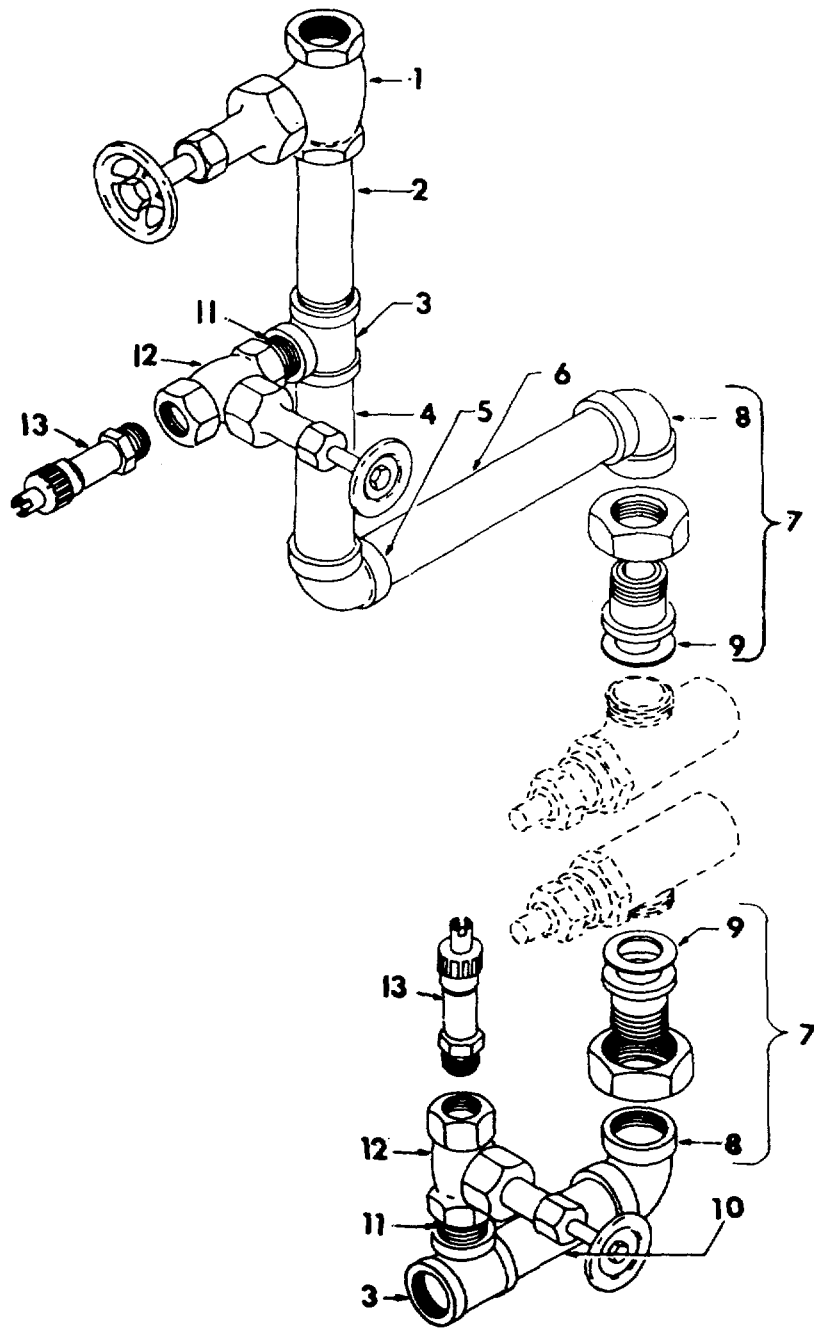
## 6. Abbreviations

<i>Abbreviations</i>	<i>Explanation</i>
conec -----	connector

Section II. REPAIR PARTS LIST

(1) SMR Code	(2) Federal stock No.	(3) Description  Reference Number & Mfr Code Usable on Code	(4) Unit of Meas	(5) Qty Inc in Unit	(6) 15-Day Organizational Maintenance Alw				(7) Illustration	
					(a) 1-5	(b) 6-20	(c) 21-150	(d) 51-100	(a) Figure No.	(b) Item No.
C	PA OZ Z	4820-227-0167	VALVE, GLOBE bronze, 3/4-14 NPT, rh, 125 to 200 psi WWV51TYPEICLASSA (81348)	ea	1	*	*	*	1	1
C	PA OZ Z	4730-188-1897	NIPPLE, PIPE stl, 3/4-14 NPT, rh, 4.000 in. nom lg WWN351TYPE1 (81348)	ea	1	*	*	*	1	2
C	PA OZ Z	4730-266-9715	TEE, PIPE malleable iron, 150 to 300 psi, 3/4-14 NPT, rh, 1.050 in. nom leg lg, first end conec 1/4-18 NPT, rh, 1.080 in. nom leg lg, third end conec WWP521TYPE1 (81348)	ea	2	*	*	*	1	3
C	PA OZ Z	4180-188-1899	NIPPLE, PIPE stl, 3/4-14 NPT, rh, 5.000 in. nom lg WWN351TYPE1 (81348)	ea	1	*	*	*	1	4
C	PA OZ Z	4730-249-1478	ELBOW, PIPE malleable iron, 3/4-14 NPT, 1.31 in. leg lg, 90 deg WWP521TYPE2 (81848)	ea	1	*	*	*	1	5
C	PA OZ Z	4730-277-9966	NIPPLE, PIPE stl, 3/4-14 NPT, rh, 8.000 in. lg WWN351TYPE1 (81348)	ea	1	*	*	*	1	6
C	PA OZ Z	4730-192-6309	ADAPTER, ANGLE E6-19-1 (81361)	ea	2	*	*	*	1	7
C	PA OO F	4780-377-4075	ADAPTER, VALVE B6-19-5 (81361)	ea	2	*	*	*	1	7
C	PA OZ Z	4780-253-5751	ELBOW, PIPE brass, 3/4-14 NPT, rh, 125 to 175 lb psi, 90 deg WWP460 (81348)	ea	1	*	*	*	1	8
C	PA OZ Z	4780-199-5484	ELBOW, PIPE brass o0 bronze, 3/8-18 NPT, rh, 90 deg WWP4M 0 (81348)	ea	1	*	*	*	1	8
C	PA OZ Z	5310-639-2634	WASHER, FLAT lead, 0.813 in. id, 1.3906 in. od, 0.625 in. thk A6-19-4 (81361)	ea	1	*	*	*	1	9
C	PA OZ Z	5310-368-6237	WASHER, FLAT lead, 0.562 in. max id, 0.922 in. max od, 0.078 in. max thk A6-19-8 (81861)	ea	1	*	*	*	1	9

(1)  SMR Code	(2)  Federal stock No.	(3)  Description  Reference Number & Mfr Code	(4)  Unit of Meas	(5)  Qty Inc in Unit	(6)  15-Day Organizational Maintenance Alw				(7)  Illustration		
					(a) 1-5	(b) 6-20	(c) 21-150	(d) 51-100	(a) Figure No.	(b) Item No.	
C	PA OZ Z	4780-196-1498	NIPPLE, PIPE stl, 3/4-14 NPT, 3.000 nom lg WWN351TYPE1 (81348)	ea	1	*	*	*	*	1	10
C	PA OZ Z	4730-278-3553	NIPPLE, PIPE stl, 1/4-18 NPT, 7/8 in. lg o/a WWN351TYPEB (81348)	ea	2	*	*	*	*	1	11
C	PA OZ Z	4820-262-7020	VALVE, GLOBE bronze, 150 to 300 psi, 1/4-18 NPT, rh WWV51 (81348)	ea	2		*	*	*	1	12
C	PA OZ Z	4820-826-8880	VALVE, PNEUMATIC TANK brass, 1/4-18 NPT outlet, 0.302-32 thd size, tire and rim assoc, inlet rh 1498E6 (53477)	ea	2	*	*	*	*	1	13



MU-E-641-1

Figure 1. M1 adapter repair parts.

**Section IV. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER  
CROSS-REFERENCE TO FIGURE AND ITEM NUMBER**

<i>Stock Number</i>	<i>Figure No.</i>	<i>Item No.</i>	<i>Stock Number</i>	<i>Figure No.</i>	<i>Item No.</i>
4730-188-1897	1	2	4730-277-9966	1	6
4730-188-1899	1	4	4730-278-3553	1	11
4730-192-6309	1	7	4730-377-4075	1	7
4730-196-1498	1	10	4820-227-0167	1	1
4730-199-5484	1	8	4820-262-7020	1	12
4730-249-1478	1	5	4820-826-8880	1	13
4730-253-5751	1	8	5310-368-6237	1	9
4730-265-9715	1	3	5310-639-2634	1	9

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**Section IV. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER  
CROSS-REFERENCE TO FIGURE AND ITEM NUMBER**

<i>Reference No.</i>	<i>Mfg Code</i>	<i>Fig No.</i>	<i>Item No.</i>	<i>Reference No.</i>	<i>Mfg Code</i>	<i>Fig No.</i>	<i>Item No.</i>
A6-19-4	81361	1	9			1	10
A6-19-8	81361	1	9	WWP460	81348	1	8
B6-19-5	81361	1	7	WWP521TYPE1	81348	1	3
E6-19-1	81361	1	7	WWP521TYPE2	81348	1	5
WWN351TYPEB	81348	1	11	WWV51	81348	1	12
WWN351TYPE1	81348	1	2	WWV51TYPE1			
		1	4	CLASSA	81348	1	1
		1	6	1498E6	53477	1	13

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By Order of the Secretary of the Army:

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Arsenals (3) except  
Edgewood (50)  
PG (5)  
USA Corps (1)  
Units org under fol TOE:  
3-67 (1)  
3-117 (1)  
3-147 (1)  
3-500 (AA-AB) (1)

NG: State AG (3) ; div (1).

USAR: None.

For explanation of abbreviations used, see AR 320-50.

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