TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE AND DIRECT SUPPORT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

MINE, ANTIPERSONNEL: HE, M74
(NSN 1345-01-076-3497)

MINE, ANTITANK: HE, M75
(NSN 1345-01-078-4104)

AND

MINE, ANTITANK, PRACTICE: M79
(NSN 1345-01-074-9370)

This copy is a reprint which includes current pages from Changes 1 and 2.

HEADQUARTERS, DEPARTMENT OF THE ARMY

31 DECEMBER 1984

WARNING

MINES WILL BE REMOVED FROM SHIPPING AND STORAGE CONTAINERS BEFORE CONTAINERS ARE WELDED.

CHANGE)
NO. 2)

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 30 April 1987

ORGANIZATIONAL MAINTENANCE AND DIRECT SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) MINE, ANTIPERSONNEL: HE, M74 (NSN 1345-01-076-3497) MINE, ANTITANK: HE, M75 (NSN 1345-01-078-4104) AND MINE, ANTITANK, PRACTICE: M79 (NSN 1345-01-074-9370)

TM 9-1345-210-23&P, 31 December 1984, 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.

Remove pages	Insert pages
A	A
2-1 and 2-2	2-1 and 2-2
4-1 and 4-2	4-1 and 4-2
5-1 and 5-2	5-1 and 5-2
5-5 (5-6 blank)	5-5 (5-6 blank)
6-1 and 6-2	6-1 and 6-2

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:

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

Distribution:
To be distributed in accordance with DA Form 12-40-R, Organizational Maintenance and Direct Support Maintenance requirements for Mine, Antipersonnel: HE, M74; Mine, Antitank: HE, M75; and Mine, Antitank, Practice: M79.

CHANGE)
NO. 1)

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 31 August 1985

ORGANIZATIONAL MAINTENANCE AND DIRECT SUPPORT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

MINE, ANTIPERSONNEL: HE, M74
(NSN 1345-01-076-3497)

MINE, ANTITANK: HE, M75
(NSN 1345-01-078-4104)

AND

MINE, ANTITANK, PRACTICE: M79
(NSN 1345-01-074-9370)

TM 9-1345-210-23&P, 31 December 1984, 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.

Remove pages	Insert pages
A	A
iii	iii
2-5 and 2-6	2-5 and 2-6

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:

DONALD J. DELANDRO
Brigadier General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-40-R, Organizational Maintenance and Direct Support Maintenance requirements for Mine, Antipersonnel: HE, M74; Mine, Antitank: HE, M75; and Mine, Antitank, Practice: M79.

INSERT LATEST CHANGED PAGES.
DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

NOTE

The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page.

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 71
CONSISTING OF THE FOLLOWING:

PAGE NO.	*CHANGE NO.	PAGE NO.	*CHANGE NO.
Cover	0	5-6 blank	0
Inside Cover	0	6-1	2
A	2	6-2	0
B blank	0	A-1 and A-2	0
i and ii	0	B-1 thru B-3	0
iii	1	B-4 blank	0
iv blank	0	C-1 thru C-6	0
1-1 thru 1-9	0	C-7 blank	0
1-10 blank	0	C-8 thru C-13	0
2-1	2	C-14 blank	0
2-2 thru 2-4	0	D-1	0
2-5 and 2-6	1	D-2 blank	0
3-1 and 3-2	0	E-1 thru E-3	0
4-1	2	E-4 blank	0
4-2 and 4-3	0	E-5 thru E-7	0
4-4 blank	0	E-8 blank	0
5-1	2	Authentication Page	0
5-2 thru 5-4	0		
5-5	2		

*Zero indicates an original page.

TECHNICAL MANUAL)
)
9-1345-210-23&P)

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 31 December 1984

ORGANIZATIONAL MAINTENANCE AND DIRECT SUPPORT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

MINE, ANTIPERSONNEL: HE, M74
(NSN 1345-01-076-3497)

MINE, ANTITANK: HE, M75
(NSN 1345-01-078-4104)

AND

MINE, ANTITANK, PRACTICE: M79
(NSN 1345-01-074-9370)

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, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAY-T (D), Dover, New Jersey 07801-5001. A reply will be furnished directly to you.

LIST OF ILLUSTRATIONS

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

These instructions are for use by organizational and direct support maintenance personnel. They apply to antipersonnel mine M74, antitank mine M75, and practice antitank mine M79. These mines are for use with mine dispenser M128.

1-2. Forms, Records, and Reports

Department of the Army maintenance forms and reporting procedures are prescribed in DA PAM 738-750. Accidents involving injury to personnel or damage to material will be reported on DA Form 285 (Army Accident Investigation Report) in accordance with AR 385-40. Explosive ammunition malfunctions will be reported in accordance with AR 75-1.

1-3. Destruction of Army Materiel to Prevent Enemy Use

Destruction of land mines subject to capture or abandonment will be undertaken by the user only when such action is indicated by orders of, or policy established by, the Army commander (see TM 750-244-5-1).

Section II. DESCRIPTION AND DATA

1-4. General

a. Mine, antipersonnel: HE, M74 (A, fig. 1-1).

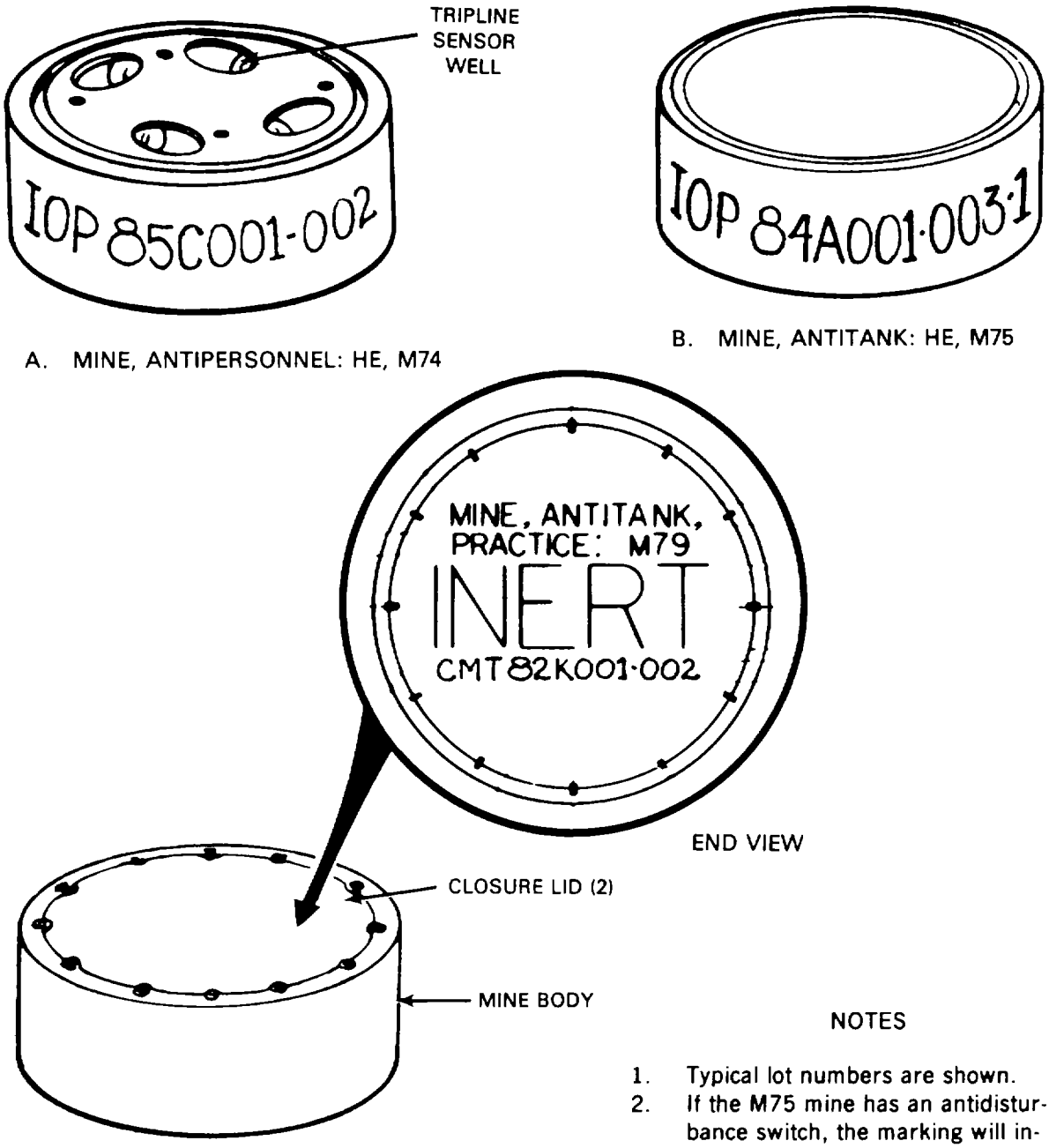
This antipersonnel mine is green, is cylindrical in shape, and is fabricated of thickwall steel tubing which is internally scored for maintaining uniform fragment size. It has an internal safing and arming (S&A) device, an electronic assembly, a power supply, and four tripline assemblies at each end (eight total). The mines are shipped and stored in a sealed, desiccated container. The container holds 8 sleeves, each containing 5 mines, for a total of 40 mines per container. The containers are palletized, with six containers per pallet.

b. Mine, antitank: HE, M75 (B, fig. 1-1).

This antitank mine is green, is cylindrical in shape, and is fabricated of thickwall steel tubing. It has an internal safing and arming device, an electronic assembly, and a power supply. Some of the M75 mines have an antidisturbance switch within the mine, as indicated by the last digit in the lot number. A lot number ending with a "-2" indicates that the mine has an antidisturbance switch; a lot number ending with a "-1" indicates no switch. The mines are shipped and stored in the same manner as the mine M74.

c. Mine, antitank, practice: M79 (C, fig. 1-1).

This practice mine is cylindrical in shape and is similar in appearance to the antipersonnel mine M74 and the antitank mine M75. The mine is inert and it is fabricated of thick-wall steel tubing with a sheet metal closure lid staked in each end. The mines are shipped and stored in the same manner as the mine M74.



A. MINE, ANTIPERSONNEL: HE, M74

B. MINE, ANTITANK: HE, M75

C. MINE, ANTITANK, PRACTICE: M79

NOTES

1. Typical lot numbers are shown.
2. If the M75 mine has an antidisturbance switch, the marking will include a "-2" at the end of the lot number instead of a "-1."

ARD 83-0921

Figure 1-1. Mines.

d. Sleeve (A, fig. 1-2).

The reusable sleeve is green and is rectangular in shape. It consists of a plastic (polyethylene) body which holds five mines, a plastic cap, and two plastic retainer tabs. The retainer tabs act as hinges so the cap can easily be opened and closed for unpacking and repacking of the mines. A separate cloth lifting strap is assembled around each sleeve as an aid in packing and unpacking.

e. Shipping and storage container, mine (B, fig. 1-2).

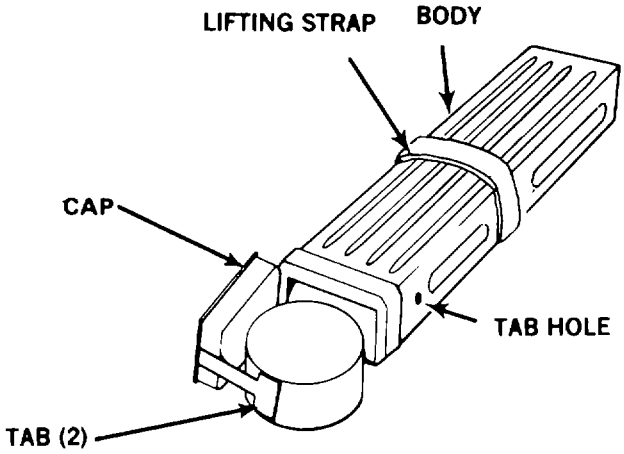
The reusable steel shipping and storage container is rectangular and has a rubber gasket between the base assembly and the cover assembly to make it water/water vapor tight. The cover assembly is secured to the base assembly by 10 quick-acting tee bolts. A plug humidity indicator, a vent assembly, and an identification plate are located at one end of the base assembly. The plug humidity indicator provides a means for determining the humidity inside the container, and the vent assembly is used to prevent pressure buildup during air transport. A desiccant compartment in the base assembly contains two 4-unit bags of desiccant to absorb excessive moisture within the container when closed. The base assembly has four handles for manual handling by four people. The container is forest green with white markings.

f. Pallet (fig. 1-3).

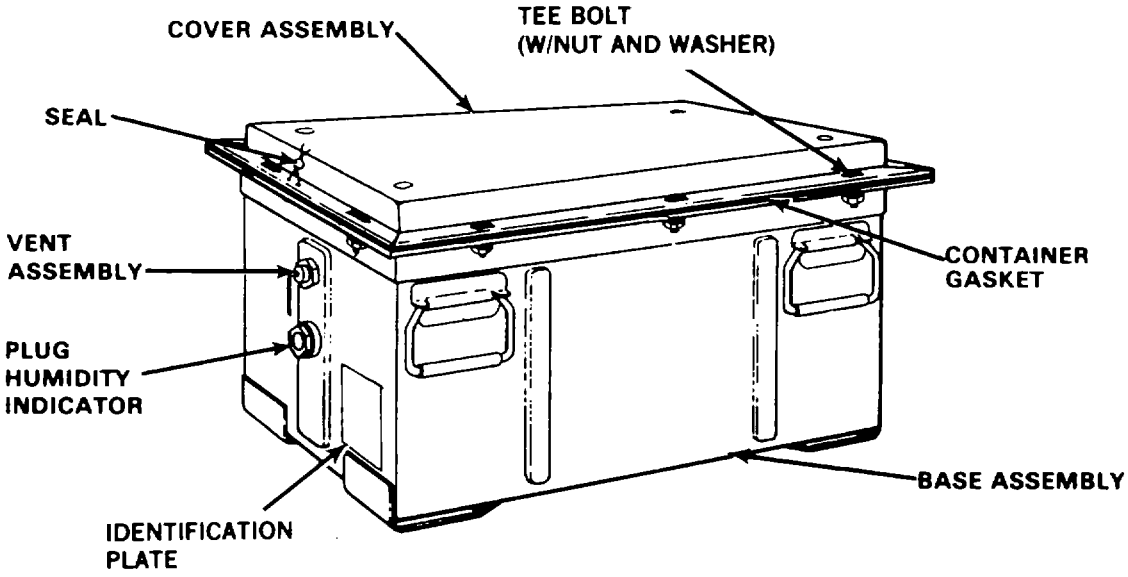
The loaded and strapped pallet contains six shipping and storage containers, each arranged so that its plug humidity indicator is visible at one end of the pallet. An identification label is located at one end and one side of the pallet.

1-5. Tabulated Data

	Mine, antipersonnel: HE, M74	Mine, antitank: HE, M75	Mine, antitank, practice: M79
Mines:			
Painting	Green	Green	Blue
Marking	Black	Black	White
Height (max) (all models)	.....	.....	2.60 in. (6.60 cm)
Diameter (max)	4.75 in. (12.07 cm)	4.75 in. (12.07 cm)	4.77 in. (12.12 cm)
Weight	3.10 lb (1.41 kg)	4.00 lb (1.81 kg)	3.55 lb (1.61 kg)
Material (all models)	.....	.....	Steel Tubing



A. SLEEVE



B. CONTAINER.

Figure 1-2. Mine sleeve and mine shipping and storage container.

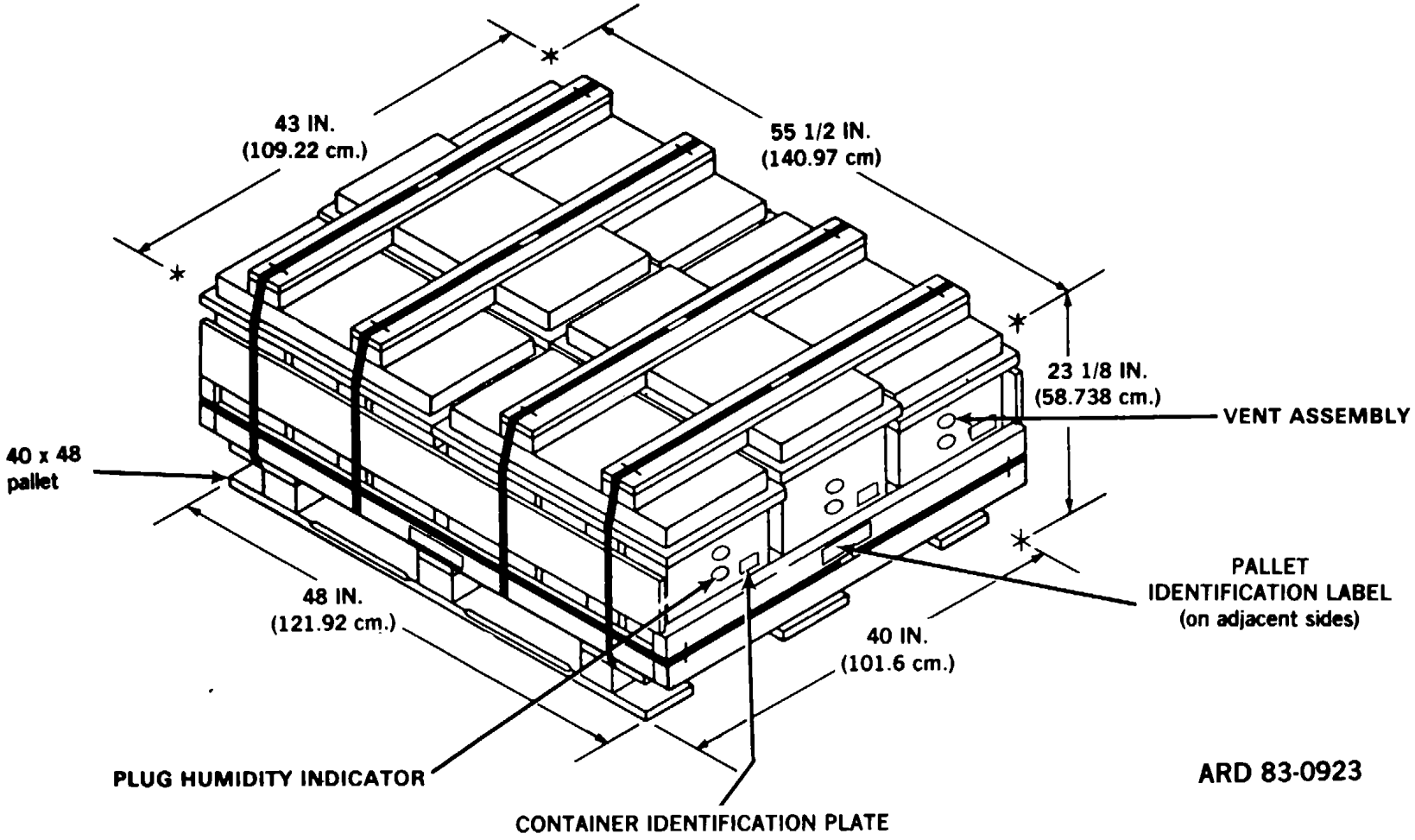


Figure 1-3. Palletized containers.

	Mine, antipersonnel: HE, M74	Mine, antitank: HE, M75	Mine, antitank, practice: M79
Explosive weight per mine:			
Composition B	40.90 lb (0.41 kg)	--	--
Composition A5	0.22 oz (6.35 g)	--	--
RDX and Estane (95/5)	--	1.26 lb (0.57 kg)	--
PBXN-5:	0.17 oz (4.70 g	0.50 oz (14.27 g)	--
Physical security category	II	II	Nonsensitive
DODIC	K151	K184	K234

Shipping and Storage Container - Empty:

Length (all models)	27.30 in. (69.30 cm)
Width (all models)	14.10 in. (35.81 cm)
Height (all models)	15.20 in. (38.61 cm)
Weight (all models)	55.0 lb (25.0 kg)
Cube (all models)	3.40 cu ft (0.10 cu m)
NSN (all models)	8140-01-089-2763
Part No. (all models)	9313655

Shipping and Storage Container- Loaded:			
Weight	196.0 lb (88.9 kg)	232.0 lb (105.2 kg)	214.0 lb (97.1 kg)

	Mine, antipersonnel: HE, M74	Mine, antitank: HE, M75	Mine, antitank, practice: M79	
Storage compatibility group		D	D	Inert
Quantity-distance class for depot storage	1.1	1.1		
Quantity distance class for field storage	E	E		
DOT shipping class	A	A		
DOT markings	EXPLOSIVE MINE	EXPLOSIVE MINE	AMMUNITION NON-EXPLOSIVE	
US Coast Guard classification	X-A	X-A		
Shelf life	10 yr	10 yr	Indefinite	

Storage temperature limits:

Minimum	-60°F (-51°C)	-60°F (-51°C)
Maximum	+ 155°F (+ 63°C)	+ 155°F (+ 63°C)

Sleeve (empty):

Color (all models)	Green
Length (all models)	24.48 in. (62.18 cm)
Width (all models)	5.63 in. (14.30 cm)
Height (all models)	3.50 in. (8.89 cm)
Weight (all models)	2.12 lb (0.96 kg)

	Mine, antipersonnel: HE, M74	Mine, antitank: HE, M75	Mine, antitank, practice: M79
Pallet (loaded w/ full containers):			
Length (all models)	55.50 in. (140.97 cm)		
Width (all models)	43.00 in. (109.22 cm)		
Height (all models)	23.13 in. (58.75 cm)		
Weight (approx incl dunnage)	1357 lb (616 kg)	1573 lb (714 kg)	1465 lb (665 kg)
Cube (all models)	31.93 cu ft (0.90 cu m)		

Section III. SAFETY, CARE, AND HANDLING

1-6. General

a. Safety, care, and handling requirements are given in TM 9-1300-206.

b. The procedures in this section prescribe minimum safety standards and requirements that must be observed during all operations involving shipping and storage containers housing mines M74, M75, or M79. In addition to these instructions, the general instructions on storage, care, handling, preservation, and quantity-distance requirements for ammunition outlined in AR 385-63, AR 385-64, and TM 9-1300-206 apply. The absence of a safety requirement in this publication or in the above references does not imply that safeguards are not needed. Prompt action must be taken to control any hazard.

c. The safety requirements and precautions will be complied with by personnel during all operations involving explosive items. All personnel engaged, directly or indirectly, in operations in which an explosive item and/or other hazardous material is involved will be thoroughly trained in explosive safety. Thinking safety and working safely must become a firmly established habit when working with, or in the vicinity of, explosive items.

1-7. Safety Precautions

a. Handling.

(1) Exercise care, especially during handling, unpacking, and packing, to avoid denting or otherwise damaging the shipping and storage container. Containers will not be tumbled, rolled, dragged, dropped, or otherwise roughly handled.

(2) Do not expose the container to moisture, dampness, or direct rays of the sun for longer periods of time than is absolutely necessary.

b. Tools and Equipment. Prevention of accidents when using tools is dependent upon properly instructing and training personnel and observing safety precautions. Defective tools will not be used.

c. Safe Housekeeping. The area around the storage location will be kept clear of tools, trash, flammable' material, or other material that could interfere with the safety and efficiency of the operation.

1-9 (1-10 blank)

CHAPTER 2

ORGANIZATIONAL MAINTENANCE INSPECTIONS AND INSTRUCTIONS

Section I. INSPECTION UPON RECEIPT OF MATERIAL

2-1. Verification of the National Stock Number (NSN)

The NSN of mines received will be verified to assure that it matches the NSN which was ordered. If the NSN does not match, the mines will be returned to Direct Support.

2-2. Visual Inspection

The shipping and storage containers will be inspected for the following defects:

a. Missing or damaged tee bolt, nut, or washer.

b. Missing or damaged plug humidity indicator.

c. Bent bottom support channels, as well as cracks, breaks, and broken welds.

d. Surface dented to the extent that contents may be damaged.

e. Misalinement of cover and base assemblies.

f. Missing or damaged vent assembly.

g. Rusted or corroded metal.

h. Incorrect or illegible markings.

i. Missing or broken antipilferage seals.

j. Unserviceable common hardware such as bolts, nuts, screws, washers, and threaded parts.

If any defects are found in a container, it will be returned to Direct Support for repair or disposition.

2-3. Relative Humidity Check

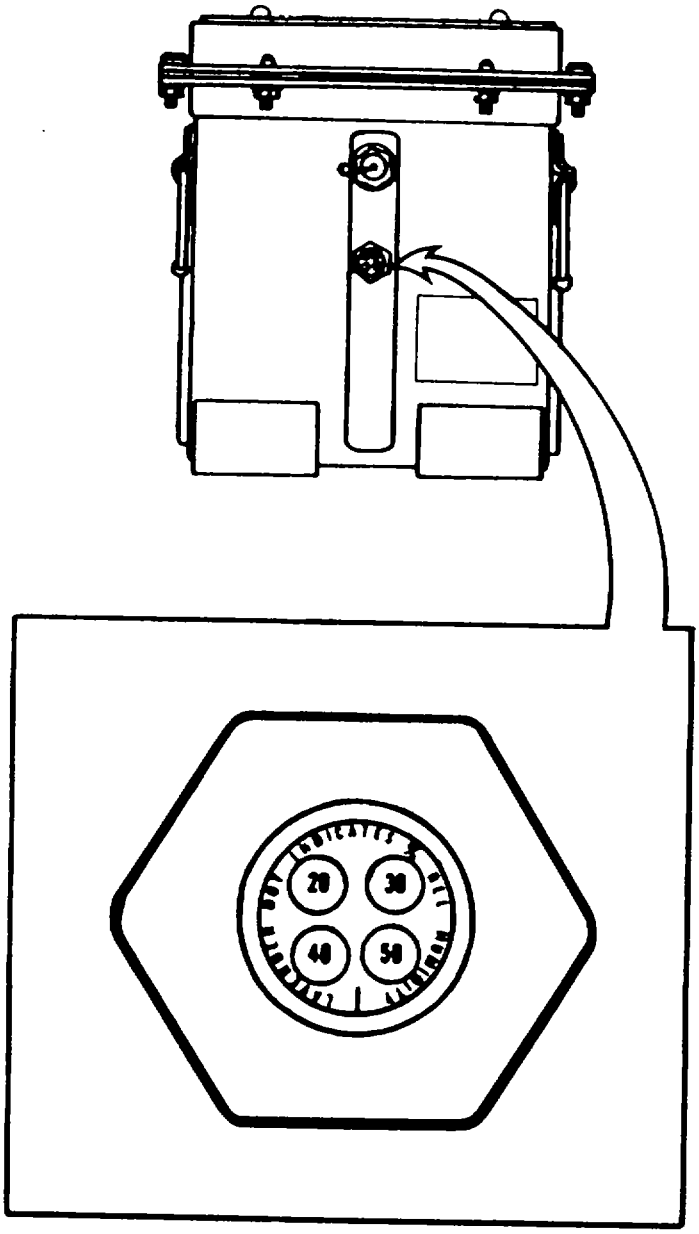
Note
The following paragraph does not apply to the M79 practice mine.

The plug humidity indicator on the front end of the container (fig. 2-1) will be checked to determine if relative humidity is satisfactory. Relative humidity less than 40% is satisfactory. Relative humidity is less than 40% when circles 40 and 50 are blue. If circles 40 or 50 are lavender or pink, the container will be returned to Direct Support.

Section II. SPECIAL TOOLS AND EQUIPMENT

2-4. Tools

Tools authorized for maintaining the shipping and storage containers are listed in table 2-1. Tools should not be used for purposes other than those prescribed and, when not in use, should be stored properly. Table 2-1 constitutes an authorization for an organizational maintenance company (ammunition) having responsibility for maintaining the mines to requisition these tools.



ARD 83-0924

Figure 2-1. Plug humidity indicator.

Table 2-1. Tools.

National Stock No.	Description	Unit of Issue
5120-00-189-7932	SOCKET, SOCKET WRENCH: 9/16 in., 12 pt opening, 1/2 in. drive size.	ea
5120-00-277-1260	WRENCH, OPEN-END, FIXED: single-head type; style 1, size 9/16 in.	ea
5120-00-277-1262	WRENCH, OPEN-END, FIXED: single-head type; style 1, size 7/16 in.	ea
5120-00-595-9069	WRENCH, TORQUE: 1/2-in. sq-drive, 5 to 75 ft-lb torque capacity.	ea

Section III. MAINTENANCE INSTRUCTIONS

2-5. Maintenance Instructions for M74, M75, and M79 Mines

CAUTION
M79 practice mines require maintenance after each use in accordance with paragraph 2-6.

a. Maintenance conditions. The mines will be unpacked and the maintenance will be performed on the mines under either of two following conditions: the relative humidity in a container reaches a level of 40% or higher; the antipilferage seals are missing or broken.

b. Relative humidity 40 percent or higher. If all circles on the humidity indicator card are white, return container to Direct Support. If circles 40 and 50 are blue, humidity is less than 40% and no maintenance is required. If circle 40 or circles 40 and 50 are lavender or pink, humidity is 40% or higher. The containers will be checked for the following defects: visible cracks or holes in container or broken glass in plug humidity indicator. If any of above defects is evident, container will be returned to Direct Support for repair. If none of these defects is evident, container then will be opened, in accordance with steps (1) through (5) below and container gasket (between base and cover assemblies) will be checked. If container gasket is missing or damaged, container will be closed in accordance with steps (12) and (13) below and returned to Direct Support for repair. If container gasket is not missing or damaged, procedures in steps (6) through (16) below will be completed. Full procedures for opening container, performing maintenance on mines, and closing container are as follows:

(1) Place container on firm, level surface.

(2) Cut and remove antipilferage seals from container.

(3) Unscrew vent assembly cover to relieve any pressure that may have built up within container.

(4) Using 7/16-inch open-end wrench and 9/16-inch open-end wrench, loosen nuts on 10 tee head bolts as follows:

(a) Hold tee bolt securely with 7/16-inch wrench and loosen nut using 9/16-inch wrench.

(b) When nut has been loosened sufficiently to allow head of tee bolt to turn freely, turn tee bolt 900 and drop head into slot in cover.

(5) Remove cover assembly by lifting straight up.

(6) Using lifting strap as an aid, remove sleeves from container and perform following procedures on mines (in sleeves) removed from container.

CAUTION

Mines inadvertently dropped will be inspected for flat spots or metal protrusions, which could affect launching. Damaged mines will be returned to direct support.

(a) Using one handle of the plastic retainer tab (A, fig., 1-2), release from sleeve body so that cap may be opened, with other retainer tab acting as a hinge.

(b) Remove five mines from sleeves by slightly raising closed end of sleeve and allowing mines to roll out of open end in a controlled manner.

(c) Visually inspect mines and interior of sleeves for the presence of moisture.

(d) If moisture is present, remove with a clean, dry cloth.

(e) Assure that the eight tripline sensor wells of the M74 mines are free from any foreign material.

(f) Inspect each mine for presence of moisture or minor rust. Wipe off moisture with a clean, dry cloth. Remove rust from mines with an 80-grit abrasive cloth (P-C-451).

(g)

CAUTION

When touching up M74 mines, do not get any lacquer in the eight tripline sensor wells.

If necessary, touch up mines M74 and M75 with green lacquer, color number 34151, or touch up mine M79 with blue lacquer, color number 35044.

(7) Reinsert five mines into sleeve. When reinserting M75 mines into sleeve, insert first one mine with lot number ending in "-2" (antidisturbance switch) followed by four mines with lot number ending in"-1" (no antidisturbance switch).

(8) Secure cap on sleeve by reversing the procedure of step (6)(a) above.

(9) Assure that lifting strap is positioned on sleeve at approximately midway the length of the sleeve. [f strap is missing or damaged, salvage another strap from an empty sleeve.

(10) Just before returning sleeves to container, remove previously installed desiccant and replace with new desiccant.

(11) Return sleeves to shipping and storage container.

(12) Aline tee bolts and install cover assembly.

(13) Raise tee bolts above cover flange and turn 900. Tighten by hand all nuts on the tee bolts. Apply 14 to 18 foot-pounds of torque to each nut.

(14) Install new antipilferage seals.

(15) Assure that plug humidity indicator, vent assembly, and cap on vent assembly are tight.

(16) If circles 40 and 50 on humidity indicator card do not return to blue within 3 days after closing, return container to Direct Support.

c. Broken or missing antipilferage seals. If any antipilferage seals are broken or missing, container will be opened, its contents inspected, and broken or missing seals replaced, as stated in paragraph 2-5b(1) through (16) above.

2-6. Maintenance Instructions for M79 Practice Mines Only

The M79 practice mines will be inspected after each use for damage. Dirt, mud, etc., will be completely cleaned from the mines. The mines will be checked for dents and abrasions which might interfere with passage through the dispenser. Touch up the mines if necessary. Both lids will be checked to ensure that they are securely attached to the ends of the mine. Damaged mines will be disposed of in accordance with instruction from local Property Disposal Office.

2-7. Light Container

a. Packing. If a mine sleeve contains fewer than five mines, fill void with soft packing material, such as styrofoam, polyethylene, polyurethane, or paper. If a shipping and storage container contains fewer than eight sleeves, fill void with empty sleeves. If empty sleeves are unavailable use dry, firm materials such as wood or other appropriate size empty rigid containers. Assure that materials used to fill voids will hold contents as securely as would he expected in a full sleeve or full container. Assure that the weight of a light sleeve or light container does not exceed that of a normal packed sleeve or container.

b. Marking. If a mine sleeve contains fewer than five mines, paint sleeve orange before shipment. If a shipping and storage container contains fewer than 40 mines, mark container, before shipment, with words "LIGHT BOX" on both sides, both ends, and the top in orange lettering as large as practical.

FIGURE 2-2. Deleted.

CHAPTER 3

DIRECT SUPPORT TOOLS AND EQUIPMENT

Section I. SPECIAL TOOLS AND EQUIPMENT

3-1. Tools

Tools authorized for maintaining the shipping and storage containers are listed in table 3-1. Tools should not be used for purposes other than those prescribed and, when not in use, should be stored properly. Table 3-1 constitutes an authorization for a DS maintenance company (ammunition) having' responsibility for maintaining the mines to requisition these tools.

Table 3-1. Tools

National Stock No.	Description	Unit of Issue
5120-00-144-5207	ADAPTER, SOCKET WRENCH: (To convert 1/2 in. sq-drive to 3/4 in. sq-drive).	ea
5120-00-230-6385,	HANDLE, SOCKET WRENCH: 1/2 in. sq-drive.	ea
5120-00-198-5391	KEY, SOCKET HEAD SCREW: 1/2 in. hex.	ea
5120-00-189-7932	SOCKET, SOCKET WRENCH: 9/16 in., 12 pt opening, 1/2 in. drive size.	ea
--	SOCKET, SOCKET WRENCH: 13/16 in., 12 pt opening, 1/2 in. drive size.	ea
5120-00-189-7931	SOCKET, SOCKET WRENCH: 1-7/16 in., 12 pt opening, 1/2 in. drive size.	ea
5120-00-228-9511	WRENCH, COMBINATION BOX AND OPEN-END: 15° offset box opening, 13/16 in.	ea
5120-00-228-9514	WRENCH, COMBINATION BOX AND OPEN-END: 15° offset box opening, 1 in.	ea
5120-00-277-2326	WRENCH, OPEN-END, FIXED: dble-hd type, 150 angle, 1-5/8 in. and 1-7/16 in. openings.	ea
5120-00-277-1262	WRENCH, OPEN-END, FIXED: single-hd type; style 1, size 7/16 in.	ea

Table 3-1. Tools - Continued

National Stock No.	Description	Unit of Issue
5120-00-277-1260	WRENCH, OPEN-END, FIXED: single-hd type; style 1, size 9/16 in.	ea
5120-00-595-9069	WRENCH, TORQUE: 1/2-in. sq-drive, 5 to 75 ft-lb torque capacity.	ea

Section II. FABRICATED TOOLS AND EQUIPMENT

3-2. General

There are no fabricated tools or equipment on/with the shipping and storage container

CHAPTER 4

DIRECT SUPPORT INSPECTION REQUIREMENTS

Section I. GENERAL

4-1. Purpose of Inspection

Inspections are made for the purpose of recognizing conditions which would cause future failure of the mines or the container or would result in unsafe conditions. Inspection criteria contained in this section are provided to assure that all maintenance will restore the containers to an acceptable quality level.

4-2. Inspections

a. Inspection upon Receipt.

(1) *Containers received from Manufacturer, Storage Installation or Depot Activity*. Loaded palletized containers received from manufacturer, storage installation, or depot activity will be checked to assure that the quantities received match the quantities requisitioned. Also a visual inspection will be made of each container to determine any damage incurred in transit, condition of exposed antipilferage seals, correct markings on container, and a satisfactory reading on the plug humidity indicator.

(2) *Mines or Loaded Containers Returned from User.*

(a) Loaded containers returned from the user will be visually inspected for evidence of tampering or damage to the containers.

(b) If the container is undamaged, if the antipilferage seals are secured, and if the plug humidity reading is acceptable, the loaded container will be transferred to storage.

(c) Containers which have been opened or mines which have been returned from an ammunition company and are not in containers will be inspected according to the procedures specified in paragraph f below. Each M74 and M75 mine has a lot number stamped on the mine cylindrical surface. For M75 mines, the last lot number digit on 32 of the mines in a container will be "-1" and on 8 mines it will be "-2" (i.e., [OP84A001-003-1 and [OP84A001-0032). These mines are to be replaced in each sleeve in the same order as they are removed. The lot number of M79 mines is stamped on one end. The lot identification must be maintained. Therefore, as single mines are loaded into sleeves and sleeves returned to containers, lot number marking on the sleeves and containers will be corrected to agree with the mine lot number.

b. Preissue inspection. All plug humidity indicators will be checked to confirm that the relative humidity level within the container is satisfactory.

c. Storage monitoring. Refer to paragraph 6-5.

d. Storage inspection. Refer to paragraph 6-6.

e. Final acceptance inspection.

Note
The following paragraphs do not apply to the M79 practice mine.

(1) After container has been repaired and reloaded, inspect container to assure that the following items are installed and/or properly secured.

(a) Plug humidity indicator and card.

(b) Container gasket (sealing the cover and base assemblies).

(c) Cover assembly.

(d) Vent assembly.

(e) Tee bolts, washers, and nuts.

(f) Antipilferage seals.

(2) Assure painting and marking have been properly applied.

f. Inspection of M74, M75, and M79 Mines.

CAUTION

If mines are inadvertently dropped, inspect for flat spots or metal protrusions which could affect launching. Set damaged mines aside and request disposition instructions.

(1) Mines in sleeves removed from containers as a result of excessive plug humidity indicator readings will be inspected in a clean, dry work area. Refer to paragraph 2-5b(1) through (16).

(2) If mines have flat spots, burrs, or other damage, submit DA Form 2415, requesting disposition instructions.

4-3. Annotation of Inspection Results

DA forms 2415 and 3022-R and other applicable documents, as required, will be annotated to show date and results of any inspection and corrective actions taken or required.

Section II. EVALUATION OF DEFECTS

4-4. Definition of Defects

The following definitions of defects will be used to determine the physical condition of the shipping and storage container.

a. Major defect. A defect that requires repair or replacement of components because the defect prevents the container from performing its intended function as protection of contents or suitability for identification, storage, or handling.

b. Minor defect. A defect that does not prevent the container from performing its intended function as protection of contents or suitability for identification, storage, or handling, and where repair or replacement of components is not essential but only desirable.

Section III. CLASSIFICATION OF DEFECTS

4-5. Classification of Defects of the Shipping and Storage Containers

a. Major defects.

(1) Missing or broken base assembly lifting handle.

(2) Damaged or missing tee bolts.

(3) Surface dented to the extent that contents may be damaged.

(4) Container cover and base assemblies do not properly aline (after assuring that cover assembly is not reversed).

(5) Incorrect or illegible markings.

(6) Bent bottom support channels.

(7) Missing or damaged container gasket that seals cover and base assemblies.

(8) Missing or damaged plug humidity indicator.

(9) Missing or damaged vent assembly.

(10) Rusted or corroded metal.

(11) Damaged desiccant cage.

b. Minor defects.

(1) Inadequate paint.

(2) Minor dents.

4-6. Evaluation of Inspection Results

a. Shipping and storage containers having a major defect will be considered unserviceable until the condition is corrected.

b. Shipping and storage containers having a minor defect will be considered serviceable, and the condition will be corrected when practicable.

c. Upon completion of the prescribed inspections, the data will be evaluated to assess the condition of the shipping and storage container to determine whether it is:

(1) Satisfactory.

(2) In need of minor repair.

(3) In need of major repair.

(4) Irreparable.

d. If inspection indicates that the shipping and storage containers require repairs, perform necessary repairs as authorized in chapter 5.

4-7. Annotation of Inspection Results

DA forms 2415 and 3022-R and other applicable documents, as required, will be annotated to show date and results of inspection and any corrective actions taken or required.

Section IV. DISPOSITION OF LOTS

4-8. General

a. A lot of materiel is acceptable for issue and use if the acceptable criteria as indicated in section III are met.

b. Report all lots of materiel rejected under the applicable serviceability table for disposition instructions to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMIC-DS (R), Rock Island, [I, 61299-6000. Include a statement describing the capability and workload situation of your organization as to whether you are capable of reworking the items or demilitarizing them.

CHAPTER 5

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

Section I. GENERAL

5-1. Scope

a. This chapter contains instructions for the guidance of Direct Support maintenance personnel in inspecting and repairing the shipping and storage container, as well as M74, M75, and M79 mines.

b. The scope of maintenance is generally governed by replacement of parts. If a part is damaged beyond repair, the next higher assembly or the component to which the part belongs will be used.

c. All tools and equipment required for inspections and repairs are as authorized in this manual.

d. Consumable materials used in maintenance are listed in appendix D.

5-2. Disposition Instructions

a. *Unserviceable-Irreparable Items*. Unserviceable-irreparable mines and inert items will be reported for disposition on DA Form 2415 (Ammunition Condition Report) in accordance with DA PAM 738-750.

b. *Serviceable items*. Items which are returned to a serviceable condition as a result of the maintenance prescribed in this publication may either be returned to storage for subsequent issue or returned to the using organization from which received.

5-3. Disassembly and Assembly

a. Disassembly procedures will be kept to a minimum and will be made only to the extent necessary to repair or replace an item. Handle these components carefully during replacement to prevent any further damage to the components. Closely examine components to determine the need for replacement.

b. As parts and assemblies are removed, they will be placed on a clean, flat surface to prevent damage. Parts which are removed from an assembly should be kept together and segregated from those of other assemblies.

c. Assembly of a unit will normally be conducted in reverse order to that of disassembly.

d. When installing screws, always engage the first two or three threads by hand, if possible, to avoid cross-threading.

5-4. Replacing Card Humidity Indicator, Plug Humidity Indicator, Desiccant, and Container Gasket

a. Replacement Procedures.

Note
The following paragraphs do not apply to the M79 practice mine.

(1) Place container on firm, level surface.

(2) Cut and remove antipilferage seals from container.

(3) Unscrew vent assembly cover to relieve any pressure that may have built up within container.

(4) Using 7/16-inch open-end wrench and 9/16-inch open-end wrench, loosen nuts on 10 tee bolts as follows:

(a) Hold tee bolt securely with 7/16-inch wrench and loosen nut using 9/16-inch wrench.

(b) When nut has been loosened sufficiently to allow head of tee bolt to turn freely, turn tee bolt 90° and drop head into slot in cover.

(5) Remove cover assembly by lifting straight up.

(6) Using lifting strap, remove and lay aside the eight plastic sleeves from container to gain access to plug humidity indicator and desiccant.

(7) Remove retaining ring and washer by using a 1/2-inch socket head screw key, and remove card humidity indicator. Install a serviceable card humidity indicator (8881094), and reinstall the washer and retaining ring.

(8) If glass in indicator is broken, remove defective plug humidity indicator (with card humidity indicator) from outside of container, using 1-7/16-inch open-end wrench. Install a serviceable plug humidity indicator (8860990-2) and card. Apply 13 to 17 foot-pounds of torque.

(9) Just before returning sleeves to container, remove previously installed desiccant and replace with new desiccant.

(10) Return sleeves to shipping and storage container.

(11) If container gasket that seals cover and base assemblies is unserviceable, replace it with a serviceable gasket (9313658).

(12) Aline tee head bolts and install cover assembly.

(13) Raise tee bolts above cover flange and turn 90°. Tighten by hand all nuts on tee bolts. Apply 14 to 18 foot-pounds of torque to each nut.

(14) Install new antipilferage seals.

(15) Assure that plug humidity indicator, vent assembly, and cap on vent assembly are tight.

b. Replacement of Parts. When repairing a container, replace damaged screws, bolts, nuts, and washers with new ones. Replace damaged or defective parts as authorized in appendix B.

5-5. Cleaning

Dirt and other foreign matter will be removed from the surface of inert items with cleaning cloths or brushes.

5-6. Threads and Mating Surfaces

All threads and mating surfaces must be clean, dry, and free of corrosion.

5-7. Painting and Marking

a. General. The area to be painted will be sanded with fine sandpaper or emery cloth, and the edge of the surrounding paint feathered to produce a smooth finish.

b. Shipping and Storage Containers (fig. E-3). Containers will be painted with forest green enamel, color number 34079 (refer to appendix D). Markings are to be applied with white stencil ink, color number 37875 (refer to appendix D).

5-8. Welding

Welding will be restricted only to the repair of empty containers.

5-9. Touch Up

CAUTION

When touching up M74 mines, do not get any lacquer in the eight tripline sensor wells.

Minor rust on mines will be sanded with fine sandpaper or emery cloth and touched up with green lacquer, color number 34151 for the M74 and M75 mines and with blue lacquer, color number 35044, for the M79 mine.

Section II. REPAIR OF SHIPPING AND STORAGE CONTAINER

5-10. General

This section contains instructions and procedures for disassembling, cleaning, inspecting, repairing, and reassembling the shipping and storage container. For descriptive and repair purposes, each container will be divided into two assemblies: the cover assembly and the base assembly. Certain cleaning, inspecting, and repairing procedures are common. These common procedures are described in paragraph 5-11 below.

5-11. General Maintenance

a. Inspecting common hardware and other threaded parts. Visually inspect all common hardware items such as bolts, nuts, screws, washers, and other threaded parts. When any of the following conditions exist, items are unserviceable:

(1) Bent or distorted part.

(2) Stripped, crossed, pulled, or distorted threads.

(3) Misshaped or burred bolt or screw heads.

(4) Misshaped or broken slots and recesses.

(5) Misshaped or burred nuts.

b. Inspecting miscellaneous parts. Visually inspect all miscellaneous parts. When any of the following conditions exist, part is unserviceable:

(1) *Metal parts*. Metal parts are nicked, scratched, galled, scored, burred, gouged, cracked or distorted to the extent that:

(a) Use of part will cause damage to other parts.

(b) Part will not fit mating part satisfactorily.

(2) Rubber parts. Rubber parts such as gaskets are torn, cut, misshaped, or deteriorated.

c. Restoring unserviceable threads.

(1) Damaged internal threads in housing, frames, etc., may be repaired by chasing, drilling and tapping oversize, or by installing helical thread inserts.

(2) Damaged external threads may be repaired by chasing, if practicable.

d. Welding.

WARNING

Mines will be removed from shipping and storage containers before containers are welded.

CAUTION

Welding will not be attempted unless operator is thoroughly familiar with the physical characteristics of the metal to be welded.

Welding is authorized for parts that may be satisfactorily welded in accordance with standards set forth in TM 9-237.

e. Miscellaneous repairs.

(1) Distorted metal parts may be straightened, cracked metal parts may be welded, and metal parts with nicks, scratches, galls, scores, burrs, and gouges may be smoothed or repaired.

(2) Unserviceable rubber parts such as gaskets should be replaced.

f. Rust removal. Remove rust from container with fine sandpaper or emory cloth. Touch up container with forest green enamel, color number 34079.

g. Painting and marking (fig. E-2). Refer to paragraph 5-7b.

5-12. Cover Assembly (Fig. C-1)

a. Inspect overall body of cover assembly for bent portions, cracks, breaks, and dents.

b. Repair cover assembly by welding and straightening (para 5-8 and 5-11 d and e).

5-13. Base Assembly (Fig. C-1) a. Disassembly.

(1) Remove tee bolt by removing nut and washer.

(2) Remove loose container gasket that seals container base and cover assemblies.

(3) Remove plug humidity indicator by unscrewing from outside end of base assembly.

(4) Remove vent assembly by loosening cap, unscrewing nut on outside end of base assembly, removing ring attached by chain to cap, and removing plug from inside of base assembly.

b. In-process Inspection:

(1) Inspect overall body of base assembly for bent portions, cracks, breaks, dents and broken welds.

(2) Inspect common hardware and other threaded parts in accordance with paragraph 5-11a.

(3) Inspect rubber gaskets in accordance with paragraph 5-11b(2).

(4) Inspect bottom support channels for dents, cracks, breaks and broken welds.

(5) Disassemble plug humidity indicator with a 1/2-inch socket-head screw key and inspect in accordance with paragraph 5-11a.

c. Repair.

(1) Repair body of base assembly by welding and straightening (para 5-8 and 5-11 d and e).

(2) Replace unserviceable container gasket that seals cover and base assemblies with a serviceable gasket.

(3) Repair bottom support channels by straightening and welding.

(4) Replace unserviceable plug humidity indicator with a serviceable item, or, if card has turned white, replace with a serviceable card humidity indicator. Assemble plug humidity indicator in accordance with figure C-2.

NOTE

Card may be replaced from inside container by removing retainer ring and washer. Replace card and reinstall washer and retaining ring.

d. Installation.

(1) Install vent assembly. Apply 13 to 17 foot-pounds of torque to nut. Install cap and secure hand-tight.

(2) Install plug humidity indicator. Apply 13 to 17 foot-pounds of torque.

(3) Assure that all surfaces of container that mate with container gasket are completely clean, and install container gasket that seals cover and base assemblies.

(4) Install container cover assembly.

(5) Install 10 tee bolts, spring lock washers, and hexagon plain nuts. Apply 14 to 18 foot-pounds of torque.

5-14. Final Inspection

Note
The following paragraphs do not apply to the M79 practice mine.

a. After container has been repaired and reloaded, inspect container to assure that the following items are installed and properly secured.

(1) Plug humidity indicator and card humidity indicator.

(2) Container gasket (sealing the cover and base assemblies).

(3) Cover assembly.

(4) Antipilferage seals.

(5) Vent assembly.

(6) Tee bolts, washers, and nuts.

b. Assure painting and marking have been properly applied.

CHAPTER 6

STORAGE AND STORAGE HANDLING PROCEDURES

6-1. Scope

This chapter contains procedures for storage, storage handling, storage monitoring, and storage inspection.

6-2. Storage Classification

a. Quantity Distance Class and Storage Compatibility Group. Refer to paragraph 1-5 for quantity-distance class and storage compatibility group for the mine containers.

b. Minimum Distances. Refer to TM 91300-206 for minimum distances permitted.

6-3. Shelf Life

Shelf life is the length of time an item can remain in storage under prescribed packaging and storage conditions. The expiration date for shelf life is the last day of the month in the month ad year specified.

6-4. Storage Precautions

a. Containers will not be opened until the items are required for use or inspection. Items opened will be issued first in order that stocks of opened containers may be kept to a minimum.

b. Damaged containers will be repaired or replaced. Special care will be taken to assure that all markings on repaired containers or new containers are complete and correct

6-5. Storage Monitoring

a. General.

Note

The following paragraphs do not apply to the M79 practice mine.

(1) Storage monitoring is a periodic inspection of the mine shipping and storage containers in stockpile or operational storage to determine whether a change in relative humidity inside the containers has occurred which could detrimentally affect the munition. Each container will be monitored to detect the presence of excessive moisture within the container by visually examining the plug humidity indicator which is attached to the front end of the shipping and storage container.

(2) Each loaded container will be monitored at least once each month for the first 3 months; then, if the moisture trend is not upward, the monitoring interval may be extended to once every 3 months. Stacks of containers will be examined to assure the stacks are stable, dunnage is solid and free from dry rot or other fungi, and container seals are intact.

(3) Whenever the container is opened for inspection or maintenance of the munitions and then reclosed, read the plug humidity indicator on the third day after closing the container to assure that the desiccant has absorbed any excessive moisture within the container. Thereafter, read the humidity indicator at least once each month for 3 months; then, if the moisture trend is not upward, extend the monitoring interval to once every 3 months.

b. Procedures. Read the plug humidity indicator on the front end of the containers to ascertain if relative humidity is satisfactory. When all circles (dots) are blue, relative humidity is satisfactory. When circles have changed to lavender, pink, or white, the following procedure will be followed:

(1) When relative humidity is less than 40 percent (circles 20 and 30 are pink or lavender and circles 40 and 50 are blue), no action is required.

(2) When relative humidity is over 40 percent (circles 20, 30, and 40 are pink or lavender), perform a storage inspection as outlined in paragraph 6-6 as soon as possible (definitely within 30 days).

(3) When all four circles show no pink or lavender and have tuned white, the indicator card probably has been wetted and will not return to the blue condition regardless of new desiccant and low actual relative humidity. In such cases, perform a storage inspection as outlined in paragraph 6-6 and replace the card humidity indicator as instructed in paragraph 5-4a. This is to be accomplished as soon as possible and, in all cases, within 30 days.

6-6. Storage Inspection

a. General.

(1) Storage inspection will be performed:

(a) When a mine container has broken or missing seals.

(b) When there is evidence of obvious physical defects in the container.

(c) When the plug humidity indicator reveals that the relative humidity within the container is over 40 percent.

(2) Refer to paragraphs 4-4, 4-5, and 4-6 for storage definitions, classifications, and evaluation of defects.

b. Procedures. Inspect exterior of shipping and storage container for following defects:

(1) Missing or damaged tee bolt or its associated hardware.

(2) Missing or damaged plug humidity indicator.

(3) Bent bottom support channels, as well as cracks, breaks, and broken welds.

(4) Surface dented to extent that contents may be damaged.

(5) Misalinement of cover and base assemblies.

(6) Rusted or corroded metal.

(7) Incorrect or illegible markings.

(8) Deteriorated or damaged container gasket.

(9) Unserviceable common hardware such as bolts, nuts, screws, washers, and threaded parts.

(10) Missing, damaged, or loose vent assembly.

c. Repair and disposition.

If any of above defects are discovered, refer to chapter 5 for repair and disposition.

APPENDIX A

REFERENCES

A-1. Army Regulations

Reporting of Transportation Discrepancies in Shipments	AR 55-38
Malfunctions Involving Ammunition and Explosives	AR 75-1
Department of the Army Information Security Program	AR 380-5
Accident Reporting and Records	AR 385-40
Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat	AR 385-63
Ammunition and Explosives Safety Standards	AR 385-64
Classification, Reclassification, Maintenance, Issuance and Reporting of Maintenance Training Aircraft	AR 700-42
Ammunition Stockpile Reliability Program (ASRP)	AR 702-6
Storage and Supply Activity Operations	AR 740-1

A-2. Blank Forms

U.S. Army Accident Investigation Report	DA Form 285
Recommended Changes to Publications and Blank Forms	DA Form 2028
Equipment Maintenance Log (Consolidated)	DA Form 2409
Ammunition Condition Report	DA Form 2415
Army Depot Surveillance Record	DA Form 3022-R
Fire Report	DA Form 3985
Discrepancy in Shipment Report	SF Form 361

A-3. Doctrinal, Training, and Organizational Publications

Operator's Manual for Welding Theory and Application	TM 9-237

Ammunition and Explosive Standards	TM 9-1300-206
Ammunition Maintenance	TM 9-1300-250
The Army Maintenance Management System (TAMMS)	DA PAM 738-750
Destruction of Conventional Ammunition and Improved Conventional Munitions to Prevent Enemy Use (Excluding Toxic and Incapacitating Chemical Agents	TM 750-244-5-1

A-4. Supply Bulletin

Ammunition Surveillance Procedures	SB 742-1
DOD Consolidated Ammunition Catalog	Ammo 1-2-3

APPENDIX B

MAINTENANCE ALLOCATION CHART

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 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 transferred 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 the mines are specified to be performed at the organizational maintenance level. However, direct support is the lowest level of maintenance that will normally receive bulk packaging materials; therefore, organizational maintenance personnel will use salvage cannibalization.

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 serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability and to detect incipient failure by measuring mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. To periodically perform operations to keep an item in proper operating condition:

(1) Unpack. To remove from packing box for service or for performance of other maintenance operations.

(2) *Repack*. To return item to packing box after service or other maintenance operations.

(3) *Clean.* To rid item of contamination.

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

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

d. Install. To emplace, seat, or fix into position an item in a manner to allow proper functioning of 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 entire item.

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

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

B-3. Explanation of Format

a. Group Number. Column 1 lists the group numbers, whose purpose 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 Functions. Column 3 lists the 12 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:

Symbol	Maintenance Category
0	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.

MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENET ASSEMBLY	(3) Maintenance functions												(4) Tools and equipment	(5) Remarks
				SERVICE							RENOVATE				
		INSPECT	TEST	UNPACK	REPACK	CLEAN	TOUCH UP	MARK	INSTALL	ADJUST	PAINT	REPAIR	REPLACE		
01	Mine, antipersonnel: HE, M74	F		F	F	F	F								
02	Mine, antitank: HE, M75	F		F	F	F	F								
03	Mine, antitank, practice: M79	0		0	0	0	0	0							
04	Shipping and storage container, mine	0		0	0	0	0	0			F	F	F		
0401	Vent assembly	0										F	F		
0402	Indicator, humidity, plug	0										F	F		
0403	Gasket, container	0											F		
0404	Bolt, tee	0											F		
0405	Nut, plain, hex	0											F		
0406	Desiccant	0											0		

APPENDIX C

DIRECT SUPPORT MAINTENANCE

REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. SCOPE.

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of organizational, and general support maintenance of the Mines Container. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

C-2. GENERAL.

In addition to Section 1, Introduction, 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 by this RPSTL 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 ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name sequence at the end of the section. Repair parts kits are listed separately in their own functional group within Section II. Repair parts for repairable special tools are also listed in this section. Items listed are shown on the associated illustrations.

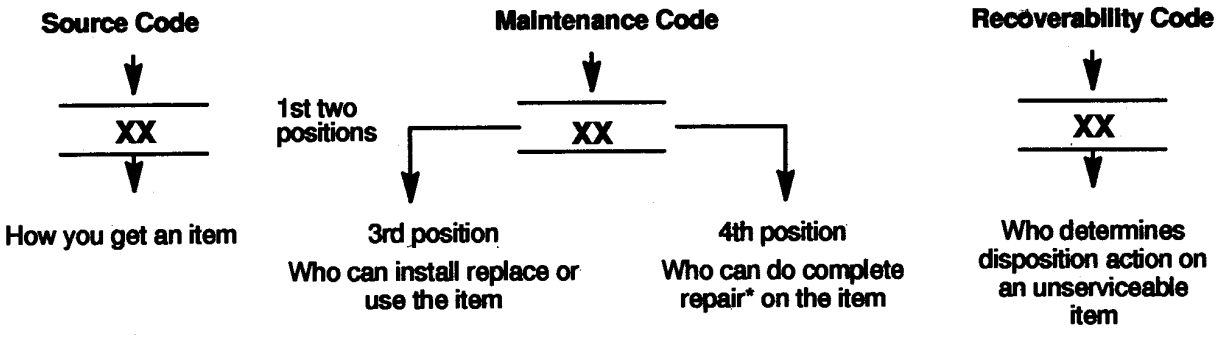
b. Section III Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE (UOC) column) for the performance of maintenance.

c. Section IV National Stock Number and Part Number Index. A list, in National Item Identification Number (NIIN) sequence, of all National Stock Numbered items appearing in the listings, followed by a list in alphanumeric sequence of all part numbers appearing in the listing. National Stock Numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III).

a. ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

b. SMR CODE (Column (2)). The Source, Maintenance, and Recoverability (SMR) code is a 5-position code, containing supply/requisitioning information, maintenance category authorization criteria, and disposition instructions, as shown in the following breakout:



*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Source codes are always the first two positions of the SMR code. Explanations of source codes follow:

Code	Explanation
PA PB PC** PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3d position of the SMR code.
	** **NOTE:** Items coded PC are subject to deterioration.
KD KKFS KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.
MO - (Made at org/AVUM Level) MH - (Made at GS Level) ML - (Made at Specialized > Repair Act (SRA) MD - (Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

Code	Explanation
AO-(Assembled by or/AVUM Level) AH-(Assembled by GS Category) AL-(Assembled by SRA) AD-(Assembled by Depot)	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level order the item from the higher level of maintenance.

XA - Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)
XB - If an "XB" item is not available from salvage, order it using the FSCM and part number given.
XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD - Item is not stocked. Order an "XD"-coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE: Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 700-42.

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

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

Code	**Application/Explanation**
C	- Crew or operator maintenance done within organizational or aviation unit maintenance.
O	- Organizational or aviation unit category can remove, replace, and use the item.
F	- Direct support level can remove, replace and use the item.
H	- General support level can remove, replace, and use the item.
L	- Specialized repair activity can remove, replace, and use the item.
D	- Depot level can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions). (NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR CODES.) This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	- Organizational or (aviation unit) is the lowest level that can do complete repair of the item.
F	- Direct support is the lowest level that can do complete repair of the item.
H	- General support is the lowest level that can do complete repair of the item.
L	- Specialized repair activity is the lowest level that can do complete repair of the item.
D	- Depot is the lowest level that can do complete repair of the item.
Z	- Nonreparable. No repair is authorized.
B	- No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

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

Code	Definitions
X	- Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of SIMR Code.
O	- Reparable item. When uneconomically reparable, condemn and dispose of the item at organizational or aviation unit level.
F	- Reparable item. When uneconomically reparable, condemn and dispose of the item at direct support or aviation unit level.
H	- Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support level.
D	- Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
L	- Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).

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

c. FSCM (Column (3)). The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. Part Number (Column (4)). 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.

NOTE: When you use a NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. Description and Usable On Code (UOC) (Column (5)). This column includes the following information:

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) The statement "END OF FIGURE" appears just below the last item description in Column 5 for a given figure in both Section II and Section III.

f. QTY (Column (6)). The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration figure, "A " appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

C-4. EXPLANATION OF COLUMNS (SECT. IV).

a. NATIONAL STOCK NUMBER (NSN) INDEX..

(1) STOCK NUMBER column. This column lists the NSN by National item identification number. (NIIN) sequence. The NIIN consists of the last 9 digits of the NSN

NSN

(i.e., 5305-01-674-1467). When using this column to locate an item, ignore the first 4 digits of the

NIIN

NSN. However, the complete NSN should be used when ordering items by stock number.

(2) FIG. column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section [II.

(3) ITEM column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. PART NUMBER INDEX. Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e., a vertical arrangement of letter and number combination which places the first letter or digit of each following letter or digit in like order).

(1) FSCM column. The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) PART NUMBER column. Indicates the primary number used by the manufacturer (individual, 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.

(3) STOCK NUMBER column. This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and FSCM columns to the left.

(4) FIG. column. This column lists the number of the figure where the item is identified/located in Section II and III.

(5) ITEM column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

C-5. SPECIAL INFORMATION. Not applicable.

C-6. HOW TO LOCATE REPAIR PARTS.

a. When National Stock Number or Part Number is Not Known:

(1) First. Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) Second. Find the figure covering the assembly group or subassembly group to which the item belongs.

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

(4) Fourth. Refer to the Repair Parts List for the figure to find the part number for the item number noted on the figure.

(5) Fifth. Refer to the Part Number Index to find the NSN, if assigned.

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. The NSN index is in National Item Identification Number (NIIN) sequence (see 4. 1(1)). The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see 4.b). Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

(2) Second. After finding the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

C-7. ABBREVIATIONS. All are common.

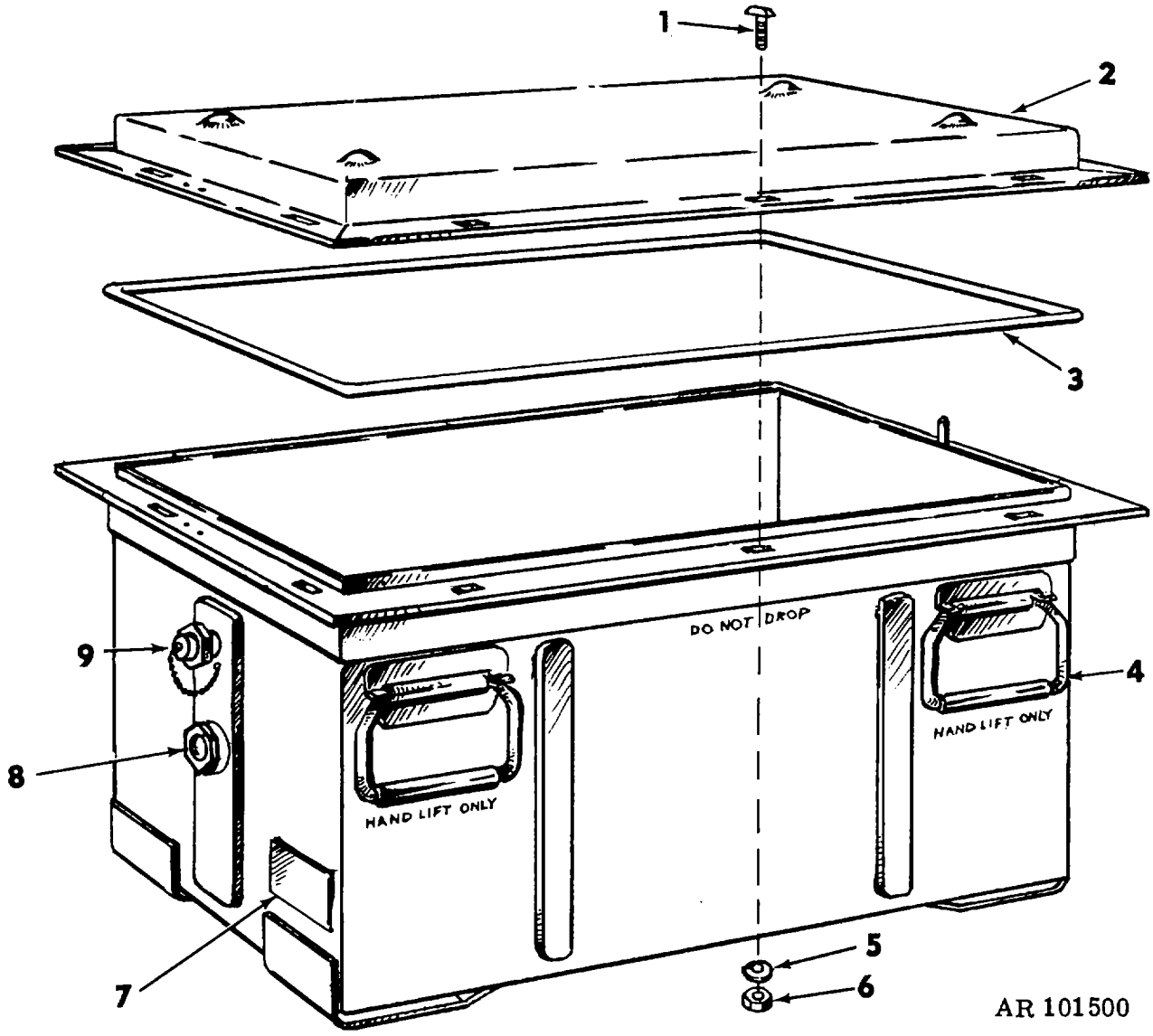


Figure C1. Shipping and Storage Container: Mines.

SECTION II REPAIR PARTS LIST

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 00 SHIPPING AND STORAGE CONTAINER: MINES	
				FIGURE C1. SHIPPING AND STORAGE CONTAINER: MINES.	
1	PAFZZ	19200	9331718	BOLT, TEE:	010
2	XAFZZ	19200	9313657	COVER ASSEMBLY:	001
3	PCFZZ	19200	9313658	GASKET:	001
4	XAFZZ	19200	9313656	BASE ASSEMBLY:	001
5	PAFZZ	96906	MS35338-46	WASHER, LOCK:	010
6	PAFZZ	96906	MS51967-8	NUT, PLAIN, HEXAGON:	010
7	PBFZZ	19200	9328433	PLATE, IDENTIFICATION:	001
8	PAFFF	19203	8860990-1	INDICATOR, HUMIDITY, PLUG:	001
9	PAFFF	19203	8853791	VENT ASSEMBLY:	001
				END OF FIGURE	

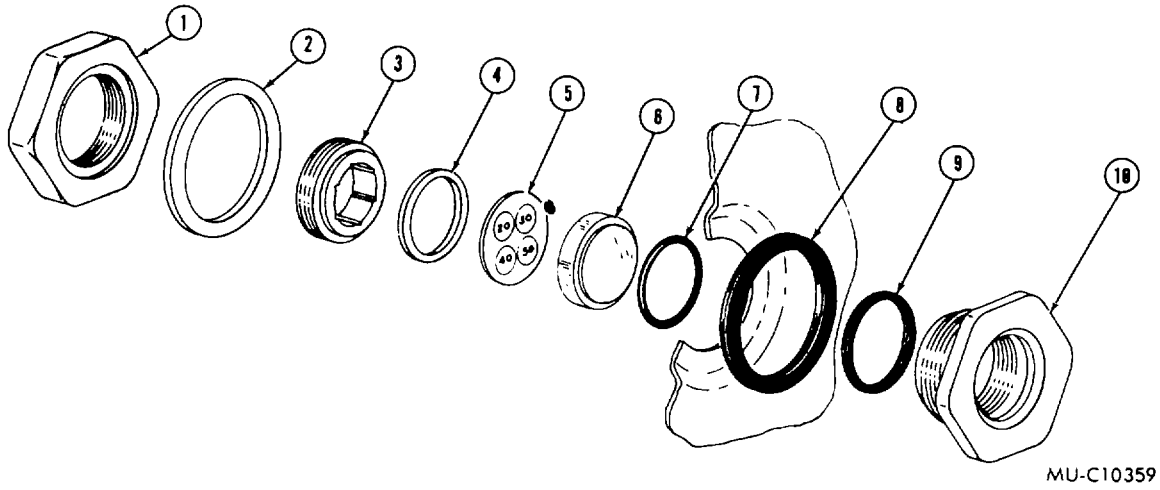


Figure C2. Indicator, Humidity, Plug.

(1)(2) ITEM NO	(3) SMR CODE	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES (UOC)	QTY
				GROUP 01 INDICATOR, HUMIDITY, PLUG:	
				FIGURE C2. INDICATOR, HUMIDITY, PLUG.	
1	XAFZZ	19203	8864906	LOCKNUT-DISCARD, NOT USED ON GEMSS MINES CONTAINER	001
2	XAFZZ	19203	8864907	WASHER-DISCARD, NOT USED ON GEMSS MINES CONTAINER	001
3	PAFZZ	19203	8864903	RING, EXTERNALLY THREADED:	001
4	PAFZZ	19203	8864908	GASKET:	001
5	PCFZZ	19203	8881094	INDICATOR, HUMIDITY, CARD:	001
6	PAFZZ	19203	8864902	WINDOW, DIAL:	001
7	PCFZZ	96906	MS29513-017	PACKING, PREFORMED:	001
8	PCFZZ	19203	8864899	GASKET:	001
9	PCFZZ	19203	8864905	GASKET:	001
10	PAFZZ	19203	8864900	HOUSING, CARD HIMIDITY INDICATOR:	001
				END OF FIGURE	

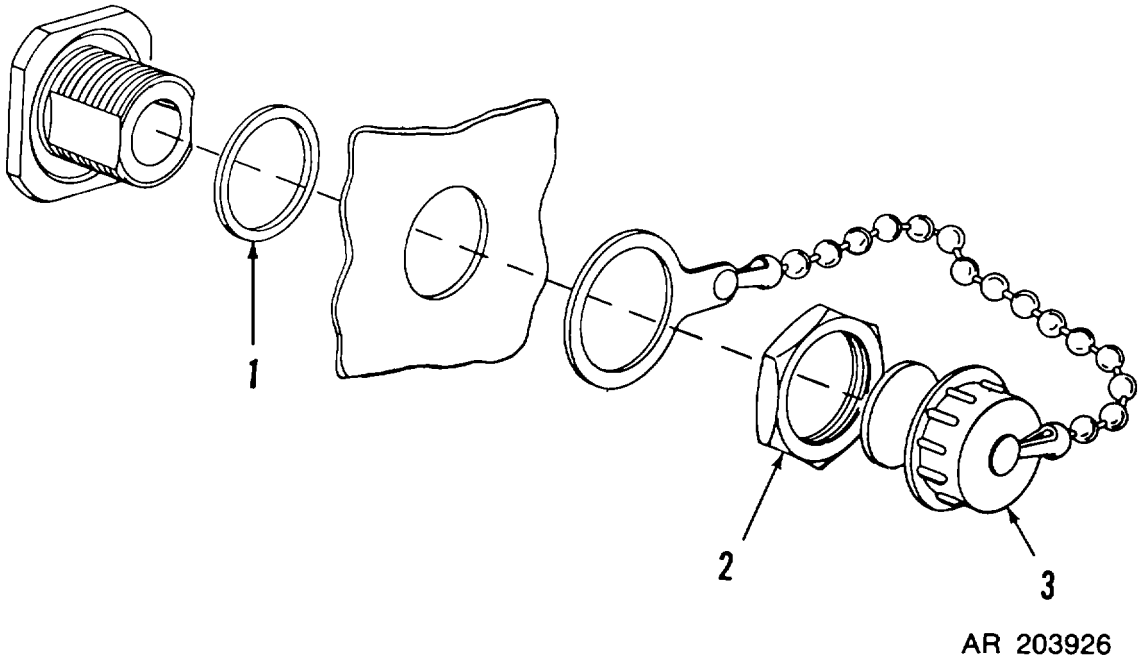


Figure C3. Vent Assembly

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 02 VENT ASSEMBLY:	
				FIGURE C3. VENT ASSEMBLY.	
1	PCFZZ	19203	8853798	WASHER, FLAT:	001
2	PAFZZ	88044	AN3066-4	LOCKNUT, ELECTRICAL:	001
3	XAFZZ	19203	8853792	CAP ASSEMBLY:	001
				END OF FIGURE	

SECTION III. NOT REQUIRED

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
6685-00-052-1865	C2	5	5310-00-732-0558	C1	6
5330-00-057-4192	C2	8	1190-00-970-3314	C1	9
5330-00-067-7445	C2	9	5355-01-171-0156	C2	6
5310-00-225-9131	C3	1	5340-01-171-5076	C2	10
5330-00-248-3842	C2	7	5365-01-171-5170	C2	3
5975-00-296-0541	C3	2	5306-01-172-7738	C1	1
6685-00-520-0809	C1	8	5330-01-172-9544	C1	3
5310-00-637-9541	C1	5	9905-01-172-9551	C1	7
5330-00-702-8784	C3	4			

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX - Continued

PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
88044	AN3066-4	5975-00-296-0541	C3	2
96906	MS29513-017	5330-00-248-3842	C2	7
96906	MS35338-46	5310-00-637-9541	C1	5
96906	MS51967-8	5310-00-732-0558	C1	6
19203	8853791	1190-00-970-3314	C1	9
19203	8853792		C3	3
19203	8853798	5310-00-225-9131	C3	1
19203	8860990-1	6685-00-520-0809	C1	8
19203	8864899	5330-00-057-4192	C2	8
19203	8864900	5340-01-171-5076	C2	10
19203	8864902	5355-01-171-0156	C2	6
19203	8864903	5365-01-171-5170	C2	3
19203	8864905	5330-00-067-7445	C2	9
19203	8864906		C2	1
19203	886490'7		C2	2
19203	8864908	5330-00-702-8784	C3	4
19203	8881094	6685-00-052-1865	C2	5
19200	9313656		C1	4
19200	9313657		C1	2
19200	9313658	5330-01-172-9544	C1	3
19200	9328433	9905-01-172-9551	C1	7
19200	9331718	5306-01-172-7738	C1	1

APPENDIX D

CONSUMABLE MATERIALS

(1) National Stock No.	(2) Nomenclature	(3) Military Specification	(4) Unit of Issue
5350-00-192-5047	ABRASIVE CLOTH: 9x11, 80 grit	P-C-451	pg
8135-00-579-8457	CHIPBOARD	UU-C-282	sh
6850-00-264-6574	DESICCANT	MIL-D-3464	dr (500 ea)
8010-00-902-0182	ENAMEL: Forest green, No. 34079 or LACQUER: Forest green, No. 34079	TT-E-516 MIL-L-11195	qt
8010-00-577-4131	ENAMEL: Orange, No. 12648 INK, MARKING STENCIL: Black, No. 37038	TT-E-506 TT-I-1795 Type I or III	gl
7510-00-161-0815	INK MARKING STENCIL: White, No. 37875	TT-I-1795 Type I or III	gl
8010-00-527-2495	LACQUER: green No. 34151 LACQUER: Blue No. 35044	TT-L-20 MIL-L-11195	gl
8010-00-292-1127	PRIMER	TT-P-664 or MIL-P-11414	gl
5340-00-491-7632	SEAL, METALLIC (nonpilferage) MS51938-5	--	ea
5340-00-902-0426	SEAL, METALLIC (nonpilferage) MS51938-6	--	hd

APPENDIX E

MARKING INFORMATION

E-1. Marking

Mines are marked in accordance with figure E-1.

Mine sleeve is marked in accordance with figure E-2.

Mine shipping and storage container is marked in accordance with figure E-3.

The pallet contains identifying information in two locations on adjacent sides, either stenciled on the pallet or printed on two white labels which are attached to the pallet. The information contained is:

NSN

Item description

Quantity

Level of protection

Weight

Cube

E-2. Painting for Light Containers

Mine sleeves containing fewer than five mines will be painted orange before shipment.

Shipping and storage containers containing fewer than 40 mines will be marked before shipment with the words "LIGHT BOX" on both sides, both ends, and the top in orange in as large letters as practical.

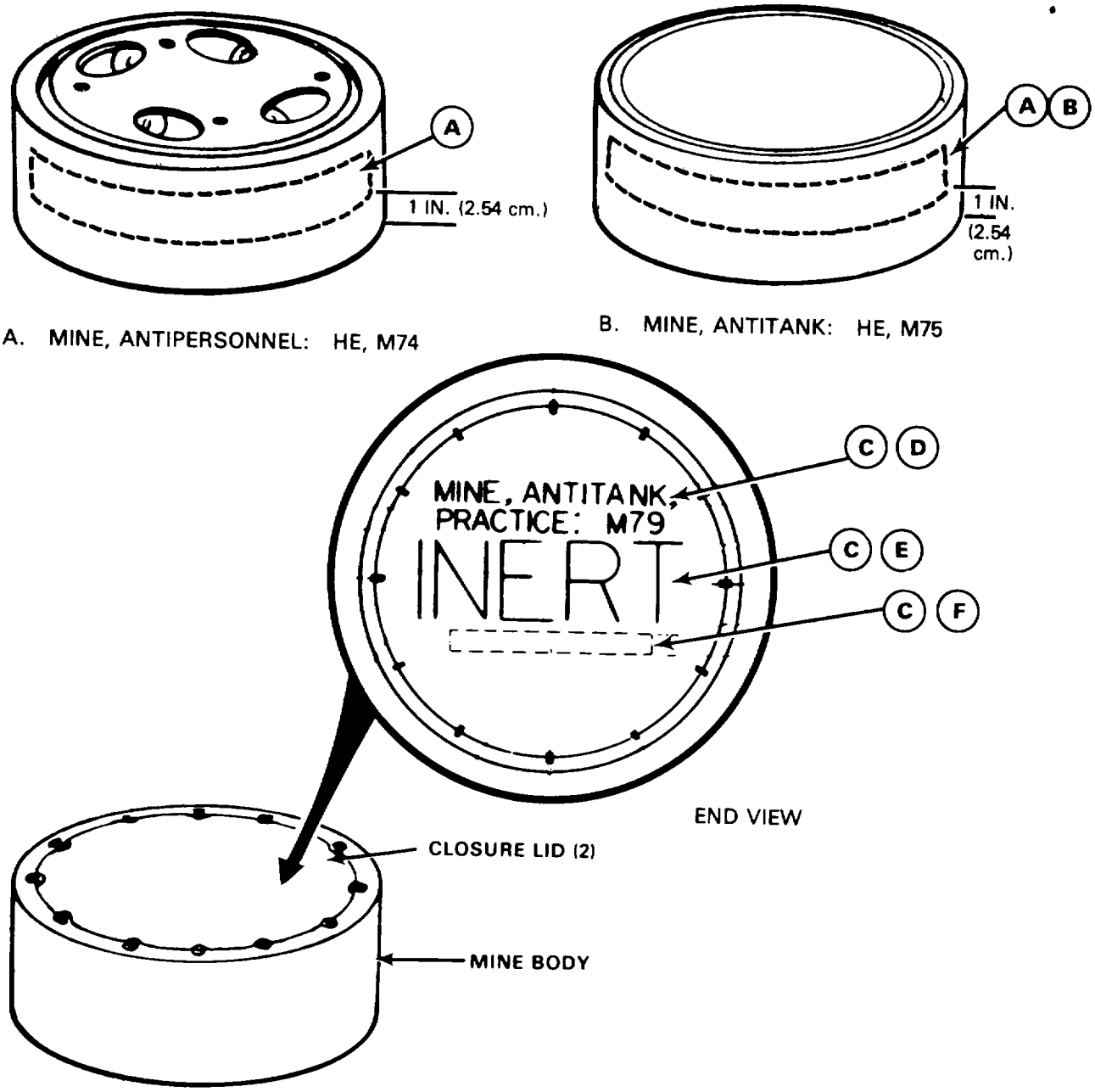


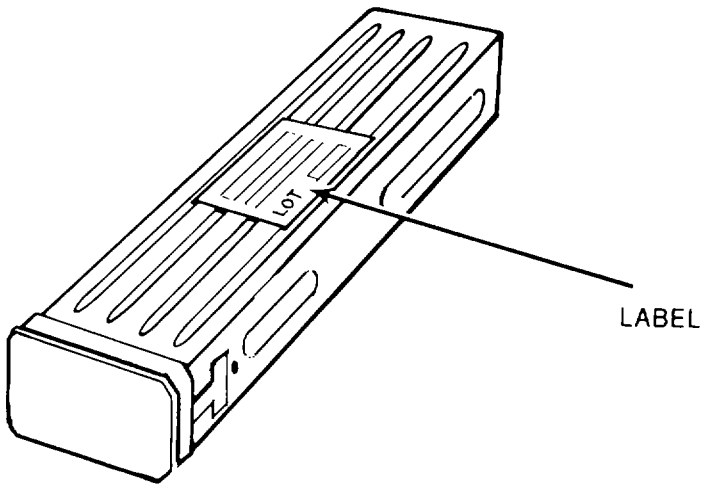
Figure E-1 Marking instructions for mines (1 of 2).

1. Marking for mines will be located approximately as shown.
   A. Lot number in 1/2 in. (1.27 cm.) high lettering with black stencil ink No. 37038, spec TT-1-1795, type I or III.
   B. Lot numbers for HE antitank mines M75 containing an antidisturbance switch end with "-2"; lot numbers for those with no antidisturbance switch end with "-1".
   C. Marking in white stencil ink No. 37875, spec TT-1-1795, type I or III.
   D. Marking in 1/4 in. (0.635 cm.) high lettering on both ends.
   E. Marking in 1 in. (2.54 cm.) high lettering on both ends.
   F. Lot number in 1/4 in. (1.27 cm.) high lettering on one end only.
2. Where previous coating is damaged, mine surfaces will be retouched with lacquer as shown below. MIL-A-2550 will apply.

Mine	Lacquer		
	Color	No.	Spec or std
M74	Green	34151	TT-L-20
M75	Green	34151	TT-L-20
M79	Blue	35044	MIL-L-11195

ARD 84-1730

Figure E-1. Marking instructions for mines (2 of 2).



Marking for mine sleeve consists of a special label bearing information shown below:

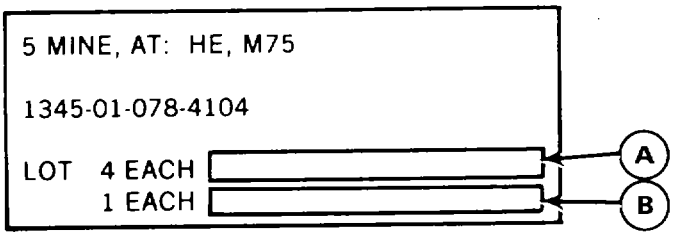
1. Descriptive nomenclature (see table).

2. NSN (see table).

Descriptive Nomenclature	NSN
5 Mine, AP: HE, M74	1345-01-076-3497
5 Mine, AT: HE, M75	1345-01-078-4104
5 Mine, AT, Prac: M79	1345-01-074-9370

3. Lot number. Note: For mine, AT: HE, M75, see below.

LABEL FOR MINE, AT: HE, M75



A. Lot number of mines containing no antidisturbance switch, with last digit being "-1."

B. Lot number of mines containing antidisturbance switch, with last digit being "-2."

ARD 84-1731

Figure E-2. Marking instructions for mine sleeve.

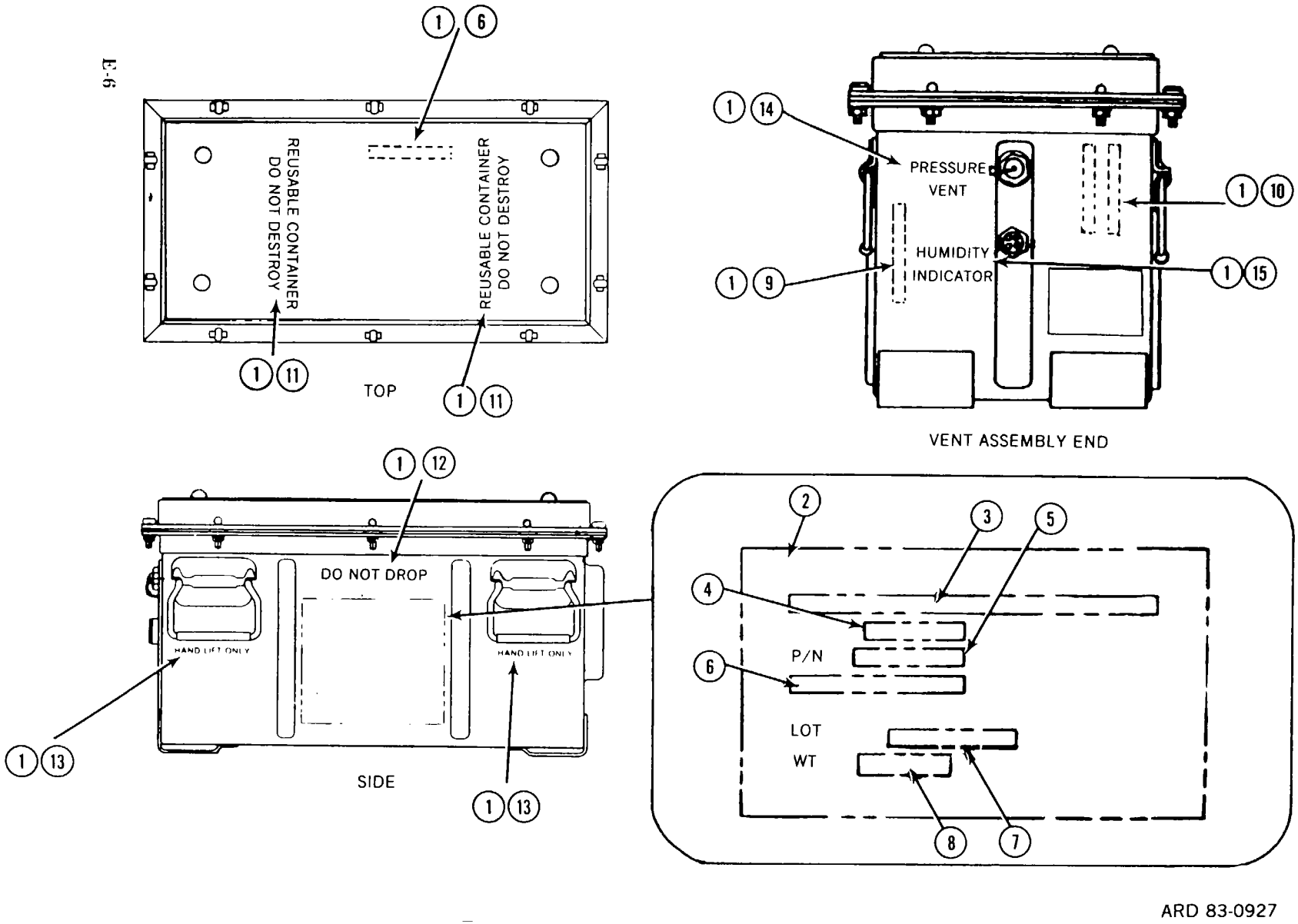


Figure E-3. Marking instructions for container (1 of 2).

MARKING INSTRUCTIONS

1. Marking will be in 1/2 in. (1.27 cm.) high lettering located approximately as shown with white stencil ink No. 37875, spec TT-I-1795.
2. Marking will be in 1/4 in. (0.635 cm.) high lettering located approximately as shown with white stencil ink No. 37875, spec TT-I-1795.
3. Descriptive nomenclature (see table).
4. NSN (see table).
5. Part number (see table). Note: For mine, AT: HE, M75, use two lines as shown in table. Part number ending with "-1" is for mines containing no antidisturbance switch. Part number ending with "-2" is for mines containing antidisturbance switch.
6. DOT nomenclature (see table).
7. Lot number. Note: For mine, AT: HE, M75, use two lines as shown below.

LOT 32 EACH [ ] (A)
8 EACH [ ] (B)

   A. Lot number of mine without antidisturbance switch, with last digit being "-1."
   B. Lot number of mine with antidisturbance switch, with last digit being "-2."

8. Gross weight to nearest pound.
9. DODIC on vent assembly end (see table).
10. Lot number (two lines). NOTE: For mine, AT: HE, M75, use four lines to show the two lot numbers.
11. "REUSABLE CONTAINER DO NOT DESTROY" in two places.
12. "DO NOT DROP" on both sides.
13. "HAND LIFT ONLY" in four places.
14. PRESSURE VENT in one place.
15. HUMIDITY INDICATOR in one place.

TOUCHUP INSTRUCTIONS

Where previous coating is damaged, container surface will be retouched with enamel, spec TT-E-516, or lacquer, spec MIL-L-11195, forest green, color No. 34079 of FED-STD-595. MIL-A-2550 will apply.

Descriptive Nomenclature	DOT Nomenclature	Part No.	National Stock No.	DODIC
40 MINE, AP: HE, M74	EXPLOSIVE MINE	9292600	1345-01-076-3497	K151
40 MINE, AT: HE, M75	EXPLOSIVE MINE	32 EACH 9292227-1 8 EACH 9292227-2	1345-01-078-4104	K184
40 MINE, AT, PRACTICE: M79	AMMUNITION NONEXPLOSIVE	9317994	1345-01-074-9370	K234

Figure E-3. Marking instructions for container (2 of 2).
ARD 81732

By Order of the Secretary of the Army:

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

Official:

DONALD J. DELANDRO
Brigadier General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-40, Organizational Maintenance and Direct Support Maintenance requirements for Mine, Antipersonnel: HE, M74; Mine, Antitank: HE, M75; and Mine, Antitank, Practice: M79.

*U.S. GOVERNMENT PRINTING OFFICE: 1995 - 388-421/00291

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 PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

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

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

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

DA FORM 1 JUL 79 2028-2

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.

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 057110-002