

TECHNICAL MANUAL

**OPERATOR'S MANUAL
DOCUMENT DESTROYER,
EMERGENCY INCENDIARY, M4
NSN 1375-00-078-0450**

HEADQUARTERS, DEPARTMENT OF THE ARMY

SEPTEMBER 1976

WARNINGS

Combustion of plastic materials results in production of toxic vapors. Stay upwind to avoid breathing vapors.

Do not operate in a closed building, due to fire hazards involved and risk of asphyxiation from breathing dangerous carbon monoxide fumes.

Never put petroleum, oils, and lubricants in the document destroyer. The combination of the oxidizer and the petroleum, oils, and lubricants could form an explosive mixture.



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CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Purpose and Scope

This publication is for your use in operating and maintaining the Document Destroyer, Emergency Incendiary, M4, which is used for the rapid destruction of paper (paper products), photographic film, recording tape, magnesium or aluminum reels, and cryptographic

devices (printed circuit boards) made of plastic. Hereinafter, this equipment will be referred to as the document destroyer.

1-2. Record and Report Forms

Equipment Maintenance forms and procedures for their use are prescribed in TM 38-750.

Section II. DESCRIPTION AND DATA

1-3. Description

a. General. The document destroyer (fig. 1-1) consists of a 55-gallon metal outer drum, a screen cover, oxidizing agent, a fiberboard inner drum, 3 igniters, 2

railroad fusees, an outer drum cover, lever lock ring, gasket, inner drum cover, instruction sheets, plastic foam spacers, and miscellaneous packing material.

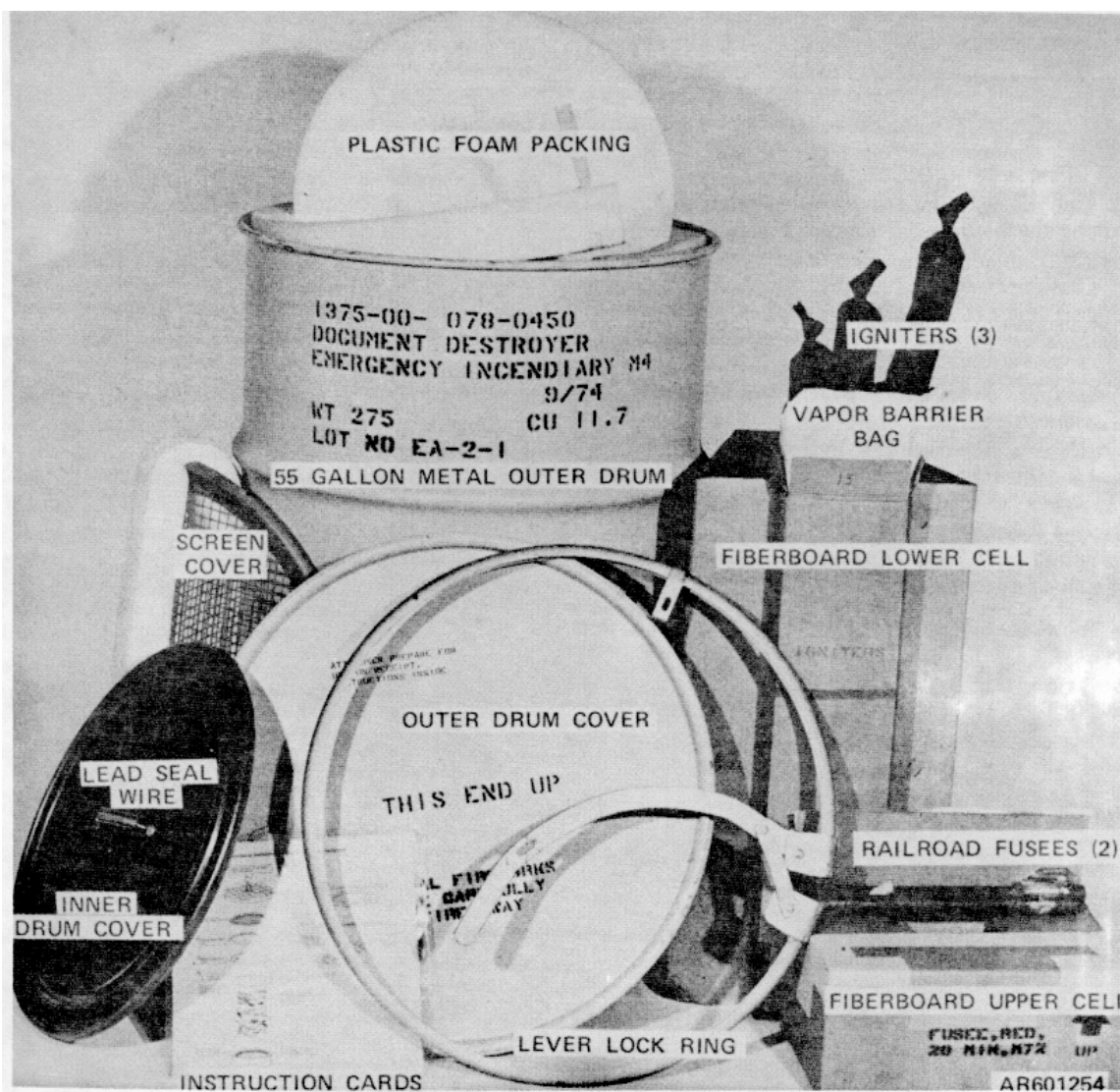


Figure 1-1. M4 emergency incendiary document destroyer.

b. *55-Gallon Metal Outer Drum.* The 55-gallon metal outer drum, with removable cover, is used as an incinerator into which up to 120 pounds of documents can be burned. The drum also serves as the shipping and storage container. The drum is shipped with a drum cover/gasket and lever lock ring secured in place with a wire lead seal. Operating instructions are attached to the underside of drum cover.

(1) *Outer drum cover.* The outer drum cover is of one piece formed steel with an outer lip. When installed on the metal outer drum, it fits over the bead of the open end of the steel drum body. When the lever lock ring is installed, the drum is sealed.

(2) *Lever lock ring.* The lever lock ring is a

half-round metal ring, which fits over the outer lip of the cover, and is equipped with a lever that draws or loosens the ring. The lever rests in a catch to hold it closed.

(3) *Gasket* The gasket is a round, synthetic rubber ring approximately 23-1/ inches in diameter. The gasket is cemented to the outer drum cover.

c. *Screen Cover.* The screen cover consists of a disk of a 2mesh 1h6-inch stainless steel wire cloth welded to a steel cover band. The screen cover is folded so that it fits inside the fiberboard inner drum.

CAUTION

Never remove the fiberboard inner drum from the 55gallon metal outer drum.

d. Fiberboard Inner Drum. The fiberboard inner drum is a cylindrical packing drum with a metal drum cover. The six plastic foam spacers position the fiberboard inner drum inside the metal outer drum. The metal inner drum cover is provided to close the fiberboard inner drum.

e. Oxidizing Agent The oxidizing agent is either sodium nitrate coated with calcium phosphate or prilled sodium nitrate. The oxidizing agent fills the space between the fiberboard inner drum and the metal outer drum. It provides the oxidizer required to support combustion of the documents being destroyed.

f. Igniters. The igniter is contained in a black plastic bag. The igniter consists of a mixture of sodium nitrate, sugar, and charcoal. The sugar and charcoal provide the fuel and the sodium nitrate provides oxygen. Three igniters approximately 3 inches diameter by 22 inches long are packed in a vapor barrier bag. The vapor barrier bag is packed in fiberboard box which is attached to the lower cell.

g. Railroad fusees. Two railroad warning fusees are provided in each document destroyer. They are packaged in the fiberboard upper cell. The fusees have

been modified by the addition of a hook which allows them to be hung on the edge of the inner drum after they are unpacked.

h. Instruction cards. Two instruction cards, one for preparation of the document destroyer and one for operation of it, are contained in a plastic envelope under the outer drum cover. In addition, a second instruction card for operation of the document destroyer is cemented to the underside of the outer drum cover.

i. Miscellaneous Packing Material Miscellaneous packing materials such as corrugated fiberboard are used to fill the void spaces and to retain the parts in place during shipping and storage of the document destroyer.

j. Markings. The markings for the document destroyer are stenciled on the outside surface of the 55gallon metal outer drum and the drum cover. Some of these markings are shown in figures 1-2 and 1-3. The markings also identify the document destroyer. The box containing the igniters (f above) is marked IGNITERS in red. The vapor barrier bag is also marked IGNITERS in red.

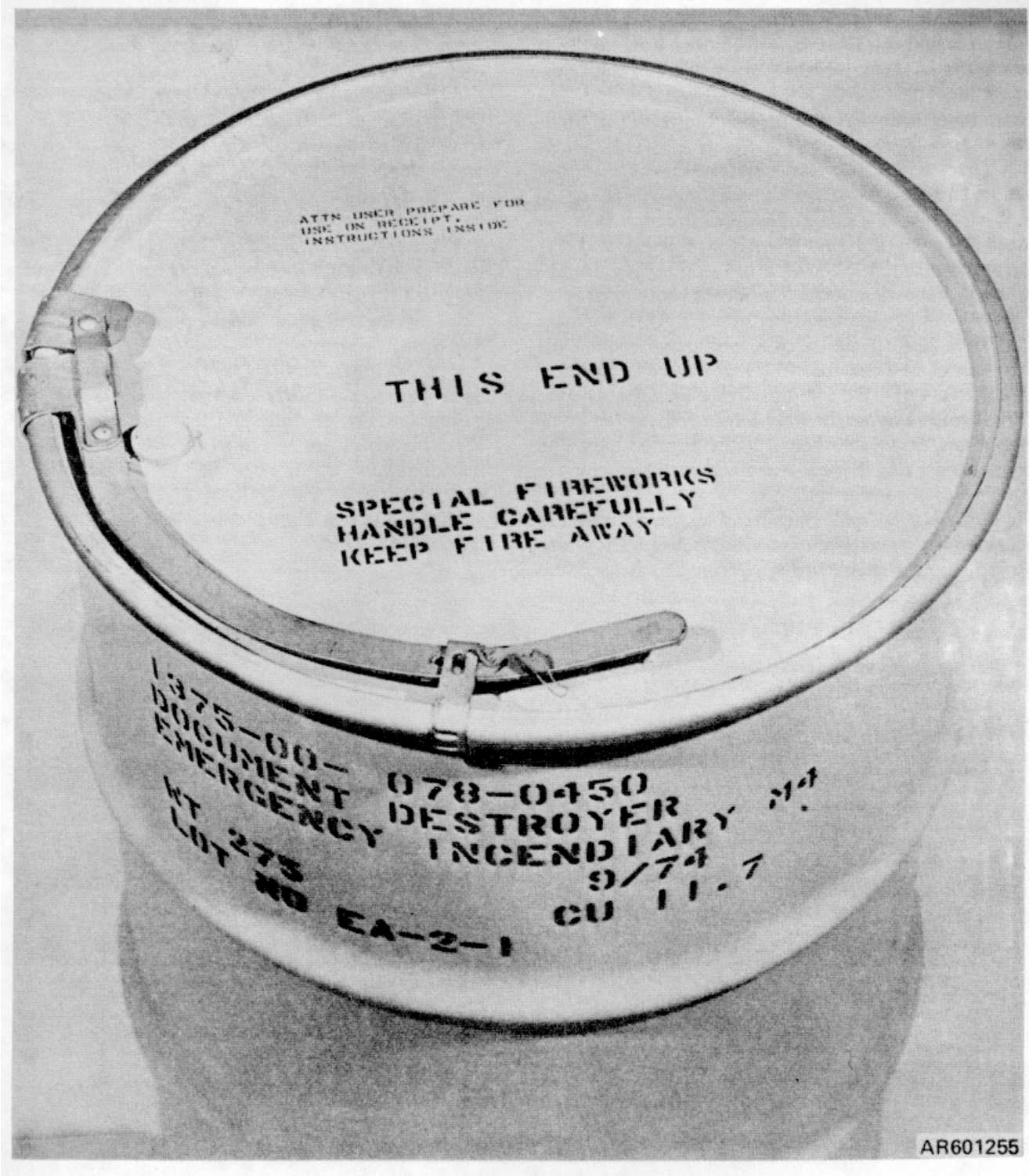
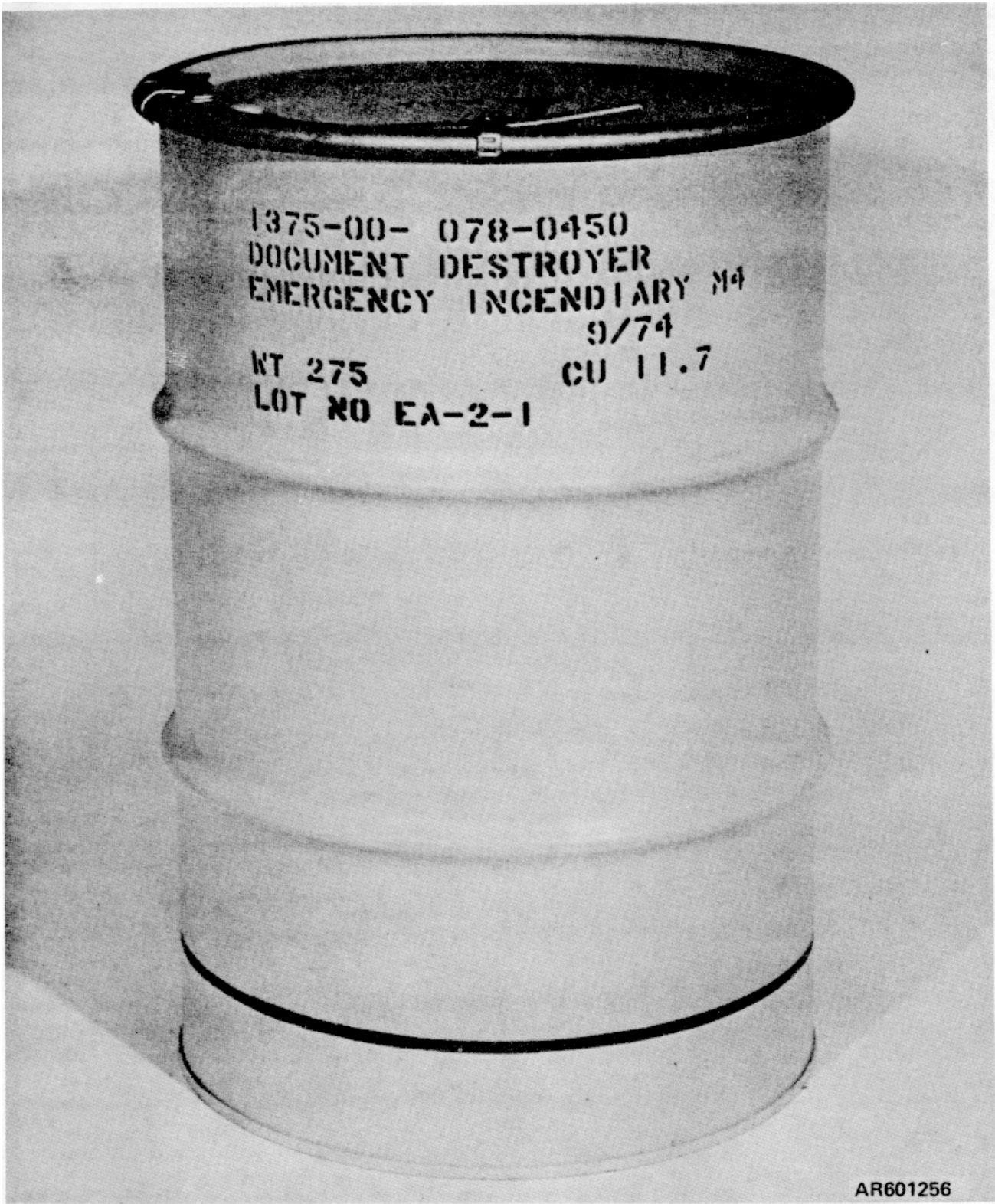


Figure 1-2. Marking.



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Figure 1-3. Markings.

1-4. Tabulated Data

All data are approximate.

a. Document Destroyer - Weight, Cube, and Dimensions.

Weight 275 lbs
Cube 11.7 cu ft
Height (with cover on)..... 35-9/16 in.
Diameter (max.) 23.75 in.

b. Prilled Sodium Nitrate Weight..... 190 lbs

c. Summary Destruction Capability.

Maximum destruction..... 120 lbs

d. Weight Limitations on Classified Material

- (1) Cellulose papers (documents) - 65 to 100% (21 to 32 in.) Glossy paper.....5 % (1-½ in.)
- (2) Plastics (printed circuit boards). 20% (6-1/2 in.)
- (3) Film and tape on metal reels or nonmetallic reels 15% (5 in.)

**CHAPTER 2
OPERATING INSTRUCTIONS**

Section I. PREPARATION AND INSPECTION

NOTE

The document destroyer should be unpacked and prepared for operation in the area where it will be used. If the document destroyer is to be repacked, save all packing materials.

2-1. Preparation

a. If the lead seal wire is broken or missing, inspect the document destroyer (para 2-2). Break, remove, and discard the lead seal wire that secures the lever lock ring and handle in place. Operate the handle and

remove the lever lock ring.

b. Remove the drum cover from the 55-gallon metal outer drum.

CAUTION

Do not remove the three top foam spacers which are attached to the fiberboard inner drum.

c. Remove and discard the plastic foam packing pad (fig. 2-1). Remove and discard the plastic foam packing ring. The preparation instructions card is located under the drum cover in a clear plastic envelope.

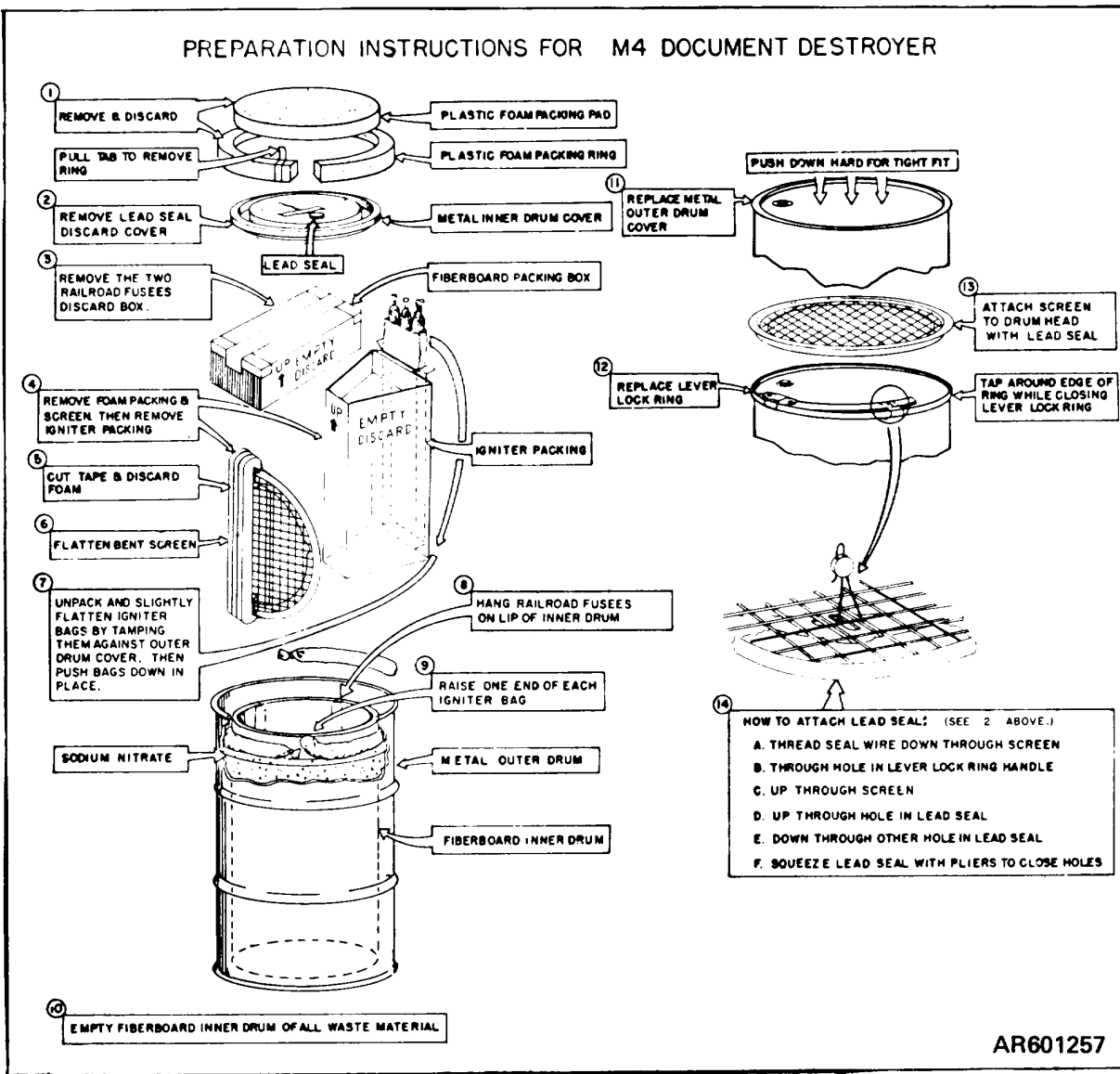


Figure 2-1. Illustration of preparation instructions.

d. Remove the inner drum cover. Be sure to remove the extra lead seal which is taped to the inner drum cover and save the lead seal for later use. Discard the inner drum cover.

e. Remove the box containing the fusees from the inner drum. Remove the fusees from the box and retain them. Squeeze the screen cover and pull upward to remove the screen cover. Then remove the fiberboard lower cell. Open the top of the fiberboard box which is attached to the fiberboard lower cell. Pull out the vapor barrier bag. Slit open the vapor barrier bag carefully so

that the igniters inside are not damaged. Flatten the igniters before attempting to insert them in the area between the drums. Place the three igniters on top of the exposed oxidizing agent. Press the igniters into place by starting at one end and working around the space between the drums. The three igniters should go completely around the circumference. Lift one end of each bag upward beyond the top of the inner drum as shown in figure 2-2. Hang the fusees on the edge of the inner drum.

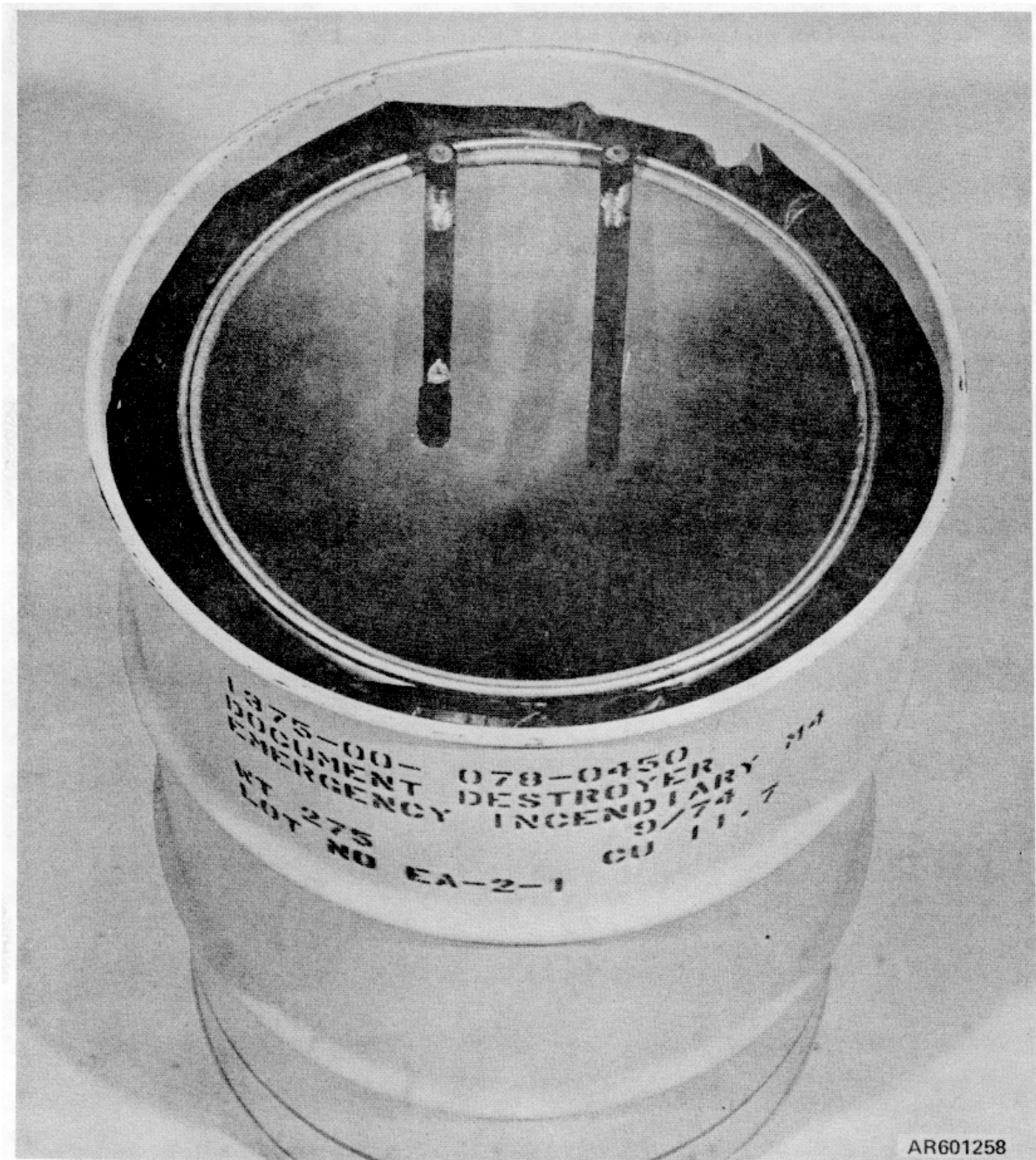


Figure 2-2. Igniter and fuze positioning.

f. Cut the tape and remove the foam spacer from the folded screen cover. Flatten the screen cover. Check fit of screen cover to the drum. Place the screen cover nearby.

g. Place the outer drum cover on top of the metal outer drum. Check that gasket is properly positioned. Secure the outer drum cover to the drum with the lever

lock ring (force in place as required).

h. (See figure 2-3.) Place the screen cover (*f* above) on top of the outer drum cover. Fasten the screen cover to the lever lock ring by passing the wire of the wire lead seal (*d* above) through the screen cover, through the hole in the lever lock ring handle, the lever catch, and through the lead seal. Crimp the lead seal after
draw

ing the wire up snug. (The lead seal assures that the contents of the document destroyer have not been tam-

pered with, that the screen is held in place, and that lever lock ring has not been removed.)

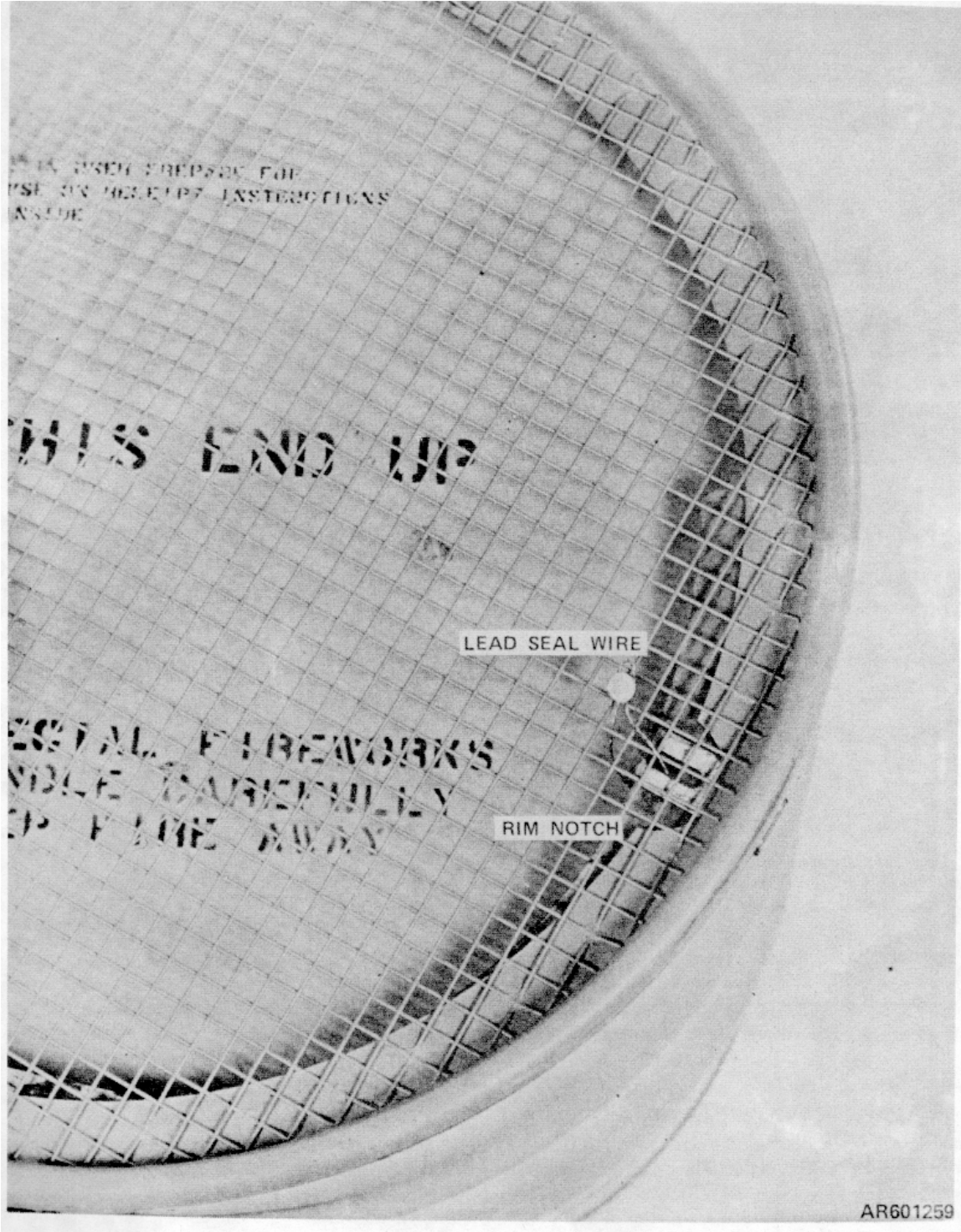


Figure 2-3. Lead seal wire installment

- i. Discard the packing material (See Note ahead of para 2-1).
- j. Establish an emergency plan for movement of classified material to the destruction site. Post the

operating instructions (fig. 2-4) in a suitable area. Retain the preparation instructions (fig. 2-1) for possible reuse.

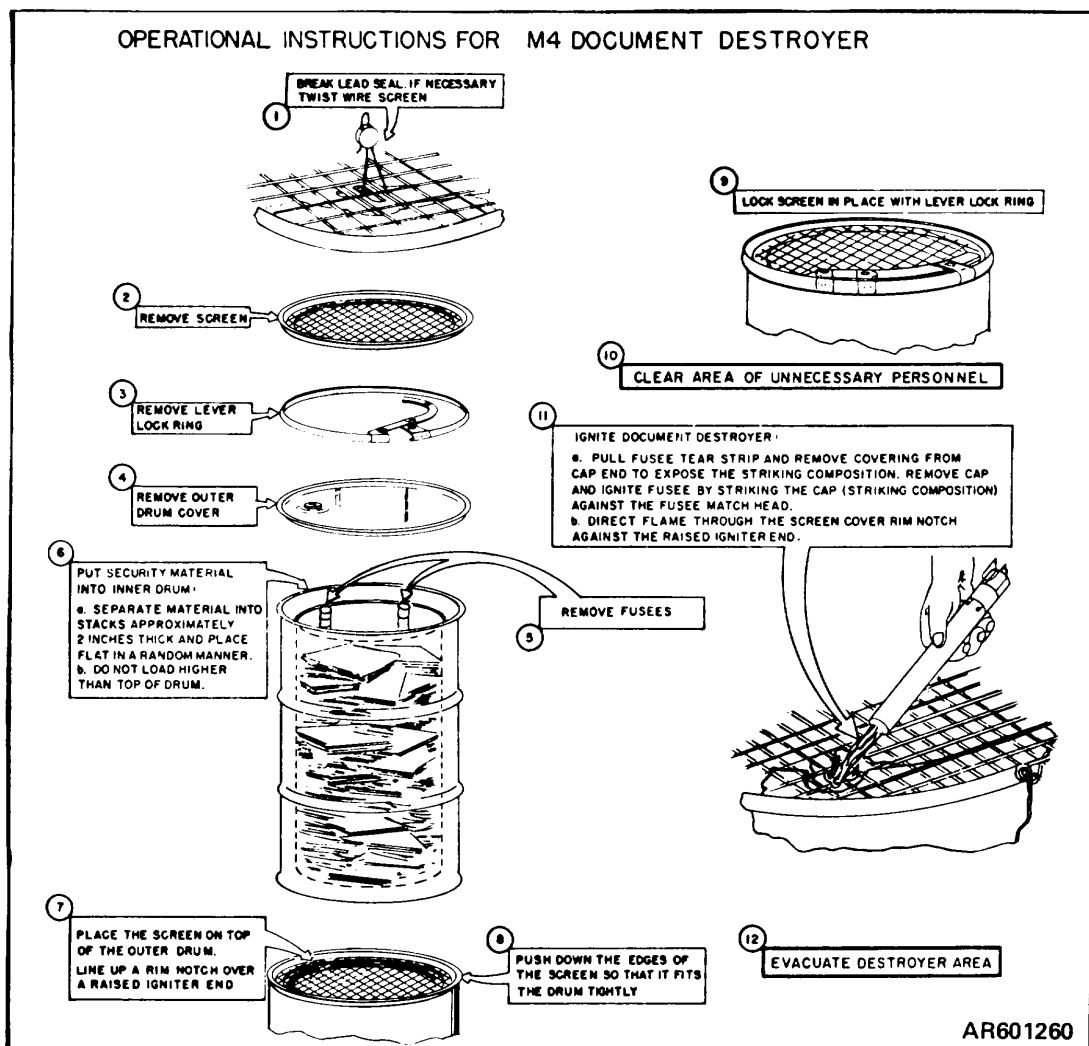


Figure 2-4. Illustration of operating instructions.

2-2. Inspection

- a. While preparing the document destroyer (para 2-1), it should be inspected to see that it is undamaged.
- b. Periodically check that wire lead' seal (fig. 2-3) is intact and that the contents have not been tampered with. If missing or broken, do not operate the document destroyer without first checking to see that the screen cover, inner drum, three igniters, two railroad fusees, and oxidizing agent are present and in good condition.

(The oxidizer can be either loose, beads, or caked.) If all parts are intact, install a new wire lead seal (para 2-1h). If water is present in document destroyer, the document destroyer should be discarded and replaced.

2-3. Repacking

- a. Use the following procedure if the original packing materials were saved:
 - (1) Remove the igniters and fusees from the document destroyer.

- (2) Place the igniters in the vapor barrier bag.
- (3) Seal or tape the vapor barrier bag closed.
- (4) Insert the vapor barrier bag into the fiberboard box, which is attached to the fiberboard lower cell.
- (5) Place the fusees in the fiberboard upper cell.
- (6) Tape the upper cell closed.
- (7) Insert the lower fiberboard cell into the fiberboard inner drum.
- (8) Fold the screen cover to fit in the fiberboard inner drum.
- (9) Tape the foam strip to the outside of the fold of the screen cover.
- (10) Insert the screen cover into the inner drum opposite the igniter box.

- (11) Place the fiberboard upper cell on top of the fiberboard lower cell.
- (12) Install the metal inner drum cover. Install the long foam strip around and between the fiberboard inner drum and the metal outer drum on top of the oxidizer.
- (13) Place the foam packing pad (spacer) in the center.
- (14) Place the metal outer drum cover in position. Lock in place with the lever lock ring.

b. If original packing materials were not saved, repack in accordance with local standing operating procedure.

Section II. OPERATING PROCEDURE

2-4. Operation Under Usual Conditions

- a.* Break the lead seal wire (fig. 2-3).
- b.* Remove the lever lock ring and the screen cover.
- c.* Remove the drum cover and attached gasket.
- d.* Remove the fusees from the edge of the inner drum.

WARNING

Never put petroleum, oils, and lubricants in the document destroyer. The combination of the oxidizer with the petroleum, oils, and lubricants could form an explosive mixture.

- e.* Fill the inner drum with classified materials that are to be destroyed. Maximum destruction limitations are as follows:
 - (1) Cellulose paper (21 to 32 in.)
 - (2) Glossy paper (1 to 1-1/2 in.)
 - (3) Plastics (printed circuit boards 6-1/2 in.)
 - (4) Film and tape reels (5 in.)

NOTE

To insure complete destruction of classified materials place the most security sensitive materials in the document destroyer first. Place material horizontally in a random manner so that there is no closely packed material more than a few inches thick.

- f.* the screen cover on top of the metal outer drum. Line up a rim notch (fig. 2-3) over a raised igniter end.
- g.* Install the lever lock ring.

WARNING

Combustion of plastic materials results in production of toxic vapors. Stay upwind to avoid breathing vapors.

WARNING

Do not operate in a closed building, due to fire hazards involved and risk of asphyxiation from breathing dangerous carbon monoxide fumes.

h. Pull the tear strip on the railroad fusee to remove the paper covering over the wooden block. Remove the wooden block and ignite the fusee by striking the match head with the striking composition which is on the outer surface of the cap. Direct the flame from the fusee onto the igniter through the rim notch of the screen cover. Make sure the igniters start burning.

i. Clear the destruction area for a safe distance (about 100 feet unobstructed, closing a door, or getting behind a wall, etc.).

2-5. Operation Under Unusual Conditions

a. Climatic Extremes.

(1) Hot weather has no appreciable effect on the performance of the document destroyer.

(2) In cold weather the document destroyer doesn't burn as hot as it does in normal temperatures. To insure complete destruction of contents clear all snow and ice away from the exterior of the document destroyer.

b. Snow or Rain. In snow or rain the cover should be maintained (placed) over the document destroyer until just before ignition.

CHAPTER 3 MAINTENANCE INSTRUCTIONS

3-1. Storage

Store the document destroyer under cover and protected from the direct rays of the sun, especially in tropical and desert areas. Make sure that the stenciled marking that reads: "SPECIAL FIREWORKS, HAN-

DLE CAREFULLY, KEEP FIRE AWAY" on the outer drum cover is legible. Figure 3-1 illustrates the labels required for the document destroyer during shipment and storage.

DD FORM 1387-1
1 APR 66
REPLACES EDITION OF 1 APR 65
WHICH MAY BE USED

MILITARY SHIPPING TAG

TRANSPORTATION CONTROL NUMBER	ADD	PROJECT
FROM	TRANS PRIORITY	
TO: (POI when applicable)		
POD (when applicable)		
ULTIMATE CONSIGNEE OR MARK FOR		
PIECE NUMBER	TOTAL PIECES	WEIGHT THIS PIECE
		CUBE THIS PIECE

GPO : 1969-286-999

MILITARY SHIPPING TAG

SPECIAL HANDLING DATA/CERTIFICATION

TRANSPORTATION CONTROL NUMBER	NOMENCLATURE OF ITEM	NET EXPLOSIVE WEIGHT	GROSS WEIGHT
DESTINATION		SHIPPER CERTIFICATION: This is to CERTIFY that the contents of the packages in this shipment are properly described by name and are packed, marked, and in proper condition for transportation in accordance with:	
HANDLING INSTRUCTIONS		<input type="checkbox"/> SUBPARAGRAPH _____ APM 714: TM 38-28C NAVREPS 18-03-800 AND MCO #403C 19 <input type="checkbox"/> OFFICIAL AIR TRANSPORT RESTRICTED ARTICLES (AMIFF'S CAB NO. 92) <input type="checkbox"/> OTHER (Specify): _____ <input type="checkbox"/> EQUIPMENT WITHIN PASSENGER CARGO AIRCRAFT LIMITATIONS	
SIGNATURE		DATE	

DD FORM 1387-2, 1 APR 66
REPLACES EDITION OF 1 APR 65 WHICH MAY BE USED

SPECIAL HANDLING DATA/CERTIFICATION



STANDARD FORM 401
NSN 7540-00-118-0083



STANDARD FORM 407
NSN 7540-00-118-0340

AR601261

Figure 3-1. DOT/Army labels.

3-2. Disposal

Open the document destroyer and ignite it or pour oxidizer onto the ground and leave it. Chop holes in the

metal outer drum body and outer drum cover with an ax.

3-3. Painting

The exterior surfaces of the 55-gallon drum are painted with light gray paint. A single band of red paint encir

cles the drum. All markings are made with black paint. Paints must conform to Federal Standard 595. See TM 43-0139 for detailed instructions on painting.

**APPENDIX
REFERENCES**

DA Pamphlet 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9) Supply Bulletins, and Lubrication Orders
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 9-1300-206	Ammunition and Explosives Standards
TM 4304)139	Painting Instructions for Field Use
TM 9-1370-203-12	Operator's and Organizational Maintenance Manual (Including Repair Parts and Special Tools List): Military Pyrotechnics
TM 38-250	Packaging and Materials Handling Preparation of Hazardous Materials for Military Air Shipment

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