

**TM 9-1305-201-20&P**

---

**TECHNICAL MANUAL**

**ORGANIZATIONAL MAINTENANCE MANUAL**

**(INCLUDING REPAIR PARTS AND**

**SPECIAL TOOL LIST)**

**FOR**

**SMALL ARMS AMMUNITION TO**

**30 MILLIMETER INCLUSIVE**

**(FSC 1305)**

This copy is a reprint which includes current pages from changes 1 through 12.

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**HEADQUARTERS, DEPARTMENT OF THE ARMY**  
**OCTOBER 1981**

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Change )  
)  
No. 15 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, D.C., 15 February 2002

**UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)  
FOR  
SMALL ARMS AMMUNITION TO 30 MILLIMETER INCLUSIVE  
(FSC 1305)**

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. Changed material is indicated by a vertical bar in the margin of the page. New or changed illustrations are indicated by a black bar adjacent to the identification number.

Remove pages

A and B  
2-5 and 2-6

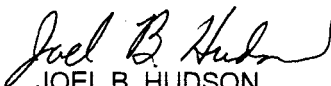
Insert pages

A and B  
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:

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020280 2

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Distribution:

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Change )  
)  
No. 14 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, D.C., 16 March 2001

**UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)  
FOR  
SMALL ARMS AMMUNITION TO 30 MILLIMETER INCLUSIVE  
(FSC 1305)**

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

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Remove pages

None  
i and ii  
2-3 thru 2-6  
2-15 and 2-16  
A-1 and A-2  
C-1 thru C-6.2  
D-1 and D-2  
E-1 and E-2  
E-5 and E-6

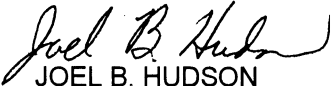
Insert pages

A and B  
i and ii  
2-3 thru 2-6  
2-15 and 2-16  
A-1 and A-2  
C-1 thru C-14  
D-1 thru D-4  
E-1 and E-2  
E-5 and E-6

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Change )  
 )  
No. 13 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, D.C., 20 December 1996

**UNIT MAINTENANCE MANUAL**  
**(Including Repair Parts and Special Tools List)**  
**FOR**  
**SMALL ARMS AMMUNITION TO 30 MILLIMETER INCLUSIVE**  
**(FSC 1305)**

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. Changed material is indicated by a vertical bar in the margin of the page. New or changed illustrations are indicated by a black bar adjacent to the identification number. A revised appendix A is indicated by a vertical bar adjacent to the title on page: A-1.

Remove pages

A and B  
i thru iii  
1-1 and 1-2  
2-5 and 2-6  
2-15 and 2-16  
3-5 and 3-6  
None  
3-7 and 3-8  
A-1  
C-3 and C-4  
E-5 and E-6

Insert pages

None  
i thru iv  
1-1 and 1-2  
2-5 and 2-6  
2-15 and 2-16  
3-5 and 3-6  
3-6.1 and 3-6.2  
3-7 and 3-8  
A-1 and A-2  
C-3 and C-4  
E-5 and E-6

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Change )  
 )  
No. 12 )

HEADQUARTERS  
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Washington, DC, 29 April 1994

**UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)  
FOR  
SMALLARMS AMMUNITION TO 30 MILLIMETER  
INCLUSIVE  
(FSC 1305)**

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added or revised illustrations are indicated by a vertical bar adjacent to the identification number.

Remove pages

A (B blank)  
2-5 and 2-6  
2-15 and 2-16  
C-3 and C-4  
E-5 and E-6

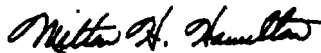
Insert pages

A and B  
2-5 and 2-6  
2-15 and 2-16  
C-3 and C-4  
E-5 and E-6

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Change )  
)  
No. 11 )

HEADQUARTERS  
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Washington, DC, 29 January 1993

**UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)  
FOR  
SMALL ARMS AMMUNITION TO 30 MILLIMETER  
INCLUSIVE  
(FSC 1305)**

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

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Remove pages

A (B blank)  
2-5 and 2-6  
2-15 and 2-16  
C-3 and C-4  
E-5 and E-6

Insert pages

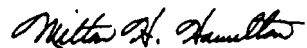
A (B blank)  
2-5 and 2-6  
2-15 and 2-16  
C-3 and C-4  
E-5 and E-6

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Change )  
 )  
No. 10 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 15 October 1992

**UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)  
FOR  
SMALL ARMS AMMUNITION TO 30 MILLIMETER  
INCLUSIVE  
(FSC 1305)**

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added or revised illustrations are indicated by a vertical bar adjacent to the identification number,

Remove pages

A  
i thru iii (iv blank)  
3-19 (3-20 blank)  
C-5 and C-6  
C-6.1 and C-6.2  
C-7 and C-8  
E-9 and E-10

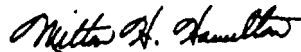
Insert pages

A (B blank)  
i thru iii (iv blank)  
3-19 and 3-20  
C-5 and C-6  
C-6.1 and C-6.2  
C-7 and C-8  
E-9 and E-10

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Change )  
          )  
No. 9    )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 3 September 1992

**UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)  
FOR  
SMALL ARMS AMMUNITION TO 30 MILLIMETER  
INCLUSIVE  
(FSC 1305)**

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page.

Remove pages

A  
2-5 and 2-6  
2-15 thru 2-18  
C-3 thru C-6  
E-7 and E-8

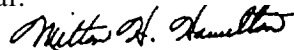
Insert pages

A (B blank)  
2-5 and 2-6  
2-15 thru 2-18  
C-3 thru C-6  
E-7 and E-8

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Change )  
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N o . 8 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 15 June 1992

**UNIT MAINTENANCE MANUAL**  
**(Including Repair Parts and Special Tools List)**  
**FOR**  
**SMALL ARMS AMMUNITION TO 30 MILLIMETER**  
**INCLUSIVE**  
**(FSC 1305)**

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page.

Remove pages

A  
2-5 and 2-6  
2-15 and 2-16  
E-5 and E-6

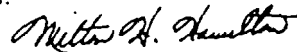
Insert pages

A  
2-5 and 2-6  
2-15 and 2-16  
E-5 and E-6

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Change )  
 )  
N o . 7 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 15 January 1992

**UNIT MAINTENANCE MANUAL**  
**(Including Repair Parts and Special Tools List)**  
**FOR**  
**SMALL ARMS AMMUNITION TO 30 MILLIMETER**  
**INCLUSIVE**  
**(FSC 1305)**

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page.

Remove pages

A  
iii (iv blank)  
2-13 and 2-14  
2-17 (2-18 blank)  
B-3 (B-4 blank)  
C-5 and C-6  
C-7 (C-8 blank)  
E-9 (E-10 blank)

Insert pages

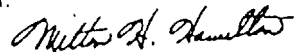
A  
iii (iv blank)  
2-13 and 2-14  
2-17 (2-18 blank)  
B-3 (B-4 blank)  
C-5 and C-6  
C-7 (C-8 blank)  
E-9 and E-10

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

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Chief of Staff

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Change )  
          )  
No. 6     )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 15 March 1991

**UNIT MAINTENANCE MANUAL**  
**(Including Repair Parts and Special Tools List)**  
**FOR**  
**SMALL ARMS AMMUNITION TO 30 MILLIMETER**  
**INCLUSIVE**  
**(FSC 1305)**

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page.

Remove pages

A/(B blank)  
2-7 and 2-8  
2-17/(2-18 blank)  
3-1 thru 3-4  
C-5 and C-6  
None  
E-9/(E-10 blank)

Insert pages

A  
2-7 and 2-8  
2-17 (2-18 blank)  
3-1 thru 3-4  
C-5 and C-6  
C-6.1 (C-6.2 blank)  
E-9 and E-10

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The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-40E, Block # 0305, formerly DA Form 12-40A-R, Unit maintenance for Small Arms Ammunition.

Change )  
          )  
No. 5    )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 10 October 1989

UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)  
FOR  
SMALL ARMS AMMUNITION TO 30 MILLIMETER  
INCLUSIVE  
(FSC 1305)

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Make the following pen-and-ink change: Cross out text (using a large X) on page as listed below and retain color illustration as indicated. (A new page 2-1 is provided.)

Cross out page

2-1

Retain color illustration on page

2-2

2. 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

A  
None  
2-7 and 2-8  
2-17/(2-18 blank)  
C-5 and C-6  
C-7/(C-8 blank)  
E-9

Insert pages

A/(B blank)  
2-1  
2-7 and 2-8  
2-17/(2-18 blank)  
C-5 and C-6  
C-7/(C-8 blank)  
E-9/(E-10 blank)

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Distribution:

To be distributed in accordance with DA Form 12-40A-R, Unit maintenance for Small Arms Ammunition.

Change )  
No. 4 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 22 January 1986

UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)

SMALL ARMS AMMUNITION TO 30 MILLIMETER  
INCLUSIVE  
(FSC 1305)

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page.

<u>Remove pages</u>	<u>Insert pages</u>
A	A
2-5 and 2-6	2-5 and 2-6
2-15 and 2-16	2-15 and 2-16
C-1 and C-2	C-1 and C-2
None	C-2.1 (C-2.2 blank)
C-3 thru C-6	C-3 thru C-6
E-5 and E-6	E-5 and E-6
E-6.1 (E-6.2 blank)	E-6.1 (E-6.2 blank)
E-7 and E-8	E-7 and E-8

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The Adjutant General

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To be distributed in accordance with DA Form 12-40A-R, Organizational maintenance for Small Arms Ammunition.

CHANGE }  
NO. 3 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 10 December 1985

UNIT MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)

SMALL ARMS AMMUNITION TO 30 MILLIMETER  
INCLUSIVE  
(FSC 1305)

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Title of manual is changed as shown above.
2. 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

None  
i and ii  
2-5 and 2-6  
2-15 and 2-16  
C-3 and C-4  
E-5 and E-6  
None

Insert pages

A  
i and ii  
2-5 and 2-6  
2-15 and 2-16  
C-3 and C-4  
E-5 and E-6  
E-6.1 (E-6.2 blank)

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

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To be distributed in accordance with DA Form 12-40A-R, Organizational maintenance for Small Arms Ammunition.



CHANGE)  
 )  
NO. 2 )

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 31 July 1985

ORGANIZATIONAL MAINTENANCE MANUAL  
(Including Repair Parts and Special Tools List)  
FOR  
SMALL ARMS AMMUNITION TO 30  
MILLIMETER INCLUSIVE  
(FSC 1305)

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added or revised illustrations are indicated by a vertical bar adjacent to the identification number.

Remove pages

i thru iii  
2-9 and 2-10  
2-15 thru 2-17  
None  
C-1 thru C-6  
C-6.1  
C-7

Insert pages

i thru iii (iv blank)  
2-9 and 2-10  
2-15 thru 2-17 (2-18 blank)  
3-19 (3-20 blank)  
C-1 thru C-6  
None  
C-7 (C-8 blank)

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Brigadier General, United States Army  
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Distribution:

To be distributed in accordance with DA Form 12-40A-R, Organizational maintenance for Small Arms Ammunition.

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, DC, 26 August 1982

CHANGE }  
No. 1 }

**ORGANIZATIONAL MAINTENANCE MANUAL**  
**(Including Repair Ports and Special Tools Lists)**  
**For**  
**SMALL ARMS AMMUNITION TO 30**  
**MILLIMETER INCLUSIVE**  
**(FSC 1305)**

TM 9-1305-201-20&P, 5 October 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page.

<i>Remove Pages</i>	<i>Insert pages</i>
2-1 through 2-8	2-1 through 2-6
2-15 and 2-16	2-15 and 2-16
B-3/(B-4 blank)	B-3/(B-4 blank)
C-1 through C-6	C-1 through C-6.1
E-3 through E-10	E-3 through E-9

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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 margin of the page. Changes to illustrations are indicated by a vertical line adjacent to the identification number.

**Dates of issue for original and changed pages are:**

Original..... 0..... 5 October 1981	Change ..... 8 ..... 15 June 1992
Change ..... 1..... 26 August 1982	Change ..... 9 ..... 3 September 1992
Change ..... 2..... 31 July 1985	Change ..... 10 ..... 15 October 1992
Change ..... 3..... 10 December 1985	Change ..... 11 ..... 29 January 1993
Change ..... 4..... 22 January 1986	Change ..... 12 ..... 29 April 1994
Change ..... 5..... 10 October 1989	Change ..... 13 ..... 20 December 1996
Change ..... 6..... 15 March 1991	Change ..... 14 ..... 16 March 2001
Change ..... 7..... 15 January 1992	Change ..... 15 ..... 15 February 2002

**TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 85, CONSISTING OF THE FOLLOWING:**

Page No.	*Change No.	Page No.	*Change No.
Cover	0	3-4	0
A	15	3-5 thru 3-8	13
B	0	3-9 thru 3-18	0
i	14	3-19	2
ii thru iv	13	3-20	10
1-1 and 1-2	13	4-1 and 4-2	0
2-1	5	A-1	14
2-2	1	A-2	13
2-3 and 2-4	14	B-1 and B-2	0
2-5	15	B-3 and B-4	7
2-6	14	C-1 thru C-14	14
2-7	6	D-1 thru D-4	14
2-8 and 2-9	0	E-1	0
2-10	2	E-2	14
2-11 thru 2-13	0	E-3 and E-4	1
2-14	7	E-5	13
2-15	14	E-6	14
2-16	12	E-6.1 and E-6.2	4
2-17 and 2-18	9	E-7	4
3-1	0	E-8	9
3-2 and 3-3	6	E-9 and E-10	10

\*Zero in this column indicates an original page

TECHNICAL MANUAL

No. 9-1305-201-20&P

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 5 October 1981

**UNIT MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)  
FOR  
SMALL ARMS AMMUNITION TO 30 MILLIMETER INCLUSIVE  
(FSC 1305)**

**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes or know of a way to improve the procedures, please let us know. You may mail, e-mail, or FAX your response. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, U.S. Army TACOM, Armament Research, Development and Engineering Center, ATTN: AMSTA-AR-WEL-S, Picatinny Arsenal, NJ 07806-5000. E-mail address is LSB@PICA.ARMY.MIL. FAX number is Commercial (973) 724-4633, DSN 880-4633. A reply will be furnished to you.

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## **WARNINGS**

DO NOT ROLL, DROP, THROW OR SUBJECT AMMUNITION TO ROUGH HANDLING.

AVOID INJURY FROM SHARP EDGES WHEN CUTTING AND HANDLING METAL STRAPPING. THE END OF THE BAND MAY FLY UP SUDDENLY WHEN TENSION IS RELEASED.

TO PREVENT INJURY, RELEASE TENSION BY PRESSING DOWN ON TOP OF BOX WHILE CUTTING STRAPS ON SIDE OF BOX. CUT LEAD SEAL WIRE WITH PLIERS AND REMOVE. TURN CATCH AND OPEN HASP, OR PULL OUT ON SPRING-LATCH TO RELEASE. LIFT BOX TOP TO OPEN. ON SPRING-LATCHED BOXES, NOTE POSITION OF TOP FOR GUIDANCE IN REPACKING. REMOVE TOP PADDING/FILLER (IF ANY) FROM BOX. REMOVE INNER PACK(s).

PRIMERS SHALL BE CLEANED ONLY WITH RAGS DIPPED IN ALCOHOL OR ACETONE. PRIMERS SHALL BE COVERED WITH FIBER CONTAINER CAP DURING CLEANING, TOUCH-UP OF AMMUNITION.

ELECTRICALLY-PRIMED AMMUNITION CAN FIRE IF EXPOSED TO HIGH-POWER RADIO FREQUENCY FIELDS. AVOID CONTACT OF ANY KIND WITH THE PRIMER, ESPECIALLY METAL OBJECTS. SEE TM 9-1300-206 FOR AMMUNITION HANDLING INSTRUCTIONS.

ANY AMMUNITION FOUND WITH EXPOSED EXPLOSIVE SHOULD BE DISPOSED OF IN THE PRESCRIBED MANNER, AS DIRECTED IN APPLICABLE STANDARD OPERATING PROCEDURES.



# CHAPTER 1

## INTRODUCTION

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### 1-1. Scope

This manual, one of a series on maintenance and service of ammunition, contains the information required to support organizational level maintenance of small arms ammunition ranging from 22 caliber through 30 millimeter and shotgun ammunition from .410 to 10 and 12 gage. Federal Supply Class 1305 inclusive. Operating instructions are contained in the appropriate weapons manuals.

### 1-2. Forms, Records and Reports

a. Authorized Forms. Forms required by organizational maintenance personnel are listed in appendix A and in DA Pam 25-30. Information on applicability and instructions for completing forms are published in TM 38-750.

h. Field Report of Accidents. Accidents involving injury to personnel or damage to materiel will be reported on DA Form 285 in accordance with AR 385-40. Malfunctions will be reported in accordance with AR 75-1.

c. Report of Damaged or Improper Shipment. Materiel received in damaged or otherwise unsatisfactory condition because of deficiencies in preservation, packaging, marking, loading, storage, or handling will be reported on SF Form 364 in accordance with AR 735-11-2. Reports of improper shipment or damage caused by transportation discrepancies will be reported on SF Form 361 in accordance with AR 55-38.

### 1-3. Destruction of Ammunition to Prevent Enemy Use

Destruction of munitions when subject to capture or abandonment will be undertaken by the user only when, in judgement of the unit commander concerned, such action is necessary in accordance with orders of, or policy established by, the Army commander.

### 1-4. Safety

Observe all safety regulations, local standing operating procedures and precautions generally applicable to ammunition. Disassembly of explosive components without specific authorization is prohibited. The U.S. Nuclear Regula-

tory Commission set standard/conditions, and issue licenses for the safe use, storage and possession of radioactive material. Current copies of title 10, parts 19, 20, and 21 as well as licensed operating procedures are maintained by the HQ IOC Health Physicist and may be examined at HQ IOC, Rock Island, IL 61299-6000. The NRC source material license for the radioactive material contained in the manual is maintained by HQ IOC, Rock Island, IL 61299-6000. Users of this material may request further information from: Commander, U.S. Army IOC, ATTN: AMSIO-DMW (RPO), Rock Island, IL 61299-6000. The cartridge 25MM APFSDS-T M919 utilizes Depleted Uranium (DU) that emits very low level radiation. Care must be taken when handling this round to avoid direct contact with the DU penetrator. Loss or unauthorized firings of M919 rounds must be reported through the chain of command as soon as discovered. All transmissions regarding incidents of this nature must be marked FOUO (For Official Use Only). IOC Headquarters must be notified within 24 hours of discovery. Report to Commander, IOC/ACALA, ATTN: AMSIO-DMW (RPO), Rock Island, IL 61299-6000 DSN: 793-0338/2969. Commercial: (309) 782-0338/2969. After normal duty hours contact SDO (Staff Duty Officer) DSN: 793-6001. Commercial: (309) 782-6001.

### 1-5. Care and Handling

a. Small-arms ammunition is not dangerous to handle. However, no ammunition should be subjected to rough treatment. This ammunition is packed to withstand conditions ordinarily encountered in the field; moisture-resistant containers and suitable packing boxes are used to provide protection for shipment and storage. Care must be taken to prevent these packings from becoming broken or damaged. All broken packings must be repaired immediately with careful attention given to the transfer of all markings to the new parts.

b. Boxes should be opened carefully as they are to be used as long as they are serviceable.

c. Ammunition boxes should not be opened until the ammunition is required for use. Ammunition removed from airtight containers, particularly in damp climates, is apt to corrode, thereby rendering the ammunition unserviceable.

d. Cartridges should be protected from high temperatures and the direct rays of the sun for any considerable length of time. Such exposure is likely to affect the firing qualities of the cartridges. The combination of high temperatures and a humid atmosphere is particularly detrimental to the stability of the propellant powder and to tracer mixture in tracer ammunition.

C. Cartridges should be protected from sand, mud, moisture, frost, snow, ice, oil, grease, or other foreign matter. If cartridges get wet or dirty, they should be wiped off at once. If verdigris or light corrosion forms on cartridges, it should be wiped off with a clean dry cloth. Cartridges should not be polished to make them look better or brighter.

f. The use of oil or grease on small-arms cartridges is prohibited. Oil or grease might cause injurious abrasives to collect in automatic weapons and produce excessive and hazardous chamber pressures when fired. Some specific rounds of ammunition may require lubrication with dry film lubricant to rectify specific operational problems. This dry film lubricant is not to be used on ammunition items other than those specifically identified by bulletins and is to be applied only as directed.

g. Whenever practical, small-arms ammunition should be stored under cover. This applies particularly to tracer and shotgun ammunition. Tracer ammunition is subject to rapid deterioration if it becomes damp. When it is necessary to store this ammunition in open storage, raise it on dunnage at least 6 inches from the ground and cover it with a double thickness of paulin, leaving enough space for the circulation of air. Where practical, dunnage strips should be placed under each layer of ammunition boxes to prevent mildew and rot. Suitable trenches should be dug to prevent water from running under the pile.

h. Ammunition, when stored, should be segregated by caliber, type, and ammunition lot.

i. When only a part of a box of ammunition is issued or used, the ammunition remaining in the box should be protected by firmly fastening the cover.

j. Ammunition removed from the original packing should be tagged or marked so as to preserve the Ammunition lot number and model number. Such identification is necessary to prevent other serviceable ammunition being classified as unserviceable through loss of identity.

k. Electrically-printed ammunition can be fired if exposed to High-Power Radio frequency fields. Avoid contact of any kind with the primer, especially metal objects.

l. Evidence of Depleted Uranium (DU) corrosion is visible in the form of a yellowish or white powder or stain seen on the outer surfaces of the projectile and can become a hazard to personnel. If corroded (yellow or white corrosion) APFSDS-T M919 ammunition is encountered, ammunition must be handled with gloves. The ammunition must be placed in the original pack, tagged unserviceable, and returned through normal supply channels. Avoid getting DU corrosion on hands. Wash hands before eating or touching face. Dispose of gloves in accordance with AK 385-11.

m. In general, when handling any material contaminated by DU avoid touching the corrosion by wearing gloves. Regardless if gloves are worn always wash hands before eating or touching face.

n. When handling sabot ammunition with an exposed penetrator (with no indication of corrosion, M919 DU round) wear gloves. Regardless if gloves are worn, always wash hands before eating or touching face. The gloves do not have to be disposed of as radioactive waste.

o. Exposure to 25MM APFSDS-T M919 ammunition results in exposure to low level radiation. The amount of radiation the soldier receives is proportional to the amount of time spent in the vicinity of APFSDS-T M919 ammunition. Although the radiation exposure received is low and considered safe, avoid unnecessary contact with packaged APFSDS-T M919 ammunition, within mission constraints.

**CHAPTER 2**

**DESCRIPTION AND DATA**

**Section I. GENERAL**

**2-1. Types of Small Arms Cartridge**

a. The definition of a small arms cartridge is the assemblage of the cartridge case, primer, propellant and bullet or shot in a single unit of ammunition 30 millimeter or smaller. The complete assembly consists of all the components required to fire a weapon once.

b. Depending upon its purpose, small-arms cartridges are classified according to type as follows:

Combat (service)	Noncombat (special)
Armor-piercing Armor-piercing discarding sabot-tracer Armor-piercing fin stabilized discarding sabot-tracer Armor-piercing- incendiary Armor-piercing- incendiary- tracer	Blank Dummy  Frangible  High-pressure test Line-throwing

Combat (service)	Noncombat (special)
Ball Ball, hornet  Grenade cartridge Incendiary  Shotgun cartridge Spotter-tracer Tracer	Practice-limited range Target Practice discarding sabot with tracer  Match Practice Practice-Tracer Shotgun cartridge

**2-2. Identification**

a. General. Small arms ammunition is identified completely by marking the nomenclature on packing, including the nomenclature ammunition lot number and the National Stock Number (NSN) and the Department of Defense Identification Code (DODIC).

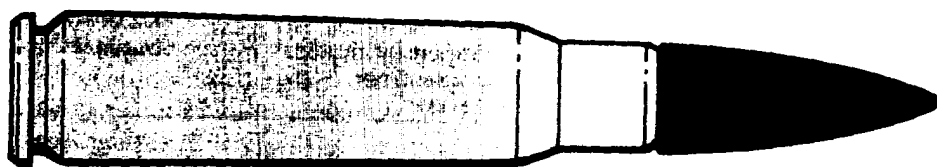
b. Color Coding. Some small arms ammunition bullet tips are painted in various colors as a ready means of identification (see figs. 2-1 and 2-2).



CARTRIDGE, 7.62 MILLIMETER: AP, NATO, M61



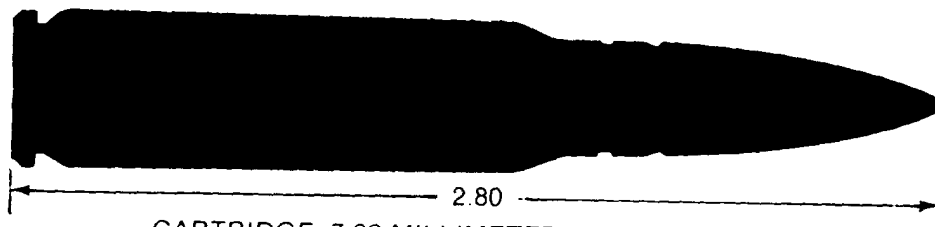
CARTRIDGE, 7.62 MILLIMETER: BALL, NATO, M59 AND M80



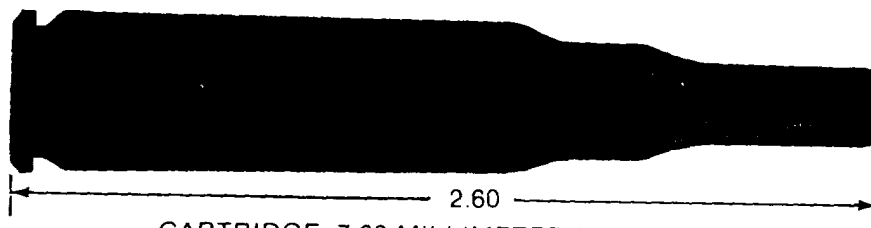
CARTRIDGE, 7.62 MILLIMETER: TEST, HIGH PRESSURE, M60



CARTRIDGE, 7.62 MILLIMETER: TRACER, NATO, M62



CARTRIDGE, 7.62 MILLIMETER: DUMMY, M63



CARTRIDGE, 7.62 MILLIMETER BLANK: M82

ARD-80 0191

Figure 2-1. 7.62 millimeter cartridges.

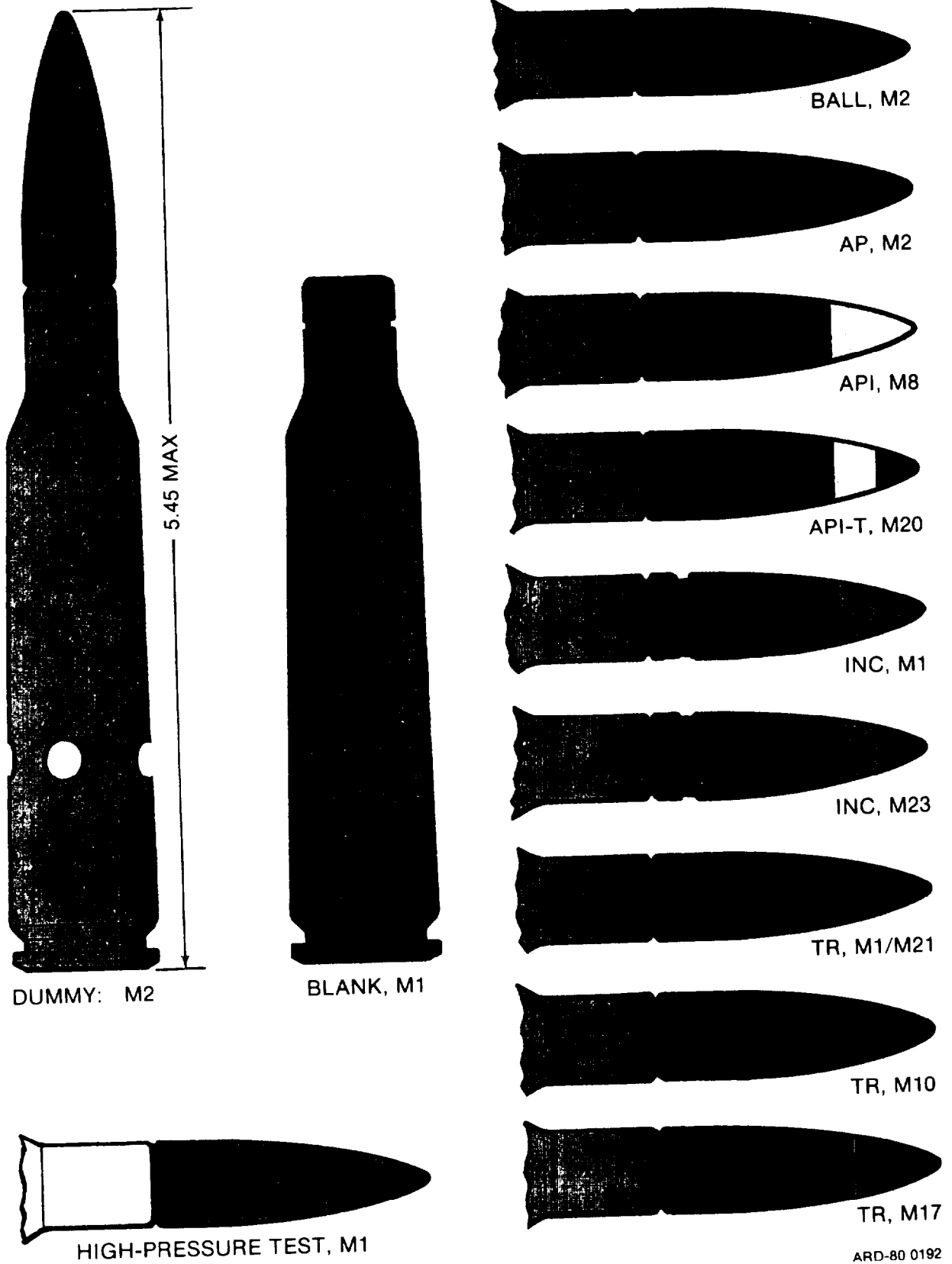


Figure 2-2. Caliber .50 cartridges

Section II. LIST OF SMALL ARMS AMMUNITION

2-3. DATA

All cartridges (rounds) of the Federal Supply Class 1305 used by the Army in the field are listed in table 2-1. This table reflects the nomenclature, length, weight, identification, and DODIC of each cartridge.

TABLE 2-1. Army Authorized Small Arms Ammunition

Nomenclature and caliber	Length (in.)	Weight (grain)	Color Identification	DODIC
<b>SHOTGUN CARTRIDGES</b>				
CARTRIDGE, SHOTGUN, .410 No. 6, M35 Cal. .22/.410 gage.	269	430	Aluminum case	A055
CARTRIDGE, SHOTGUN, 10 gage, blank	2.875	2.90		A010
CARTRIDGE, SHOTGUN, 12 gage, No. 00, M19	2.75	930	Brass case	A011
CARTRIDGE, SHOTGUN, 12 gage, No. 4, M257	2.515	748	Plastic case	A20
CARTRIDGE, SHOTGUN, 12 GAGE, No. 4, M274	2.530	74	Plastic case	A021
CARTRIDGE, SHOTGUN, 12 gage, No. 00, XM162-commercial pack.	2.530	736	Plastic case	A011
CARTRIDGE, SHOTGUN, 12 gage, No. 00, paper, commercial pack	2.530	791	Paper case	A011
CARTRIDGE, SHOTGUN, 12 gage, Non-Lethal, Point Control, M1012	2.45	(90-Proj)	Green tipped plastic case	AA51
CARTRIDGE, SHOTGUN, 12 gage, Non-Lethal, Crowd Dispersal, M1013	2.37	(69-Proj)	Green tipped plastic case	AA52
<b>CALIBER .22 CARTRIDGES</b>				
CARTRIDGE, Cal. .22 Ball, Long Rifle, M24	0.995	53	Brass case	A089
CARTRIDGE, Cal. .22 Ball, Hornet M65 (soft pint)	1.723	103.0	Brass case w/center fire primer.	A088
CARTRIDGE, Cal. .22 Ball, Long Rifle, Match grade, commercial pack.	1.0	53	Brass case	A091
CARTRIDGE, Cal. .22 Ball, short super match or equal commercial pack.	0.69	-	Brass case	A084
CARTRIDGE, Cal. .22 Tracer, Long Rifle, M861	1.0	48.0	Brass case	A090
<b>CALIBER .32 CARTRIDGES</b>				
CARTRIDGE, CALIBER .32, BALL	0.984	115	Brass case	
<b>CALIBER .38 CARTRIDGES</b>				
CARTRIDGE, CALIBER .38, BALL	1.18	196	Brass case	A401
CARTRIDGE, CALIBER .38, BALL WAD CUTTER	1.16	220	Brass case	A404
CARTRIDGE, CALIBER .38, BALL, SPECIAL M41	1.55	203	Brass case	A400
<b>CALIBER .45 CARTRIDGES</b>				
CARTRIDGE, CALIBER .45, BLANK, M9	1.108	104	Brass case w/o bullet	A476
CARTRIDGE, CALIBER .45 TRACER M26	1.275	331	Brass casew/red tip bullet	A479
CARTRIDGE, CALIBER .45, LINE THROWING, M32 (Blank)	2.0	192	Brass case w/o bullet	A477
CARTRIDGE, CALIBER .45, BALL, M1911	1.275	331	Brass case	A475
CARTRIDGE, CALIBER .45 BALL, MATCH, M1911	1.275	334	Brass case w/head stamping on base of cartridge (NM)	A483
DUMMY CARTRIDGE, CALIBER .45, M1921	1.275	305	Drilled holes in case and absence of primer.	A501
CARTRIDGE, CALIBER .45, WAD CUTTER	1.255	330	Brass case	A482
CARTRIDGE, CALIBER .45 HIGH PRESSURE TEST, M1 CALIBER .50 CARTRIDGES	1.28	324	Stannic Stained (silvered)	A480
CARTRIDGE, CALIBER .50, TRACER, M1	5.49	1785	Brass case w/red bullet tip.	A570*
CARTRIDGE, CALIBER .50, TRACER, M10	5.45	1752	Brass case w/orange bullet.	A570*
CARTRIDGE, CALIBER .50, TRACER, M17	5.45	1732	Brass case w/brown bullet.	A570*
CARTRIDGE, CALIBER .50, BALL High Pressure Test, M251.	4.53	1902	Silver case	
CARTRIDGE, CALIBER .50, BALL M2	5.45	1813	Brass case	A555
CARTRIDGE, CALIBER .50, BALL, M33	5.45	1762	Brass case	A552
CARTRIDGE, CALIBER .50, BALL, Spotter,-Tracer, M48A2 (A1 Rifle M8C)	4.53	1744	Body design different than other cartridges	A574

\*Refer to SC 1305/30-IL

Table 2-1. Army Authorized Small Arms Ammunition - Continued

Nomenclature and Caliber	Length (in.)	Weight (grain)	Color Identification	DODIC
CALIBER .50 CARTRIDGES - Continued				
CARTRIDGE CALIBER .50, BALL, Practice T249E2 (A1 Rifle M8C)	4.53	1738	Body design different than other cartridges has green bullet tip.	A579
CARTRIDGE, CALIBER .50, Ball, Armor Piercing, M2.	5.45	1812	Brass case w/black bullet tip	A525
CARTRIDGE CALIBER .50, Ball, Armor Piercing Incendiary M8.	5.45	1764	Brass case w/silver bullet tip	A531
CARTRIDGE, CALIBER .50, Ball, Armor Piercing Incendiary-Tracer, M20.	5.45	1718	Brass case w/silver ring to rear of red bullet tip.	A532
CARTRIDGE, CALIBER .50, Incendiary M1.	5.45	1744	Brass case w/blue bullet tip.	A562
CARTRIDGE, CALIBER .50, Incendiary M23.	5.45	1581	Brass case w/blue bullet tip w/light blue ring.	A563
CARTRIDGE, CALIBER .50, Blank, M1.	3.910	9.7	Brass crimped case w/o bullet.	A558
CARTRIDGE, CALIBER .50, Blank, M1A1.	3.910	9.15-9.55	Brass rosette crimp at mount.	A559
DUMMY CARTRIDGE, CALIBER .50, M2.	5.45	1248	3 drilled holes in cartridge case and no primer.	A560
CARTRIDGE, CALIBER .50, HIGH PRESSURE TEST, M1.	5.45	2082	Stannic stained (silver) cartridge.	A575
CARTRIDGE, CALIBER .50, SABOTED LIGHT ARMOR PENETRATOR (SLAP) M903.	5.45	1466	Brass case w/amber sabot (ultem 1000).	A518
CARTRIDGE, CALIBER .50, SABOTED LIGHT ARMOR PENETRATOR TRACER (SLAP-T) M962.	5.45	1466	Brass case w/red sabot (ultem 1000).	A518
CARTRIDGE, CALIBER .50, API MK211.	5.45	1765	Brass case w/green bullet tip.	A606 (Navy)
5.56MM CARTRIDGES				
CARTRIDGE, 5.56MM, BALL, M193.	2.26	182	Brass.	A066
CARTRIDGE, 5.56MM: BALL, M855.	2.26	190.0	Green bullet tip.	*A064
CARTRIDGE, 5.56MM, GRENADE, M195.	1.90	126	Rosette crimp case w/o bullet.	G841
CARTRIDGE, 5.56MM, TRACER, M196.	2.26	177	Brass case w/red bullet tip.	A069 A071
CARTRIDGE, 5.56MM: TRACER, M856.	2.26	192.0	Orange bullet tip.	*A064
CARTRIDGE, 5.56MM: SHORT RANGE, TRAINING M862.	2.05	108.0	Blue bullet (plastic).	A065
CARTRIDGE, 5.56MM, ARMOR PIERCING, M995.	2.26	180	Black bullet tip.	
CARTRIDGE, 5.56MM, BLANK, M200.	1.90	107	Rosette crimp at cartridge case mouth.	A080
DUMMY CARTRIDGE, 5.56MM, M199.	2.26	150	6 longitudinal crimps in cartridge case.	A060
DUMMY CARTRIDGE, 5.56MM, M232.	2.26	161	Black.	A069
CARTRIDGE, 5.56MM, GRENADE M755.	1.90	112	Rosette crimped case tip of crimp painted yellow.	**
CARTRIDGE, 5.56MM: HIGH PRESSURE TEST, M197.	2.26	174	Stannic-stained (silver) or Nickel-Plate/case.	A070
7.62MM CARTRIDGES				
CARTRIDGE, 7.62MM, GRENADE M64.	2.0	295	Brass case has rosette crimp w/o ball.	G839
CARTRIDGE, 7.62MM, BLANK, M82.	2.623	235	Brass case w/double tapered neck.	A110
CARTRIDGE, 7.62MM, FRANGIBLE, M160.	2.80	315	Brass case w/green bullet tip w/white ring.	A147
CARTRIDGE, 7.62MM, BALL, M59.	2.80	393	Brass case.	A122
CARTRIDGE, 7.62MM, BALL, M80.	2.80	392	Brass case.	*
CARTRIDGE, 7.62MM, BALL, MATCH, M852.	2.83	390	Brass case stamped by N.M.	A171
CARTRIDGE, 7.62MM, BALL, SPECIAL, M118: LR	2.83	390	Brass case stamped by LR	AA11
CARTRIDGE, 7.62MM, SPECIAL BALL, M118	2.83	390	Brass Case	A136
CARTRIDGE, 7.62MM, BALL, DUPLEX M198.	2.80	411	Brass case w/green bullet tip.	*
CARTRIDGE, 7.62MM, ARMOR PIERCING, M61.	2.80	393	Brass case w/black bullet tip.	A120
CARTRIDGE, 7.62MM, TRACER, M62.	2.80	383	Brass case w/orange bullet tip.	A132
DUMMY CARTRIDGE, 7.62MM, M63.	2.80	258	6 longitudinal corrugations.	A135
DUMMY CARTRIDGE, 7.62MM, M172.	2.80	385	Black.	*
CARTRIDGE, 7.62MM, DIM TRACER, M276.	2.8	381	Brass case w/pink ring to rear of green tip.	A163
CARTRIDGE, 7.62MM, ARMOR PIERCING, M993.	2.80	362.6	Black stripe circling tip	
CARTRIDGE, 7.62MM: HIGH PRESSURE TEST, M60.	2.80	412	Stannic-stained (silver) case.	A129
9MM CARTRIDGES				
CARTRIDGE, 9MM, BALL.	1.169	182	Brass case.	A360
14.5MM CARTRIDGES				
CARTRIDGE, 14.5MM, TRAINER-SPOTTER, M181A1.	2.559	1065	Brass case has markings w/yellow projectile tip and has no fuze.	A365

\*Refer to SC 1305/30-IL.

\*\*Item is packed with carrier D122-3141.

Table 2-1. Army Authorized Small Arms Ammunition - Continued

Nomenclature and Caliber	Length (in.)	Weight (grain)	Color Identification	DODIC
CARTRIDGE, 14.5MM, TRAINER-SPOTTER, M182A1.	2.559	1065	Brass case has markings w/yellow projectile tip and has no fuze.	A366
CARTRIDGE, 14.5MM, TRAINER-SPOTTER, M183A1.	2.559	1065	Brass case has markings w/yellow projectile tip and has no fuze.	A367
20MM CARTRIDGES				
CARTRIDGE, 20MM, API-T, M52E1.	6.575	3900	Brass or steel case w/black projectile w/red markings.	A869 A870
CARTRIDGE, 20MM: API, M53.	6.575	3980	Brass or steel case w/black projectile w/white markings.	*
CARTRIDGE, 20MM, AP-T, M95.	7.23	39935	Brass case, steel windshield on projectile painted black w/white markings.	A765
DUMMY CARTRIDGE, 20MM: M51A2.	6.615	3850	Steel case, chromate markings in metal stamp.	*
CARTRIDGE, 20MM: HPT, M54A1.	6.615	4392	Silvered case, purple painted projectile, black markings.	A892
CARTRIDGE, 20MM: TP, M55A2.	6.615	3935	Brass or steel case, blue painted projectile w/white markings.	A889*
CARTRIDGE, 20MM: TP, M204.	7.23	4000	Brass case, blue painted projectile w/white markings.	*
CARTRIDGE, 20MM: TP, M206A1.	8.384	4886	Brass case, blue painted projectile w/white markings. "T" marked orange.	A778*
CARTRIDGE, 20MM: Incendiary, M96.	7.18	3850	Brass case w/light red painted projectile w/black markings.	A846*
CARTRIDGE, 20MM: TP, M99A1.	7.23	7013	Brass case, blue painted projectile w/white markings.	A847
CARTRIDGE, 20MM: TP-T, M220.	6.615	3935	Brass case w/blue painted projectile w/white marking "T" marking orange.	A651
CARTRIDGE, 20MM, HEI, M56A3.	6.615	3965	Brass or steel case, projectile w/PD fuse yellow w/red band markings in black.	A490*
CARTRIDGE, 20MM, HEI, M56A4.	6.615	3965	Brass case, projectile has base cover and PD fuze. Projectile yellow w/red band black markings.	A775*
CARTRIDGE, 20MM, HEI, M97A2.	7.227	4000	Brass case w/yellow projectile w/red band and PD fuze black markings.	A863*
CARTRIDGE, 20MM, HEI, M210.	7.227	4000	Brass case projectile w/PD fuze yellow w/red band and black markings. "T" markings in orange.	*
CARTRIDGE, 20MM, HEI, M242.	6.602	3865	Brass case, projectile has a self destruct feature. Projectile has PD fuze; yellow w/brown and red bands. "T" marking orange.	*
CARTRIDGE, 20MM, HEI-T, M242A1.	6.602	3865	Yellow w/red "T" band black markings.	A787
CARTRIDGE, 20MM, HEI-T-SD, M246.	6.615	4070	Black w/red "T" band white markings.	A786
CARTRIDGE, 20MM, HEI-T-SD, M246A1.	6.615	4070	Stannic-stained (silver) case.	A892
CARTRIDGE, 20MM, HEI-T, M599.	8.4	4888	Lettering black on case and black and white on projectile with red "T" markings.	A710
CARTRIDGE, 20MM, API-T, M601.	8.4	4774		
CARTRIDGE, 20MM: HIGH PRESSURE TEST, M54A1.	6.61	4392		
CARTRIDGE, 20MM, MPT-SD, M940.	6.615	4074		
22MM CARTRIDGES				
CARTRIDGE, 22MM SUB-CALIBER PRACTICE, M744.	9.697	7679	Silver cartridge case w/blue projectile.	A680***
CARTRIDGE, 22MM SUB-CALIBER PRACTICE, M745.	9.697	7679	Silver cartridge case w/blue projectile.	A681***
CARTRIDGE, 22MM SUB-CALIBER PRACTICE, M746.	9.697	7679	Silver cartridge case w/blue projectile.	A682***
CARTRIDGE, 22MM SUB-CALIBER PRACTICE, M747.	9.697	7679	Silver cartridge case w/blue projectile.	A683***

\*Refer so SC 1305/30-IL.

\*\*\*Item is packed with carrier D122-3141.



Table 2-1. Army-Authorized Small Arms Ammunition--Continued

Nomenclature and caliber	Length (in.)	Weight (grain)	Color identification	DODIC
25MM CARTRIDGES				
CARTRIDGES, 25MM, APDS-T, M791	8.779	7018	Case painted OD; projectile black w/white markings.	A974
CARTRIDGES, 25MM, APFSDS-T, M919	8.779	7018	Case painted OD; projectile black w/white markings.	A986
CARTRIDGES, 25MM, HEI-T, M792	8.630	7725	Case painted OD; projectile yellow/red band.	A975
CARTRIDGES, 25MM, TP-T, M793	8.630	7725	Case painted OD; projectile blue w/white markings.	A976
CARTRIDGES, 25MM, TPDS-T, M910	8.779	6.494	Case painted OD; projectile blue w/white markings.	TBA
30MM CARTRIDGES				
CARTRIDGE, 30MM, TP M788	7.864	5371	Aluminum case w/projectile blue w/white markings.	
CARTRIDGE, 30MM, HEDP M789	7.864	5371	Aluminum case, projectile yellow w/black markings.	
CARTRIDGE, 30MM, HEI-M799	7.864	5371	Aluminum case, projectile yellow w/black marking and red band.	B123
25.4MM CARTRIDGES				
CARTRIDGES, 25.4MM, Decoy, M839	8.08	2380	Unpainted plastic case.	A965

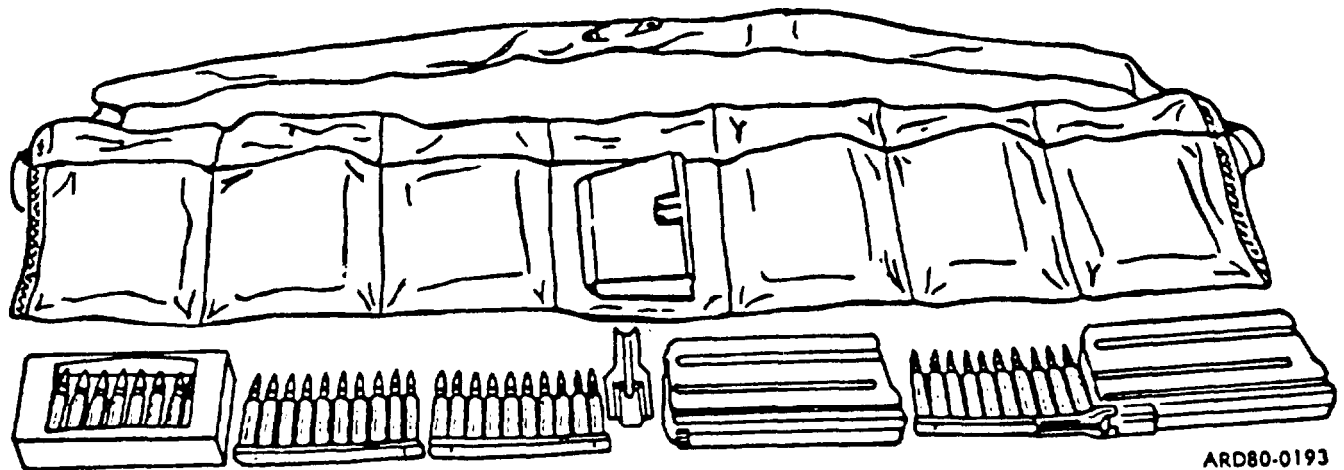


Figure 2-3. Cartridge clips and bandoleer for 5.56mm cartridges.

**2-4. Accessories**

a. *General.* Accessories used with small-arms ammunition, such as clips and metallic belt links, are described in this section. These items are listed and packed as indicated in SC 1305 30-IL.

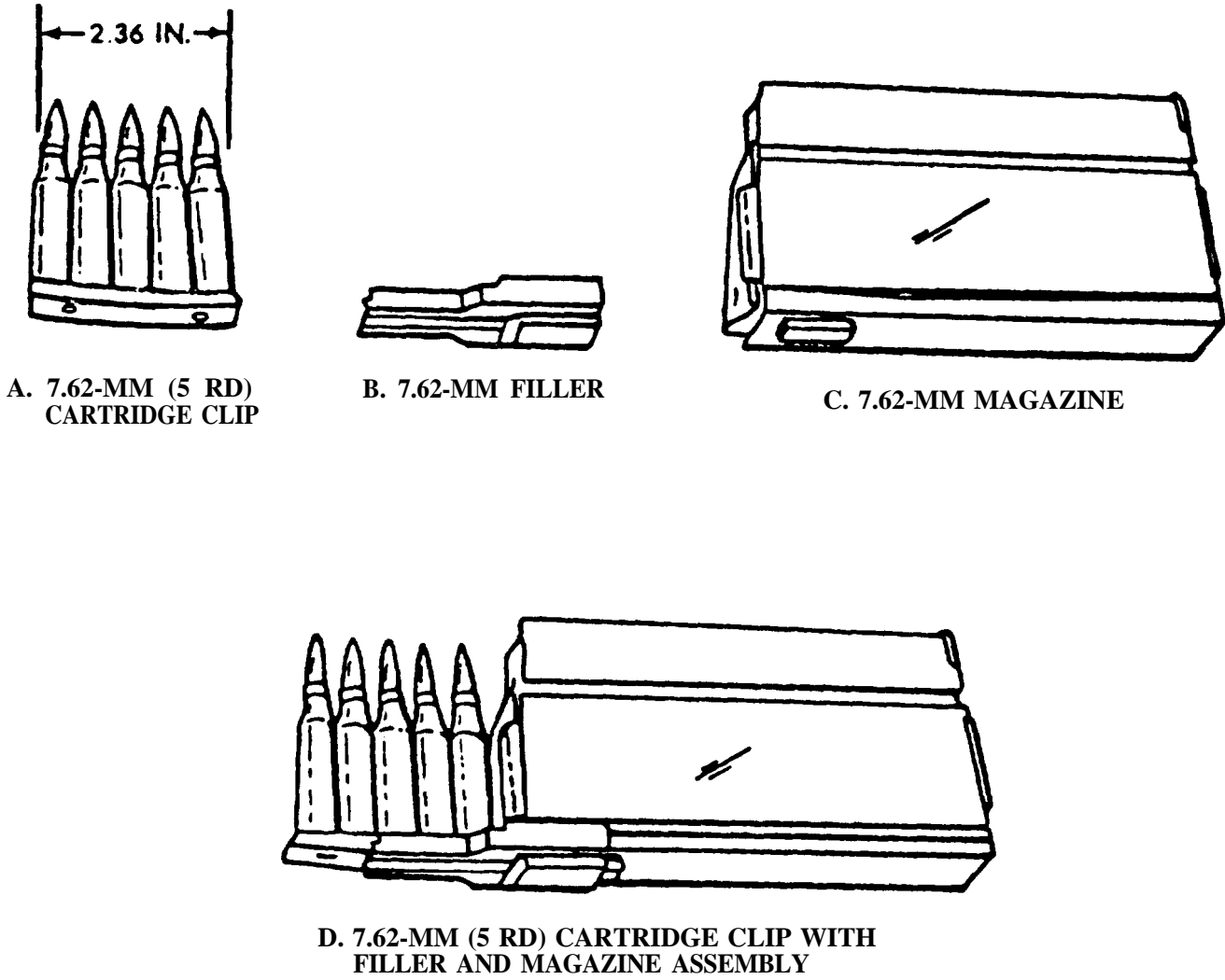
b. *Clips.*

(1) Cartridges for the 5.56mm M16 rifle are assembled in 10-round clips. Cartridges for the 7.62mm M14 rifles are assembled in 5-round clips. All cartridges are packed in bandoleers with separate magazine fillers.

(2) 5.56mm, 10-round. This clip (fig. 2-3) consists of a channel-shaped body contain-

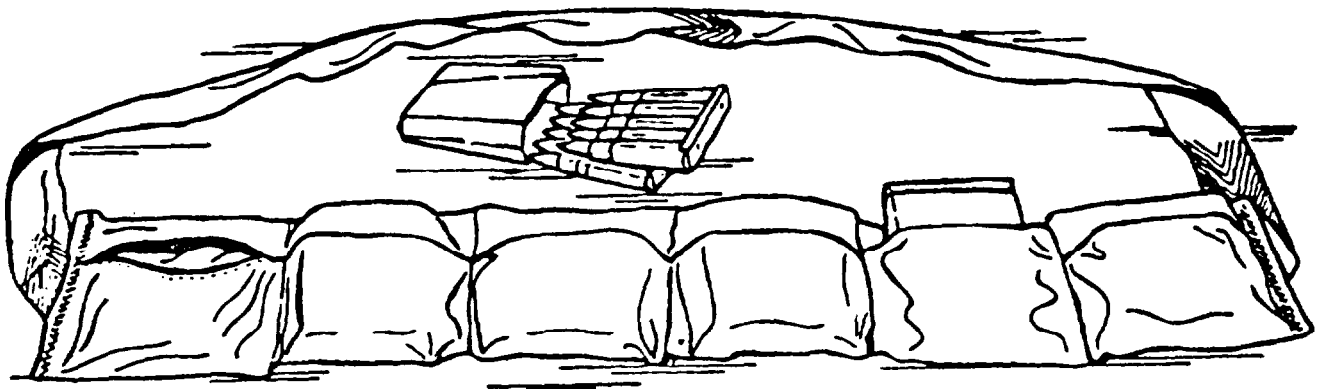
ing a spring with narrow tabs at each end. After clip is filled, tabs are bent at right angles to extractor rims of end cartridges to hold them securely in the clip.

(3) 7.62mm, 5-round. This clip (fig. 2-4), which consists of a channel-shaped body containing a spring, facilitates loading of magazines. Loaded clips are fitted into top of rifle receiver, and cartridges are pressed into magazine assembly. A magazine filler, which adapts clips to magazine, allows individual magazines to be loaded with clipped ammunition. This clip is 2.36 inches long. The 7.62mm ammunition and clip are shown with the M14 bandoleer in figure 2-5 and with the M4 bandoleer, in figure 2-6.



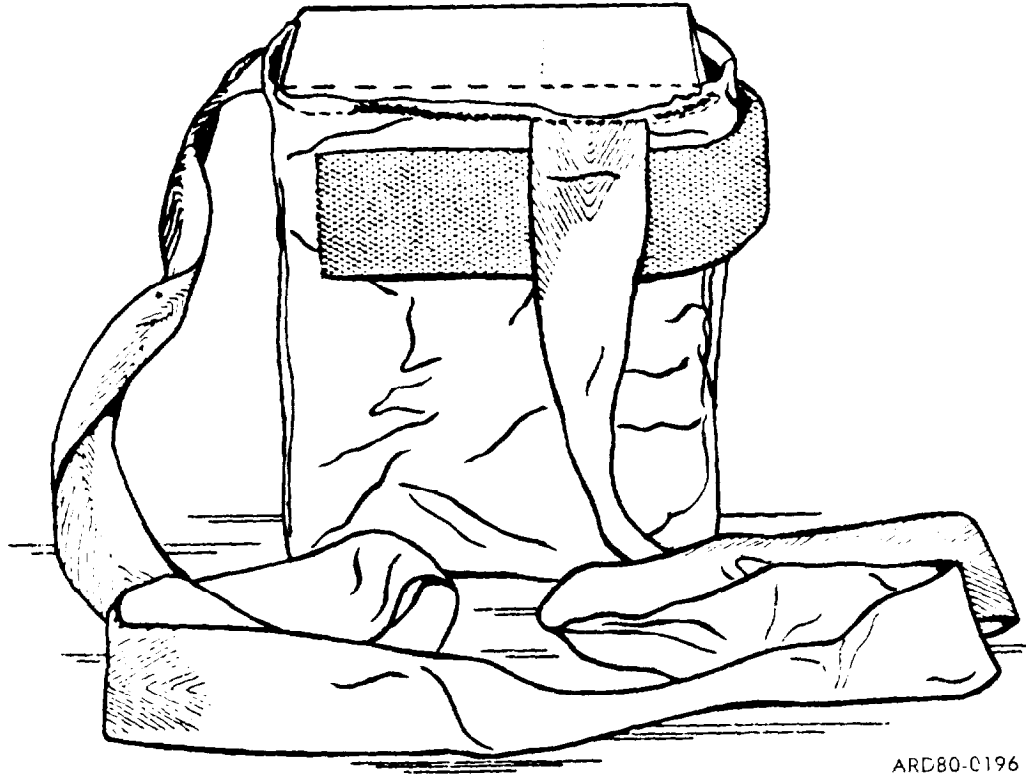
ARD80-0194

Figure 2-4. Cartridge clip, filler, and magazine assembly for 7.62mm cartridge.



ARD80-0195

Figure 2-5. M14 bandoleer for 7.62mm cartridges.



ARD80-C196

Figure 2-6. M4 bandoleer for 7.62mm cartridges.

(4) Pistols and other hand guns. Clip for the pistols such as the 45 caliber or 32 caliber do not come preloaded from the ammunition supply point. The magazine for the sub-machine gun M3 or M3A1 holds 30 rounds of ammunition and this also is not preloaded.

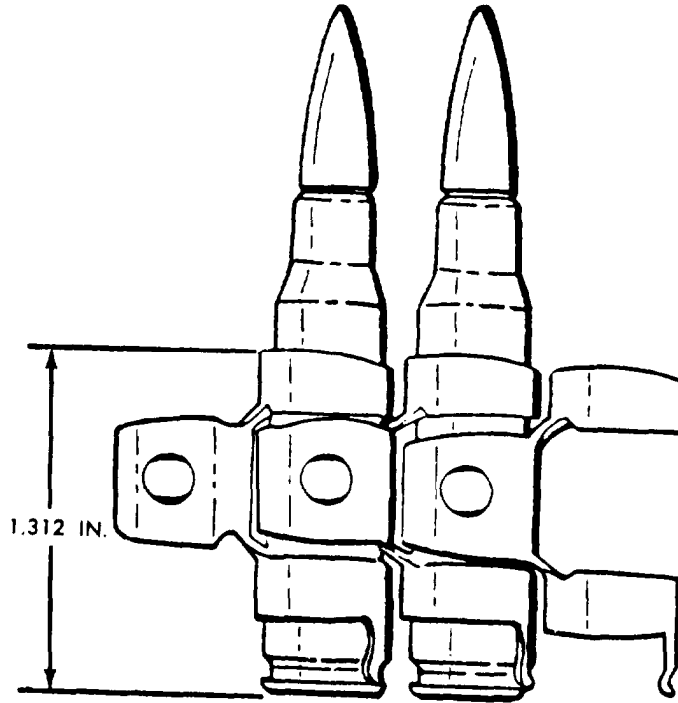
*c. Metallic Link Belts.* Ammunition for use in machine guns is issued in metallic link belts. Link belts are made of units of cartridges and links. Each link has two loops fitted around a single cartridge and one loop fitted around adjacent cartridge. Each cartridge in a metallic link belt has two links attached to it, except the end cartridges. Cartridge links are made of steel which is processed to prevent rusting. They are manufactured and tested to assure satisfactory ammunition feed and functioning under all service conditions,

(1) *Closed loop links.* Caliber .50, M2 and M9 links are manufactured with closed loops. When assembled with cartridge in belts, these links fit on cartridge shoulder. The tapered front loops of these links are positioned firmly on cartridge shoulder to

hold cartridge in proper alignment for feeding into weapon. This design requires cartridge to be extracted from the rear and dropped into position for moving into chamber for firing. Weapons designed for these links require additional space in the rear of receiver for retraction.

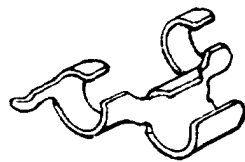
(2) *Open loop links.* The caliber .50, M15A2 and 7.62mm, M13 (fig 2-7) links (view C, fig 2-8) are manufactured with partially open loops and have a positioning finger on one side which snaps into extractor grooves of cartridge to retain cartridge in proper feed alignment. This link design permits a portion of bolt to ride through link loop openings and push cartridges forward and out of the link into chamber for firing. Weapons using this type link are designed and manufactured with a short receiver.

(3) *M27 link for 5.56mm.* The M27 link is a reduced size of the 7.62mm link M13. The body link fits into the extractor groove on the cartridge case. The US Navy uses this link with the Stoner Machine Gun M63. The US army designates its use for the XM249 Machine gun.

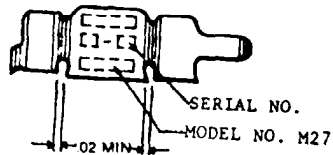


ARD80-0197

Figure 2-7. Cartridge link M13 for 7.62mm cartridges.

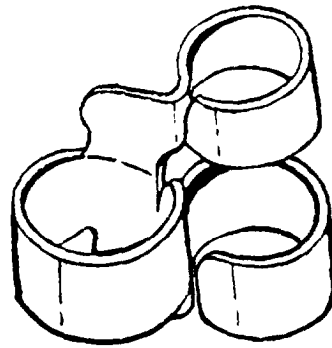


ISOMETRIC VIEW

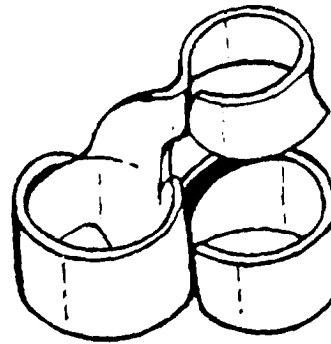


ARD82-0365 |

Figure 2-7.1. M27 link for 5.56m.

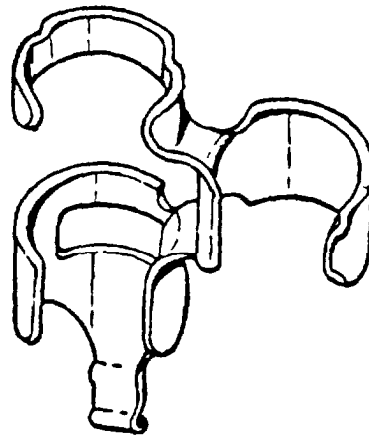


CALIBER .50, M2



CALIBER .50, M9

**A. CLOSED LOOP**



CALIBER .50, M15A2

**B. OPEN LOOP**

ARD80-0198

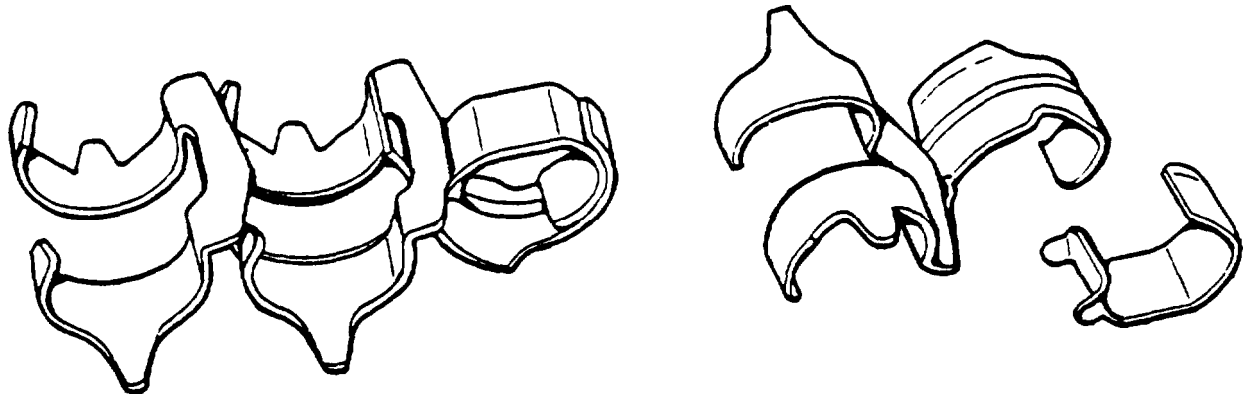
Figure 2-8. Cartridge links and metallic belt end.

*d. Links for 20mm Cartridges.*

(1) *Link, M10 in M3 and M24 Gun (fig 2-9).*  
 This link is utilized in M3 and M24 belt-fed automatic guns. The links are of steel and the belt is formed by the placement of cartridges within the links. The links are self-separating when the cartridges are removed during the gun feeding cycle. This metallic link can be used to make up belts for either right-or left hand feeding of the gun. A cartridge metallic-link filler is used at end of belt when it is desired to load belts for either double-loop left-hand feed, or doubleloop right-hand feed. The

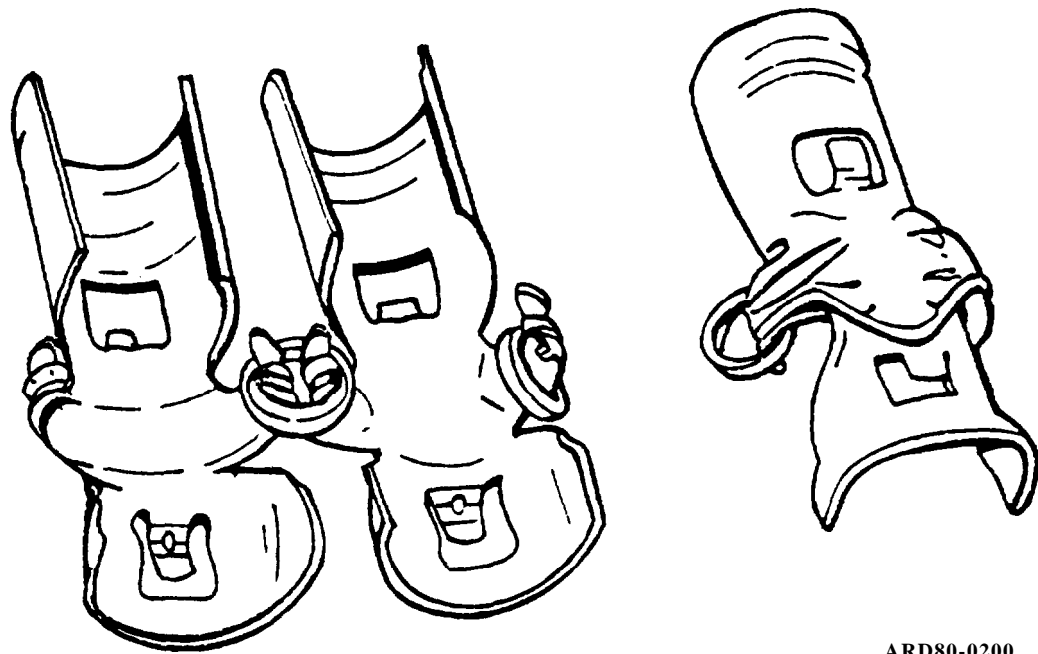
purpose of the link-filler is to close the single loop when it is at end of belt to prevent snagging in feed chute.

(2) *M12 metallic link.* The M12 metallic link (fig 2-10) is used in belt-fed gas-operated M39 Series automatic aircraft guns. The ammunition belt is formed by connecting a specified number of links together and then inserting a cartridge for each link. The links are self-separating when cartridges are removed during the gun-feeding cycle. The M12 is an end loading link and is linked for either right or left hand feeder.



ARD80-0199

Figure 2-9. M10 link 20mm cartridges.

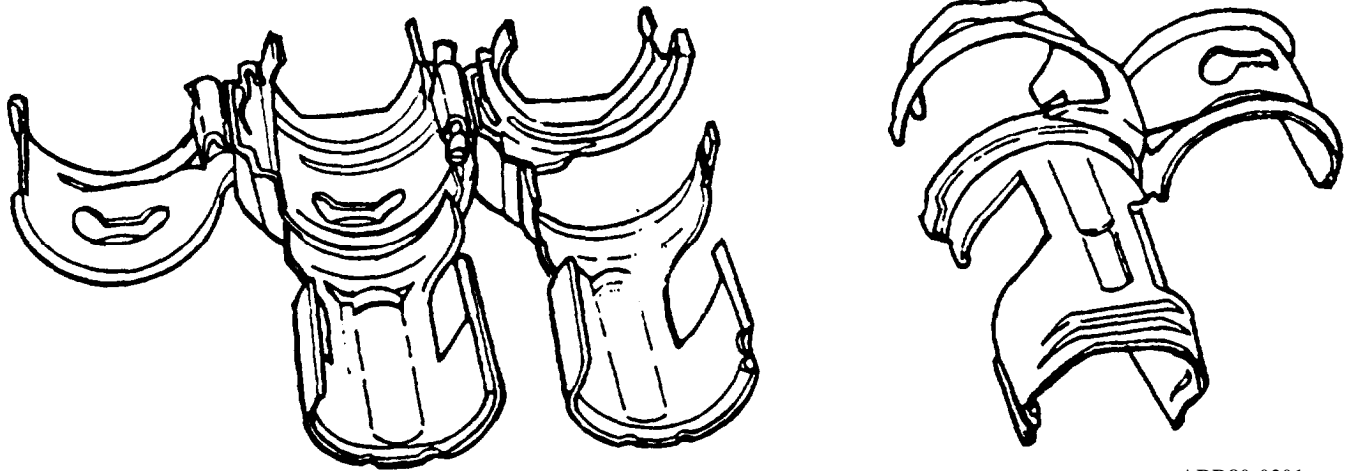


ARD80-0200

Figure 2-10. M12 link for 20mm cartridges.

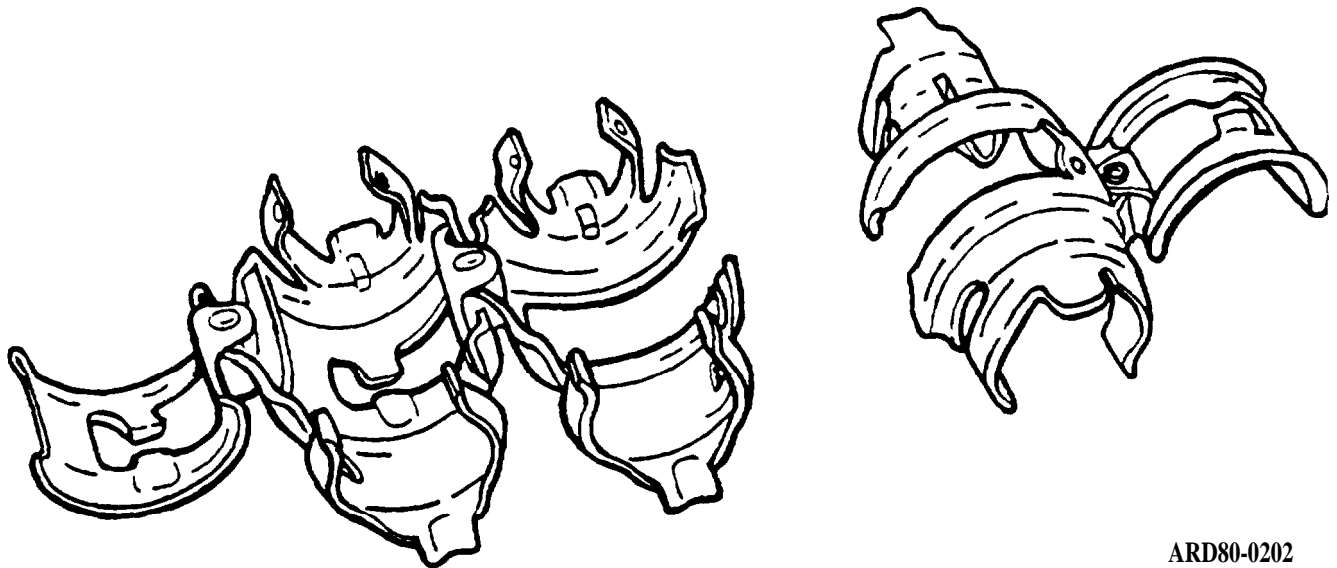
(3) M14A2 link. The M14A2 link (fig 2-11) is used primarily for linking 20mm ammunition for belt-fed M61 automatic guns and loading of ammunition into linkless feed systems used in aircraft and ground defense vehicles. The links are self-separating when cartridges are removed during feeding cycle.

(4) M17A2 link. The M17A2 link (fig 2-12) is used for linking 20mm ammunition for belt-fed M61 automatic weapon system in the B52 G & H aircraft. The links are self-separating when cartridge is removed from link during feeding cycle.



ARD80-0201

Figure 2-11. M14A2 link for 20mm cartridges.



ARD80-0202

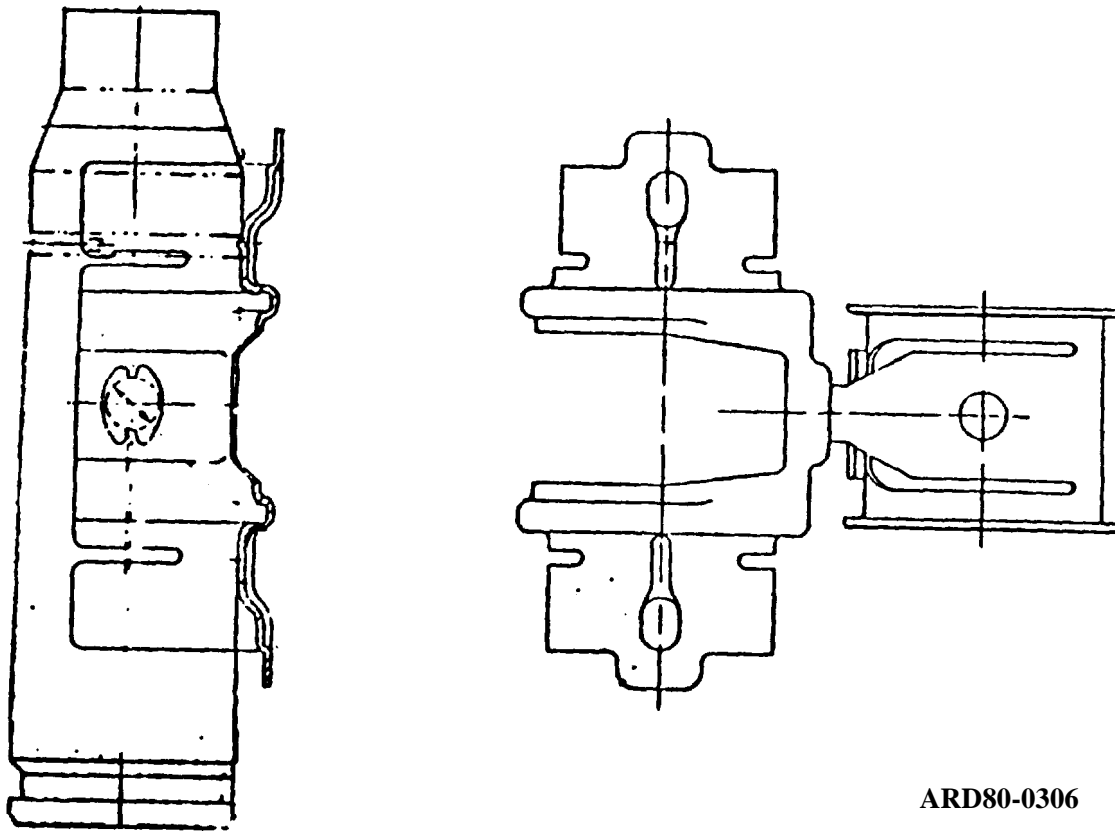
Figure 2-12. M17A2 link for 20mm cartridges.

(5) *M24 link.* The M24 link is a metallic link for use with the following 20mm cartridges: target-practice tracer M206A1, high-explosive incendiary tracer M599, and armor-piercing incendiary tracer M601. The European (German) DMI/DMIA links are also used for these cartridges. The DMI-DMIA link is used with the HSH20 Series.

(6) *M22 link.* The M22 link is for U.S. Air Force use only. It is used to upload their link-

less system. It is reusable and does not disintegrate.

(7) *The M28 25mm Cartridge Link* is a two-piece assembly (fig 2-13) intended to hold and link the 25mm ammunition for guiding the ammunition through the weapon system. This assembly consists of hardened steel main and pivot links hooked together and contoured accordingly for its intended purpose. The Swiss Gerlikon link and the M28 are dimensionally identical.

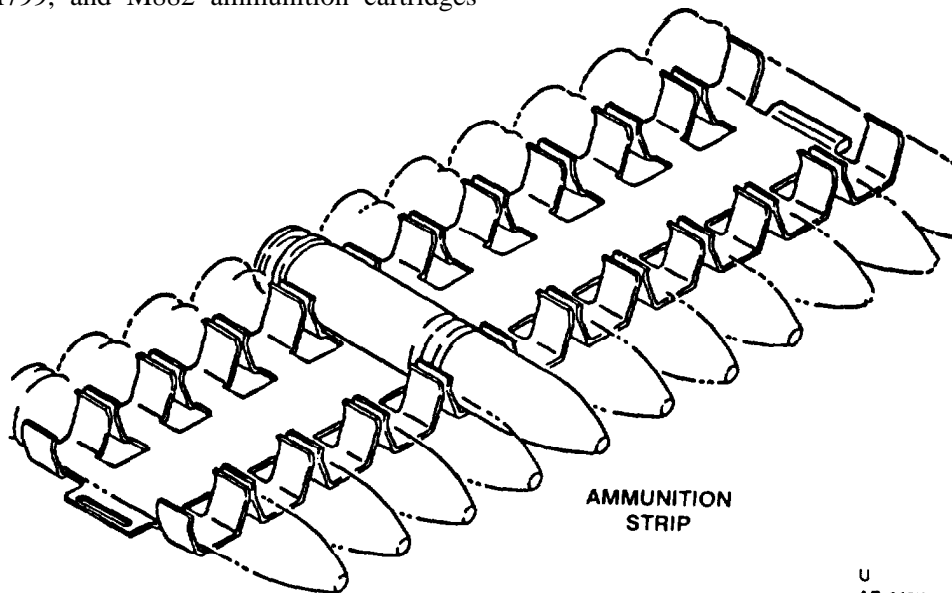


ARD80-0306

Figure 2-13. M28 link for 25mm cartridges.

(8) The 30mm Bulk Strip is a one-piece assembly (fig 2-14) intended to hold the M788, M789, M799, and M882 ammunition cartridges

for upload into the loading system of the AH-64A Helicopter.



U  
AR 4497

Figure 2-14. Bulk pack ammunition strip.



Table 2-2. Small Arms Accessories

Caliber	Ammunition	Clip	Magazine	Link	Weapon used
5.56mm	Ball M193 Tracer M196 Grenade M195 Dummy M199 Blank M200 High Pressure Test, M197 M855 M856 M862 Armor Piercing, M995	10 rd	20 and 30 rd	M27	M231 Sub Machine Gun for M196 tracer only M16/M161 rifle Stoner M63 (Navy and M249 machine guns) M16A2 rifle and M249 MG  M16A1 and M16A2 w/M2 bolt system M16A2 rifle and M249 MG
7.62mm	Ball M59 Ball M80 Tracer M62 Dim Tracer, M276 Armor Piercing, M993 AP, M61 Dummy 63 Blank M82 High Pressure Test M60 Grenade M64 Dummy M172 Frangible M160 Ball Match M118 Long Range M118	5 rd	20 rd	M13 open loop for MG	M14 rifle; M60, M73, M219, M240*, and M134 machine guns M60, M240 MG's, M24 rifle  M14 rifle only M60 MG only M219 MG only M14 rifle only M14, M21, M24, and M40A1 rifles

NOTE  
 10 rd clip f/M16A1  
 5 rd clip f/M14  
 20 rd mag f/M16A1  
 30 rd mag f/M16A1  
 20 rd mag f/M14

9mm	Ball M882 High Pressure Test M905	N/A	15 rd	N/A	M9 pistol
Cal. 45	Ball, M1911 Blank, M9 High Pressure	7 rd f/pistol	30 rd for sub machine gun	N/A	Pistol M1911 and M1911A sub machine gun M3 and M3A1

Table 2-2.Small Army Accessories-Continued

Caliber	Ammunition	Clip	Magazine	link	Weapon used
Cal .50	Ball, M2	N/A	N/A	**M15A2	M85 Machine Gun
	Ball, M33				
	AP, M2				
	API, M8				
	API-T, M20				
	Incend M1	N/A	N/A	***M9 & M2 closed Loops w/ M2 MG	M2 Machine Gun only
	Incend M23				
	Tracer M1				
	Tracer M10				
	Tracer M17				
	Dummy M2				
	High Pressure Test				
	Blank M1				
	Plastic Plastic Practice M860				
	SLAP, M903				
SLAP-T, M962					
Spotter-Tracer M48A2	8 rd	-	M15A1	Rifle, spotting M8C	
Spotter-Tracer T249E2	8 rd	-	M15A1	Rifle, spotting M8C	
Spotter-Tracer M251	8 rd	-	M15A1	Rifle, spotting M8C	

NOTE

\*\*Link M15A2 Open Loop used w/M85 Machine Gun only.

\*\*\*Link M2 and M9 Closed Loop used w/M2 Machine Gun only.

Caliber	Ammunition	Link	Weapon (Gun)
20mm	HEI-T-SD, M246 HEI, M56A3, M56A4 TP-T, M220 TP, M55A2 Dummy, M51A2	M14 series	M167A1 (M168 Cannon)
20mm	API-T, M52E1 API, M53 HEI, M56A3, M56A4 HEI-T, M242 HEI-T-SD, M246 TP, M55A2 TP-T, M220 Dummy, M51A2	M12 Metallic Link For M39 cannon. M14A2 for M61 Cannon.	M39, M61

Table 2-2. Small Arms Accessories - continued

Caliber	Ammunition	Link	Weapon (Gun)
20mm	API-T, M52E1 API, M53 HEI, M56A3, M56A4 HEI-T-SD M246 TP, M55A2 TP-T, M220 Dummy, M51A2	M17A2	M61
20mm	API, M53 HEI, M56A3, M56A4 TP, M55A2 Dummy, M51A2	M14A2	M195 Linker-Delinker M25
20mm	HEIT-SD, M246 HEI, M56A3, M56A4 TP-T, M220 TP, M55A2 Dummy, M51A2 MPT-SD, M940	M14A2	168, 197
20mm	AP-T, M95 Incendiary, M96 TP, M204 HEI, M210	M10	M3
20mm	AP-T, M95 Incendiary, M96 HEI, M97A2 TP, M99A1	M10	M24A1
20mm	HEIT, M599 API-T, M601 TP-T, M220	M24 or DMI/DMIA	139
25mm	APFSDS-T, M919 APDS-T, M791 HEI-T, M792 TP-T, M793 TPDS-T, M910	M28	M242
30mm	HEDP-M789 TP, M788 HEI, M799 HPT, M882	M29  Bulk ammunition strip.	M230



## CHAPTER 3

### MAINTENANCE INSTRUCTIONS

#### Section I. SERVICE UPON RECEIPT OF MATERIEL

##### 3-1. General

a. In general, small-arms ammunition is packed in either watertight metal liners, plain or wax sealed cartons, metal-foil envelopes, hermetically sealed cans, or in metal boxes having hinged covers sealed by means of a rubber gasket. These containers are overpacked in cleated wooden boxes or wirebound wooden boxes. Dependent upon the intended use, the ammunition within the immediate container may either be bulk packed in cartons or functionally packed in clips in bandoleers or in link belts.

b. The containers and methods for packing small-arms ammunition are given in appropriate supply manuals. Containers presently being manufactured have been reduced to a few standard types designed to withstand all conditions commonly encountered in handling, storing, and transportation of ammunition.

c. Packing containers for small-arms ammunition are listed in appendix C. Box Components (fig 3-1), which are classed as hardware, such as wingnuts and screwhooks, are listed in supply manuals covering FSC group 53. Cartridge clips, cartridge links, and bandoleers, used for functional packs are listed in appendix C.

d. Each outer shipping container and all inner containers down to the smallest unit container are fully marked to identify the ammunition contained therein. These markings include the National stock number, descriptive nomenclature of the ammunition included, ammunition lot number, and the number of rounds (figs 3-2 and 3-3). In addition to the above, the outer shipping container also is marked with the National stock number, Department of Defense identification code, Department of Transportation shipping name, weight, cube. The salee closer (fig 3-4) was used to bind the wire loops which was used to close the wirebound box.

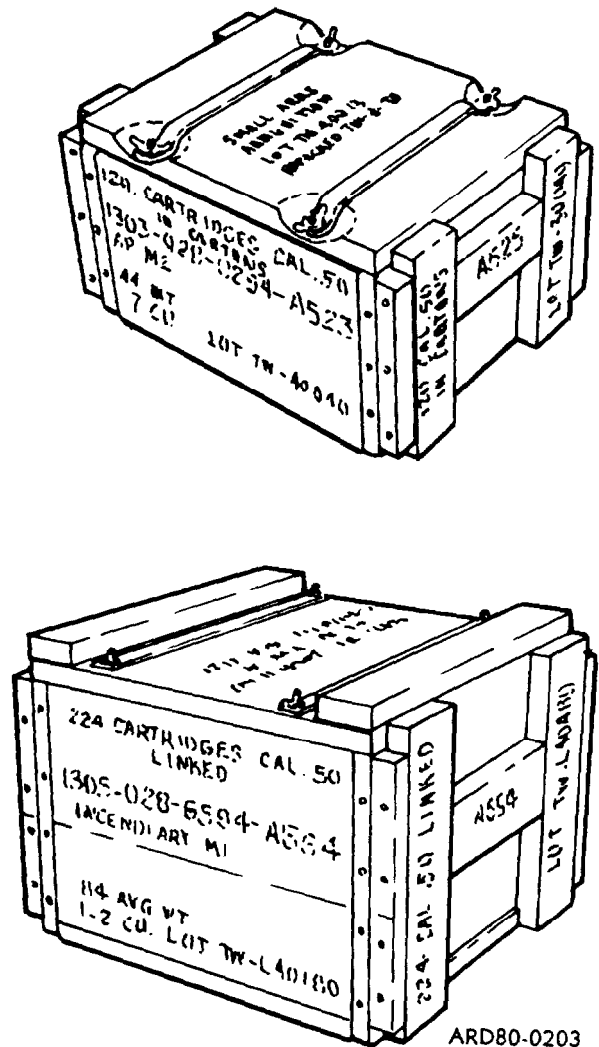


Figure 3-1. Packing boxes small-arms ammunition.

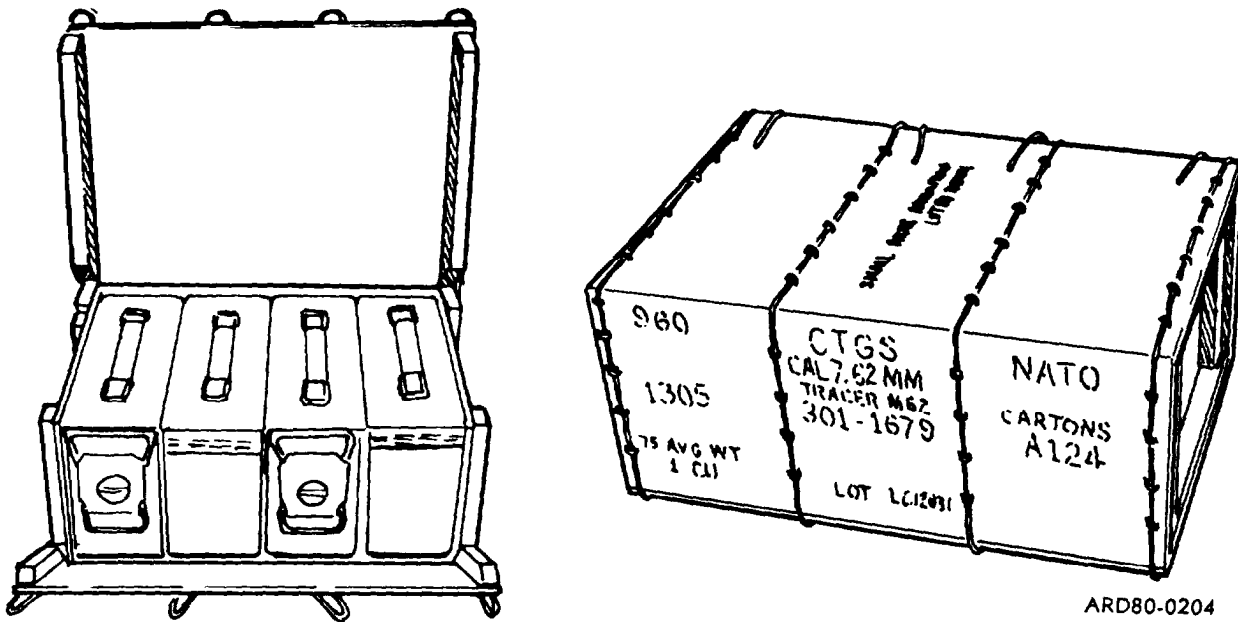
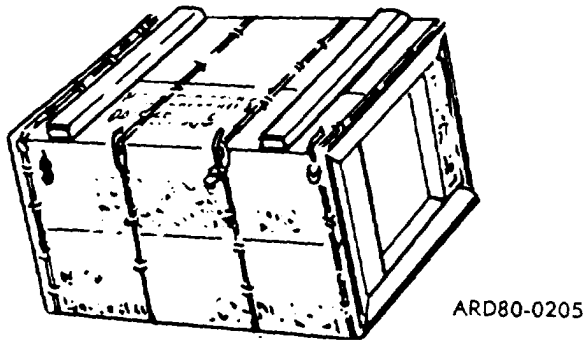


Figure 3-2. Wirebound box with 7.62mm ammunition in metal containers M19A1.



**CLOSED AND SEALED**

Figure 3-3. Typical wirebound box.

e. Metal boxes and cans are painted olive drab and marked in yellow. Some outer containers are stained light brown and marked in yellow. Those of current manufacture are unstained and marked in black. Specific lots when selected for rifle or pistol match requirements will be marked "MATCH" on the nomenclature side and top of outer shipping containers. Boxes containing functionally packed ammunition (ammunition packed in rifle clips, or link belts) have figure symbols stenciled on the container for quick identification of the type of inner pack (fig 3-5).

f. Upon receipt of ammunition, verify each packaged item against the requisition list. If marking on packaging conflicts with nomenclature on requisition, check with ammunition supply personnel to determine if an issue error has been made.

**NOTE**

Manufacturer's identification and year of manufacture will be embossed on container. If the container has been reconditioned, the words "REHAB", month and year of reconditioning, and activity performing reconditioning will be stenciled on the container.

g. Unless packing boxes show evidence of moisture or damage to the extent that contents may be unusable, do not open until cartridges are to be used.

**3-2. Precautions**

**WARNING**

Avoid injury from sharp edges when cutting and handling metal strapping. The end of the band may fly up suddenly when tension is released.

a. Limit the quantity of ammunition and flammables at work site to the minimum necessary for efficient operation.

b. All standard precautions for care and handling of ammunition are applicable to small arms ammunition.

### 3-3. Unpacking Procedures

#### a. Inspection.

(1) Inspect markings on packaging for legibility of lot number. If illegible, open box, note lot number stenciled on inner pack or item and restore illegible numbers.

(2) Visually inspect each box/container for damage or indication that the contents may be damaged.

(3) Unpack only as far as necessary to determine the serviceability of the materiel.

(4) If outer box or container is damaged beyond repair, transfer contents to a serviceable box or container, mark accordingly and give priority of issue.

(5) If necessary, visually inspect each item according to procedures in paragraph 3-14.

#### WARNING

Use gloves or a rag to hold strap near the end where it will spring loose when cut. Cut straps with metal cutting shears. Remove boxes/containers/ammunition from pallet. Dispose of strapping and non-recoverable materials. Return serviceable pallets and components to ammunition supply.

#### b. Wood Boxes with Metal Hardware.

- (1) Cut steel strapping with metal cutting shears.
- (2) Remove and dispose of straps.
- (3) Gloves must be worn.

#### WARNING

To prevent injury, release tension by pressing down on top of box while cutting straps on side of box. Cut lead seal wire with pliers and remove. Turn catch and open hasp, or pull out on spring-latch to release. Lift box top to open. On spring-latched boxes, note position of top for guidance in repacking. Remove top padding/filler (if any) from box. Remove inner pack(s).

#### c. Wirebound Boxes.

- (1) Cut lead seal wire with pliers and remove.
- (2) Bend wire loops up straight using a salee closer (fig 3-4), screwdriver, or pliers.



ARD80-0206

Figure 3-4. Salee closet:

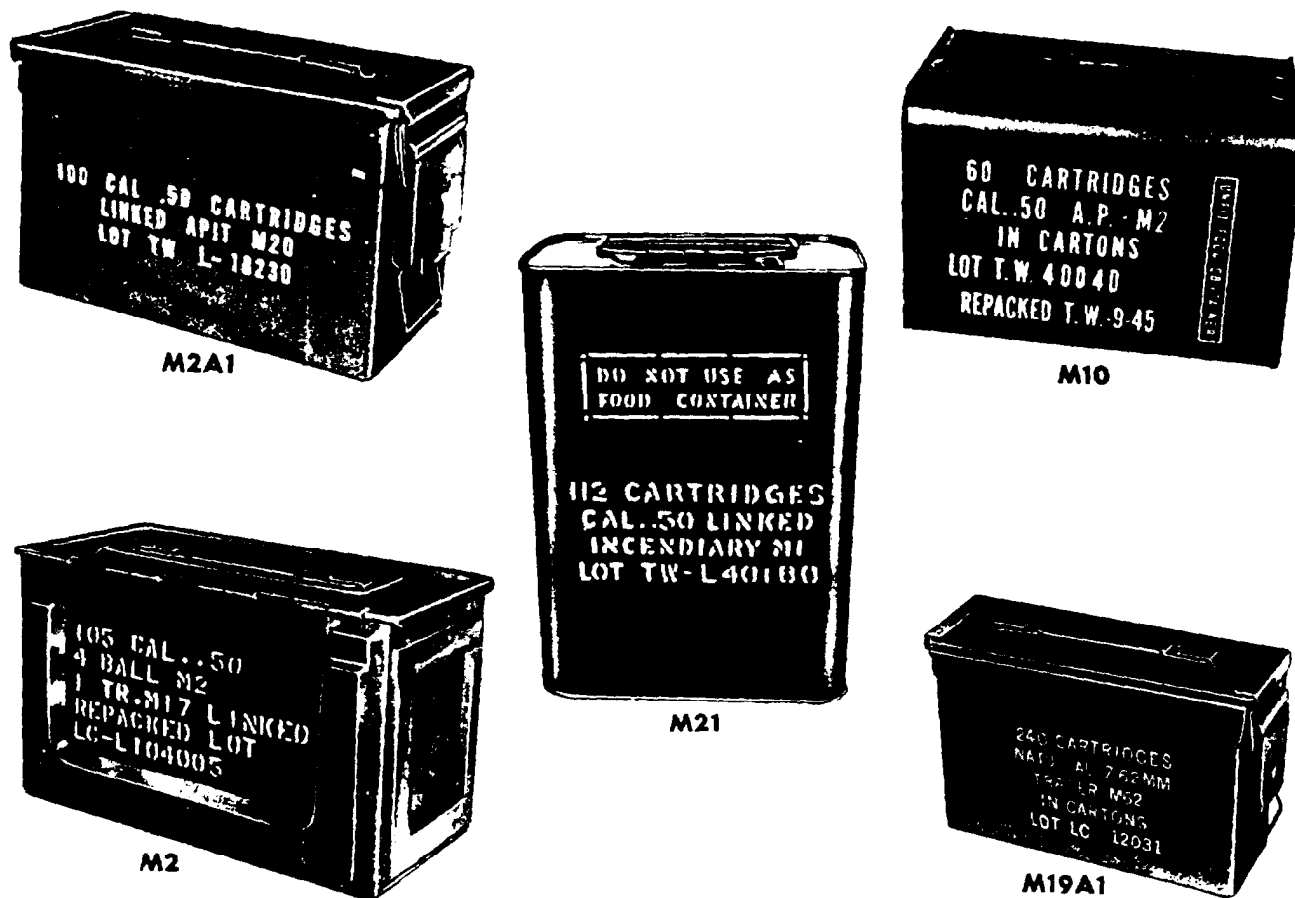
- (3) Lift lid panel to open box.
- (4) Remove top packing (if any) from box.
- (5) Remove inner pack(s).

#### d. Metal Containers.

- (1) Cut lead seal wire with pliers and remove.

- (2) Turn locking bar counterclockwise to loosen end cap. Use pry bar to loosen locking bar, if necessary.

- (3) Remove container end using twisting-pulling motion.



ARD80-0207

Figure 3-5. Packing containers small-arms ammunition.

## Section II. TOOLS AND EQUIPMENT

### 3-4. Common Tools and Equipment

Standard and commonly used tools and equipment having general application to this ammunition are authorized for issue tables of organization and equipment (TOE).

### 3.5 Repair Parts and Special Tools

Repair parts and special tools required at organizational level are listed in appendix C.

## Section III. MAINTENANCE

### 3-6. General

*a.* Maintenance at the organizational level is performed by designated personnel in using units. Its purpose is to prevent further deterioration of ammunition which has been exposed to rough handling or adverse weather conditions. Direct support units may be called upon to provide technical assistance and packaging materials.

*b.* Responsibilities for maintenance are limited to those functions specified in appendix B, Maintenance Allocation Chart (MAC). Only maintenance operations for which procedures

are given in this manual or in the weapon operator's manual are authorized.

*c.* Maintenance shall be performed at least 90 feet from any ammunition magazine or storage shelter.

*d.* Remove ammunition from packaging before performing maintenance on packaging materials.

### 3-7. Expendable Materials

*a.* Paint, cleaning compounds, and other expendable materials authorized for use by



organizational maintenance personnel are listed in appendix D.

b. Expendable materials should be requisitioned through normal channels on an as-required basis.

**3-8. Inspection of Packaging**

a. Inspection. if receipt inspection or storage inspection of packaging reveals damage or deterioration to the extent that serviceability of the ammunition is questionable, unpack ammunition Text using procedures in paragraph 3-3) and visually inspect inner packs and/ or items. Unpack only as far as necessary to determine serviceability.

b. Packaging Defects. Specific inspection criteria and identification of defects (as acceptable, repairable or irreparable) are outlined in table

3-4. The most commonly encountered packaging defects are listed below:

- (1) outer containers (boxes) damaged, weathered, or rotted to the extent contents are not protected).
- (2) Inner container damaged to the extent contents are not protected or cannot be readily removed.
- (3) Container cap or closure insecure to the extent contents are not protected.
- (4) Inner containers wet ( except metal), rusted, moldy nor mildewed.
- (5) Hardware or banding loose, missing broken, or ineffective.
- (6) Handle or cleat missing or broken.
- (7) Contents loose to the extent item may be damaged in handling.

Table 3-1. Inspection Criteria for Packaging

Wooden boxes and crates			
Component	Acceptable	Repairable	Irreparable at organizational level
Hardware	Operative and tight. Nails and fasteners present and in good condition.	Inoperative or loose. Nails, screws, and fasteners which can be replaced or properly sealed.	None. None.
Ends	Free from damage.	Broken or missing cleats and handlers.	Damage which requires disassembly of box.
Wood	Splits less than 3-inches long no closer than 1 inch to edge of board or adjoining split  The board must be secured by at least one nail on each side of the split when it extends to the end of the board. Warping which does not prevent sealing of box or insertion of required ammunition. Light mold which can be brushed off.  Sound tight knots the diameter of which do not exceed 1/2 the width of the board. Skids securely attached to box or crate. Knots no greater than 1/4 the width of skid.	Splits over 3 inches but no closet than 1 inch to edge of board or adjoining split. or 1/1-inch wide, which can be repaired by use of corrugated fasteners.  None.  None.  Loose skids.	Splits closer than than 1-inch to edge of board or adjoining split or over 1/4-inch wide.  Warping which prevents insertion or removal of rounds and/or sealing of the box. Excessive mildew and mold which cannot be removed and which render markings illegible. Holes or loose knots which exceed 1-1/2 inches in largest diameter or 1/2 width of board. Knots greater than 1/4 the width of skid.
Strapping	Present and unweakened by rust or distortion.	Missing, rusted or distorted.	None.
Body	Dents less than 1/4 inch deep.  Flanges which are bent but do not prevent placement or removal of cover with normal hand pressure. Tight seams which prevent entrance of moisture. Free from rust.  Free from perforations. Supports which are integral to container present and inserviceable condition.	Dents deeper than 1/4-inch which may be removed without weakening structure of container. Flangers which can be straightened to allow placement and removal of cover with normal hand pressure. None.  Minor rust which can be removed.  None.	Dents which impair the structural integrity of the material, or prevent removal of contents. Flanges which cannot be straightened.  Loose or leaking seams.  Rust which has caused pitting and perforations. Perforated. Damaged supports which are integral to container.
Caps and covers	Dents which do not prevent cover from closing. Free from rust.  Free from perforations.	Dents which can be removed.  Minor rust which can be removal.  None.	Dents which cannot be removed and/ or prevent assembly to body. Rust which has caused excessive pitting. Perforated.

Table 3-1. Inspection Criteria for Packaging Continued

Wooden boxes and crates			
Component	Acceptable	Reparable	Irreparable at organizational level
Caps and covers-Continued	Gaskets present and sufficiently serviceable to make container air tight in single round metal containers and to make metal containers for propelling changes air tight.	Missing or damaged gaskets.	None
Metal boxes			
Body and cover	Free from rust. Tight seams. Dents less than 1/4 inch deep  Unperforated. Separators integral to container serviceable, allowing easy insertion and removal of contents. Gaskets present and sufficiently serviceable to insure moisture proof pack.	Minor rust which can be removed. Repair not practical. Dents which impair the structural be removed without weakening structure of container. None None  Damaged or missing gaskets.	Extensive pitting and rust. Split seams Dents which impair the structural integrity of the material  Perforated. Missing or broken separators.  Not applicable.

**3-9. Inspection of Ammunition**

a. Material Defects. Specific defects (identified as acceptable, repairable or irreparable) and inspection criteria are outlined in table 3-2. Specific defects for 25MM ammunition (identified as accept or reject) and inspection criteria for 25MM Ammunition are outlined in table 3-2.1. In addition, figures 3-5.1 through 3-5.5 detail the entire family of 25MM ammunition, to be used in conjunction with table 3-2.1, in determining 25MM ammunition serviceability. 25MM APFSDS-T M919 ammunition that is found to be unserviceable should be containerized in the original pack, tagged unserviceable, and returned through normal ammunition supply channels.

b. Corrective Action.

(1) Acceptable ammunition to be repackaged using procedures in paragraph 3-14.

(2) Ammunition to be cleaned - clean flaked or blistered coating and touch up paint following procedures in paragraph 3-10.

**WARNING**

The cartridge 25MM APFSDS-T M919 utilizes Depleted Uranium (DU) that emits very low level radiation. Care must be taken when handling this round to avoid direct contact with the DU penetrator.

Evidence of DU corrosion is visible in the form of a yellowish or white powder or stain seen on the outer surfaces of the projectile and can become a hazard to

personnel. If corroded (yellow or white corrosion) APFSDS-T M919 ammunition is encountered, ammunition must be handled with gloves. The ammunition must be placed in the original pack, tagged unserviceable, and returned through normal supply channels. Avoid Setting DU corrosion on hands. Flush hands before eating or touching face. Dispose of gloves in accordance with AK 385-11.

**CAUTION**

When handling sabot ammunition with an exposed penetrator (with no indication of corrosion. M919 DU round) wear gloves. Regardless if gloves are worn, always flush hands before eating or touching face. The gloves do not have to be disposed of as radioactive waste.

**NOTE**

DU ammunition must not be destroyed/ burned. Contact Radiation Protection Officer, render-safe procedure authorized to Explosive Ordnance Disposal (EOD) units only.

c. Disposition of irreparable items. For disposition of irreparable ammunition or rejected 25MM ammunition, contact the next higher maintenance level. Contact EOD personnel for disposition of ammunition items considered to be hazardous.

Table 3-2. Inspection Criteria for Ammunition

<b>Projectiles (20mm, 25mm and 30mm calibers)</b>			
Item	Acceptable	Reparable	Irreparable
Markings	Legible and correct	Illegible, correct data available for remarking.	Correct data cannot or determined
Paint	No scratches, peeling or blistering.	Scratches peeling or blistering in spots.	Scratches, peeling or blistered requiring complete repaint.
Body	Free from rust.	Minor rust that can be removed with corrosion removal compound, sandpaper or wire brush.	Extensive rust that cannot be removed with corrosion removal compound or sandpaper or with wire brush.
Marking	Legible	Missing, illegible, incorrect or misleading and correct data is available for remarking.	Correct data cannot be determined.
Body	Light corrosion.  Minor scratches in coating. Minor dents.	Minor scratches, rust or corrosion which can be removed with fine sandpaper or steel wool, or corrosion removal compound.  None	Severe corrosion, rust or scratches which cannot be removed with sandpaper or steel wool.
Body and base	Minor cuts, scratches and dents.	None	Severe cuts, tears and dents where propellant is exposed. Oil and water damage.

Any discernible degree of etching appearing in a stained area will be reclassified and penalized as corrosion. Refer to MIL-STD-651.

Table 3-2.1. Inspection Criteria for 25MM Ammunition.

	M791 APDS-T	M919 APFSDS-T	M792 HEL-T	M793 TP-T	M910 TPDS-T
<b>CARTRIDGE CASE</b>					
Dented or scratched	Accept	Accept	Accept	Accept	Accept
Perforated or cracked	Reject		Reject	Reject	Reject
Pierced or perforated primer	Reject	Reject	Reject	Reject	Reject
Corroded primer	Accept	Accept	Accept	Accept	Accept
<b>PROJECTILE ASSEMBLY</b>					
Projectile loose within cartridge case.	Reject	Reject	Reject	Reject	Reject
Nose cap split or missing.	Accept	Accept			Accept
Cracked or missing sabot segment	Reject	Reject			Reject
Windscreen bent, cracked or missing	Reject	Reject	Reject	Reject	Reject
Loose M758 Fuze (M792)			Reject		
Loose penetrator (M919)		Reject			
Corroded if cap is off (M919)		Reject			
Loose obturator (M919)		Accept			
Missing or damaged obturator (M919)		Reject			

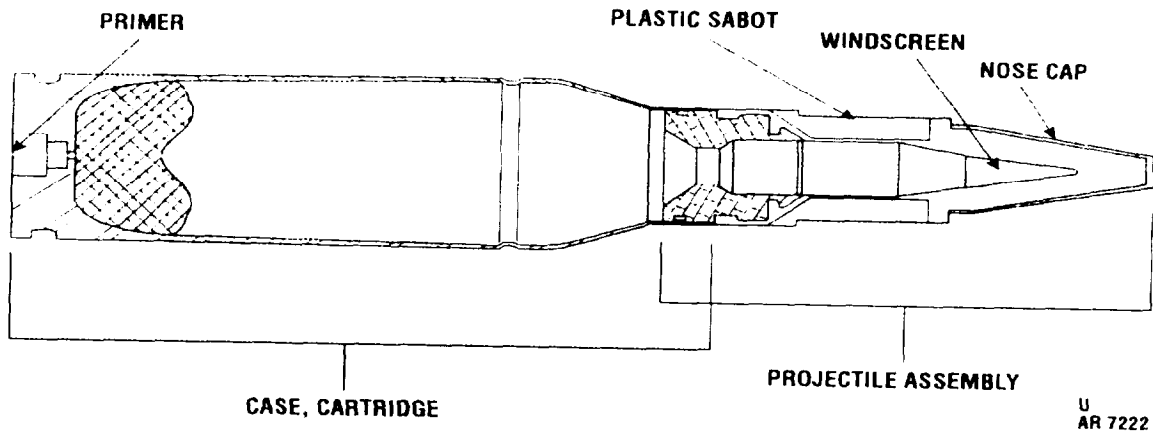


Figure 3-5.1. M791 APDS-T ammunition.

U  
AR 7222

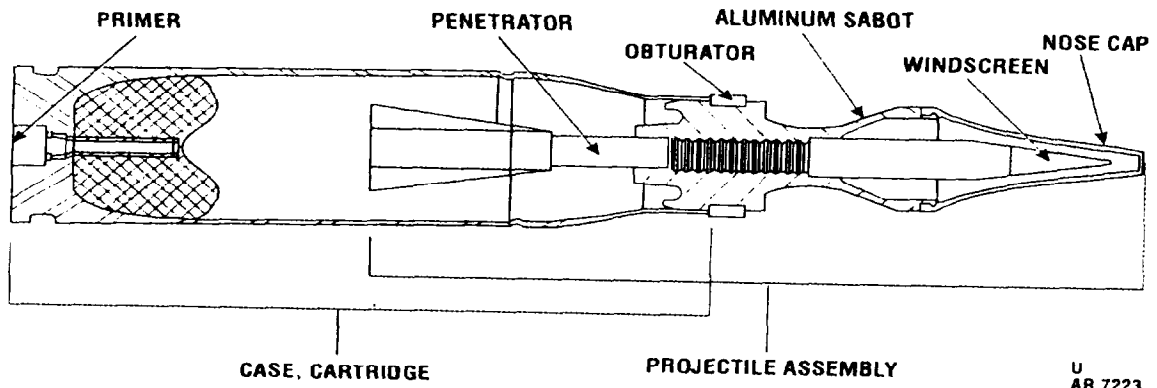


Figure 3-5.2. M919 APFSDS-T ammunition

U  
AR 7223

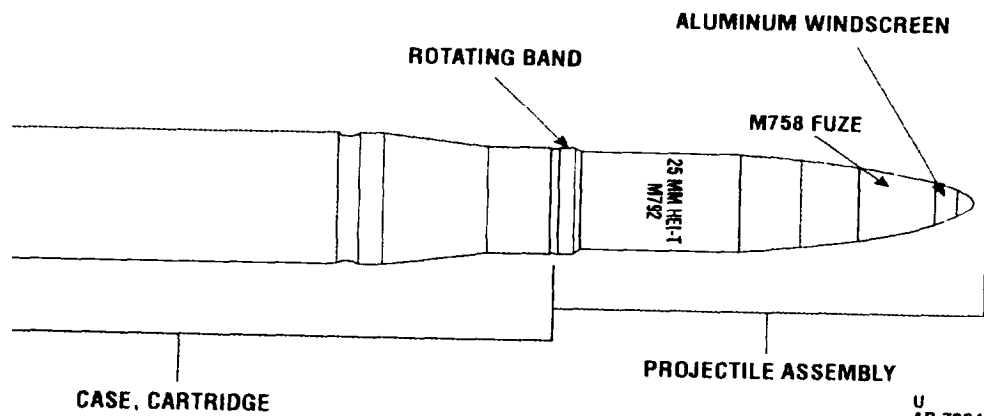


Figure 3-5.3. M792 HEI-T ammunition

U  
AR 7224

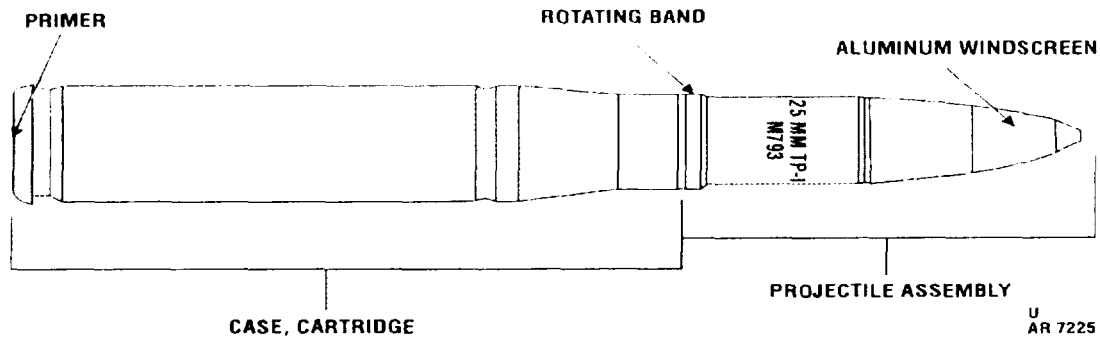


Figure 3-5.4. M793 TP-T ammunition.

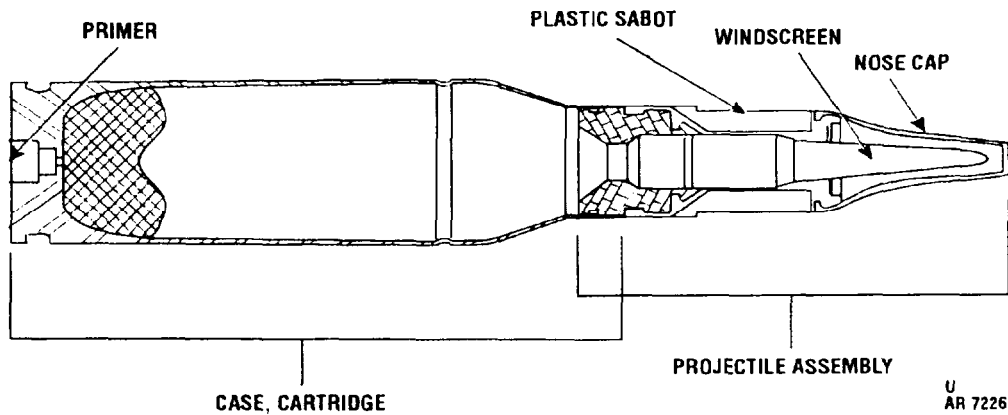


Figure 3-5.5. M910 TPDS-T ammunition.

**3-10. Cleaning and Touch-Up Ammunition**

**WARNING**

Primers shall be cleaned only with rags dipped in alcohol or acetone. Primers shall be covered with fiber container cap during cleaning, touch-up of ammunition.

a. Cleaning.

**CAUTION**

Rags shall be stored in noncombustible self-closing containers. Wastes or used rags shall be placed in water filled containers. Areas will be well ventilated where solvents and paints are used.

(1) Remove dirt, mud, and other foreign material using rags or brushes. Use rags damp-

ened with alcohol or acetone to remove grease.

(2) Using nonferrous brush, remove flaked, chipped, blistered, or peeling paint.

(3) Remove rust using nonferrous brush or sandpaper.

(4) Clean corrosion from aluminum or copper-based metals by first brushing with a nonferrous brush and then removing residue with rags and corrosion removing compound.

(5) Inspect cleaned item for cracks or other damage or deterioration.

b. Touch-Up.

(1) Use masking tape to cover existing markings which are in good condition.

(2) Use brush, cover bare metal with primer and allow to dry.

(3) Use brush, paint primed area with two coats, allowing first coat to dry before applying second.

(4) After paint has dried, remove masking tape.

**3-11. Defects Found on Visual Inspection**

a. Small arms cartridges will be given a pre-issue inspection prior to issue. The cartridges in a minimum of three boxes from each lot, depending on the size of the lot, will be inspected for physical defects. Lots having more than 5 percent defective cartridges will be subjected to 100 percent inspection if authorized by higher authority, and visually defective rounds will be called out. Ammunition having less than 5 percent visually defective rounds may be issued without further inspection. The defects in table

3-3 may be found in cartridges during inspection.

b. The following defects may be found in belted ammunition for use in machine guns;

(1) The cartridges are not properly in the belts.

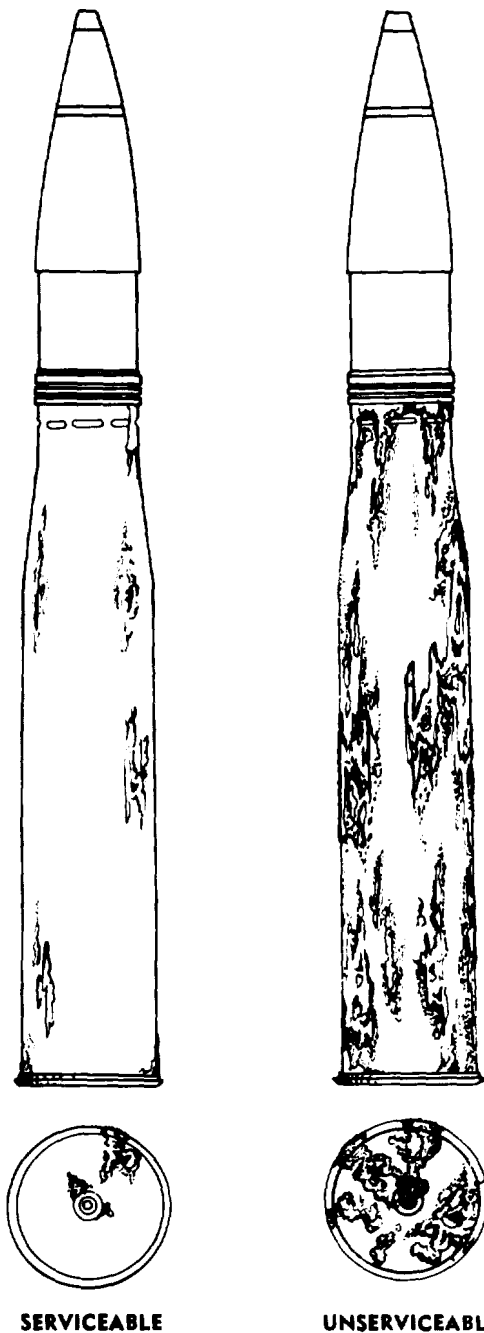
(2) There is an improper proportion or spacing of incendiary and/or tracer ammunition with ball ammunition.

(3) Cartridge links in link belts may have broken, cracked, or stretched loops

(4) Link belts not packed with double loop on top

Table 3-3. Defects Found on Visual Inspection.

Name of defect	How to recognize	Causes-effects-precautions
Cartridge Short Bullet	Bullet seated too deep.	Not serious unless it is so deep as to affect density of charge and chamber pressure. May not function machine gun.
Cartridge Case Corrosion (fig. 3-6)	Coloring of cases (green, blue, yellow, or white colors). Also appearance of chemical deposit. Not to be confused with normal discoloration or blackening of case due to annealing.	Metal eaten into and weakened will cause rupture when cartridge is fired. Deposit interferes with chambering. Cartridges showing advanced corrosion should not be fired.
Season Crack	Split in neck of case. Definite longitudinal cracking when exposed to severe weathering conditions or certain reagents. Check by pressing diagonally down on the bullet end.	Due to distortion of the normal crystalline structure of the metal as a result of drawing or tapering operations (not to be confused with split necks occurring after firing).
Dent and Burr	Indentations and burring.	Rough handling. Dangerous pressure only if dent is large. Cartridges may fail to chamber.
Bullet	Bullet is loose in case. A defect if bullet can be moved by twisting, pushing, or pulling while cartridges are held in hand (exception - caliber .22 long rifle).	May cause short round stoppage or bullet may remain in bore if cartridge is removed from gun without firing. Should not be fired.
Split Bullets (tracer)	Longitudinal cracks in the bullet.	Do not use for overhead fire. i.e., in filtration courses, etc.



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Figure 3-6. Corrosion on primers and cartridge case.

### 3-12. Maintenance of Packaging Hardware

*a. Repair of Damaged Hardware.* Hardware which has been damaged to the point that it is inoperable is usually irreparable; however, minor damage can usually be corrected by straightening, as follows:

(1) Using pliers carefully, bend damaged item until its configuration is the same as the serviceable item.

(2) Test repaired hardware for proper functioning.

*b. Replacement of Irreparable Hardware.* Hardware which cannot be repaired can be replaced with a serviceable item cannibalized from an unserviceable container, as follows:

(1) Using a screwdriver, remove unserviceable hardware.

(2) Attempt to reinstall serviceable hardware in existing holes. Secure with screws.

(3) If screws are missing or cannot be tightened in existing holes, proceed as follows:

(a) Replace missing screws with others obtained from an unserviceable box.

(b) If screws cannot be tightened, move hardware (with box top in place) to a different location where screws can be secured. If necessary, carve notch to accommodate hinge pin.

(c) Mark location for attaching screws and remove hardware.

(d) Drive and remove a small nail at each location to provide a pilot hole.

(e) Place hardware and screws in position and secure.

*c. Removing Rust or Corrosion from Hardware.*

(1) Remove rust and corrosion from hardware by first brushing with a wire bursh or use corrosion removing compound.

(2) Cover with primer or paint.

*d. Replacing Broken, Loose, or Deteriorated Strapping.*

(1) Cut pieces of 5/8-inch banding of sufficient length to go around box plus about 6 to 8-inches.

(2) Position strap(s) under box.

(3) Insert one strap end into strap stretcher so that strap is held firmly by stretcher, with about 3 inches of strap protruding.

(4) Place clip over strap end.

(5) Thread loose end of strap through clip and into stretcher head.

(6) Tighten strap by repeated movement of ratchet lever, until edges begin to cut into box.

(7) Using banding crimper, crimp clip in two places.

(8) Release locking pawl on stretcher and slide stretcher out.

(9) Cut off excess strapping.

(10) Repeat (3) through (9) above, for each strap.

### 3-13. Maintenance of Packaging Containers and Materials

*a. Repair of cracks and splits in Wood*

(1) Hold board tight so that the crack or split is closed.

(2) Hammer corrugated fasteners into wood at

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4 to 6-inch intervals. Fastener should be centered across crack.

### *b. Repair of Broken Cleats or Wood Handles.*

(1) Remove broken cleat with claw hammer or pry bar.

(2) Remove serviceable cleat with claw hammer or pry bar from an otherwise unserviceable box.

(3) Position serviceable cleat on box and secure with 3 to 5 small nails.

(4) Bend nails over inside of box with hammer.

### *c. Repair of Rope or Strap Handles.*

(1) Remove cleats holding handle with claw hammer or pry bar.

(2) Remove serviceable handle from an otherwise unserviceable box by removing the holding cleats with claw hammer or pry bar.

#### **NOTE**

Do not remove nails or staples attaching handle to cleats.

(3) Position serviceable handle and cleats and attach to box with 3 to 5 nails in each cleat.

(4) Bend nails over inside of box with hammer.

*d. Painting of Wood Boxes.* Normally, used boxes will not be painted except to obliterate previous markings or to indicate less than full pack.

### *e. Painting of Metal Boxes.*

(1) Remove dirt, mud, and other foreign material from boxes using wire brush and/or rags dipped in detergent-water solution. Use rags dipped in alcohol to remove grease.

(2) Using wire brush, remove flaked, chipped, blistered, or peeling paint.

(3) Remove rust and corrosion using a wire brush and sandpaper or rages and corrosion removing compound.

(4) Cleaned surfaces to be thoroughly dried.

(5) Cover existing markings, if applicable, with masking tape.

(6) Using spray can or brush, cover bare metal with primer and allow to dry.

(7) Using spray can or brush, paint primed area with two coats allowing first coat to dry before applying second.

(8) Remove masking tape, where applied.

(9) Mark box as required.

*f. Markings on Outer Box.* The following information must be legible on each box:

Nomenclature  
National stock number  
(Including DODIC)  
Lot number  
Date of manufacture  
Quantity

#### **NOTE**

Box will have DODIC and Lot Number.

*g. Markings on Inner Container.* The following information must be legible on each inner container:

Nomenclature  
DODIC  
Lot number  
Quantity  
Weight Zone

### *h. Restoration of Markings.*

(1) Carefully observe information and location of markings on packaging of like item.

(2) Using waterproof ink marker, china marking pencil or small brush and paint, restore markings which are faded, obliterated during cleaning, or painted over.

(3) Check markings for accuracy and allow to dry.

(4) Repack ammunition following procedures in paragraph 3-14.

## **3-14. Repacking Procedures**

#### **NOTE**

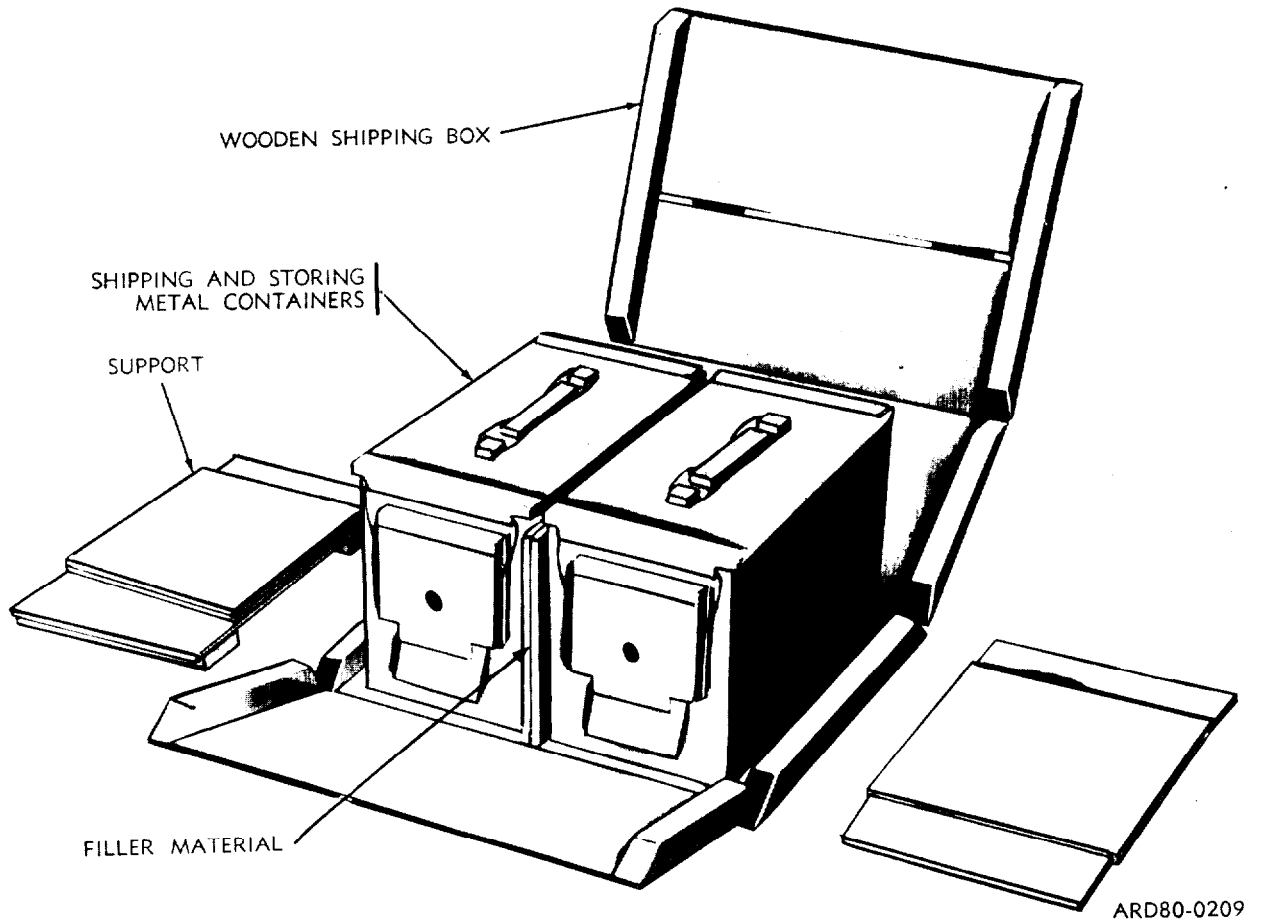
Boxes and packaging materials are normally available for reuse after ammunition is fired. If not available in using organization, requisition required items.

Refer to appendix C (Repair Parts and Special Tools List) for most recent packaging information and appendix E for packing and marking data.

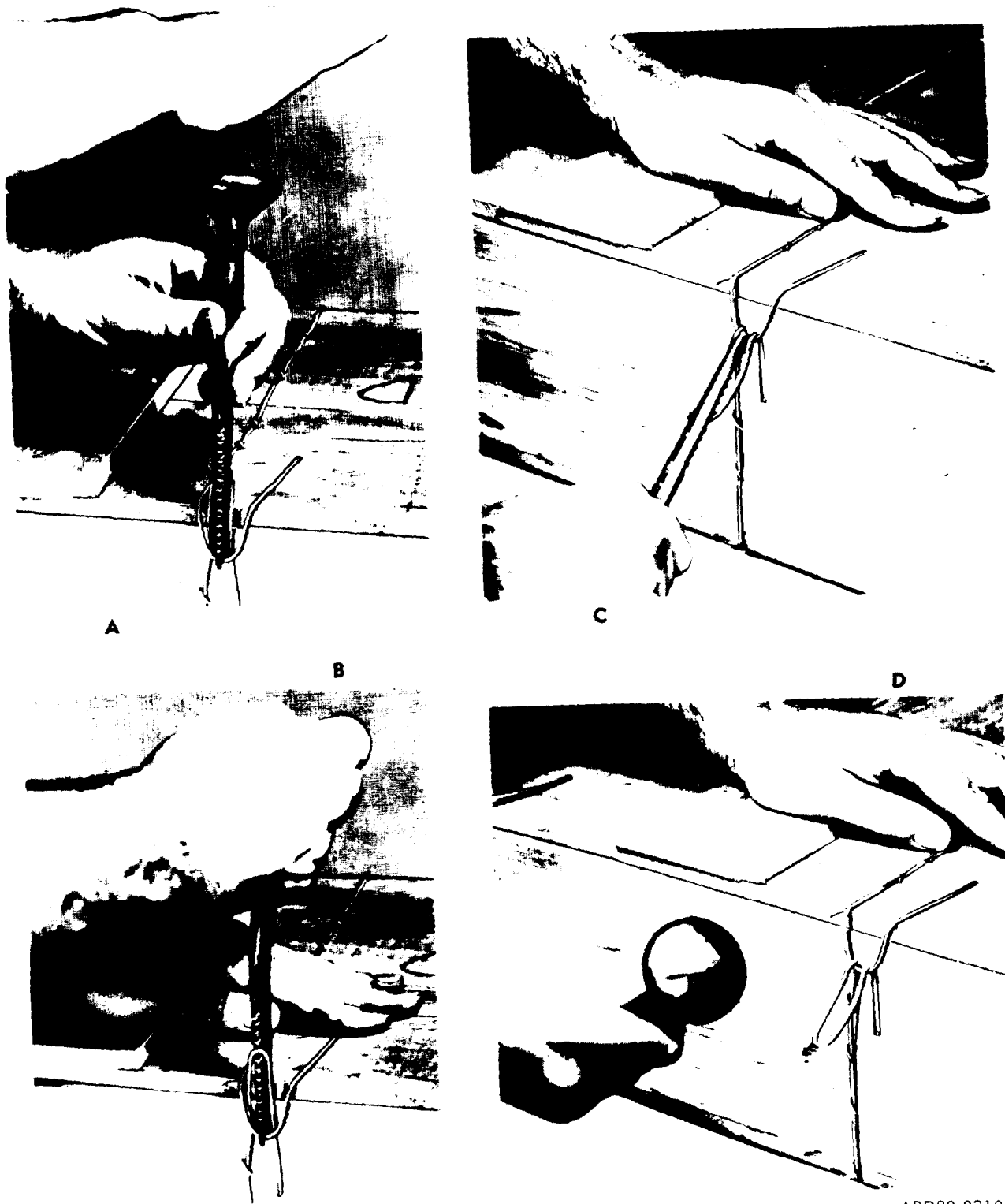
### *a. General.*

(1) Always repack ammunition in serviceable packaging containers (fig 3-7 through 3-10).



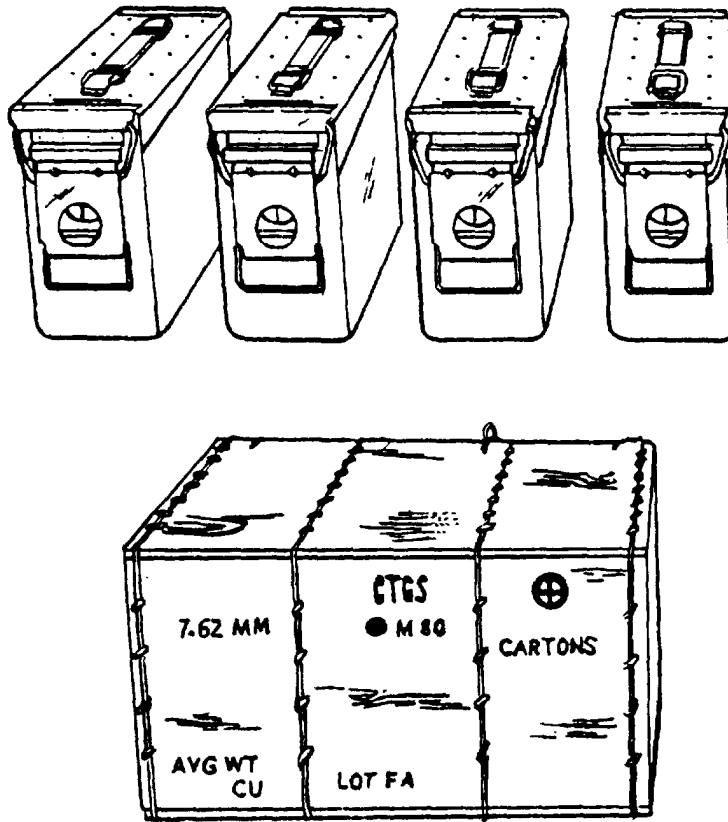


*Figure 3-7. Packing wirebound boxes.*



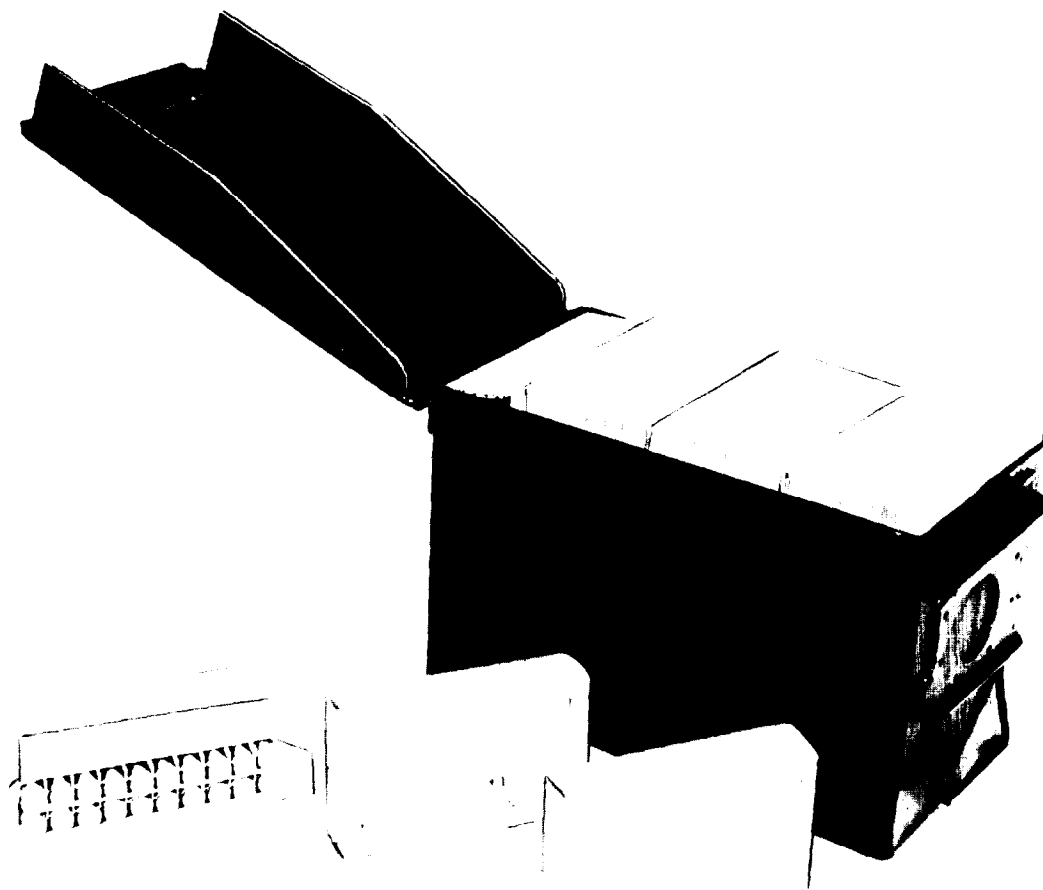
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Figure 3-8. Closing wirebound box.



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*Figure 3-9. Four M19A1 ammunition boxes and wirebound box.*



ARD80-0212

*Figure 3-10. Cartridges in 20-round cartons in ammunition box.*

(2) Select packaging components from those for similar ammunition items.

(3) Use filler pads as required for a tight pack.

(4) Re-mark package as necessary to assure proper markings.

*b. Metal Container.*

(1) Place item in container so that it is firmly seated in filler materials.

(2) Cover any sensitive parts such as primers, with padding.

(3) Place top on container.

(4) Seal with plastic filament tape or black nylon tape by wrapping joint in a double layer and folding edges over top.

*c. Metal Box (MZA1, etc.).*

(1) Inspect gasket on top of box to assure a good seal.

(2) Place lower filler materials into box.

(3) Insert item(s) in space(s) provided.

(4) Add other filler materials as required.

(5) If top has been completely removed, line up hinge slots on top with hinge pins on box and slide top onto box.

(6) Close top firmly.

(7) Place short end of locking lever under lock lip.

(8) Push down and in on locking lever until it snaps against box.

*d. Metal Box with Latches.*

(1) Inspect gasket in top of box to assure good seal.

(2) Place filler material in bottom of box, as necessary.

(3) Place inner pack(s) in box. Use filler material or empty containers when box is not full.

(4) Place padding or filler material over inner pack(s).

(5) Position top on box.

(6) Snap latches shut to secure top.

(7) Secure latches with wire.

*e. Wing-Nut Fastener Box.*

- (1) Place inner pack(s) in box. Position items to balance load for carrying.
- (2) Use padding or empty containers as filler material if box is not full.
- (3) Place end cover over tie rod(s) and push into place.
- (4) Place a large washer over each tie rod.
- (5) Screw wingnut onto tie rod and tighten firmly.

*f. Spring-Latch Box.*

- (1) Place inner pack(s) in box. Position items to balance load for carrying.
- (2) Use padding or empty containers as filler material if box is not full.
- (3) Position top so that hinge fits into hinge slot on box.
- (4) Close top.
- (5) Hook latch onto latch tab.
- (6) Press down on latch until it snaps tight.
- (7) Secure latch with wire.

*g. Hasp and Hinge Box.*

- (1) Place inner pack(s) in box. Position items to balance load for carrying.
- (2) Use filler material or empty inner containers when box is not full. Place padding on top of items.
- (3) Close box top.
- (4) Close hasp.
- (5) Rotate hasp catch to latch position.

*h. Wirebound Box.*

- (1) Position inner pack(s) on bottom of box. Position items to balance load for carrying.
- (2) Place box ends in position with enough filler material to make a tight pack.
- (3) Raise box front into position and hold.
- (4) Raise box back into position and hold.
- (5) Close top, being careful to fit wire loops on top over wire loops on front.
- (6) Bend wire loops flat against box using a salee closer.

*i. Pallet.*

- (1) Arrange boxes, containers, projectiles, etc. on pallet in the same configuration as the original load, if possible. Distribute load for balance.
- (2) Place separators between rows of metal tube containers.
- (3) Place top (projectile pallet) in position.
- (4) Cut 1 1/4-inch banding pieces about two feet

longer than pallet girth.

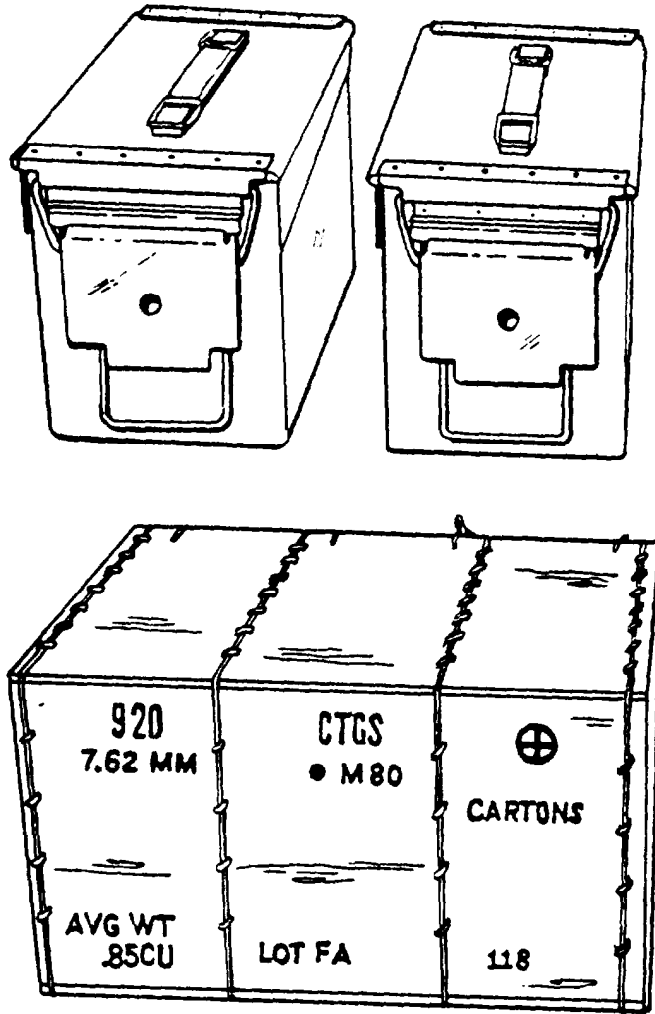
- (5) Position straps under upper part of pallet bottom.
- (6) Position wood strips under straps to protect ammunition packaging.
- (7) Insert one strap end from rear into strap stretcher so that strap is held firmly by stretcher and about 4 to 6 inches of strap protrudes.
- (8) Place clip over strap end.
- (9) Thread loose end of that strap through clip and into stretcher head.
- (10) Tighten strap, by repeated movement of ratchet lever, until edges begin to cut into wood.
- (11) Using banding crimper, crimp clip in two places.
- (12) Release locking pawl on stretcher and slide stretcher out.
- (13) Cut off excess strapping.
- (14) Repeat (7) through (13), above, for each strap.

**3-15. Painting and Marking of Boxes with Light Loads**

**NOTE**

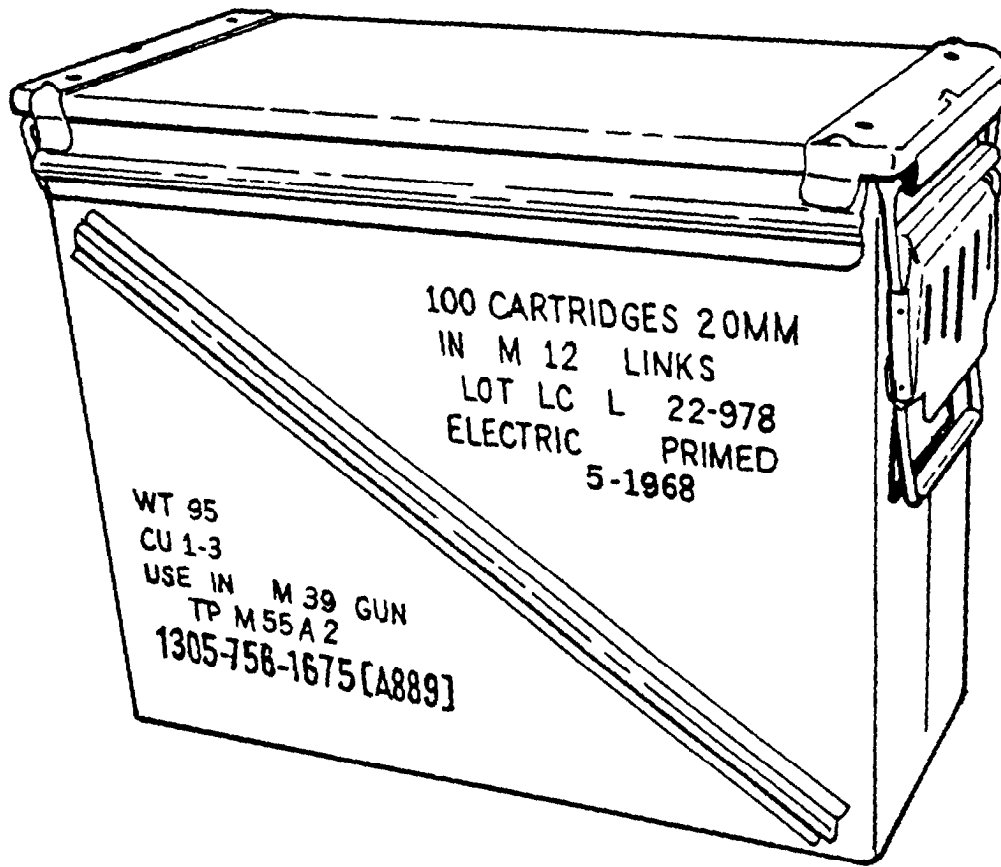
Organizations will apply this procedure only when boxes with less than full contents are to be returned to storage area or transported to new location. When painting of boxes is required, remarking (except quantity) may be avoided by applying masking tape on markings prior to painting. Boxes with less than full contents will be painted orange as follows:

- a.* Check contents with markings on box to verify that nomenclature and lot number are correct.
- b.* Make diagram of markings on box and record all markings except quantity figure.
- c.* Apply orange enamel to all outer surfaces of box. If enamel is not available use orange lacquer.
- d.* When box is dry, remark box with correct markings (b, above).
- e.* Count quantity of items in box and mark number on box in the same position as the original quantity figure.
- f.* Mark the words "LIGHT BOX" on each side of box, using approximately the same letters as original markings.



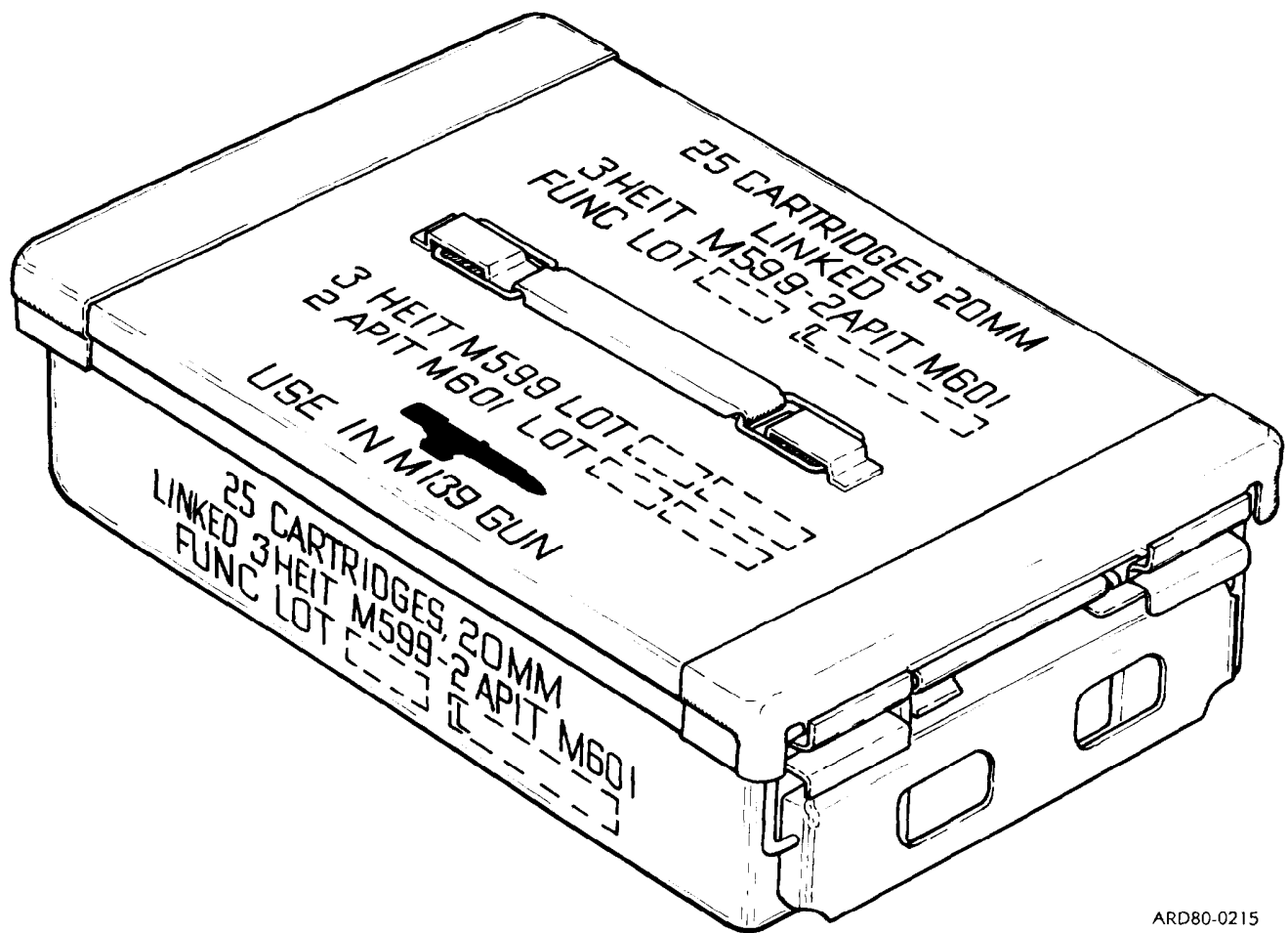
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Figure 3-11 Two M2A1 ammunition boxes and wirebound box.



ARD80-0214

Figure 3-12. Shipping and storage container M548 for 20mm cartridge



ARD80-0215

Figure 3-13. Shipping and storage container M528 for 20mm cartridges.



**GENERAL NOTES**

1. UNIT SHOWN HEREON IS PREPARED TO MEET THE FOLLOWING REQUIREMENTS:
  - A. GROSS WEIGHT APPROX. 2000 LBS, NOT TO EXCEED 2200 LBS.
  - B. HEIGHT OF PALLET AND LOAD NOT TO EXCEED 52".
  - C. OVERHANG AVOIDED WHERE POSSIBLE, BUT SHOULD NOT EXCEED APPROX. 1" IN ANY DIRECTION. ONE INCH, TWO INCH, OR FOUR INCH BATTENS MAY BE USED AS REQUIRED.
  - D. BOXES SECURED TO THE PALLET BY STEEL STRAPPING 1 1/4" X .035, TYPE I, CLASS A OR B, FED SPEC QQ-S-781A.
  - E. STRAPPING SECURED BY ONE 1 1/4" SEAL SECURED WITH A DOUBLE CRIMP, FED SPEC QQ-S-766.
2. A MINIMUM OF 2 STAPLES WILL BE USED TO FASTEN EACH STRAP TO ITS BATTEN. STAPLES WILL NOT BE USED WITHOUT BATTENS. STAPLES AUTHORIZED ARE 1 3/8" X 3/4".
3. ADDITIONAL BANDING MAY BE USED IN ANY DIRECTION ON THE PALLET LOAD, AT THE DISCRETION OF THE SHIPPER.
4. FILLERS, CONSTRUCTED OF TWO INCH LUMBER, MAY BE USED TO COMPLETE PARTIAL LAYERS ON PALLET. FILLERS SHOULD BE PLACED ON INTERIOR OF TOP LAYER, WHENEVER PRACTICAL.

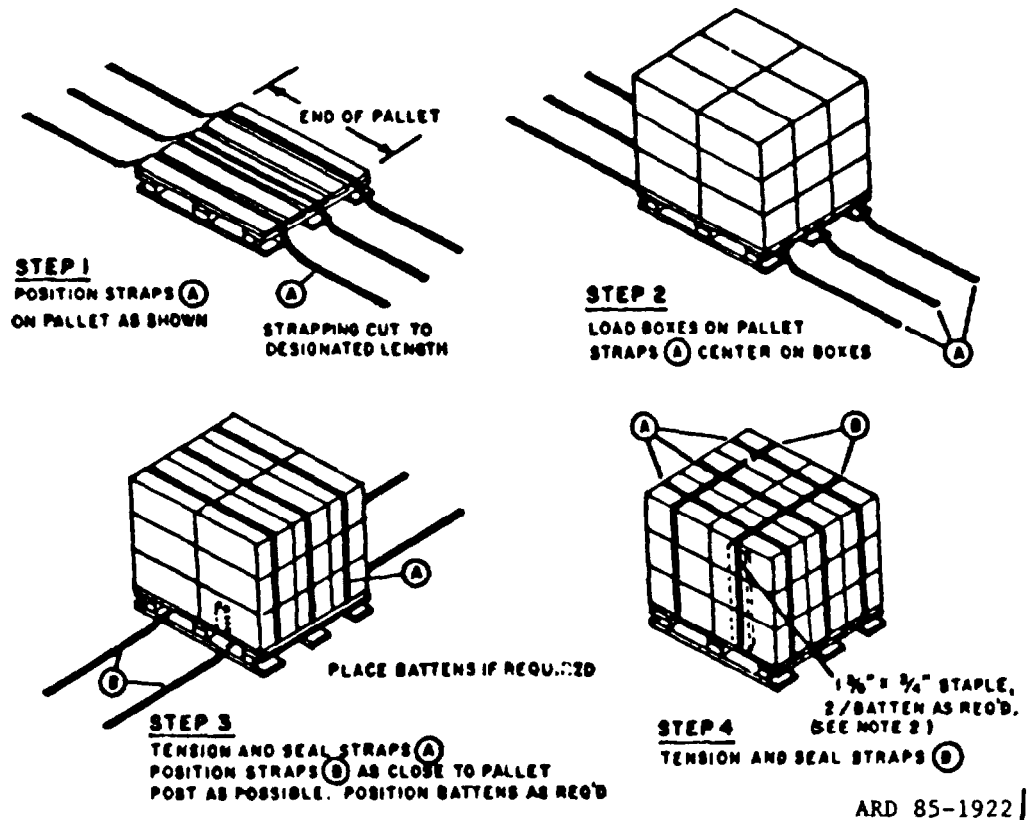


Figure 3-14. Palletizing.

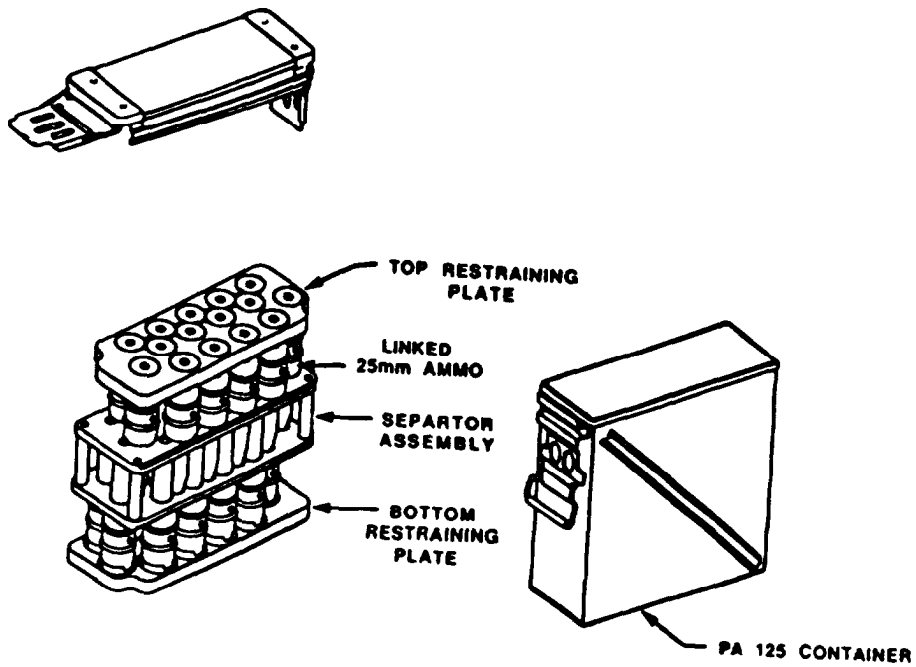


Figure 3-15. Shipping and storage container, PA125 (internal pack). U  
AR 5758

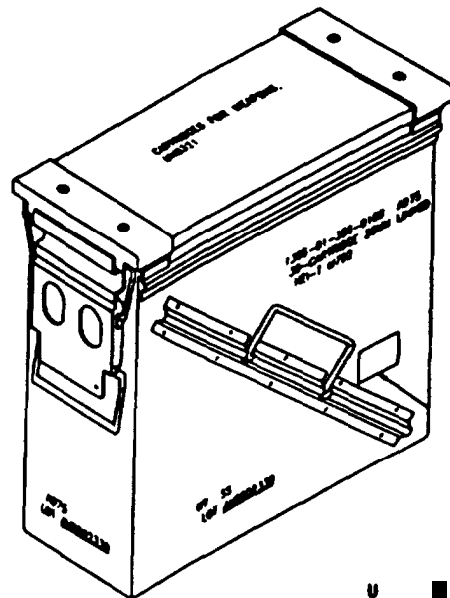


Figure 3-16. Shipping and storage container, PA125 (external pack). U  
AR 5758

## CHAPTER 4

### SHIPMENT AND STORAGE

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#### Section I. REQUIREMENTS

##### 4-1. General

a. To meet military requirements, small-arms ammunition is normally packaged and packed in metal boxes with or without outer wirebound boxes or STD wooden boxes, in accordance with level A requirements for worldwide shipment, storage, and use. These packaging methods provide a high degree of protection for the ammunition against the rigors of manual or mechanical methods of handling, trans-

portation, and storage under normal and extreme temperature and adverse weather conditions, including some degree of water submersion and air drop.

b. Ammunition should be handled and stored under conditions that will ensure minimum deterioration of the packaging materials and minimum exposure to extreme temperature and moisture.

#### Section III. SHIPMENT

##### 4-2. Precautions

Damaged, contaminated or otherwise degraded material may be dangerous and/or its usefulness may be impaired.

##### 4-3. Transportation

###### WARNING

Do not roll, drop, throw or subject ammunition to rough handling.

a. Block and brace ammunition packages being transported in trucks, jeeps and other tactical vehicles. (Blocking and bracing must be adequate to withstand sudden stops and starts, as well as off-road operations.)

b. Stack ammunition in an attitude which prevents shifting.

c. Assure packaging provides adequate protection for ammunition during transportation.

#### Section III. STORAGE

##### 4-4. Precautions

a. Select storage site carefully to avoid exposure to power lines and electric cables.

b. Assure that exposure to radio frequency (RF) energies and electromagnetic radiation is kept to a minimum in storage areas.

c. Do not store ammunition adjacent to reservoirs, water mains or sewer lines.

d. Select level, well drained sites free from readily ignitable and flammable materials.

e. Do not store ammunition under trees or adjacent to towers or other structures that attract lightning.

f. Provide nonflammable or fire-resistant overhead covers (e.g., tarpaulin) for all ammunition. Maintain overhead air space of approximately 18 inches between cover and ammunition. Keep cover at least 6 inches from stack on ends and at sides, to permit circulation of air.

g. Store ammunition in a dry, cool place; never in the direct rays of the sun or where temperatures exceed limits marked on containers.

h. Use heavy, well supported dunnage to prevent stack from sinking, and to keep bottom tier off ground.

i. Dig suitable trenches to prevent water from flowing under stack.

j. During storage, ammunition should be segregated by caliber, type, method of packing, and lot number.

k. Ammunition removed from the original packing should be tagged or otherwise marked to preserve the ammunition lot or functional lot identification. Such action will prevent otherwise serviceable ammunition from becoming condition code H through loss of identify (ammunition lot number). Small Arms Ammunition with loss of lot identity is to be reported to ARRCOM, DRSAR-MAD, Rock Island, Illinois, 61299.

**4-5. Storage Data**

a Field Storage Categories. Storage categories are the primary groups into which ammunition is segregated for storage in the field. The groupings are based on consideration of the desirability of storing components of complete rounds in adjacent stacks and on consideration of the hazards of propagation of explosion, range of fragments, spread of fires, and chemical contamination. Safety procedures covering storage are based on the following factors: Items having comparable storage risks are grouped together in the same category. For further information refer to TM 9-1300-206.

b. *Storage Compatibility Grouping.* All ammunition and explosives are assigned to an appropriate storage compatibility group (SCG) for

storage at army activities. Factors which determine ammunition and explosive storage compatibility groupings are evaluated on the basis of data obtained from ammunition drawings and tests required by TB 700-2 and other tests during research and development to determine characteristics.

**4-6. Hazard Classifications and Compatibility Groups**

Table 4-1 provides examples of the relationship between storage compatibility groups and quantity-distance divisions. Examples of specific ammunition and explosives in these divisions and groups are indicated in table 4-2.

*Table 4-1. Hazard Classifications/Compatibility Groups*

Items	SCG	Q-D Class 1 Division
1. Initiating explosives.	A	1
2. Detonators and similar initiating devices.	B	1, 2, or 4
3. Bulk propellants, propellant, propelling charges, and devices containing propellant with or without means of ignition.	C	1, 2, 3 or 4
4. Black powder, high explosives, and HE ammunition without its own means of initiation and without a propelling charge.	D	1 or 2
5. HE ammunition without its own means of initiation, with a propelling charge.	E	1 or 2
6. HE ammunition with its own means of initiation, with or without a propelling charge.	F	1 or 2
7. Fireworks and illuminating, incendiary, smoke or tear producing ammunition other than ammunition that is activated by exposure to water or the atmosphere.	G	1, 2, 3, or 4
8. Ammunition containing both explosives and white phosphorous or other pyrophoric material	H	2 or 3
9. Ammunition containing both explosives and flammable liquid or gel filler.	J	3
10. Ammunition containing both explosives and toxic chemical agent.	K	2
11. Ammunition, not included in other groups, requiring separate storage.	L	1, 2, 3, or 4
12. Ammunition which presents no significant hazards.	S	4 or None

*Table 4-2 Summary of Quantity-Distance Classifications and Storage Compatibility Groupings for Small Arms*

Item	Storage compatibility group	Quantity distance class
Ammunition, small arms, less than 50 caliber	S	1.4
Ammunition, 50 caliber, except API and Incendiary rounds	C	1.4
Ammunition, 50 caliber API and Incendiary	G	1.4
Ammunition, 20MM, HE, HEI and functional packs containing HE AND HEI	E	(04)1.2
Ammunition, 20MM; practice and high pressure tests	C	
Ammunition, 20MM, Incendiary and functional packs containing incendiary, except those containing HE or HEI	G	(04) 1.2
Ammunition 20MM, API	G	1.4
Ammunition 20MM, with inert projectile	G	1.4
Ammunition 25MM HEDP	G	(04) 1.2
Ammunition 30MM, ball and high pressure test	C	(04)1.2
Ammunition 30MM, practice and training	C	1.4
Ammunition 30MM, HEDP	E	(04) 1.2

# APPENDIX A REFERENCES

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## A-1. Administrative Publications

### a. Army Regulations.

Reporting of Transportation Discrepancies in Shipments .....	AR 55-38
Malfunctions Involving Ammunition and Explosives .....	AR 75-1
Ionizing Radiation Protection (Licensing, Control, Transportation, Disposal, and Radiation Safety) .....	AR 385-11
Accident Reporting and Records .....	AR 385-40
Policies and Procedures for Firing Ammunition for Training, Target Practice and Combat .....	AR 385-63
U.S. Army Explosives Safety Program .....	AR 385-64
Fire Protection .....	AR 420-90

### b. DA Pamphlets.

Consolidated Index of Army Publications and Blank Forms .....	DA Pam 25-30
Ammunition and Explosives Safety Standards .....	AR 385-64

## A-2. Blank Forms

U.S. Army Accident Report .....	DA Form 285
Recommended Changes to Publications and Blank Forms .....	DA Form 2028
Maintenance Request .....	DA Form 2407
Ammunition Condition Report .....	DA Form 2415
DOD Fire Incident Report .....	DD Form 2324
Transportation Discrepancy Report .....	SF Form 361
Report Of Discrepancy (ROD) .....	SF Form 364

## A-3. Doctrinal, Training and Organizational Publications

Conventional Ammunition Unit Operations .....	FM 9-38
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## A-4. Equipment Manuals

### a. Technical Manuals.

Ammunition, General .....	TM 9-1300-200
Military Explosives .....	TM 9-1300-214
Ammunition Maintenance .....	TM 9-1300-250
Army Ammunition Data Sheets for Small Caliber Ammunition (FSC 1305) .....	TM 43-0001-27

### b. Technical Bulletins.

Guidelines for Safe Response to Handling, Storage, and Transportation Accidents Involving Army Tank Munitions or Armor Which Contain Depleted Uranium .....	TB 9-1300-278
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**A-5. Supply Catalogs**

FSC 1305 - Ammunition Thru 30-MM; FSC 1310- Ammunition, Over 30-MM  
Up To 75-MM; FSC 1315 - Ammunition, 75-MM Thru 125-MM; FSC 1320-  
Ammunition, Over 125-MM; FSC 1325- Bombs and FSC 1330- Grenades ..... SC 1305/30-IL

# APPENDIX B

## MAINTENANCE ALLOCATION CHART

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### Section I. INTRODUCTION

#### B-1. General

a. The Maintenance Allocation Chart (MAC) designates the 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 evacuated to the next higher maintenance organization. Higher maintenance levels will perform the maintenance functions of lower maintenance levels when required or directed by the appropriate commander.

#### B-2. Maintenance Functions

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

a. *Inspect.* To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

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

c. *Service.* Operations required periodically to keep an item in proper operating condition.

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

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

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

(4) *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 the proper functioning of

the equipment; also to assemble one component of an end item with another.

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

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

(1) *Paint.* To repaint the entire item.

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

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

#### B-3. Explanation of Format

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

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

c. *Maintenance Function.* Column 3 lists the 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	Explanation
C .....	Operator/Crew
O .....	organizational
F .....	Direct support
H .....	GeneralSupport
D .....	Depot

d. *Tools and Equipment.* Column 4 lists any applicable tools or equipment.

e. *Remarks.* Column 5 lists any pertinent remarks.

Section II. MAINTENANCE ALLOCATION CHART

NOTE

Refer to Chapter 2 by group number for the specific item applicable to each maintenance function.

(1) Group No.	(2) Functional group	(3) Maintenance function											(4) Tools and equipment	Remarks				
		Inspect	Test	Service					Renovate									
				Unpack	Repack	Clean	Touch up	Mark	Install	Adjust	Paint	Repair			Replace			
01 GROUP																		
0101	CARTRIDGE, SHOTGUN, 12 GAGE	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	*
	a. Cartridge-Bulk	D	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	-
0101	b. Packaging for Cartridge																	
CARTRIDGE, SHOTGUN, .410 GAGE																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	*
	b. Packagiug for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	-
0101	b. Packagiug for Cartridge																	
CARTRIDGE, SHOTGUN, 10 GAGE																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	*
	b. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	-
0102	PROJECTILE ASSEMBLY																	
0103	PROPULSION SYSTEM																	
0104	FUZE																	
0105	LINKS																	
02 GROUP																		
CARTRIDGE, CALIBER .22																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	-
	b. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	-
0201	b. Packaging for Cartridge																	
CARTRIDGE, CALIBER .32																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	-
	b. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	-
0201	b. Packaging for Cartridge																	
CARTRIDGE, CALIBER .38																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	-
	b. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	-
0201	b. Packaging for Cartridge																	
CARTRIDGE, CALIBER .45																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	-
	b. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	-
0201	b. Packaging for Cartridge																	
CARTRIDGE, 5.56MM																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	-
	b. Cartridge-Clipped/Magazine	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	-
	c. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	-
0201	c. Packaging for Cartridge																	
CARTRIDGES, 7.62MM																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	-
	b. Cartridge-Clipped/Magazine	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	-
	c. cartridge-Linked	C	D	C	C	C	-	-	C	-	-	-	-	-	-	-	-	**
	d. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	*
0201	d. Packaging for Cartridge																	
CARTRIDGES, CALIBER .50																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	F	D	-	-	-	-
	b. Cartridge-Linked	C	D	C	C	C	-	-	C	-	-	-	F	D	-	-	-	**
	c. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	*
0201	c. Packaging for Cartridge																	
CARTRIDGES, 9MM																		
	a. Cartridge-Bulk	C	D	C	C	C	-	-	C	-	-	-	F	D	-	-	-	-
	b. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	*
0201	b. Packaging for Cartridge																	
CARTRIDGES, 14.5MM																		
	a. Cartridge-Bulk	C	D	C	C	C	O	O	F	C	-	-	F	D	-	-	-	*
	b. Packaging for Cartridge	O	-	F	F	O	O	O	-	-	-	-	O	O	O	-	-	*
0202	PROJECTILE ASSEMBLY																	
0203	PROPULSION SYSTEM																	
0204	FUZE																	
0205	LINKS																	



(1) Group No.	(2) Functional group	(3) Maintenance function											(4) Tools and equipment	(5) Remarks	
		Inspect	Test	Service					Install	Adjust	Renovate				
				Unpack	Repack	Clean	Touch up	Mark			Paint	Repair			Replace
0301	03 Group CARTRIDGES, 20MM a. Cartridge-Bulk b. Cartridge-Linked c. Cartridge-H. E. Loaded d. Packaging for Cartridge	C C C O	D D D -	C C O F	C C C F	C C C O	O O O O	F F F -	C C C -	- - - -	F F F O	D D D O	- - - O	*	
0302	PROJECTILE ASSEMBLY Tracer	D	D	D	D	D	-	-	-	-	-	-	D		
0303	PROPULSION SYSTEM Primer	D	D	D	D	D	-	-	-	-	-	-	D		
0304	FUZE Nose Fuze	D	D	D	D	D	-	-	-	-	-	-	D		
0305	LINKS														
0401	04 Group CARTRIDGES, 25MM a. Cartridge-Linked b. Packaging for Cartridge	C O	D -	C F	C F	C O	O O	F O	C -	- -	F O	D O	- O	** *	
0402	PROJECTILE ASSEMBLY Tracer	D	D	D	D	D	-	-	-	-	-	-	D		
0403	PROPULSION SYSTEM Primer	D	D	D	D	D	-	-	-	-	-	-	D		
0404	FUZE Nose Fuze	D	D	D	D	D	-	-	-	-	-	-	D		
0405	LINKS														
0406	CARTRIDGES, 25.4MM a. Cartridges b. Packaging for Cartridge	C O	D -	C F	C F	C O	- O	- O	C -	- -	- O	- O	- O		
0501	05 Group CARTRIDGES, 30MM a. Cartridge-Linked b. Cartridge-Bulk Strip c. Cartridge-H. E. Loaded d. Packaging for Cartridge	C C C O	D D D -	C C C F	C C C F	C C C O	O O O O	F F F -	C C C -	- - - -	F F F O	D - D O	- - - O	**  *	
0502	PROJECTILE ASSEMBLY Tracer	D	D	D	D	D	-	-	-	-	-	-	D		
0503	PROPULSION SYSTEM Primer	D	D	D	D	D	-	-	-	-	-	-	O		
0504	FUZE Nose Fuze	D	D	D	D	D	-	-	-	-	-	-	D		
0505	LINKS														

\*Refer to Appendix C, Section IV

\*\*Refer to TM 9-1305-201-34&P, Appendix B, Section IV



## APPENDIX C PACKING MATERIALS, ACCESSORIES, AND TOOLS

### SECTION I INTRODUCTION

#### C.1 SCOPE.

This appendix lists packing materials, accessories, and tools required for the performance of Unit maintenance of Small Arms Ammunition to 30 Millimeter Inclusive.

#### C.2 GENERAL.

This appendix is divided into the following sections:

C.2.1 Section II - Packing Materials and Accessories. A list of packing materials and accessories authorized for the performance of maintenance at the unit level.

C.2.2 Section III - Special Packing Tools List. A list of special tools authorized for the performance at the unit level.

#### C.3 EXPLANATION OF COLUMNS.

The following provides an explanation of columns in sections II and III.

C.3.1 Column (1) - Part Number/Drawing Number. The primary number used by the manufacturer which controls and design and characteristics of the item. Drawings can be obtained from originating source (see CAGEC).

C.3.2 Column (2) - Contractor and Government Entity Code (CAGEC). (Formerly known as Federal Supply Code for Manufacturers (FSCM).) A five-digit code used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

C.3.3 Column (3) - Figure Number. The number of the figure where the item is identified/located if applicable.

C.3.4 Column (4) - Description. The federal item name and any additional description of the item required.

## SECTION II PACKING MATERIALS AND ACCESSORIES

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
			Cartridge, 12 Gage Shotgun Plastic Case No. 00 Buckshot, XM162: Paper Case No. 00 Bushot; All Brass No. 00 Buckshort, M19
7553296	19200		Packing For: Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
B6006941	19203		Box, Packing, Ammunition:
MIL-P-15011	81349		Pallet, Material Handling:
			Cartridge, Caliber .22 Cartridge, Cal. 22 Ball, Long Rifle, M24 Cartridge, Cal.22 Ball, Hornet M65 (Soft Point) Cartridge, Cal 22 Ball, Long Rifle, Match Grade, Commercial Pack Cartridge, Cal.22 Ball, Short Super Match Or Equal Commercial Pack Cartridge, Cal.22: Tracer, Long Rifle, M861
7553296	19200		Packing for: Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
7540495	19200		Carton
MIL-P-15011	81349		Pallet, Material Handling:
			Cartridge, 9 Millimeter Ball, Nato, M882; Test High Pressure, M905;
9362826	19200		Packing for: Carton: (50 rd)
9362803	19200		Tray, Cartridge:
9378264	19200		Filler, Bottom:
9378264	19200		Filler, Side:
9378264	19200		Filler, End:
9378264	19200		Tape, Removal:

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
			Cartridge, 9 Millimeter-Continued.
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
			Cartridge, Caliber .38
			Special Ball, M41
			Packing for:
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
8594102	19200		Carton: (50 rd)
7553768	19200		Filler, End:
7553766	19203		Filler, Top:
7553767	19203		Filler, Top:
			Special, Ball, M142
			Packing for:
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
7553363	19203		Carton: (50 Rd)
7553768	19203		Filler, End:
7553766	19203		Filler, Top:
7553767	19203		Filler, Center:
MIL-P-15011	81349		Pallet, Material Handling: (all Ctg Cal 38 may use this pallet)
			Cartridge, Caliber .45
			Ball, M1911
			Packing for:
5580944	19203		Carton: (50 Rd)
7553730	19203		Filler, Top:
7553730	19203		Filler, End:
7553730	19203		Filler, Side:
7553730			Taper, Removal:

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
			Cartridge, Caliber .45 Continued.
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
1052136	19203		Ball: M1911 Match Grade Packing for:
8596133	19200		Carton: (50 Rd)
8596133	19200		Filler, Top:
8596133	19200		Filler, End:
8596133	19200		Filler, Side:
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
MIL-P-15011	81349		Pallet, Material Handling: (all ctg Cal.45 may use this pallet)
			Cartridge, Caliber .50
			Tracer, M1, M17; Incendiary, M1, M23 Armor Piercing, M2; API, M8 APIT M20, Tracer, M17; Tracer, Headlight, M21; Ball, M2, M33; Blank M1, M1A1; Ball, Plastic Practice, M858; Tracer, Plastic Practice, M860; SLAP, M903; SLAP-T, M962
			Packing for:
7140393	19204		Link, Cartridge: M9
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
			Tracer, M1, M17; Armor Piercing, M2 Ball, M2, M33; API, M8; Tracer, Headlight, M21; Incendiary, M23, SLAP, M903; SLAP-T, M962
			Packing for:
7553548	19200		Filler Side:
7553550	19200		Filler, Top And Bottom:
7553549	19200		Separator:
7553296	19200		Chest, Ammunition: M2A1

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
9395772	19200		Cartridge, Caliber .50 Continued. Box Assembly: consisting of box, wirebound; filler, end; separator Tracer, M1, M17; API, M8; APIT, M23 Tracer, Headlight, M21; Incendiary, M23 Ball, M33 Packing for:
7791440	19200		Link, Cartridge: M15A2
8596922	19200		Filler, Side:
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator Spotter, Tracer, M48 Series Packing for:
7553722	19200		Carton: (10 Rd)
7553720	19200		Filler, End:
7553720	19200		Filler, Side:
7553720	19200		Filler, Bottom:
7553720	19200		Tap:
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
7991261	19200		Link: M15A1
MIL-P-15011	81349		Pallet, Material Handling: (all ctg. cal.50 may use this pallet)  Cartridge, 5.56 Millimeter Ball, M193, Tracer; M196 HP-T, M197 Packing for:
10534433	19200		Carton: (20 Rd)
10535857	19200		Filler, Side:
10535857	19200		Filler, Corner:
10535857	19200		Tape, Removal:

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
			Cartridge, 5.56 Millimeter-Continued.
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		BOX ASSEMBLY: consisting of box, wirebound; filler, end; separator Ball, M193, Tracer: M196 Packing for:
10010483	19204		Clip: (10 Rd)
10542256	19200		Carton:
10534431	19200		Bandoleer: M3
11010484	19205		Filler, Magazine:
10542257	19200		Filler:
7553296	19200		Box, Ammunition: M2A1
9395772	19200		Box, Assembly: consisting of box, wirebound; filler, end; separator Grenade, M195, Blank, M200 Packing for
10542289	19200		Carton: (20 Rd)
10542290	19200		Filler, Upper Corner:
10542290	19200		Filler, Lower Corner:
10542290	19200		Filler, Upper Side:
10542290	19200		Filler Folded: Ball, M855, Tracer, M856, Plastic, Practice, M862 Packing for:
11691287	19200		Link, Cartridge: M27
93499295	19200		Bandoleer:
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
10542290	19200		Filler, Inner:
10542290	19200		Tape, Removal:



(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
			Cartridge, 5.56 Millimeter-Continued.
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
MIL-P-15011	81349		Pallet, Material Handling: (all ctg Cal 5.56mm may use this pallet)
			Cartridge, 7.62 Millimeter
			Nato, Ball, M59, M80, Nato, AP, M61, Nato, Tracer, M62; Tracer, XM276 Dim
			Packing for:
7553710-4	19203		Box, Intermediate Packaging: (20 Rd)
7553714	19200		Filler, End:
7553715	19200		Filler, Bottom:
7553716	19200		Filler, Side:
7553315	19203		Chest, Ammunition: M19A1
7555581	19200		Box, Wirebound:
			Nato, Ball, M59, M80, Nato, AP, M61, Nato, Tracer, M62; Tracer, XM276 Dim
			Packing for:
7553710-4	19203		Box, Intermediate Packaging:
7553748	19200		Filler, Side:
7553748	19200		Filler, "U" Top:
7553748	19200		Tape Removal:
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box, Assembly: consisting of box, wirebound; filler, end; separator
			Nato, Ball, M59, M80, Nato, Tracer, M62; Tracer, XM276, Dim
			Packing for:
7268389	19204		Link, Cartridge: M13
8595244	19200		Filler, Side:
7553315	19203		Chest, Ammunition: M19A1

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
5581378	19200		Cartridge, 7.62 Millimeter-Continued. Box, Packing, Ammunition: wirebound Nato, Ball, M59, M80, Nato, Tracer, M62; Tracer, XM276, Dim  Packing for:
7268389	19204		Link, Cartridge: M13
7258943	19201		Shipping And Storage Container:
8597302	19203		Carton, Assembly:
8597304	19200		Bandoleer: M4
7553315	19203		Chest, Ammunition: M19A1
5581378	19200		Box, Packing, Ammunition: wirebound Nato, Ball, M59, M80, Nato, Tracer, M62  Packing for:
7790130	19200		Clip, Cartridge: (5 Rd)
7791154	19205		Filler, Magazine: (5 Rd Clip)
8594722	19203		Carton:
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound, filler, end; separator  Nato, Tracer, M62; NATO, Ball M80  Packing for:
7268389	19204		Link, Cartridge: M13
8597302	19203		Carton Assembly:
8597304	19200		Bandoleer:
7543315	19203		Chest, Ammunition: M19A1
5581378	19200		Box, Packing, Ammunition: Wirebound  Nato, Tracer, M62 (Overhead Fire Application); Ball M80 (Overhead Fire Application)  Packing for:
7268389	19204		Link, Cartridge, M13
8597302	19203		Carton Assembly: (100 Rd)

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
			Cartridge, 7.62 Millimeter-Continued.
8597304	19200		Bandoleer: M4
7543315	19203		Chest, Ammunition: M19A1
5581378	19200		Box Packing, Ammunition: Wirebound Nato, Ball, M80  Packing for:
10534739	19203		Carton
NO RECORD	19200		Bandoleer: M1
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler end; separator
7553347	19200		Box, Wirebound: Match 118, Match 852, Longe Range, M118.
NO RECORD			Carton: (20 Rd)
8596111	19200		Filler, "U" Top:
8596111	19200		Filler, Side
8596111	19200		Tape, Removal
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler, end; separator
5581378	19200		Box, Packing, Ammunition: Wirebound
NO RECORD			Carton: (20 Rd)
8596108			Filler, "U" End:
8596108			Filler, Side:
8596108			Filler, Bottom:
8596108			Tape Removal:
7553315	19203		Chest, Ammunition: M19A1
5581378	19200		Box Packing, Ammunition: Wirebound Nato, Grenade, M64  Packing for:
7553850	19200		Carton: (5 Rd)
7553851	19200		Envelope, Waterproof:

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
			Cartridge, 7.62 Millimeter-Continued.
7553296	19200		Chest, Ammunition: M2A1
9395772	19200		Box Assembly: consisting of box, wirebound; filler end; separator
MI-P-15011	19203		Pallet, Material Handling: (all 7.62 mm ctgs may use this pallet)
			Cartridge, 20 Millimeter
			HEI, M97 Series; Incendiary M96, TP, M99A1, TP-T, M220, TP, M204; HEI, M56 Series; HEI-T, M242; APT-T, M95 Dummy, M51A2, TP-T, M55A2; API-T, M53; TP-T, M206; HEI-T, M242, HEI-T, M599; API-T, M601; API-T, M52E1, HEI-T-SD, M246/M246A1; MPT-SD, M940
			Packing for:
7258943	19201		Shipping And Storage Container, Cartridge, Cartridge: M548
MIL-B-3106	81349		Pad, Cushioning:
10542308	19200		Shipping And Storage Container, Cartridge: M528
MI-P-15011	19203		Pallet, Material Handling: (all 20mm ctgs may use this pallet)
7238242	19206		Link: DM10
11686411	19200		Link, Cartridge: M22
NO RECORD			Link, Cartridge: M14
11010274	19200		Link, Cartridge: M14A1
8447633	19204		Link, Cartridge, M14A2
11010333	19205		Link, Cartridge: M17A1
7147028	19200		Link, Cartridge: M12
11577416	19204		Link, Cartridge: M24
8445027	19200		Link, Cartridge: M26
130-147-0100-4	19200		Link, Cartridge: DM1
130-147-0000-3	19200		Link, Cartridge: DM1A

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
9322201 9322198	19200 19200		<p style="text-align: center;">Cartridge, 22 Millimeter</p> <p>Sub-caliber Practice Cartridges, M744, M745, M746, M747</p> <p>Packing for: Box, Ammunition: Polystyrene Compartment</p>
12913842 12013213 12013880 19-48-4116/17 12929427 12926880 12910048 12576132 1257657	19200 19204 19200 19204 19200 19200 19200 19200 19200		<p style="text-align: center;">Cartridge, 25 Millimeter</p> <p>APDS-T, M791; HEI-T, M792; TP-T, M793; TPDS-T, M910; APFSDS-T, M919</p> <p>Packing for: Box, Wood: Link, Cartridge: M28 designed for 25MM Dummy Cartridge, 22mm: Pallet, Wood: Container, Shipping: PA125 Separator Assembly: Retaining Plate: Filler, Pad: Gasket, Rubber:</p>
9332576 8865541	19200 19203		<p style="text-align: center;">Cartridge, 25.4 Millimeter Decoy, M839</p> <p>Box, Wood: Shipping And Storage Container Munitions: PA19</p>
9229066 11825879 19-48-4116/18 12902719 12902723	19200 19200 19200 19200 19200		<p style="text-align: center;">Cartridge, 30 Millimeter</p> <p>TP, M788, HEDP, M789, HEI-T, M799</p> <p>Packing For: Metal Container: M592 Link, Cartridge: M29 Pallet, Wood: Strip, Ammunition: Channel, Edge Guard:</p>

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
12902725	19200		Cartridge, 30 Millimeter Continued. Liner, Ammunition Can: Strap, Removal:
12902724	19200		

### SECTION III SPECIAL PACKING TOOLS LIST

(1) Part Number/ Drawing Number	(2) CAGEC	(3) Figure Number	(4) Description
8864731	19203		Clip, Cartridge Sallee Closer (5120-00-319-5434)
MIL-S-43104	81349		Strapping And Sealing Kit: 5/8-inch Strapping (3540-00-565-6242)
MIL-S-43104	81349		Strapping And Sealing Kit: 1-1/4-inch Strapping (3540-00-565-6244)

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## APPENDIX D EXPENDABLE AND DURABLE ITEMS LIST

### SECTION I INTRODUCTION

#### D.1 SCOPE.

This appendix lists expendable and durable items you will need to operate and maintain the Small Arms Ammunition to 30 Millimeter Inclusive. This listing is for information purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except: Medical, Class V, Repair Parts and Heraldic Items).

#### D.2 EXPLANATION OF COLUMNS.

D.2.1 Column (1) - Item Number. This number is assigned to the entry in the listing for reference when required.

D.2.2 Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item.

C - Operator/Crew  
O - Unit Maintenance  
F - Direct Support Maintenance  
H - General Support Maintenance

D.2.3 Column (3) - National Stock Number. This is the national stock number assigned to the item; use it to request or requisition the item.

D.2.4 Column (4) - Description. Indicates the federal item name and, if required, a description to identify the item. The last line for each item indicates the Commercial and Government Entity Code (CAGEC) in parentheses followed by the part number.

D.2.5 Column (5) - Unit of Measure (U/M)/Unit of Issue (U/I). This measure is expressed by a two-character alphabetical abbreviation (e.g., EA, IN, PR). If the unit of measure differs from the unit of issue as shown in the Army Master Data File (AMDF), requisition the lowest unit of issue that will satisfy your requirements.

**SECTION II EXPENDABLE AND DURABLE ITEMS LIST**

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) (U/M/ U/I)
1	0	6810-00-184-4796	Acetone, Technical: liquid (81346) ASTM D329	cn
2	0	6810-00-543-7415	Alcohol, Denatured: liquid, grade III (0MUS3) 27 CFR 21.35	gl
3	0	8020-00-246-8504	Brush, Artists: A1 round, flat edge (80244) GSAPD 8020-00-224-8010 ITEM 12	ea
4	0	7920-00-255-5135	Brush, Wire Scratch: copper beryllium alloy, curved handle, 14 in. oa lg (61452) B-82-2017	ea
5	0	7920-00-269-0933	Brush, Wire Scratch: copper beryllium alloy, straight handle, 7 in. block lg (61452) B-80-2015	ea
6	0	8020-00-889-7919	Brush, Paint: 1-1/2 in. nom w x 13/32 in. nom thk (80244) GSAPD 8020-00-245-4517	ea
7	0	8020-00-262-9084	Brush, Varnish: 1/2 in. nom w x 1/4 in nom thk (45092) 608-1	ea
8	0	6850-00-174-9672	Corrosion Removing Compound: liquid, Type II (81349) MILC10578	gl
9	0	7930-00-249-8036	Detergent, General Purpose: flake or powder, 5 lb. box (80244) 7930-00-249-8036	co
10	0	8010-00-910-8154	Enamel: Black, No. 37038, lusterless (81348) TT-E-516	pt
11	0	8010-01-418-5436	Enamel: Green, No. 34088, Lead and Chromate Free, Type 3 (81348) TT-E-2784	gl
12	0	8010-00-878-5761	Enamel: White, No. 37875, lusterless (81348) TT-E-516	pt
13	0	8010-00-851-5525	Enamel: Yellow, No. 23538, semigloss (81349) MIL-E-16663	bx
14	0	8010-01-418-5440	Enamel: Black, No. 37038, Lead and Chromate Free, Type 3 (81348) TT-E-2784	gl
15	0	8010-01-418-5442	Enamel: Green, No. 35109, Lead and Chromate Free, Type 3 (81348) TT-E-3784	gl
16	0	8010-01-088-0096	Enamel: Orange, No. 32246, lusterless (81348) TT-E-516	qt

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) (U/M/ U/I)
17	0	8010-01-418-5446	Enamel: White, No. 37875, Lead and Chromate Free, Type 3 (81348) TT-E-2784	gl
18	0	NO NSN	Enamel: Forest Green, No. 34079 Fed-STD-595	gl
19	0	5315-00-597-9766	Fastener, Corrugated, Wood, Joint: saw tooth edge 1/2 in. nom w (58536) A-A-1957	hd
20	0	7520-00-973-1059	Marker, Tube Type: black, permanent ink, felt tip (03042) MARKSALOTBLACK	dz
21	0	7520-00-973-1062	Marker, Tube Type: red, permanent ink, felt tip (03042) MARKSALOTRED	dz
22	0	7520-00-079-0288	Marker, Tube Type: yellow, permanent ink, felt tip (83421) 7520-00-079-0288	dz
23	0	5315-00-889-2743	Nail: 1-1/2 in fastening lg, stl, 19 flat, size 4D (81346) ASTM F1667	pg
24	0	5315-00-889-2744	Nail: 2 in. fastening lg, stl, 19 flat (81346) ASTM F1667	pg
25	0	8010-00-515-2208	Primer, Paint: yellow, type 1 (54636) E90Y3	gl
26	0	7920-00-205-1711	Rag, Wiping: cotton, unbleached, mixed colors (80244) 7920-00-205-1711	be
27	0	8135-00-239-5291	Seal, Strapping: 5/8 in. nom w, stl, grade 2, type d, style II (81346) ASTM D 3953-87	bx
28	0	8135-00-239-5294	Seal, Strapping: 1-1/4 in nom w, stl, grade 2, type d, style II (81346) ASTM D 3953-87	bx
29	0	8135-00-281-4071	Strapping: Steel, 5/8 in. nom w, 0.020 in nom thk (81346) ASTM D 3953-87	cl
30	0	8135-00-283-0671	Strapping: Steel, 1-1/4 in nom w, 0.035 in nom thk (81346) ASTM D 3953-87	cl
31	0	7510-00-266-6711	Tape, Pressure Sensitive Adhesive: one side, tan masking, crepe back, 3/4 in nom w., 60.0 yd nom lg, lusterless (52170) 232 3/4 IN.	ro
32	0	7510-00-266-5016	Tape, Pressure Sensitive Adhesive: one side, Olive Drab, cotton and linen, water resistant, 2 in. nom w., 60.0 yd nom lg, lusterless (81348) PPP-T-60	ro
33	0	8010-01-441-5940	Thinner, Paint Products: General Purpose (58536) A-A-3007	gl

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) (U/M/ U/I)
34	0	5350-00-242-4405	Wool, Metallic: stl (80244) 5350-00-242-4405	lb
35	0	5350-00-255-7736	Wool, Metallic: copper, (80244) 5350-00-255-7736	lb

# APPENDIX E

## PACKING, MARKING AND STORAGE DATA

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### Section I. INTRODUCTION

#### E-1. Scope

This appendix contains information required by organizational level of maintenance for repacking of small arms munitions.

#### E-2. Explanation of Columns

*a. Item.* Column 1 indicates the nomenclature of the munition.

*b. Outer Pack.* Column 2 indicates the type of package.

*c. Inner Pack.* Column 3 indicates the type of pack.

*d. Number of Items in Package.* Column 4 indicates the quantity of munitions in the outer pack.

*e. Number of Items per Inner Pack.* Column 5 indicates the quantity of munitions in the inner pack.

*f. Total Weight (lbs).* Column 6 indicates total weight of the outer and inner pack and contents.

*g. Total Explosives Weight (lbs).* Column 7 indicates the total weight of explosives of the packaged munitions.

*h. Cube.* Column 8 indicates result of the length, multiplied by the width, multiplied by height of the outer pack.

*i. Field Storage Compatibility.* Column 9 indicates the primary groups into which ammunition is segregated for storage in the field.

TM 9-1305-201-20&P

Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lb)	Total explosive weight	Cube	Field storage cat.	Remarks and Dwg No.
<b>SHOTGUN CARTRIDGES</b> CARTRIDGE, SHOTGUN .410, No. 6, M35 Cal .22/.410 Gage.	Wood box	Carton	500	25/ctn	78.0	0.5	1.49	A	*Commercial pack
CARTRIDGE, SHOTGUN, 10 gage, blank.	Wood box	Carton	500	10/ctn 24/ctn	37.5	-	0.8	A	*Commercial pack
CARTRIDGE, SHOTGUN, 12 gage, No. 00, M19.	Wood box	Carton/ metal box (2)	480	10/ctn 24/ctn/ metal box	88.0	1.7	1.28	A	10521660
CARTRIDGE, SHOTGUN, 12 gage, No. 4, M257.	Wirebound box	Metal Box (2)	480	10/ctn 24/ctn 2/ctn metal box	88.0	1.7	1.28	A	*7553347
CARTRIDGE, SHOTGUN, 12 gage, No. 4 M274.	-	-	-	25/ctn	-	-	-	A	Commercial pack
CARTRIDGE, SHOTGUN, 12 gage No. 00 XM 162 - commercial pack.	Wirebound box	Metal box (2)	480	10/ctn 24/ ct metal box	81.7	-	1.52	A	*
CARTRIDGE, SHOTGUN, 12 gage No. 00 paper, commercial pack.	Wirebound box	Metal box (2)	350	25/ctn 14/ctn metal box	66.3	-	.90	A	*
CARTRIDGE, SHOTGUN, 12 gage non-lethal, point control, M1012	Wirebound box	Metal box (2)	320	160	34.0	0.27	0.90	S	9396206 9296197
CARTRIDGE, SHOTGUN, 12 gage non-lethal, crowd dispersal, M1013	Wirebound box	Metal box (2)	320	160	32.0	0.48	0.90	S	9396206 9396197
<b>CALIBER .22 CARTRIDGES</b> CARTRIDGE, CAL .22 ball, long rifle M24.	Wirebound box	Metal box	10,200	50/ctn 10/ctn 8 ctn/ 22 tcn	40.0	2.5	1.47	A	*7553769
CARTRIDGE, CAL .22 ball, hornet M65 (soft point).	Wood box	Ctn/ containers	2,000	50 ctn/ 40 ctn/box	37.0	3.0	0.38	A	*Commercial pack
CARTRIDGE, CAL .22 ball, long rifle, match shade, commercial pack.	-	-	-	-	-	-	-	A	*Commercial pack

\*For additional packing, refer to SC 1305/30-IL.

Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lbs)	Total explosive weight	Cube	Field storage cat.	Remarks and Dwg. No.
CALIBER .22 CARTRIDGES-Continued CARTRIDGE, CAL .22 ball, short super match or equal commercial pack.	—	—	2,000	-	-	—		A	*Commercial pack
CARTRIDGE, CAL .22 Tracer, Long Rifle M861	—	—	—	-	-	—	-	A	*Commercial pack
CALIBER .32 CARTRIDGES CARTRIDGE, CAL .32, BALL.	wood box	Carton	2,500	50/ctn 50 ctn/box	40.0	—	0.33	A	Commercial
CALIBER .38 CARTRIDGES CARTRIDGE, CAL .38 BALL.	Wood box	Carton	2,000	50/ctn 40 ctn/MB	94.4	—	0.90	A	* Commercial 6038
CARTRIDGE, CAL .38, BALL WAD CUTTER	Wirebound box	Ctn metal box (2)	2,400	50/ctn 24 ctn/MB	94.4	-	0.90	A	* 10522441
CARTRIDGE, CAL .38, BALL, SPECIAL, M41	Wirebound box	Ctn metal box (2)	2,400	50/ctn 24 ctn/MB	94.4	1.5	0.90	A	* 7553763
CALIBER .45 CARTRIDGES CARTRIDGE, CAL .45. BALL, HIGH PRESSURE TEST, M1.	Wirebound box	Cartons Wood box (2)	2,000	20/ctn 50 ctn/wood box	117.0	2.0	0.90	A	*10534191
CARTRIDGE, CAL .45, BLANK, M9.	wood box	Cartons metal box (2)	2,000	50/ctn 12 ctn/MB	102.3	2.8	0.90	A	*7553728
CARTRIDGE, CAL .45, TRACER M26.	Wirebound box	Cartons metal box (2)	2,000	50/ctn 20 ctn/MB	102.3	1.70	0.90	D	* 7553728
CARTRIDGE, CAL .45, LINE THROWING, M32 (Blank).	wood box	Carton	1,000	20/ctn 50 ctn/		-	1.04	A	10542548
CARTRIDGE, CAL .45, BALL, M1911.	Wirebound box	Cartons metal box (2)	2,000	50/ctn 20/ctn metal box	102.3	1.43	090	A	* 10553728

\*For additional packing, refer to SC 1305/30-IL

Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lbs)	Total explosive weight	Cube	Field storage cat.	Remarks and Dwg. No.
CALIBER .45 CARTRIDGES-Continued									
CARTRIDGE, CAL .45, BALL, MATCH, M1911.	Wirebound box	Cartons metal box (2)	2,000	50/ctn 20 ctn/wood box	115.0	1.43	0.90	A	8596134
DUMMY CARTRIDGE, CAL .45, M1921.	Wirebound box	Carton metal box	2,000	50/ctn 20 ctn/MB	102.3	N/A	0.90	A	*10553728
CARTRIDGE, CAL .45, WAD CUTTER.	Wood Box	Carton	1,000	20/ctn 50 ctn	55.0	-	1.04	A	*Commercial
CALIBER .50 CARTRIDGES									
CARTRIDGE, CAL .50, TRACER, M1.	Wirebound box								
CARTRIDGE, CAL .50, TRACER, M10.	Wirebound box								
CARTRIDGE, CAL .50, TRACER, M17.	Wirebound box	Metal box (2)	200	100				D	*7553346 8596993
CARTRIDGE, CAL .50, BALL HIGH PRESSURE TEST, M1.	Wirebound box	Carton metal box (2)	180	10ctn 9 ctn/MB				A	*10534277
CARTRIDGE, CAL .50, BALL HIGH PRESSURE TEST, M251.	Wirebound box	Carton metal box (2)	220	10/ctn 11 ctn/MB					
CARTRIDGE, CAL .50, BALL M2.	Wirebound box	Metal box (2)	200	100	77.1	6.7	0.90	A	7553346
CARTRIDGE, CAL .50, BALL, M33.	Wirebound box	Metal box (2)	200	100	77.1	6.7	0.90	A	7553346
CARTRIDGE, CAL .50, BALL, SPOTTER-TRACER, M48A2 (A1 Rifle M8C).	Wirebound box	Carton * Metal box (2)	220	10/ctn 11 ctn/MB	76.6	3.48	0.90	D	*7553719
CARTRIDGE, CAL .50, BALL, PRACTICE T249E2 (A1 Rifle M8C).	Wirebound box	Carton Metal box (2)	220	10/ctn 11 ctn/MB	76.6	3.48	0.90	A	10534780
CARTRIDGE, CAL .50, BALL, ARMOR PIERCING, M2.	Wirebound box	Metal box (2)	200	100	77.1	6.7	0.90	A	*7553346

For additional packing, refer SC 1305/30-IL.



Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lb)	Total explosive weight	Cube	Field storage cat	Remarks and Dwg No.
CALIBER .50 CARTRIDGES-CONTINUED CARTRIDGE, CAL .50, BALL, ARMOUR PIERCING INCENDIARY, TRACER, M8.	Wirebound box	Metal box (2)	200	100	77.1	6.55	0.90	D	*7553346 8596993
CARTRIDGE, CAL .50, BALL, ARMOR PIERCING INCENDIARY, TRACER, M20.	Wirebound box	Metal box (2)	200	100	77.1	6.5	0.90	D	*7553346
CARTRIDGE, CAL .50, INCENDIARY, M1.	Wirebound box	Metal box (2)	200	100	77.1	6.8	0.90	D	*7553346
CARTRIDGE, CAL .50, INCENDIARY, M23.	Wirebound box	Metal box (2)	200	100	77.1	6.8	0.90	D	*7553346
CARTRIDGE, CAL .50, BLANK, M1.	Wirebound box	Metal box	200	100	77.1	6.7	0.90	A	*7553346
CARTRIDGE, CAL .50, BLANK, M1A1.	Wirebound box	Metal box	200	100	77.1	6.7	0.90	A	*7553346
DUMMY CARTRIDGE, CAL .50, M2.	Wood box	Container	350	20/ctn 35 ctn/box	85.0	N/A	1.49	A	*7690572
CARTRIDGE, CAL .50, BALL, PLASTIC, PRACTICE, M858.	Wirebound box	Metal box (2)	200	100	40.4	1.4	0.90	A	*9340557
CARTRIDGE, CAL .50, TRACER, PLASTIC PRACTICE, M860.	Wirebound box	Metal box (2)	200	100	40.4	1.4	0.90	A	*9340558
CARTRIDGE, CAL .50, SABOTED LIGHT ARMOR PENETRATOR (SLAP), M903.	Wirebound box	Metal box (2)	200	100	77.1	6.9	0.90	D	*12902945
CARTRIDGE, CAL .50, SABOTED LIGHT ARMOR PENETRATOR TRACER (SLAP-T), M962.	Wirebound box	Metal box (2)	200	100	77.1	6.9	0.90	D	*12902945
CARTRIDGE, CAL .50, API MK 211.	Wirebound box	Metal box (2)	200	100	77.1	7.0	0.90	D	12576457
5.56MM CARTRIDGES CARTRIDGE, 5.56MM, BALL, M193.	Wirebound box	Bandoleers Metal box (2)	1,120	560	50.84	4.0	0.90	A	* 10534605 10542258 10542651
CARTRIDGE, 5.56MM, GRENADE, M195.	Wirebound box	Carton Metal box (2)	2,280	20/ctn 52 ctn/MB	57.12	8.0	0.90	A	10542290 *10542291
CARTRIDGE, 5.56MM, TRACER, M196.	Wirebound box	Bandoleers Metal box (2)	1,120	560	50.84	4.56	0.90	A	*10534605 10542258 10542651
CARTRIDGE, 5.56MM, HIGH PRESSURE TEST, M197.	Wirebound box	Carton Metal box (2)	1,640	820	62.70	3.8	0.90	A	*10534012 10542540
CARTRIDGE, 5.56MM, BLANK, M200.	Wirebound box	Carton Metal box (2)	2,280	20/ctn 52 ctn/MB	57.12	2.28	0.90	A	10542290 *10542291
DUMMY CARTRIDGE, 5.56MM, M232.	Wirebound box	Carton Metal box (2)	1,640	820	64.5	N/A	0.90	A	*10535858

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Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lb)	Total explosive weight	Cube	Field storage cat.	Remarks and Dwg No.
5.56MM CARTRIDGES - Continued CARTRIDGE, 5.56MM: GRENADE M755.	ITEM IS PACKED WITH PROJECTILE 64MM: RIOT CONTROL M743 NSN 1310-01-015-6246 B638								D122-3-141
CARTRIDGE, 5.56MM: BALL, M855.	Wirebound box	Carton Metal box (2)	1,120	560	50.84	4.0	0.90	A	9342862
CARTRIDGE, 5.56MM: TRACER, M856.	Wirebound box	Carton Metal box (2)	1,120	560	50.84	4.56	0.90	D	9342863
CARTRIDGE, 5.56MM: SHORT RANGE TRAINING, M862.	Fiberboard carton	Cartons Cardboard box (2)	2,400	30/Carton 40/Cartons/1.C 2 intermediate containers/1.C	N/A	N/A	N/A	A	Commercial Pack MIL-C-70725
CARTRIDGE, 5.56MM: ARMOR PIERCING, M995.	Brass-bound box	Carton plastic laminate bag	2,160	30/ctn 12 ctn/inner pack 360	59.3	7.40	0.89	A	12956131
7.62MM CARTRIDGES CARTRIDGE, 7.62MM, BALL, M59.	Wirebound box	Cartons Metal box (4)	960	20/ctn 12 ctn/MB 240	7.65	6.30	0.93	A	*7553708
CARTRIDGE, 7.62MM, HIGH PRESSURE TEST, M60.	Wirebound box	Cartons Metal box (4)	960	20 ctn/MB 12 ctn/MB 240	78.8	5.62	0.93	A	*8595430
CARTRIDGE, 7.62MM, BALL, M80.	Wirebound box	Cartons Metal box (4)	960	20/ctn 12 ctn/MB 240	76.5	6.30	0.93	A	*10523087
CARTRIDGE, 7.62MM, BALL, MATCH, M118.	Wirebound box	Cartons Metal box (2)	920	20/ctn 23 ctn/MB 460	73.42	5.71	0.90	A	*8596112 7553296
CARTRIDGE, 7.62MM, SPECIAL BALL: LONG RANGE, M118	Wirebound box	Cartons Metal Box (2)	920	20/ctn 23 ctn/MB 460	73.5	5.75	0.90	A	8597555
CARTRIDGE, 7.62MM, BALL, MATCH, M852.	Wirebound box	Cartons Metal box (2)	920	20/ctn 23 ctn/MB 460	73.42	5.72	0.90	A	7553296
CARTRIDGE, 7.62MM, BALL, DUPLEX, M198.	Wirebound box	Cartons Metal box (2)	800	20/ctn 10 ctn/MB 200	77.8	4.55	0.93	A	*8597306
CARTRIDGE, 7.62MM, ARMOR PIERCING, M61.	Wirebound box	Cartons Metal box (4)	960	20/ctn 12 ctn/MB 240	76.5	5.62	0.93	A	*7553708

\* For additional packing, refer to SC 1305/30-IL.

Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lb)	Total explosive weight	cube	Field storage cat.	Remarks and Dwg. No.
7.62MM CARTRIDGES-Continued									
CARTRIDGE, 7.62MM, FRANGIBLE, M160.	Wirebound box	Carton metal (4)	800	100 rd belt 2 belt/MB 200	69.48	12.0	0.93	A	*10522480
DUMMY CARTRIDGE, 7.62MM, M63.	Wirebound box	Carton metal (4)	920	20/ctn 23 ctn/-MB 460	55.66	N/A	0.90	A	*7553747
DUMMY CARTRIDGE, 7.62MM, MI72	Wirebound box	Carton metal box	800	600/belt 1 belt/ctn	81.00	N/A	0.90	A	*10521861
9MM CARTRIDGES CARTRIDGE, 9MM, BALL.	Wood box	Carton Metal box	2,000	58 ctn 40 ctn	-	MBR**	-	A	Commercial pack
CARTRIDGE, 9MM, BALL, NATO, M882..	Wirebound box	Cartons metal box (2)	2,000	50/ctn 20 ctn/box	80	1.7	0.90	A	*9345211
CARTRIDGE, 9MM, TEST, HIGH PRESSURE, M905.	Wirebound box	Cartons metal box (2)	2,000	50/ctn 20 ctn/box	80	2.0	0.90	A	*9378265
14.5MM CARTRIDGES CARTRIDGE, 14.5MM TRAINER-SPOTTER, M181A1.	Wood box Wood box	Metal box Metal box (2)	500 500	10/ctn 10/ctn 50 ctn/MB	-	2.5	-	A	9098295
CARTRIDGE, 14.5MM, TRAINER-SPOTTER, M182A1.	Wood box	Metal box (2)	500	10/ctn 50 ctn/MB	-	-	-	A	11738790 11738800
CARTRIDGE, 14.5MM: TRAINER-SPOTTER, M183A1.	Wood box	Metal box (2)	500	10/ctn 50 ctn/MB	-	-	-	A	11738790 11738800
20MM CARTRIDGES CARTRIDGE, 20MM, M52E1.	Metal box M548	N/A	200	200	113.0	MBR	1.30	D	*7258942 7258943
CARTRIDGE, 20MM: API, M53.	Metal box M548	N/A	100	100	95.0	1.14	1.30	D	*7258969 7258970
CARTRIDGE, 20MM, AP-T M95.	Metal box	N/A	120	120	106	1.96	1.65	D	*7258969 7258970
DUMMY CARTRIDGE, 20MM: M51A2.	Metal box M548	N/A	100	100	93.0	N/A	1.30	A	*7589943
CARTRIDGE, 20MM: HPT, M54A1.	Metal box M548	N/A	200	200	142.0	MBR**	1.30	D	7258969 7258970
CARTRIDGE, 20MM: TP, M55A2.	Metal box M548	N/A	100	100	95.0	MBR**	1.30	A	*7258943

\*For additional Packing, refer to SC 1305/30-IL.

\*\*Meet Ballistic requirements.

**TM 9-1305-201-20&P**

Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lb)	Total explosive weight	Cube	Field storage cat.	Remarks and Dwg. No.
CARTRIDGE, 20MM: TP - continued CARTRIDGE, 20MM: TP, M204.	Metal box MC548	N/A	200	200	120.0	MBR*	1.30	A	*7558928
CARTRIDGE, 20MM: TP-T M206A1.	Wirebound box	Metal box M528	62	31/MB 2 MB/ wirebound	58.0	MBR**	0.38	D	*10542309
CARTRIDGE, 20MM: Incendiary M96.	Wood box	Metal box	120	10/ctn 20 ctn/ metal box	96.0	2.90	1.43	D	*7258943 7258940
CARTRIDGE, 20MM: TP, M99A1.	Wood box	Metal containers	150	25/cntr 6 cntr	106.0	3.5	1.39	A	*728943 7258940
CARTRIDGE, 20MM: TP-T, M220.	Metal box M548	N/A	200	200	141.0	MBR**	1.30	D	7558943
CARTRIDGE, 20MM, HEI, M56A3/M56A4.	Metal box M548	N/A	100	100	93.0	3.07	1.30	D	*7258969 7258970 725943
CARTRIDGE, 20MM HEI, M97A2.	Metal box	Metal can	165	55/can 3 cans	131.0	2.82	1.55	D	*7553334
CARTRIDGE, 20MM, HEI, M210.	Metal box M548	N/A	150	150	88.0	MBR**	1.30	D	7258189 7258190
CARTRIDGE, 20MM, HEI, M242/M242A1.	Metal box M548	N/A	100	100	45.0	8.5	1.30	D	*7559237 725943
CARTRIDGE, 20MM, HEI-T-SD, M246/M246A1.	Metal box M548	N/A	100	100	93.0	MBR**	1.30	D	*7558943 725943
CARTRIDGE, 20MM: API-T, M601.	Metal box M528	N/A	25	25	-	MBR**	.35	D	*10542309 10542308
CARTRIDGE, 20MM, HEI-T, M599.	Metal box M528	N/A	25	25	-	MBR**	.35	D	10542309 10542308
CARTRIDGE, 20MM, MPT-SD, M940	Metal box M528	N/A	100	100	90	11.00	1.30	D	7258969 7258928
22 MILLIMETER 22MM SUB-CALIBER PRACTICE CARTRIDGE, M744.	Wood box	-	100	1 per Poly- styrene com- partment	109.0	21.00	3.9	C	9322189 9332201
22MM SUB-CALIBER PRACTICE CARTRIDGE, M745.	Wood box	-	100	1 per poly- styrene com- partment	109.0	21.00	3.9	C	9322189 9332201
22MM SUB-CALIBERS PRACTICE CARTRIDGE, M746.	Wood box	-	100	1 per poly- styrene com- partment	109.0	21.00	3.9	C	9322189 9332201

\*For additional Packing, refer to SC 1305/30-IL.

\*\*Meet Ballistic requirements.

Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lb)	Total explosive weight	cube	Field storage cat.	Remarks and Dwg. No.
22MM CARTRIDGES--Continued 22MM SUB-CALIBER PRACTICE CARTRIDGE, M747	Wood box	--	100	1 per polystyrene compartment	109.0	50.00	3.9	C	9322198 9322201
CARTRIDGES, 25MM APDS-T, M791	Metal storage container PA125	1 separator assembly 2 end plates	30	30	53	6.3	.61	D	12929427
CARTRIDGES, 25MM HEI-T, M792	Metal storage container PA125	1 separator assembly 2 end plates	30	30	55	8.1	.61	D	12929427
CARTRIDGES, 25MM TP-T, M793	Metal storage container PA125	1 separator assembly 2 end plates	30	30	55	6.3	.61	D	12929427
CARTRIDGES, 25MM TPDS-T, M910	Metal storage container PA125	1 separator assembly 2 end plates	30	30	53	6.3	.61	D	12929427
CARTRIDGES, 25MM APFSDS-T, M919	Metal storage container PA126	1 separator assembly 2 end plates	30	30	55	6.3	.61	D	12929427
CARTRIDGES, 25MM APFSDS-T, M919	Plastic storage container M621	2 plastic separators	30	30	48.0	6.3	.61	D	9391300
CARTRIDGES, 25MM HEI-T, M792	Plastic storage container M621	2 plastic separator	30	30	46.0	8.1	.61	D	†: 12013671

† Contractor drawings

TM 9-1305-201-20&P

Item	Outer pack	Inner pack	No. items in package	No. items inner pack	Total weight (lb)	Total explosive weight	cube	Field storage cat.	Remarks and Dwg. No.
CARTRIDGES, 25MM, TP-T, M793	Plastic storage container M621	2 plastic separators	30	30	48.0	6.3	.61	D	†12013671
CARTRIDGES, 25MM, TPDS-T, M910	Plastic storage container M621	2 plastic separators	30	30	43.0	6.3	.61	D	12556500
CARTRIDGES, 25MM, TPDS-T, M910	Wood box	Container Barrier bag	50 linked	50	71	11.22	2.33	D	12556500 12913882
25.4MM CARTRIDGE CARTRIDGE, 25.4MM, DECOY, M839	Wood box	2 Containers	100	50	67.0	0.08	1.5	B	9329776
30MM CARTRIDGES CARTRIDGE, 30MM, HE-DP, M789	Metal container M592	Container	201 (121 bulk) (80 linked)	201	126	21.0	1.5	A	†9229066
CARTRIDGE, 30MM, TP, M788	Metal container M592	Container	201 (121 bulk) (80 linked)	201	126	13.31	1.5	A	9229066
CARTRIDGE, 30MM, HEI	Metal container M592	Container	201 (121 bulk) (80 linked)	201	126	22.0	1.5	A	9229066
CARTRIDGE, 30MM, TP, M788, BULK STRIP	Metal container M592	Container	201 (121 bulk) (80 linked)	110	117	12.3	1.5	A	12902718
CARTRIDGE, 30MM, HE-DP, M789, BULK STRIP	Metal container M592	Container	201 (121 bulk) (80 linked)	110	117	19.0	1.5	A	12902718

† Contractor Drawings

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*The Adjutant General*

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Change illustration. Reason: Tube end shown assembled on wrong side of lever cam.

Figure 4-1, item 3 has the wrong NSN. Supply rejects orders for this item. The NSN shown here is not listed in the AMDF or the MCRL. Please give us the correct NSN and P/N.

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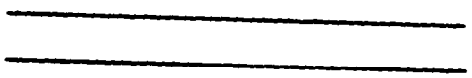
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