

HAND RECEIPT

**COVERING CONTENTS OF COMPONENTS OF END ITEM (COEI),
BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL)**

FOR

**HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A2
(NSN 2350-01-031-0586)**

**HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A3
(NSN 2350-01-031-8651)**

HEADQUARTERS, DEPARTMENT OF THE ARMY

This manual supersedes TM9-2350-217-10-HR dated 16 September 1985 and TM 9-2350-303-10-HR dated 6 August 1985.

27 JUNE 1986

CHANGE

No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 24 August 1989

HAND RECEIPT

COVERING CONTENTS OF COMPONENTS OF END ITEM (COEI),
BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL)

FOR

HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A2
(NSN 2350-01-031-0586)

HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A3
(NSN 2350-01-031-8851)

HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A4
(NSN 2350-01-277-5770)

TM 9-2350-311-10-HR, 27 June 1986, is changed as follows:

1. The purpose of this change is to incorporate modifications applied by MWO 9-2350-311-50-9 to update M109A2/M109A3/M109A4 howitzers.
2. On front cover, beneath "Headquarters, Department of the Army", add "Distribution Statement A: Approved for public release; distribution is unlimited." Also add below (NSN 2350-01-031-8851) the following "HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A4 (NSN 2350-01-277-5770)".
3. New or changed material is indicated by a vertical bar in the outside margin of text changes.
4. Remove old pages and insert new pages in manual as indicated below. File this change sheet in back of manual for reference.

Remove Pages

1 and 2
Additional Authorization List (AAL)
1 thru 12 of 12

Insert Pages

1 and 2
Additional Authorization List (AAL)
1 thru 14 of 14

By Order of the Secretary of the Army:

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

Official:

WILLIAM J. MEEHAN II
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-37, Operator Maintenance requirements for Howitzer, Medium, Self-Propelled, 155-MM, M109A2/A3.

HAND RECEIPT

COVERING CONTENTS OF COMPONENTS OF END ITEM (COEI),
BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL)
FOR

HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A2
(NSN 2350-01-031-0586)

HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A3
(NSN 2350-01-031-8851)

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(NSN 2350-01-277-5770)

REPORTING OF ERRORS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be furnished to you.

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Section I.

INTRODUCTION

1. SCOPE. This publication provides an overprinted DA Form 2062 (Hand Receipt) which lists the contents of Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL) items related to Howitzer, Medium, Self-Propelled, 155MM, M109A2 and M109A3.

2. GENERAL.

a. Section II is the overprinted DA Form 2062 which lists the content of COEI, BII, and AAL extracted from TM 9-2350-311-10. The listings consist of exactly the same items and are in the same sequence as those listings in TM 9-2350-311-10.

Distribution Statement A: Approved for public release; distribution is unlimited.

b. The overprinted DA Form 2062 will eliminate manual preparation of the form and will assist organizations in inventorying and accounting for property as required by AR 710-2.

assemblages; all tools in FSC's 5110, 5120, 5130, 5133, 5136, 5140, 5180, 5210, 5220, and 5280; and any other nonconsumable with a price in excess of \$50.00 not already "N".

c. Local reproduction of the overprinted DA Form 2062 is authorized. However, organizations shall comply with local policies in the reproduction of DA Form 2062 by office copying equipment, field printing plant, or duplicating plant facilities.

(X) Expendable

Items regardless of type classification or price and which are consumed in use. Includes all class 9 repair parts. Items not consumed in use which cost \$50.00 or less and not already "N" or "D".

d. Additional copies may be requisitioned from the US Army Adjutant General Publications Center, 2800 Eastern Boulevard, Baltimore. MD 21220-2896 in accordance with Chapter 3, AR 310-2.

b. Authorization documents are as follows:

3. EXPLANATION OF BLOCKS AND COLUMNS (DA FORM 2062). Refer to DA PAM 710-2-1, Chapter 5. Additional information required to complete DA Form 2062 is listed below:

(1) Components of End Item (COEI) are authorized by the applicable Repair Parts and Special Tools list (RPSTL).

a. Hand receipts shall identify the accounting requirements status of all line item entries via Column C.

(2) Basic Issue Items (BII) are authorized by the applicable operator's manual.

One of the following Accounting Requirements Codes (ARC) will apply:

(3) Additional Authorization List (AAL) items are authorized by appropriate MTOE, TDA, CTA, or JTA authorization documents.

(N) Nonexpendable Items not consumed in use, retaining their identity during use, and requiring that accountability be maintained throughout the life of the item.

4. USABLE ON CODE. "USABLE ON" codes are included to help in identifying which component items are used on different models. With the exception of COEI item PANORAMIC TELESCOPE M117. All other items in the HR are used on both vehicles. The "USABLE ON" column is therefore left blank.

(D) Durable Nonconsumable components of sets, kits, outfits, and

| HAND RECEIPT For use of this form, see DA PAM 710-2-1. The proponent agency is ODCSLOG. | | FROM | TO | | | | HAND RECEIPT NUMBER | | | | |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------|----------|------------------|----------------|---------------------|---|---|---|---|
| FOR ANNEX CR ONLY | END ITEM STOCK NUMBER (s) See columns a below | END ITEM DESCRIPTION Howitzer, Med, Sp, 155MM, M109A2 and M109A3 | PUBLICATION NUMBER TM 9-2350-311-10-HR | | PUBLICATION DATE | QUANTITY 1 | | | | | |
| STOCK NUMBER a. | ITEM DESCRIPTION b. | * c. | SEC d. | UI e. | QTY AUTH f. | QUANTITY g. | | | | | |
| | | | | | | A | B | C | D | E | F |
| 2350-01-031-0586 | HOWITZER, MEDIUM, SELF-PROPELLED 155MM, M109A2 | N | | | | | | | | | |
| 2350-01-031-8851 | HOWITZER, MEDIUM, SELF-PROPELLED 155MM, M109A3 | N | | | | | | | | | |
| | Components of End Item (COEI) | | | | | | | | | | |
| 1005-00-704-6650 | MOUNT, MACHINE GUN, CAL. 50 (19204) 7046650 | N | | ea. | 1 | | | | | | |
| 1240-00-344-4643 | PERISCOPE, M27 (chief of section) (19200) 7633132 | N | | ea. | 1 | | | | | | |
| 1240-00-509-2743 | PERISCOPE, M45 (driver's) (19200) 8213430 | N | | ea. | 3 | | | | | | |
| 1240-01-092-2693 | TELESCOPE, ELBOW M118A2 | N | | ea. | 1 | | | | | | |
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* WHEN USED AS A:
 HAND RECEIPT, enter Hand Receipt Annex Number
 HAND RECEIPT FOR QUARTERS FURNITURE, enter Condition Codes
 HAND RECEIPT ANNEX/COMPONENTS RECEIPT, enter Accounting Requirements Code (ARC).

| HAND RECEIPT For use of this form, see DA P.A.M 710-2-1. The proponent agency is ODCSLOG. | | FROM | TO | | | | HAND RECEIPT NUMBER | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------|-----|------------------|----------------|---------------------|---|---|---|---|
| FOR ANNEX CR ONLY | END ITEM STOCK NUMBER (s) See p. 1 of COEI | END ITEM DESCRIPTION 155MM, M109A2 and M109A3 | PUBLICATION NUMBER TM 9-2350-311-10-HR | | PUBLICATION DATE | QUANTITY 1 | | | | | |
| STOCK NUMBER a. | ITEM DESCRIPTION b. | * | SEC | UI | QTY AUTH | QUANTITY g. | | | | | |
| | | c. | d. | e. | f. | A | B | C | D | E | F |
| Additional Authorization List (AAL) | | | | | | | | | | | |
| 4930-00-288-1511 | ADAPTER, GREASE GUN 12 lg (81349) MIL-L-4387 | X | | ea. | 1 | | | | | | |
| 5120-00-227-8088 | ADAPTER, SOCKET WRENCH, 1/2 in - 3/4 in (in tool bag) (81348) GGG-W-641 | N | | ea. | 1 | | | | | | |
| 5110-00-293-2336 | AXE, SINGLE BIT 4 lb (19207) 6150925 | D | | ea. | 1 | | | | | | |
| 5120-00-526-6044 | BAR, PINCH 1/2 inch x 11-7/8 lg (19204) 5266044 | X | | ea. | 1 | | | | | | |
| 2590-00-906-4741 | BOX ASSEMBLY, SPARE bulb (19207) 10870949 | X | | ea. | 1 | | | | | | |
| 1025-00-730-7400 | BRUSH, CLEANING, ARTILLERY (19206) 8765994 | D | | ea. | 1 | | | | | | |
| 5140-00-261-4994 | CARRIER, TOOL M1938 (19207) 11655787 | D | | ea. | 1 | | | | | | |
| <p>* WHEN USED AS A:</p> <p>HAND RECEIPT, enter Hand Receipt Annex Number</p> <p>HAND RECEIPT FOR QUARTERS FURNITURE, enter Condition Codes</p> <p>HAND RECEIPT ANNEX/COMPONENTS RECEIPT, enter Accounting Requirements Code (ARC).</p> | | | | | | | | | | | |

| STOCK NUMBER a. | ITEM DESCRIPTION b. | * c. | SEC d. | U e. | QTY AUTH f. | 5. QUANTITY | | | | | |
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| | | | | | | A | B | C | D | E | F |
| | AAL (Continued) | | | | | | | | | | |
| 5110-00-236-3272 | CHISEL, COLD HAND 3/4 x 8 lg (8134) GGG-C-313 | D | | ea. | 1 | | | | | | |
| 1025-00-557-6513 | COVER ASSEMBLY (19206) 5576513 | X | | ea. | 1 | | | | | | |
| 5120-00-227-8074 | EXTENSION, SOCKET WRENCH 1/2 dr x 10 lg (19207) 11655788-1 | D | | ea. | 1 | | | | | | |
| 5120-00-227-8079 | EXTENSION, SOCKET WRENCH 3/4 dr x 16 lg (55719) L122 | D | | ea. | 1 | | | | | | |
| 5120-00-273-9208 | EXTENSION, SOCKET WRENCH 3/4 dr x 3 lg (81348) MS16243-14 | D | | ea. | 1 | | | | | | |
| 5110-00-241-9160 | FILE, HAND three square, smooth, 6 lg (81348) GGG-F-325 | D | | ea. | 1 | | | | | | |
| 4933-00-340-1129 | FIXTURE, GUN TUBE LEVELING (19207) 11578744 | N | | per btry | 1 | | | | | | |
| 5120-00-900-6097 | HAMMER double face with handle, 10 lb (81348) GGG-H-86 | D | | ea. | 1 | | | | | | |
| 5120-00-288-6574 | HANDLE, MATTOCK-PICK (19207) 11677021 | X | | ea. | 2 | | | | | | |

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| STOCK NUMBER a. | ITEM DESCRIPTION b. | * | SEC | UI | QTY AUTH f. | QUANTITY | | | | | | |
| | | | | | | A | B | C | D | E | F | |
| | AAL (Continued) | | | | | | | | | | | |
| 5120-00-099-8544 | HANDLE, SOCKET WRENCH T-handle 3/4 dr x 12 lg (50024) 2479141 | D | | | ea. 1 | | | | | | | |
| 5120-00-249-1071 | HANDLE, SOCKET WRENCH 1/2 dr nutspeeder (81348) GGG-W-641 | D | | | ea. 1 | | | | | | | |
| 5120-00-230-6385 | HANDLE, SOCKET WRENCH ratchet 1/2 dr x 9-1/2 lg (80064) 14U1502 | D | | | ea. 1 | | | | | | | |
| 5120-00-241-3142 | HANDLE, SOCKET WRENCH 1/2 x 7 lg (55719) 510 | D | | | ea. 1 | | | | | | | |
| 5100-00-222-0457 | HATCHET, CLAW 4-cut (81348) GGG-H-131 | D | | | ea. 1 | | | | | | | |
| 5120-00-224-2510 | KEY, SOCKET HEAD SCREW 5/8 (81348) GGG-K-275 | D | | | ea. 1 | | | | | | | |
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| | AAL (Continued) | | | | | | | | | | |
| 5120-00-224-2510 | KEY, SOCKET HEAD SCREW 5/8 (81348) GGG-K-275 | D | | ea. | 1 | | | | | | |
| 5120-00-224-4659 | KEY, SOCKET HEAD SCREW 1/4 (80065) 1940720 | D | | ea. | 1 | | | | | | |
| 5120-00-240-5292 | KEY, SOCKET HEAD SCREW 1/8 (1348) GGG-K-275 | D | | ea. | 1 | | | | | | |
| 5120-00-242-7410 | KEY, SOCKET HEAD SCREW 3/32 (92674) BA27077-4 | D | | ea. | 1 | | | | | | |
| 6240-00-019-0877 | LAMP, INCANDESCENT elec 3 cp 24-28V, 10 No. 1251 (blackout marker) (96906) MS15570-1251 | X | | ea. | 1 | | | | | | |
| 6240-00-019-3093 | LAMP, INCANDESCENT elec 6 cp 24-28V, No. 623 (dome lights) (96906) MS15570-623 | X | | ea. | 1 | | | | | | |
| 6240-00-155-7836 | LAMP, INCANDESCENT elec 24-28V No. 327 (tlscp M117A2 and mount M145) (96906) MS25237-327 | X | | ea. | 18 | | | | | | |
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| HAND RECEIPT/ANNEX NUMBER <i>For use of this form, see DA PAM 710-2-1. The proponent agency is ODCSLOG.</i> | | FROM: | TO: | HAND RECEIPT NUMBER | | | | | | | | | | | |
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| FOR ANNEX/CR ONLY | END ITEM STOCK NUMBER See p.1 of COEI | END ITEM DESCRIPTION Howitzer, Med, Sp, 155MM, M109A2 and M109A3 | PUBLICATION NUMBER TM 9-2350-311-10-HR | PUBLICATION DATE | QUANTITY 1 | | | | | | | | | | |
| STOCK NUMBER <i>a.</i> | ITEM DESCRIPTION <i>b.</i> | * | SEC | UI | QTY AUTH | QUANTITY | | | | | | | | | |
| | | | | | | <i>c.</i> | <i>d.</i> | <i>e.</i> | <i>f.</i> | A | B | C | D | E | F |
| | AAL (Continued) | | | | | | | | | | | | | | |
| 6240-00-155-8714 | LAMP, INCANDESCENT elec 17 amp 24-28V No. 313 (instrument panel warning light) (96906) MS25231-313 | X | | ea. | 4 | | | | | | | | | | |
| 6240-00-635-9800 | LAMP, INCANDESCENT No. 325 (96906) MS51608-3 | X | | ea. | 4 | | | | | | | | | | |
| 6240-00-155-7864 | LAMP, INCANDESCENT elec 3V, No. 323 (M27 Fuze setter) (81348) W-L 00111/10 | X | | ea. | 2 | | | | | | | | | | |
| 6240-00-051-4843 | LAMP, INCANDESCENT (96906) MS25236-8623 | X | | ea. | 2 | | | | | | | | | | |
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| STOCK NUMBER e. | ITEM DESCRIPTION b. | * | SEC | UI | QTY AUTH f. | g. QUANTITY | | | | | |
|--------------------|------------------------------------------------------------------------------------------|---|-----|-----|-------------------|-------------|---|---|---|---|---|
| | | | | | | A | B | C | D | E | F |
| | AAL (continued) | | | | | | | | | | |
| 5120-00-293-0791 | PUNCH, DRIVE PIN straight type 3/16 dia (81348) GGG-P-831 | D | | ea. | 1 | | | | | | |
| 4933-00-796-4537 | ROLL ASSEMBLY, TOOLS AND EQUIPMENT (19207) 7964537 | X | | ea. | 1 | | | | | | |
| 5120-00-234-5223 | RULE, STEEL machinist 6 inches (81348) GGG-R-791 | D | | ea. | 1 | | | | | | |
| 5120-00-227-7338 | SCREWDRIVER, FLAT TIP machinist extra heavy duty, 5 inch blade (77948) D339 | D | | ea. | 1 | | | | | | |
| 5120-00-236-2127 | SCREWDRIVER, FLAT TIP 3 inch lg blade, 3/16 tip (89905) 133690-10 | D | | ea. | 1 | | | | | | |
| 5120-00-278-1283 | SCREWDRIVER, FLAT TIP common normal duty single grip, 6 inch blade (19207) 4151104 | D | | ea. | 1 | | | | | | |
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| HAND RECEIPT For use of this form, see DA PAM 710-2-1. The proponent agency is ODCSLOG. | | | FROM | TO | HAND RECEIPT NUMBER | | | | | | |
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| FOR ANNEX CR ONLY | END ITEM STOCK NUMBER (s) | END ITEM DESCRIPTION | Howitzer, Med, Sp. | PUBLICATION NUMBER | PUBLICATION DATE | QUANTITY | | | | | |
| | See p.1 of COEI | 155MM, M109A2 and M109A3 | | TM 9-2350-311-10-HR | | 1 | | | | | |
| STOCK NUMBER a. | ITEM DESCRIPTION b. | * | SEC | U | QTY AUTH f. | g. QUANTITY | | | | | |
| | | | | | | A | B | C | D | E | F |
| | AAL (Continued) | | | | | | | | | | |
| 5120-00-188-8450 | SHOVEL, HAND genl purpose long handled strap back rd point (81348) GGG-S-326 | D | | ea. | 2 | | | | | | |
| 5120-00-293-3336 | SHOVEL, HAND genl purpose rd point D-handle (19207) 11655784 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7911 | SOCKET, SOCKET WRENCH 1/2 dr, 12 pt x 3/8 opng (65814) ST812 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7913 | SOCKET, SOCKET WRENCH 1/2 dr, 12 pt x 1-1/16 opng (19207) 11677025-8 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7914 | SOCKET, SOCKET WRENCH 1/2 dr, 12 pt x 1-1/8 opng (19207) 11677025-10 | D | | ea. | 1 | | | | | | |

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| STOCK NUMBER a. | ITEM DESCRIPTION b. | * | SEC d. | UI e. | QTY AUTH f. | g. QUANTITY | | | | | |
|--------------------|------------------------------------------------------------------------|---|-----------|----------|-------------------|-------------|---|---|---|---|---|
| | | | | | | A | B | C | D | E | F |
| | AAL (Continued) | | | | | | | | | | |
| 5120-00-189-7924 | SOCKET, SOCKET WRENCH 1/2 dr, 12 pt x 7/16 opng (95683) 41W3005 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7930 | SOCKET, SOCKET WRENCH 3/4 dr, 12 pt x 1-3/8 opng (47805) 5544 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7931 | SOCKET, SOCKET WRENCH 3/4 dr, 12 pt x 1-7/16 opng (47805) 5546 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7934 | SOCKET, SOCKET WRENCH 1/2 dr, 12 pt x 7/8 opng (19207) 11677025-5 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7935 | SOCKET, SOCKET WRENCH 1/2 dr, 12 pt x 15/16 opng (19207) 11677025-6 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7946 | SOCKET, SOCKET WRENCH 1/2 dr, 12 pt x 5/8 opng (19207) 11677025-2 | D | | ea. | 1 | | | | | | |
| 5120-00-189-7985 | SOCKET, SOCKET WRENCH 1/2 dr, 12 pt x 3/4 opng (19207) 11677025-4 | D | | ea. | 1 | | | | | | |
| 5120-00-232-5681 | SOCKET, SOCKET WRENCH 3/4 dr, 12 pt x 1-5/16 opng (81348) GGG-W-641 | D | | ea. | 1 | | | | | | |
| 5120-00-293-0094 | SOCKET, SOCKET WRENCH 3/4 dr, 12 pt x 1-12 opng (47805) 5548 | D | | ea. | 1 | | | | | | |

| HAND RECEIPT For use of this form, see DA PAM 710-2-1. The proponent agency is ODCSLOG. | | FROM | TO | HAND RECEIPT NUMBER | | | | | | | |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------|---------------------|----------------|----------------|---|---|---|---|---|
| FOR ANNEX CR ONLY | END ITEM STOCK NUMBER (S) See p.1 of COE1 | END ITEM DESCRIPTION Howitzer, Med, Sp, 155MM, M109A2 and M109A3 | PUBLICATION NUMBER TM- 9-2350-311-10-HR | PUBLICATION DATE | | QUANTITY 1 | | | | | |
| STOCK NUMBER a. | ITEM DESCRIPTION b. | * c. | SEC d. | UI e. | QTY AUTH f. | QUANTITY g. | | | | | |
| | | | | | | A | B | C | D | E | F |
| | AAL (Continued) | | | | | | | | | | |
| 5130-00-221-8005 | SOCKET, SOCKET WRENCH 1/2 dr, 6 pt x 7/16 opng (55719) P140 | D | | ea. | | | | | | | |
| 5130-00-221-8007 | SOCKET, SOCKET WRENCH 1/2 dr, 6 pt x 9/16 opng (55719) P180 | D | | ea. | | | | | | | |
| 5120-00-235-5871 | SOCKET, SOCKET WRENCH 3/4 dr, 1-1/4 (47805) 5540 | D | | ea. | | | | | | | |
| 7310-00-285-6155 | STOVE, GASOLINE BURNER w/case (81349) MIL-S-10736 | N | | ea. | | | | | | | |
| 6675-00-240-1881 | TRIPOD, SURVEYING (use with aiming post for arctic use only) (81349) MIL-T-11674 | N | | ea. | | | | | | | |
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 HAND RECEIPT ANNEX/COMPONENTS RECEIPT, enter Accounting Requirements Code (ARC).

| STOCK NUMBER <i>a.</i> | ITEM DESCRIPTION <i>b.</i> | * | SEC | UI | QTY AUTH | QUANTITY | | | | | | | | | |
|---------------------------|-----------------------------------------------------------------------------------|---|-----|-----|-------------|-----------|-----------|-----------|-----------|---|---|---|---|---|---|
| | | | | | | <i>c.</i> | <i>d.</i> | <i>e.</i> | <i>f.</i> | A | B | C | D | E | F |
| | AAL (Continued) | | | | | | | | | | | | | | |
| 5120-00-269-7971 | UNIVERSAL JOINT, SOCKET WRENCH 1/2 dr (18702) S140 | D | | ea. | 1 | | | | | | | | | | |
| 5120-00-187-7123 | WRENCH, OPEN END engr 15 deg angle double head 7/16 x 1/2 (55716) S1416 | D | | ea. | 1 | | | | | | | | | | |
| 5120-00-187-7130 | WRENCH, OPEN END engr 15 deg angle double head 13/16 x 7/8 (07971) E2628 | D | | ea. | 1 | | | | | | | | | | |
| 5120-00-224-3102 | WRENCH, OPEN END engr 15 deg angle double head 5/8 x 3/4 (65814) 729 | D | | ea. | 1 | | | | | | | | | | |
| 5120-00-277-2307 | WRENCH, OPEN END engr 15 deg angle double head 5/16 x 3/8 (55719) S1012 | D | | ea. | 1 | | | | | | | | | | |
| 5120-00-277-7025 | WRENCH, OPEN END engr 15 deg angle double head 15/16 x 1 (19207) 11544789-5 | D | | ea. | 1 | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

By Order of the Secretary of the Army:

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

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

DISTRIBUTION:

To be distributed in accordance with DA Form 12-37, Operator Maintenance requirements for Howitzer, Medium, Self-Propelled. 155-MM. M109A2/A3.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



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

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.

PARA-GRAPH

FIGURE NO.

TABLE NO.

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

TEAR ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

THE METRIC SYSTEM AND EQUIVALENTS

LENGTH MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 lb.
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

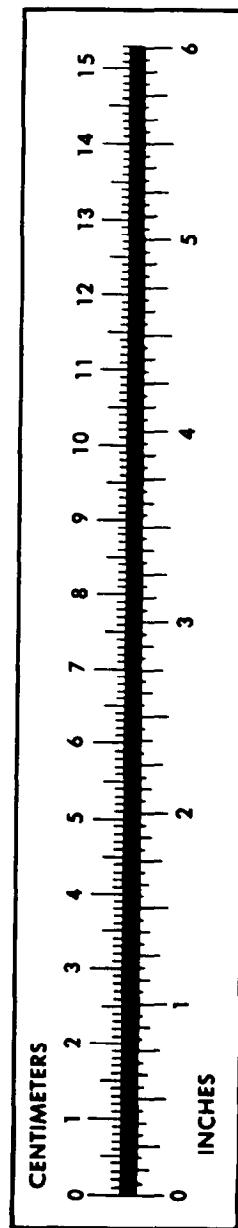
TEMPERATURE

$5/9(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $9/5^{\circ}\text{C} + 32 = ^{\circ}\text{F}$

APPROXIMATE CONVERSION FACTORS

| TO CHANGE | TO | MULTIPLY BY |
|------------------------|----------------------|-------------|
| Inches | Centimeters | 2.540 |
| Feet | Meters | 0.305 |
| Yards | Meters | 0.914 |
| Miles | Kilometers | 1.609 |
| Square Inches | Square Centimeters | 6.451 |
| Square Feet | Square Meters | 0.093 |
| Square Yards | Square Meters | 0.836 |
| Square Miles | Square Kilometers | 2.590 |
| Acres | Square Hectometers | 0.405 |
| Cubic Feet | Cubic Meters | 0.028 |
| Cubic Yards | Cubic Meters | 0.765 |
| Fluid Ounces | Milliliters | 29.573 |
| its | Liters | 0.473 |
| arts | Liters | 0.946 |
| allons | Liters | 3.785 |
| Ounces | Grams | 28.349 |
| Pounds | Kilograms | 0.454 |
| Short Tons | Metric Tons | 0.907 |
| Pound-Feet | Newton-Meters | 1.356 |
| Pounds per Square Inch | Kilopascals | 6.895 |
| Miles per Gallon | Kilometers per Liter | 0.425 |
| Miles per Hour | Kilometers per Hour | 1.609 |

| TO CHANGE | TO | MULTIPLY BY |
|--------------------|------------------------|-------------|
| Centimeters | Inches | 0.394 |
| Meters | Feet | 3.280 |
| Meters | Yards | 1.094 |
| Kilometers | Miles | 0.621 |
| Square Centimeters | Square Inches | 0.155 |
| Square Meters | Square Feet | 10.764 |
| Square Meters | Square Yards | 1.196 |
| Square Kilometers | Square Miles | 0.386 |
| Square Hectometers | Acres | 2.471 |
| Cubic Meters | Cubic Feet | 35.315 |
| Cubic Meters | Cubic Yards | 1.308 |
| Milliliters | Fluid Ounces | 0.034 |
| Liters | Pints | 2.113 |
| Liters | Quarts | 1.057 |
| ers | Gallons | 0.264 |
| ms | Ounces | 0.035 |
| ograms | Pounds | 2.205 |
| Metric Tons | Short Tons | 1.102 |
| Newton-Meters | Pounds-Feet | 0.738 |
| Kilopascals | Pounds per Square Inch | 0.145 |
| ometers per Liter | Miles per Gallon | 2.354 |
| ometers per Hour | Miles per Hour | 0.621 |



PIN: 060189-001