

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.

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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
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HOWITZER, MEDIUM, SELF-PROPELLED: 155MM, M109A4
(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.	g. QUANTITY					
							A	B	C	D	E	F
2350-01-031-0586		HOWITZER, MEDIUM, SELF-PROPELLED	N									
		155MM, M109A2										
2350-01-031-8851		HOWITZER, MEDIUM, SELF-PROPELLED	N									
		155MM, M109A3										
		Components of End Item (COEI)										
1005-00-704-6650		MOUNT, MACHINE GUN, CAL. 50	N		ea.	1						
		(19204) 7046650										
1240-00-344-4643		PERISCOPE, M27 (chief of section)	N		ea.	1						
		(19200) 7633132										
1240-00-509-2743		PERISCOPE, M45 (driver's)	N		ea.	3						
		(19200) 8213430										
1240-01-092-2693		TELESCOPE, ELBOW M118A2	N		ea.	1						

* 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.	*	SEC	U	QTY AUTH	5. QUANTITY									
						c.	d.	e.	f.	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										

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 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 a.	ITEM DESCRIPTION b.	* c.	SEC d.	UI e.	QTY AUTH f.	QUANTITY g.						
						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							

* 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).

STOCK NUMBER a.	ITEM DESCRIPTION b.	*	SEC d.	UI e.	QTY AUTH f.	g. QUANTITY					
						A	B	C	D	E	F
	AAL (Continued)										
5120-00-224-2510	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						

HAND RECEIPT/ANNEX NUMBER 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 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 a.	ITEM DESCRIPTION b.	*	SEC	UI	QTY AUTH f.	QUANTITY g.					
						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 <i>a.</i>	ITEM DESCRIPTION <i>b.</i>	* <i>c.</i>	SEC <i>d.</i>	UI <i>e.</i>	QTY AUTH <i>f.</i>	g. QUANTITY					
						A	B	C	D	E	F
5980-01-285-6689	LED, T1-3/4 BASED	X		ea.	4						
	12360905-1										
5980-01-289-5274	LED, T1-3/4 BASED	X		ea.	4						
	12360905-2										
5980-01-285-6688	LED, T3-1/4 BASED	X		ea.	4						
	12360890-1										
6220-01-290-9346	MARKER ASSEMBLY	X		ea.	1						
	12360860-2										
6220-01-284-2709	MARKER ASSEMBLY, REAR	X		ea.	1						
	12360850-1										

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					
FOR ANNEX/CR ONLY	END ITEM STOCK NUMBER	END ITEM DESCRIPTION	Howitzer, Med, Sp, 155MM, M109A2 and M109A3	PUBLICATION NUMBER	TM 9-2350-311-10-HR		PUBLICATION DATE			QUANTITY		
STOCK NUMBER <i>a.</i>	ITEM DESCRIPTION <i>b.</i>	*	SEC <i>d.</i>	U <i>e.</i>	QTY AUTH <i>f.</i>	QUANTITY <i>g.</i>						
						A	B	C	D	E	F	
	AAL (Continued)											
5120-00-243-2395	MATTOCK head (19207) 11677022	D		ea.	1							
5120-00-194-9458	PICK, DIGGING head (81348) GGG-H-506 (58536) A-A-338	D		ea.	1							
5315-00-861-1473	PIN, LOCK (19206) 8767184	X		ea.	2							
5120-00-223-7397	PLIERS, SLIP JOINT w/cutter 8 lg (19207) 5214421	D		ea.	1							
* 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).												

STOCK NUMBER a.	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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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.							

* 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).

STOCK NUMBER <i>a.</i>	ITEM DESCRIPTION <i>b.</i>	*	SEC	UI	QTY AUTH	QUANTITY <i>g.</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						

HAND RECEIPT <i>For use of this form, see DA P.A.M 710-2-1.</i> <i>The proponent agency is ODCSLOG.</i>			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 <i>a.</i>	ITEM DESCRIPTION <i>b.</i>	*	SEC	UI	QTY AUTH	g. QUANTITY					
		<i>c.</i>	<i>d.</i>	<i>e.</i>	<i>f.</i>	A	B	C	D	E	F
	AAL (Continued)										
5120-00-293-2134	WRENCH, OPEN END engr 15 deg angle double head 9/16 x 11/16 (19207) 5323330	D		ea.	1						
5120-00-164-3777	WRENCH, SPANNER adjustable (65814) 484	D		ea.	1						
5120-00-277-9076	WRENCH, SPANNER adjustable 2 to 4-3/4 (19207) 5218469	D		ea.	1						
* 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).											

STOCK NUMBER <i>e.</i>	ITEM DESCRIPTION <i>b.</i>	* <i>c.</i>	SEC <i>d.</i>	UI <i>e.</i>	QTY AUTH <i>f.</i>	<i>g.</i> QUANTITY					
						A	B	C	D	E	F

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.

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PUBLICATION DATE

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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

WEIGHT 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

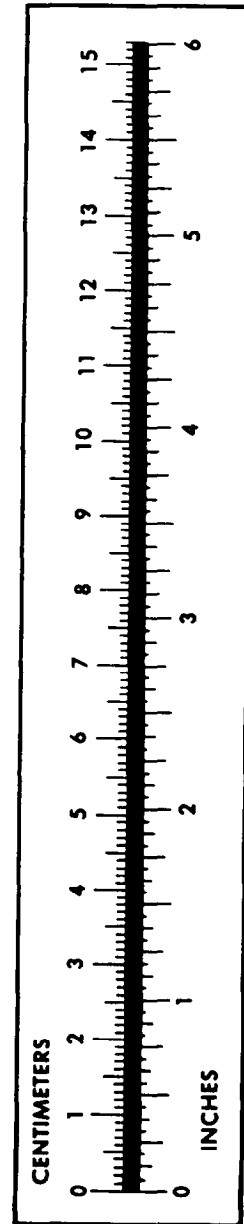
TEMPERATURE

$5/9(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 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