

TM 5-6675-243-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

ORGANIZATIONAL, DS, GS, AND
DEPOT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS LIST)

LIGHT TARGET SURVEYING

U/W RANGE POLE; SELF ILLUMINATING
W/CARRYING CASE (MILITARY DESIGN)

FSN 6675-612-1187

This copy is a reprint which includes current
pages from Changes 2,3 and 5,6



HEADQUARTERS, DEPARTMENT OF THE ARMY

3 MARCH 1966

CHANGE

NO. 6



HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 26 AUGUST 1992

**Operator, Organizational, Direct
and General Support and Depot Maintenance
Manual Including Repair Parts List**

**LIGHT, TARGET, SURVEYING; U/W RANGE POLE;
SELF-ILLUMINATING; W/CARRYING CASE
(MILITARY DESIGN NSN 6675-00-612-1187**

Approved for public release; Distribution is unlimited.

TM 5-6675-243-15, March 1966, changed as follows:

Page 35, Line 0089, change source code from PO to X20, and delete NSN 6145-233-7472.

By Order of the Secretary of the Army:

Official:

MILTON H. HAMILTON
*Administrative Assistant to the
Secretary of the Army*
02258

GORDON R. SULLIVAN
*General, United States Army
Chief of Staff*

DISTRIBUTION:

To be distributed in accordance with DA Form 12-25-E, block 1096, operator, Unit, Direct and General Support Maintenance requirements for TM 5-6675-243-15.

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CHANGE }
NO. 5 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 4 September 1978

Operator, Organizational, Direct
and General Support and Depot Maintenance
Manual Including Repair Parts List

LIGHT, TARGET, SURVEYING; U/W RANGE POLE;
SELF-ILLUMINATING; W/CARRYING CASE
(MILITARY DESIGN NSN 6675-00-612-1187)

Current as of 31 March 1978

TM 5-6675-243-15, 3 March 1966, is changed as follows:

Title is changed to read as shown above.

Page 1. Preceding the table of contents
add the following:

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U. S. Army Troop Support & Aviation Materiel Readiness Commander, ATT: DRSTS-MTP, 4300 Goodfellow Boulevard, St. Louis, MO. 63120. A reply will be furnished directly to you.

Page 1. References are superseded as follows:

APPENDIX	A. REFERENCES	A-1
	B. COMPONENTS OF END ITEMS LIST	B-1
	C. ADDITIONAL AUTHORIZATION LIST	C-1
	D. MAINTENANCE ALLOCATION CHART	D-1
	E. REPAIR PARTS AND SPECIAL TOOLS LIST	E-1
	F. EXPENDABLE SUPPLIES AND MATERIALS LIST	F-1

*This change supersedes C4, 11 June 1973.

Page 2. Paragraph 1b is superseded as follows:

Appendix A contains a list of publications applicable to this manual. Appendix B lists integral items and basic issue items for the initial operation. Appendix C contains the additional authorization list. Appendix D contains the Maintenance Allocation Chart. Appendix E contains the repair parts and Special Tools List. Appendix F contains the Expendable Supplies and Materials List.

Paragraph 1d Delete in its entirety.

Paragraph 1e is superseded as follows:

DA Forms and procedures used for equipment will be only those prescribed by TM 38-750.

Paragraph 2 is rescinded.

Paragraph 4b is superseded as follows:

Tabulated Data
Dimensions and Weights

Length	8.5 in.	21.5 cm
Width	6.5 in.	16.5 cm
Height	5.5 in.	13.9 cm
Weight	1.5 lb	680.4 grams

Page 23. Appendix A is superseded as follows:

APPENDIX A

REFERENCES

A-1. Painting

AR 740-1

Marking and Preparation of Equipment for Shipment.

AR 746-5

Color and Marking of Army Materiel.

A-2. Maintenance

TM 38-750

The Army Maintenance Management System

A-3. Preventive Maintenance

SM 740-97-2

Preservation of USAMECOM Mechanical Equipment for Storage.

TB 740-90-1

Administrative Storage of Equipment.

A-4. Demolition

TM 750-244-3

Destruction of Materiel to Prevent Enemy Use.

Page 24. Appendix II is superseded as follows:

APPENDIX B

COMPONENTS OF END ITEMS LIST

Section I. INTRODUCTION

B-1. Scope

This appendix lists Integral Components of and Basic Issue Items List (BIIL) for the light target surveying to help you inventory items required for safe and efficient operation.

B-2. General

The components of end item list are divided into the following sections:

a. Section II. Integral Components of the End Item. These items, when assembled, comprise the light target surveying and must accompany it whenever it is transferred or turned in. These illustrations will help you identify these items.

b. Section III. Basic Issue Items. Not Applicable.

B-3. Explanation of Columns

a. Illustration. This column is divided as follows:

(1) *Figure Number.* Indicates the figure number of the illustration on which the item is shown (if applicable).

(2) *Item Number.* The number used to identify item called out in the illustration.

b. National Stock Number (NSN). Indicates the national stock number assigned to the end item which will be used for requisitioning.

c. Part Number (P/N). Indicates the primary number used by the manufacturer which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards and inspection requirements to identify an item or range of items.

d. Description. Indicates the federal item name and, if required, a minimum description to identify the item.

e. Location. The physical location of each item listed is given in this column. The lists are designed to inventory all items in one area of the major item before moving on to an adjacent area.

f. Usable on Code. "USABLE ON" codes are included to help you identify which component items are used on the different models. Identification of the codes used in this list are:

NOT APPLICABLE

g. Quantity Required (Qty Reqd). This column lists the quantity of each item required for a complete major item.

h. Quantity. This column is left blank for use during inventory. Under the received column, list the quantity you actually receive on your major item. The date columns are for use when you inventory the major item at a later date, such as for shipment to another site.

Section II. INTEGRAL COMPONENTS OF END ITEM

(1) ILLUSTRATION		(2) NATIONAL STOCK NO.	(3) PART NO. & FSCM	(4) DESCRIPTION	(5) LOCATION	(6) USABLE ON CODE	(7) QTY REQD	(8) QUANTITY			
(a) FIGURE NO.	(b) ITEM NO.							RCVD	DATE	DATE	DATE
		6675-01-053-0848	13216E8103 (97403)	Case, Carrying Assembly		CTD	1				

After *APPENDIX B* add *APPENDIX C* as follows:

APPENDIX C ADDITIONAL AUTHORIZATION LIST

Section I. INTRODUCTION

C-1. Scope

This appendix lists additional items you are authorized for the support of the light target surveying.

C-2. General

This list identifies items that do not have to accompany the light target surveying and that do not have to be returned in with it. These items are au-

thorized to you by CTA, MTOE, TDA or JTA.

C-3. Explanation of Listing

National stock number, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment. "USABLE ON" codes are identified as follows:

NOT APPLICABLE

Section II. ADDITIONAL AUTHORIZATION LIST

(1) NATIONAL STOCK NUMBER	(2) PART NUMBER & FSCM	(3) DESCRIPTION	(4) USABLE ON CODE	(5) U/M	(6) QTY AUTH
6135-00-120- 1020	(BA30 (81349)	Battery, Dry, 1.5 Volts	CTD	EA	8

Page 26. Change "APPENDIX III" to read "APPENDIX D MAINTENANCE ALLOCATION CHART".

Page 29. Change "APPENDIX IV OR-

GANIZATIONAL, DIRECT AND GENERAL SUPPORT, AND DEPOT MAINTENANCE REPAIR PARTS LIST" to read "APPENDIX E REPAIR PARTS AND SPECIAL TOOLS LIST".

After *APPENDIX E* add *APPENDIX F* as follows:

APPENDIX F

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

F-1. Scope

This appendix lists Expendable Supplies and Materials you will need to operate and maintain the light target surveying. These items are authorized to you by CTA50-970, Expendable Items (except Medical, Class V, Repair Parts and Heraldic Items).

F-2. Explanation of Columns.

a. Column 1 - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material.

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

c. Column 3 - National Stock Number. This is

the national stock number assigned to the item; use it to request or requisition the item.

d. 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 part number followed by the Federal Supply Code for Manufacturer (FSCM) in parenthesis, if applicable.

e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., each (ea), inch (in), pair (pr), etc). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	C	6850-00-664-5685	Cleaning Solvent, FED SPEC PD 680	QT
2	C	7920-00-401-8034	Cloth, Lint Free, Non-abrasive, General Purpose Part No. 1001	BX

By Order of the Secretary of the Army:

Official:

J.C. PENNINGTON
Brigadier General, United States Army
The adjutant General

BERNARD W. ROGERS
General, United States Army
Chief of Staff

Distribution:

To be distributed in accordance with DA Form 12-25A, Operator maintenance requirements for Surveying Equipment.

CHANGE }
NO. 3 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D. C., 1 November 1971

**Operator, Organizational, Direct Support General Support and Depot Maintenance
Manual (Including Repair Parts List)
LIGHT, TARGET, SURVEYING: U/W RANGE POLE; SELF ILLUMINATING;
W/CARRYING CASE (MILITARY DESIGN) FSN 6675-612-1187**

Current as of 8 October 1971

TM 5-6675-243-15, 3 March 1966, is changed as follows:

Page 2. Paragraph 4c is added as follows:

c. *Tabulated Data.* The following dimensions and weights are for surveying target lights having serial numbers KB9501 through KB9625.

Dimensions and Weights

Length	5.5 in.
Width	4.3 in.
Height	5.8 in.
Weight	2.5 lbs.

Page 2. Paragraph 5 is superseded as follows:

5. Difference in Models

a. This manual covers only the military design surveying target light.

b. Change No. 3 covers only surveying target lights with serial numbers KB9501 through KB9625. The only known difference for the units covered by this change is the use of an aluminum alloy replacing magnesium used with previous models.

Page 29. Paragraph 1c is superseded as follows:

c. Repair parts lists are arranged as follows:

(1) For surveying target lights procured in 1968 or before, Section II lists parts and major assem-

blies alphabetically by item name within functional groups.

(2) For surveying target lights procured after 1968 with serial numbers from KB9501 through KB9625, Section III list parts and major assemblies alphabetically by item name within the functional groups.

(3) In sections II and III, assembly components and subassemblies are indented, and listed alphabetically by item names under major assemblies.

(4) In Sections II and III, bulk material is listed in functional group 9501.

Page 36. Section III is added as follows:

Line No.	Source codes				Federal stock number	Description	Unity of Issue	QTY Incorporated in Unit	Guide Qty(s) per majequips					Illust		
	Material	Source	Maint	Recoverability					15 Days maintenance			Depot MAINT	Figure No.	Item No.		
									Organization		DS				GS	
									1-5		6-10				EQUIPMENTS	
										</						

Line No.	Source codes				Federal stock number	Description	Manufacturer's		Unity of Issue	QTY Incorporated in Unit	Guide Qty(s) per major equip					Illust	
	Material	Source	Maint	Recoverability							15 Days maintenance			Depot MAINT	Figure No.	Item No.	
											Organization	DS	GS				
																	1-5
0024	X20					MIRROR ASSEMBLY	97403	13216E8105		1	SEE GRP 6702						
0025	X20					PLATE ASSEMBLY: FRONT	97403	13216E8101		1	SEE GRP 6703						
0026	X20					RETAINER, LEVEL	97403	13216E8104		1	SEE GRP 6718						
0027	X20					RHEOSTAT ASSEMBLY: LIGHT	97403	13216E8090		1	SEE GRP 6710						
0028	X20					SIGHT ASSEMBLY	97403	13216E8116		1	SEE GRP 6702						
0029	X20					WEDGE ASSEMBLY: Locking				1	SEE GRP 6703						
0030						6702-OPTICS											
0031	X20					FILTER: GREEN	97403	13216E8111-2		1	*	*	*	*	*	20	
0032	X20					FILTER: RED	97403	13216E8111-1		1	*	*	*	*	*	20	
0033	X20					MIRROR ASSEMBLY	97403	13216E8105		1	*	*	*	*	*	16	
0034	X1					HINGE	97403	13216E8105-1		1							
0035	X1					MIRROR	97403	13216E8105-2		1							
0036	0				5305-550-5002	SCREW, MACHINE: Slotted, Cres, Pass., No. 4-40 UNC-2A x .25 LG, Type 1, Style 9S											
						96906	MS35233-13			2	*	*	*	*	*	16	
0037	0				5305-050-3971	SCREW, MACHINE: Filter MTG, Slotted, No. 0-80 UNF 2A x 1/8 LG											
						96906	MS35246-1			4	*	*	*	*	*	20	
0038	X20					SIGHT ASSEMBLY				1	*	*	*	*	*	16	
0039	X20					BASE, SIGHT	97403	13216E8115		1	*	*	*	*	*	16	
0040	X20					SIGHT	97403	13216E8116		1	*	*	*	*	*	16	
0041	0				5305-022-6611	SCREW, MACHINE: Slotted, Cres, Pass. No. 2-56 UNC-2A x .19 LG				2	*	*	*	*	*	16	
0042						6703-MECHANICAL, STRUCTURAL, AND PRECISION PARTS											
0043	X20					CAP ASSEMBLY: BATTERY	97403	13216E8097		2	*	*	*	*	*	16	
0044	X20					CAP	97403	13216E8097-1		2	*	*	*	*	*	16	
0045	X20					GASKET	97403	13216E8097-2		2	*	*	*	*	*	16	
0046	0				5305-558-2864	SCREW, MACHINE: Slotted, Cres, Pass., No. 6-32, UNC-2A, 5/16 LG, Type 1, Style 9S											
						96906	MS35233-31			2	SEE GRP 6712						
0047	X20					SPRING, HELICAL	97403	13216E8097-4		2	SEE GRP 6712						
0048	X20					HOUSING, TARGET LIGHT	97403	13216E8089		1	*	*	*	*	*	16	

Line No.	Source codes				Federal stock number	Description	Manufacturer's		Unity of Issue	QTY Incorporated in Unit	Guide Qty(s) per majequips					Illust	
	Material	Source	Maint	Recoverability							15 Days maintenance			Depot MAINT	Figure No.	Item No.	
											Organization		DS				GS
											1-5	6-10	100 EQUIPMENTS				
							CODE	PART NO.									
0049	X20				KNOB, FILTER AND CONTACT ASSEMBLY				1	*	*	*	*	*	20	10	
0050	X20				PIN, SPRING: Tubular, Filter Knob Retaining 1/16 in. DIA. x 1/4 LG	97403	13216E8118										
0051	X20				KNOB, RHEOSTAT	96906	MS16562-190		1	*	*	*	*	*	20	11	
0052	0				SET SCREW: Knob Retaining, Hex, Socket	97403	13216E8099		1	*	*	*	*	*	19	8	
0053	X20				PLATE ASSEMBLY, FRONT	96906	MS51038-29		1	*	*	*	*	*	19	9	
0054	X20				CONTACT STRIP	97403	13216E8101		1	*	*	*	*	*	17		
0055	X20				GASKET, RUBBER	97403	13216E8101-4		2	SEE GRP 6712							
0056	X1				HOUSING ASSEMBLY: Window	97403	13216E8101-1		1	*	*	*	*	*	17	3	
0057	X1				CAP, WINDOW	97403	13216E8107		1						17	6	
0058	X1				HOUSING, WINDOW	97403	13216E8107-2		1								
0059	X1				GASKET, RUBBER	97403	13216E8107-1										
0060	X1				GASKET, RUBBER	97403	13216E8107-4		1								
0061	X1				RIVET, SOLID	97403	13216E8107-3		1								
0062	0			5305-579-3029	SCREW, MACHINE: Slotted, No. 2-56 UNC-2A x .12 LG, Cres, Pass.	96906	MS20426A2-5		4								
0063	X1				SHIELD	96906	MS35233-1		2	*	*	*	*	*			
0064	X1				WINDOW	97403	13216E8109		1						17	5	
0065	X1				PLATE, FRONT	97403	13216E8107-3		1								
0066	X1				RIVET, SOLID: Contact Plate Mtg, AL ALY 1100, 1/16 DIA x 5/16 LG	97403	13216E8101-6		1						17	4	
0067	X1				RIVET, SOLID: Housing Assembly Window Mtg, AL ALY 1100, 1/16 DIA x 7/16 LG	96906	MS20426A2-5		8	SEE GRP 6712							
0068	0			5305-579-3029	SCREW, MACHINE: Shield Mtg.	96906	MS20426A2-7		4						17	9	
0069	X20			5305-543-2580	SCREW, MACHINE: Front Plate Assembly Mtg, Slotted, No. 8-32 UNC-2A x .38 LG, Cres, Pass.	96906	MS35233-43		2	*	*	*	*	*	17	8	
0070	X20				WEDGE ASSEMBLY: Locing	96906	MS35233-43		4	*	*	*	*	*	17	7	
									1	*	*	*	*	*	16		

Line No.	Source codes				Federal stock number	Description	Manufacturer's	CODE	PART NO.	Unity of Issue	QTY Incorporated in Unit	Guide Qty(s) per majequips					Illust	
	Material	Source	Maint	Recoverability								15 Days maintenance			Depot MAINT	Figure No.	Item No.	
												Organization	DS	GS				
1-5		6-10		100 EQUIPMENTS														
0071	X20			6135-120-1020	BAR: Wedge, Locking	97403	13216E8089-3			2	*	*	*	*	*			
0072	X20				WEDGE, LOCKING	97403	13216E8089-4			1	*	*	*	*	*	16	13	
0073					6704-BATTERIES													
0074	PO				BATTERY, DRY: 1.5 volts, type D Cell, BA30					4	*	*	*	*	*	16	2	
0075					6705-FUSES AND LAMPS													
0076	X20				BRACKET ASSEMBLY, LIGHT													
						97403	13216E8117			1	*	*	*	*	*	18		
0077	X20				COVER, BRACKET	97403	13216E8121-1			1	*	*	*	*	*			
0078	X20				GASKET, LIGHT BRACKET ASSEMBLY													
						97403	13216E8122			1	*	*	*	*	*	18	2	
0079	X20			5315-855-0002	HOLDER, LAMP	97403	13216E8121-1			1	*	*	*	*	*	18	3	
0080	PO				LAMP, INCANDESCENT: G-3-1/2 Miniature Screw, 2.47 volts, 30 AMP													
						96906	MS15611-3			3	(3)	(3)	(6)	*	100	18	12	
0081	0				PIN, GROOVED: Headless, Holder MTG, 1/8 in. DIA x 1/2 in. LG													
						96900	MS35672-21			1						18	4	
0082	X20				SCREW, ADJUSTMENT: Slotted, No. 4-48 UNF-2A, 7/8 in. LG, Flatpoint													
						97403	13216E8120			2	*	*	*	*	*	18	5	
0083	X20				THUMBSCREW, DIAMOND KNURLED: No. 8-32 UNC-2A, 7/8 in. LG, Flatpoint													
						97403	13216E8119			2	*	*	*	*	*	18	6	
0084					6710-CIRCUIT COMPONENTS													
0085	MO			5975-892-7354	LEAD ASSEMBLY, ELECTRICAL: Rheostat to Contact Strip Assembly and Front Plate Contact					2						19	11	
0086	X20				MANUFACTURE FROM: Terminal Lug 18 AWG Wire, No. 8 Screw Size													
							MS25036-153			4	*	*	*	*	*			
0087	PO			6145-233-7472	WIRE, ELECTRICAL (1st Lead 3 in. required) (2nd Lead 6 in. required)				Ft		SEE GRP 9501							
0088	MO			6145-233-7472	LEAD ASSEMBLY, ELECTRICAL: Rheostat to Filter and Contact Assembly					1						19	1	
0089	PO				MANUFACTURE FROM: Wire, Electrical (6 in. required)					Ft		SEE GRP 9501						
0090	X20				RHEOSTAT ASSEMBLY: Light													
					97403	13216E8090				1	*	*	*	*	*			

Line No.	Source codes				Federal stock number	Description	Manufacturer's		Unity of Issue	QTY Incorporated in Unit	Guide Qty(s) per majequips					Illust	
	Material	Source	Maint	Recoverability			CODE	PART NO.			15 Days maintenance			Depot MAINT	Figure No.	Item No.	
											Organization	DS	GS				
																	1-5
0091	X20					GASKET: Rheostat, Rugger, 2 in. x 1.25 in.	97403	13216E8092		1	*	*	*	*	*	19	4
0092	X20					KNOB: Rheostat, Knurled, AL ALY	97403	13216E8099		1	SEE GRP 6703						
0093	X20					PLATE, RHEOSTAT: Aluminum, 2 in. x 1.75 in.	97403	13216E8093		1	*	*	*	*	*	19	5
0094	X20					RESISTOR, VARIABLE:	97403	13216E8098		1						19	2
0095	0					SET SCREW, HEX SOCKET: No. 4-48 UNF-3A x 1/4 LG	96906	MS51038-29		1							
0096	X20					SPACER: Rheostat, Plastic, 68 in. DIA. x 1/2 in. THK	97403	13216E8091		1						19	3
0097	X20					WASHER, PLASTIC: .68 in. DIA. x .062 in. THK	97403	13216E8095		1						19	7
0098	X20					WASHER, RUBBER: .68 in. DIA. x .062	97403	13216E8096		1						19	6
0099	0					SCREW MACHINE: Rheostat Assembly Mtg, No. 6-32 UNC-2A x .38 LG	96906	MS36233-26		4	*	*	*	*	*	19	10
0100						6712-MOUNTED CONNECTING DEVICES											
0101	X20					CONTACT ASSEMBLY: Strip	97403	13216E8123		1	*	*	*	*	*	18	
0102	X20					BINDING POST	97403	13216E8123-2		1	*	*	*	*	*	18	10
0103	X20					BINDING POST	97403	13216E8123-3		1	*	*	*	*	*	18	9
0104	X20					GASKET RUBBER	97403	13216E9145-2		1	*	*	*	*	*	18	1
0105	Z20					PLATE, CONTACT STRIP: ALY 6061-TB, .75 in. x 2.75 in. LG	97403	13216E9145-1		1	*	*	*	*	*	18	7
0106	X2F					CONTACT STRIP: Front Plate	97403	13216E8101-2		2			*	*	*	17	2
0107	X1					RIVET, SOLID: Al ALY 1100, 1/16 in. DIA x 3/16 LG	96906	MS20426A2-5		8						17	1
0108	X20					FILTER AND CONTACT ASSEMBLY	97403	13216E9144		1	*	*	*	*	*	20	
0109	X20					CAP, FILTER ASSEMBLY	97403	13216E8114		1	*	*	*	*	*	20	8
0110	X20					FILTER: Plastic, Green	97403	13216E8111-2		1	SEE GRP 6702						
0111	X20					FILTER: Plastic, Red	97403	13216E8111-1		1	SEE GRP 6702						

Line No.	Source codes				Federal stock number	Description	Manufacturer's		Unity of Issue	QTY Incorporated in Unit	Guide Qty(s) per majequips					Illust	
	Material	Source	Maint	Recoverability			CODE	PART NO.			15 Days maintenance				Depot MAINT	Figure No.	Item No.
											Organization		DS	GS			
											1-5	6-10	100 EQUIPMENTS				
0112	X20				GASKET: Cap, Rubber	97403	13216E9143	1	*	*	*	*	*	20	7		
0113	X20				GASKET: Plate	97403	13216E8113	1	*	*	*	*	*	20	5		
0114	X20				KNOB: Filter Assembly	97403	13216E8118	1	SEE GRP 6703								
0115	X20				PIN, SPRING: Knob Retaining, Slotted, 1/16 in. DIA. x 1/4 in. LG	96906	MS16562-190	1	SEE GRP 6703								
0116	X1				SPRING, CONTACT	97403	13216E8110	1	*	*	*	*	*	20	6		
0117	X20				PLATE, CONTACT	97403	13216E8110	1	*	*	*	*	*	20	6		
0118	0			5305-050-3971	SCREW, MACHINE: Filter MTG, Slotted, No. 0-80 UNF-2A x 1/8 LG	96906	MS36246-1	4	SEE GRP 6702								
0119	0			5305-550-5002	SCREW, MACHINE: CAP MTG, Slotted, No. 4-40 UNC-2A x 3/8 LG	96906	MS36233-13	2	*	*	*	*	*	20	9		
0120	X20				SHAFT AND GEAR: Contact Assembly	97403	13216E8112	2	*	*	*	*	*	20	3		
0121	X20				SHAFT AND PINION: Contact Assembly	97403	13216E8124	1	*	*	*	*	*	20	4		
0122	0			5305-558-2864	SCREW, MACHINE: Contact Spring MTG, No. 6-32 UNC-2A x 5/16 LG, Cres, Pass, FF-S-92, Type 1	96908	MS35233-31	2	*	*	*	*	*	16	3		
0123	0			5305-637-7079	SCREW, MACHINE: Contact Strip MTG, No. 6 6-32 UNC-2A x .38 LG, Slotted, Cres, Pass	96906	MS35223-26	2	*	*	*	*	*	18	11		
0124	0			5305-045-1628	SCREW, MACHINE: Filter and Contact Assembly MTG, No. 6-32 UNC 2A x .38 LG, Cres, Pass, FF-S-92, Type 1, Style 9S	96906	MS35233-28	4	*	*	*	*	*	20	12		
0125	X20				SPRING, HELICAL, COMPRESSION	97403	13216E8097-4	2	*	*	*	*	*	16	4		
0126					6718-COMPASS AND LEVEL												
0127	X20				VIAL, LEVER, CIRCULAR	97403	13216E8102	1	*	*	*	*	*	16	10		
0128	X20				BUBBLE, ILLUMINATOR CLEAR PLASTIC	97403	13216E8106	1	*	*	*	*	*				

Line No.	Source codes				Federal stock number	Description	Manufacturer's		Unity of Issue	QTY Incorporated in Unit	Guide Qty(s) per majeurequis					Ilust		
	Material	Source	Maint	Recoverability							15 Days maintenance				Depot MAINT	Figure No.	Item No.	
											Organization		DS	GS				
											1-5		6-10	100 EQUIPMENTS				
											CODE	PART NO.						
0129	0				PACKING, PREFORMED, LEVEL MTG, SYNTHETIC RUBBER	97403	13216E9146	1	*	*	*	*	*	16	9			
0130	X20				RETAINER, LEVEL	97403	13216E8104	1	*	*	*	*	*	16	11			
0131	0				SCREW, MACHINE: Retainer MTG, Slotted, No. 2-56 UNC-2A x .19 LG			3	*	*	*	*	*	16	12			
0132					GROUP 95-GENERAL USE STANDARDIZED PARTS													
0133					9501-BULK MATERIAL													
0134	PO				WIRE, ELECTRICAL: 18 AWG			Ft										

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

VERNE L. BOWERS,
Major General, United States Army,
The Adjutant General.

Distribution

To be distributed in accordance with DA Form 12-25, Section I, (qty rqr block no. 174) Organizational maintenance requirements for Surveying Equipment.

CHANGE }
NO. 2 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D. C., 11 December 1970

**Operator, Organizational, Direct Support
General Support and Depot Maintenance Manual
(Including Repair Parts Lists)**

**LIGHT, TARGET, SURVEYING: U/W RANGE POLE;
SELF ILLUMINATING; W/CARRYING CASE
(MILITARY DESIGN) FSN 6675-612-1187**

Current as of 22 October 1970

TM 5-6675-243-15, 3 March 1966, is changed as follows:

Page 2. Paragraph 1d is superseded as follows:

d. The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028, Recommended Changes to Publications, and forwarded direct to Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, Mo. 63120.

Page 7, paragraph 12. Add caution as follows:

CAUTION

Turning the rheostat control knob beyond the "STOP" position will damage the variable resistor.

Page 34. In line 0031 add "FSN 6675-498-3767"

Page 34. In line 0032 add "FSN 6675-103-9118"

Page 35. In line 0090 add "FSN 5905-239-6090"

Page 35. In line 0094 change "X20" to read "PO"; add "FSN 5905-081-9048" and change "97403 11350-7A" to read "97403 11350-7A8."

Page 36. In line 0130 change "97403 11350-9-2" to read "97403 11350-9-6."

By Order of the Secretary of the Army:

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Distribution:

To be distributed in accordance with DA Form 12-25, Section I, (qty rqr block #174) organizational maintenance requirements for Surveying Equipment.

**Organizational, DS, GS, and Depot Maintenance Manual
(Including Repair Parts List)**

**LIGHT, TARGET, SURVEYING: U/W RANGE POLE;
SELF ILLUMINATING; W/CARRYING CASE (MILITARY DESIGN)
FSN 6675-612-1187**

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. These instructions are published for the use of the personnel to whom the Military Design Surveying Target Light is issued. Chapters 1 through 5 provide information on the operation and organizational maintenance of the equipment, accessories, components, and attachments. Chapter 6 provides information for direct and general support and depot maintenance. This manual also provides description of the main units and their functions in relationship to other components.

b. Appendix I contains a list of publications applicable to this manual. Appendix II contains the basic issue items authorized for the initial operation. Appendix III contains the maintenance allocation chart. The organizational, direct and general support and depot maintenance repair parts is listed in appendix IV.

c. Numbers in parentheses on illustrations

indicate quantity. Numbers preceding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

d. The direct reporting of errors, omissions, and recommendations for improving this manual by the individual user is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvements. This form will be completed using pencil, pen, or typewriter and forwarded to Commanding General, U. S. Army Mobility Equipment Center, ATTN: SMOME-MPD, 4300 Goodfellow Boulevard, St. Louis, Me., 63120.

e. Report all equipment improvements recommendations as prescribed by TM 38-750.

2. Record and Report Forms

For record and report forms applicable to the operator and organizational maintenance, refer to TM 38-750.

Section II. DESCRIPTION AND DATA

3. Description

The Military Design Surveying Target Light (figs. 1 and 2) is issued for use at night under all weather conditions and blackout. The light supplies a light source for surveying within certain limits. The colors are red, green, and white. Light intensity is controlled by a rheostat. The light also illuminates the circular level vial to assist in initial leveling.

4. Identification and Tabulated Data

a. *Identification.* The surveying target light has an identification decalcomania, located top-

back, which contains the FSN, nomenclature, manufacturer, model number and contract number.

b. Tabulated Data

Dimensions and weights	
Length -----	8½ in.
Width -----	6½ in.
Height -----	5½ in.
Weight -----	1½ lb.

5. Difference in Models

This manual covers only the military design surveying target light. No known differences exist for the unit covered by this manual.



Figure 1. Surveying target light, front and top view, with shipping dimensions.

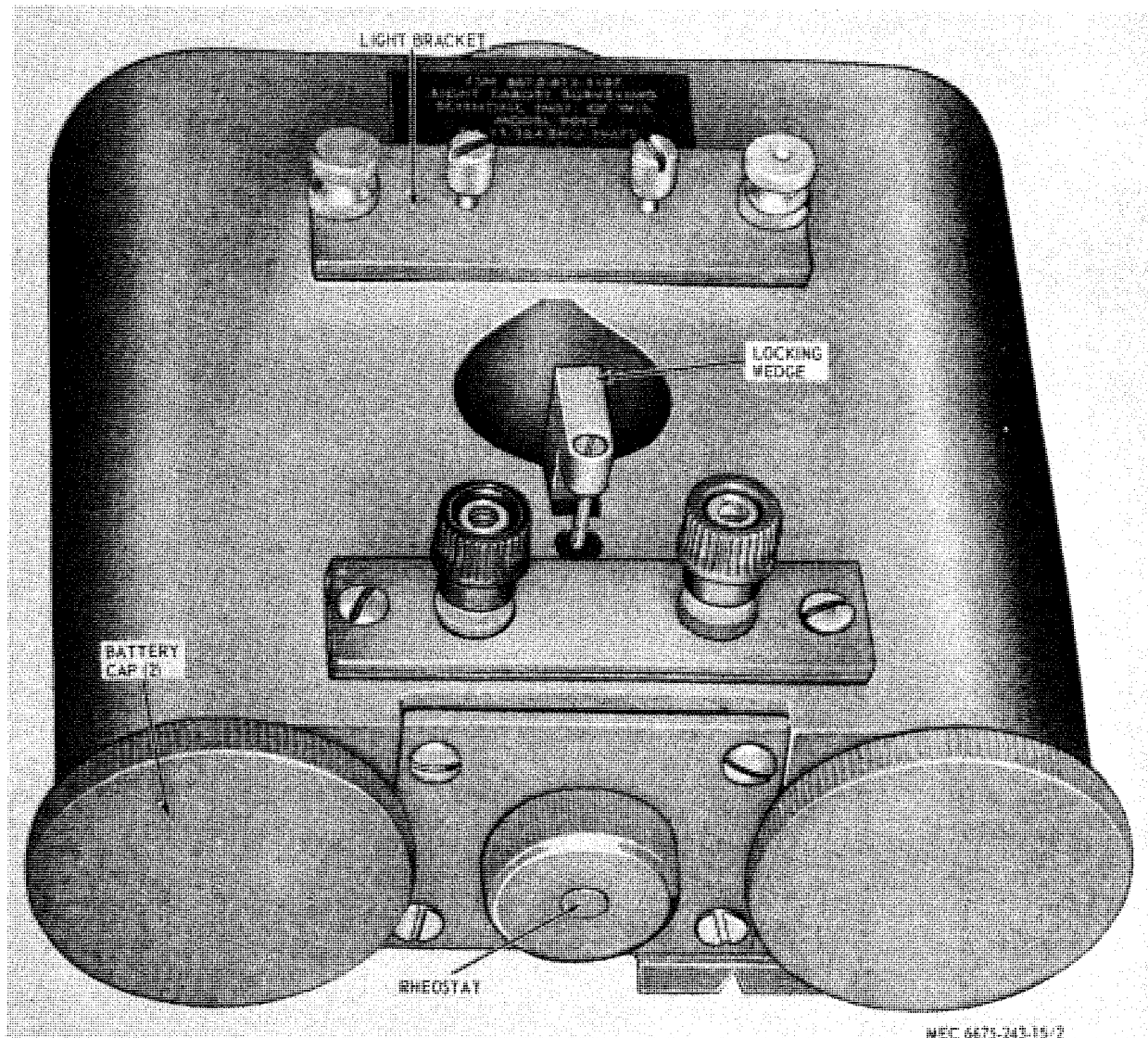


Figure 2. Surveying target light, back and bottom view.

CHAPTER 2

INSTALLATION AND OPERATION INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

6. Unpacking the Equipment

- a.* Remove the tape securing the packing carton.
- b.* Remove the metal container with the surveying target light.
- c.* Remove the surveying target light from the metal container.

7. Inspecting and Servicing Equipment

- a.* Inspect the entire unit for loose or missing hardware and accessories.

- b.* Make sure all items are with the surveying target light and in serviceable condition.
- c.* Correct all deficiencies or report to organizational maintenance,

8. Installation or Setting-Up Instructions

- a.* Remove the surveying target light from its carrying case.
- b.* Install batteries (para 18).
- c.* Mount the surveying target light on the range pole.

Section II. CONTROLS AND INSTRUMENTS

9. General

This section describes, locates, illustrates, and furnishes the operator sufficient information about the various controls for proper operation of the surveying target light.

10. Controls and Instruments

Refer to figure 3 for the purpose and location of all controls and instruments.

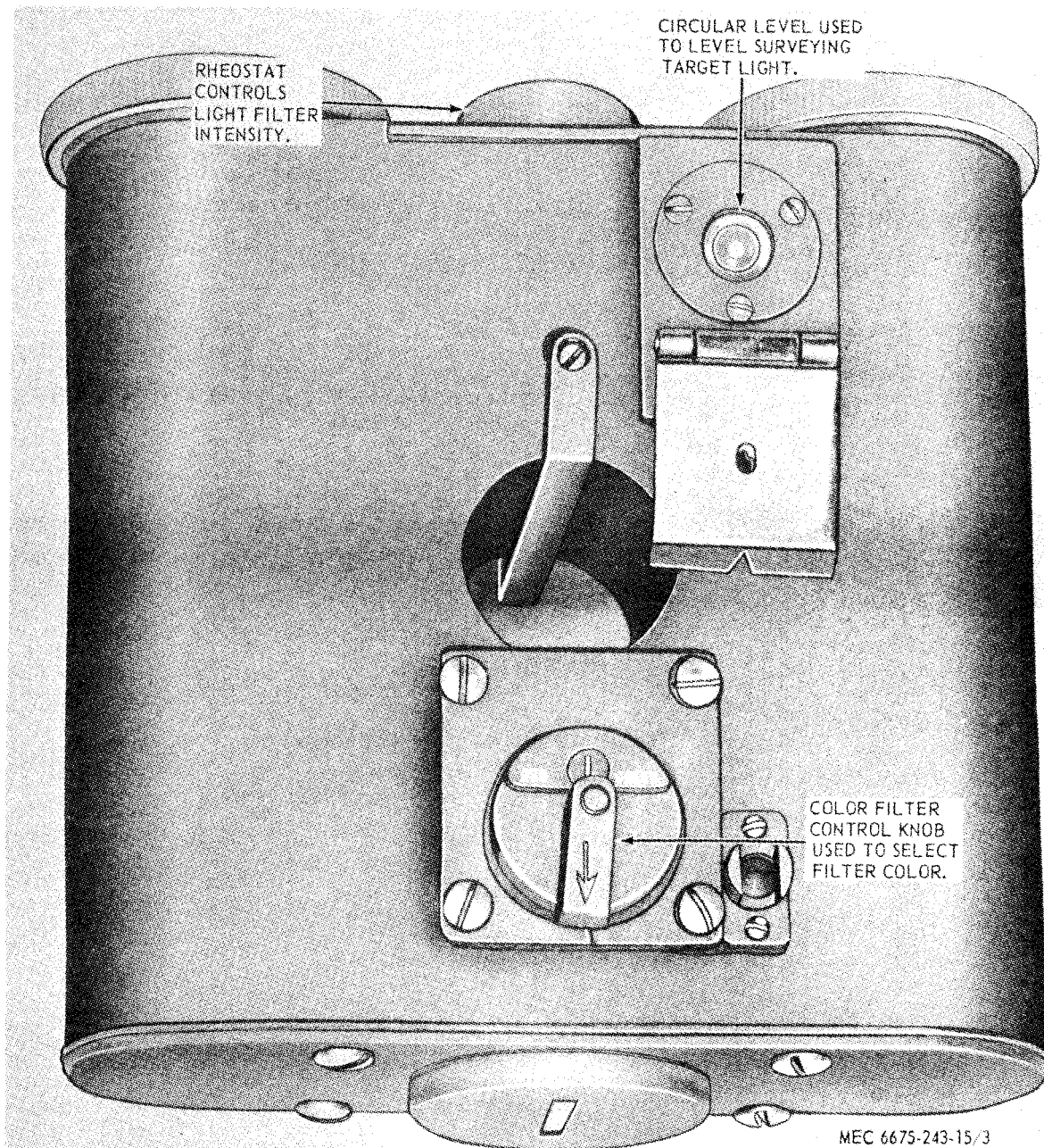


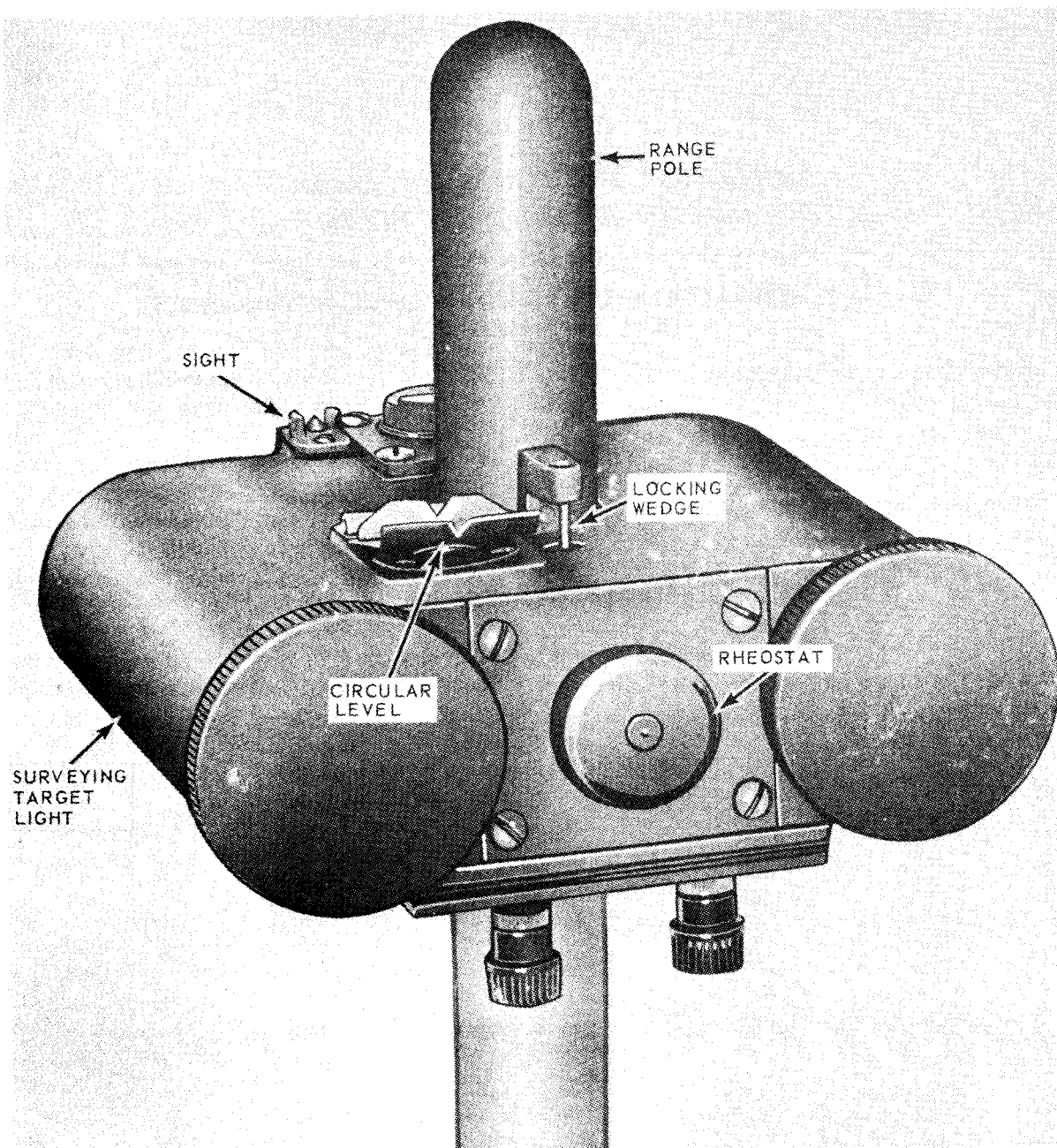
Figure 3. Controls and instruments.

Section III. OPERATION OF EQUIPMENT

11. General

a. The instructions in this section are published for the information and guidance of the personnel responsible for the operation of the surveying target light.

b. The operator must know how to perform every operation of which the target light is capable. This section gives instructions on the operation of the unit. Since nearly every job



STEP 1. POSITION THE LIGHT ON THE RANGE POLE AND SECURE WITH THE LOCKING WEDGE.
 STEP 2. LEVEL THE RANGE POLE VERTICALLY WITH THE CIRCULAR LEVEL.
 STEP 3. ALINE THE BEAM WITH THE SURVEYING INSTRUMENT BY MEANS OF THE SIGHT.
 THE BEAM SPREAD IN THE VERTICAL PLANE IS 3 TO 5 DEGREES.
 THE BEAM WIDTH IN THE HORIZONTAL PLANE IS 30 TO 45 DEGREES.
 NOTE: CONTROL THE BRIGHTNESS OF THE LIGHT SOURCE WITH THE RHEOSTAT.

MEC 6675-243-15/4

Figure 4. Target light operating instructions.

presents a different problem, the operator may have to vary given procedures to fit the individual job.

AGO 10117A

12. Target Light Operation

Refer to figure 4 for the surveying target light operating instructions.

CAUTION: Turning the Rheostat control knob beyond the "STOP" position will damage the variable resistor.

CHAPTER 3

OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. OPERATOR AND ORGANIZATIONAL MAINTENANCE TOOLS AND EQUIPMENT

13. Special Tools and Equipment

No special tools or equipment are required to perform maintenance on the surveying target light.

14. Basic Issue Tools and Equipment

Tools and repair parts issued with or

authorized for the surveying target light are listed in the basic issue items list, (app. II).

15. Organizational Maintenance Repair Parts

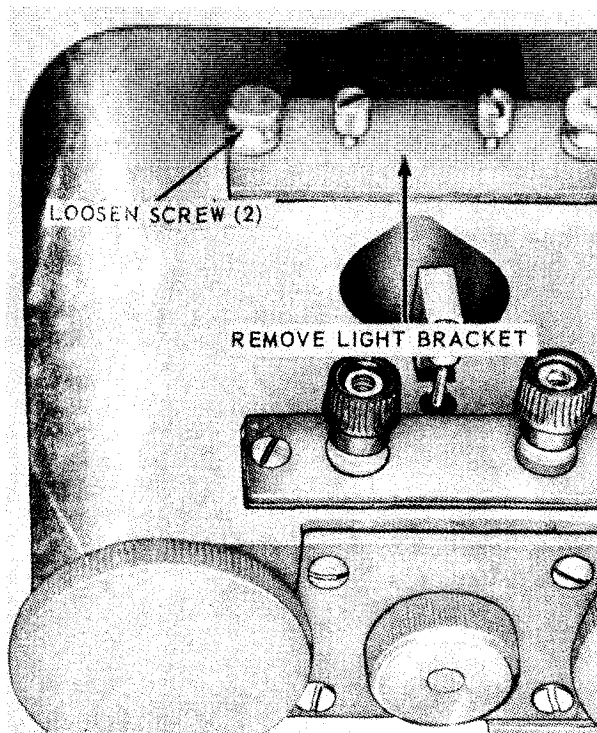
Organizational maintenance repair parts are listed and illustrated in appendix IV.

Section II. OPERATOR'S MAINTENANCE

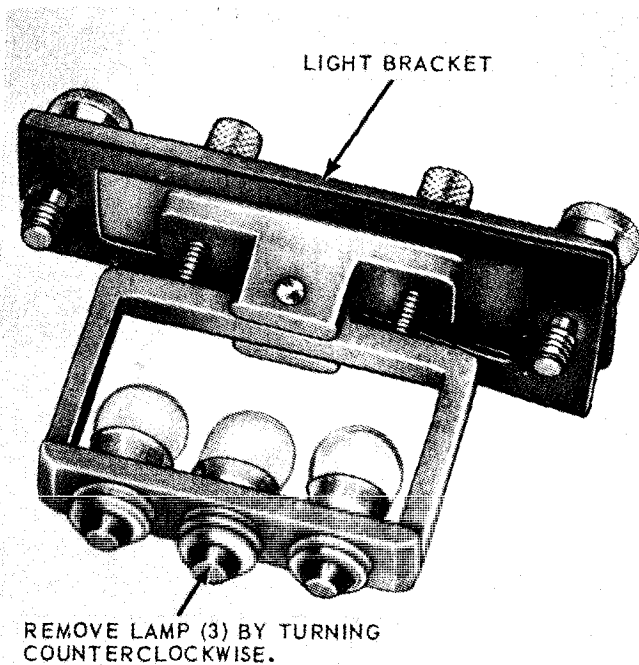
16. General

This section contains information on the maintenance of the surveying target light

which is the responsibility of the operator. This maintenance includes the replacement of the lamps and batteries.



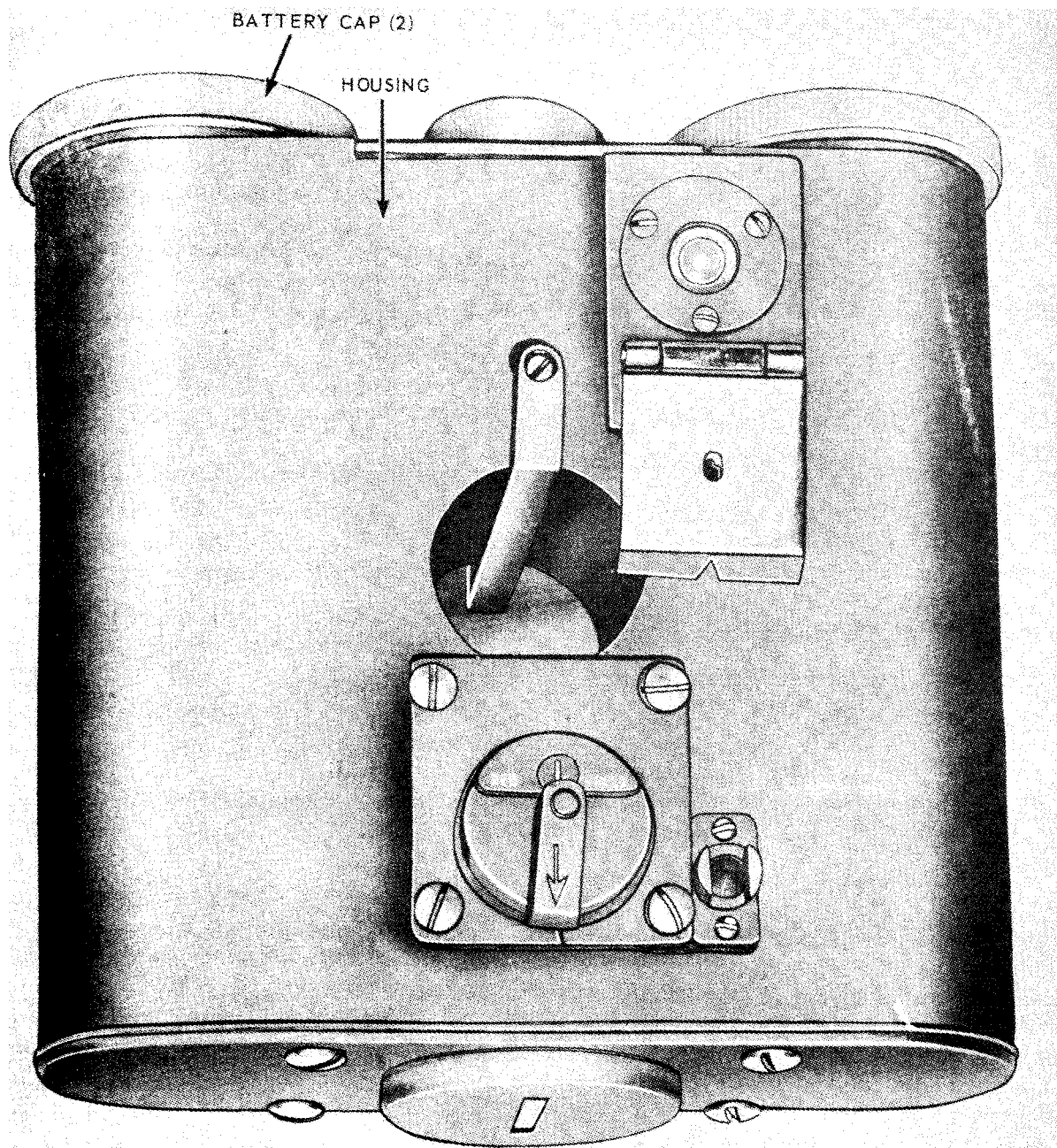
A. LIGHT BRACKET REMOVAL.



B. LAMP REMOVAL.

MEC 6675-243-15/5

Figure 5. Lamps, removal and instalation.



- STEP 1. REMOVE BATTERY CAP (2).
STEP 2. REMOVE BATTERIES FROM HOUSING.
STEP 3. INSTALL NEW BATTERIES.
STEP 4. INSTALL BATTERY CAP (2).

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Figure 6. Batteries, removed and installation.

17. Lamps

a. Removal. Refer to figure 5 and remove the lamps.

b. Cleaning and Inspection.

- (1) Clean the lamps with a clean cloth.
- (2) Inspect for cracks, breaks, and a burned-out condition.
- (3) Replace a damaged or defective lamp.

c. Installation. Refer to figure 5 and install the lamps.

18. Batteries

a. Removal. Refer to figure 6 and remove the batteries.

b. Cleaning and Inspection.

- (1) Clean the batteries with a clean cloth. Clean any corrosion from the contacts with a wire brush.
- (2) Inspect for cracks, leaks, and corrosion.
- (3) Replace a damaged or defective battery.

c. Installation. Refer to figure 6 and install the batteries.

Section iii. TROUBLESHOOTING

19. General

This section contains information useful in diagnosing and correcting unsatisfactory operation or failure of the surveying target light. Each trouble symptom stated is followed by a list of probable causes of the trouble. The possible remedy recommended is described opposite the probable cause. Any trouble beyond the scope of the organizational maintenance will be reported to direct support maintenance.

20. No Illumination in Target Light

<i>Probable cause</i>	<i>Possible remedy</i>
Lamp defective-----	Replace lamp (para 17).
Battery defective-----	Replace battery (para 18).

21. Illumination Cannot Be Controlled

<i>Probable cause</i>	<i>Possible remedy</i>
Rheostat defective----	Replace rheostat (para 32).

Section IV. FRONT PLATE ASSEMBLY

22. General

This section contains information on the maintenance of the front plate assembly which is the responsibility of organizational maintenance. This maintenance does not include the replacement of the front plate contacts.

23. Front Plate Assembly

a. Removal. Refer to figure 7 and remove the front plate assembly.

b. Cleaning and Inspection.

- (1) Clean all metal parts with an approved cleaning solvent and dry thoroughly.
- (2) Inspect for cracks, breaks, corrosion, and other damage.
- (3) Replace a damaged or defective front plate assembly.

c. Installation. Refer to figure 7 and install the front plate assembly.

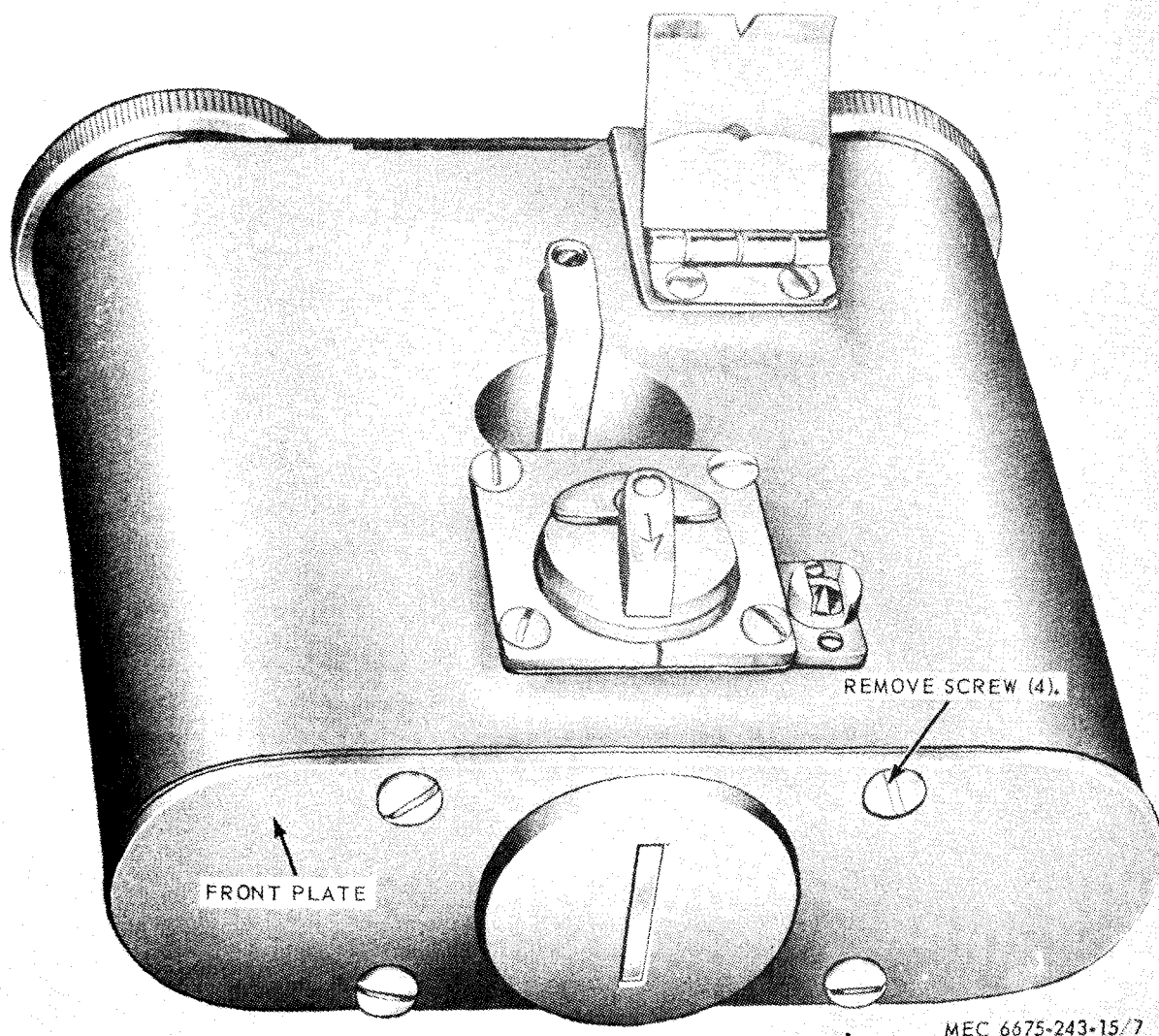


Figure 7. Front plate assembly, removal and installation.

Section V. HOUSING ASSEMBLY

24. General

This section contains information on the maintenance of the housing assembly and its components. These include the locking wedge, rheostat, lamp bracket, contact strip, mirror, level retainer and level, filter and contact assembly, and sight.

25. Locking Wedge

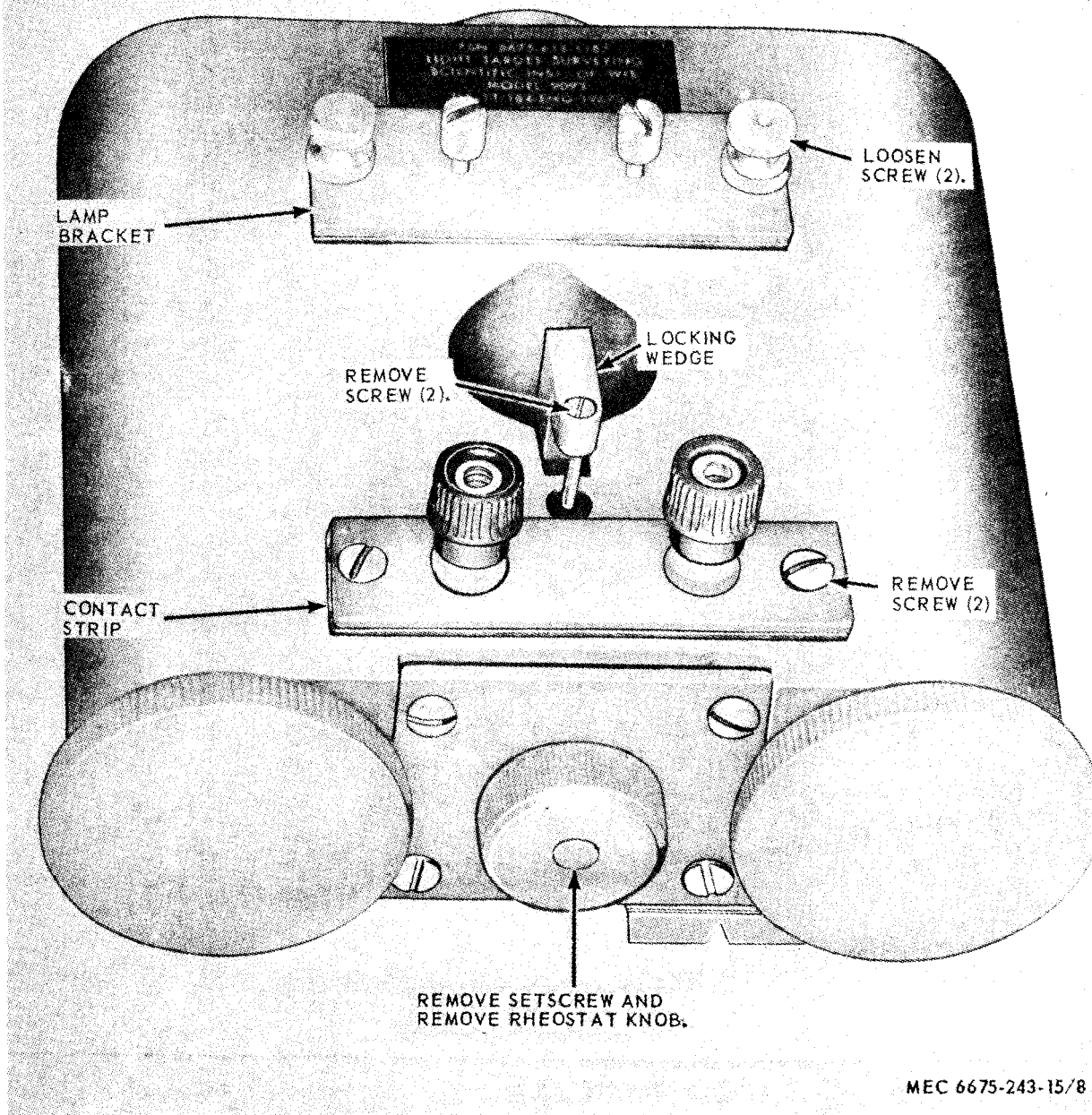
a. Removal. Refer to figure 8 and remove the locking wedge.

b. Cleaning and Inspection.

- (1) Clean all parts with an approved cleaning solvent and dry thoroughly.
- (2) Inspect for cracks, breaks, and other damage.
- (3) Replace a damaged or defective locking wedge.

c. Installation. Refer to figure 8 and install the locking wedge.

NOTE: TAG AND DISCONNECT ELECTRICAL LEADS AS NECESSARY.



MEC 6675-243-15/8

Figure 8. Locking wedge, rheostat knob, lamp bracket, and contact strip, removal and installation.

26. Rheostat Knob

a. *Removal.* Refer to figure 8 and remove the rheostat knob.

b. *Cleaning and Inspection.*

- (1) Clean the knob with an approved cleaning solvent and dry thoroughly.

- (2) Inspect for cracks, breaks, and other damage.

- (3) Replace a damaged rheostat knob.

c. *Installation.* Refer to figure 8 and install the rheostat knob.

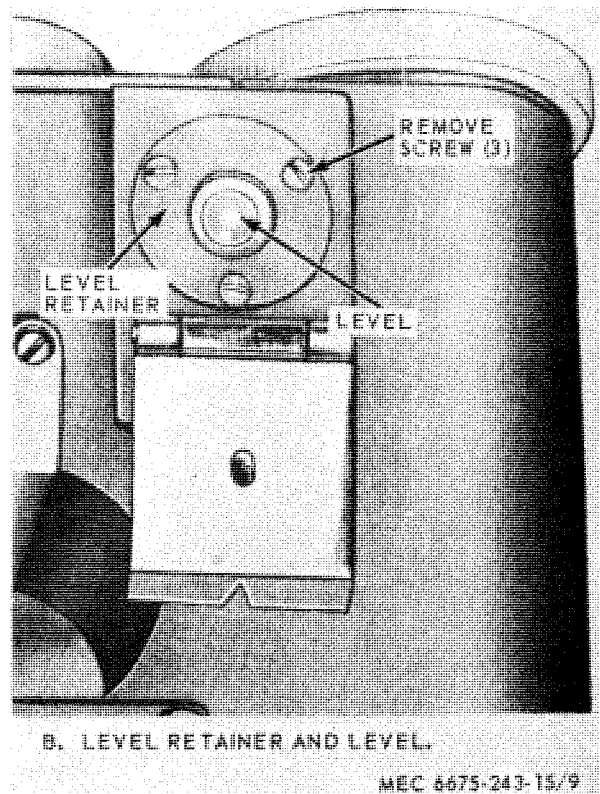
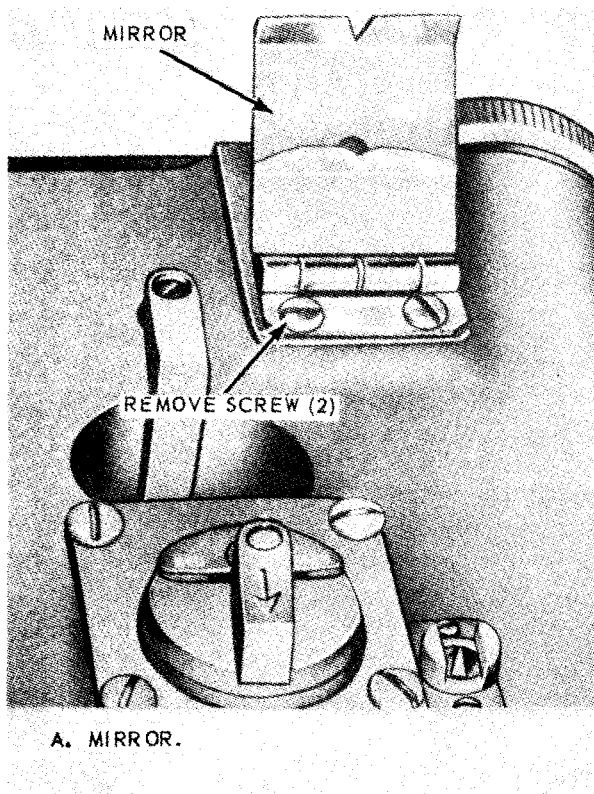


Figure 9. Mirror, level retainer, and level, removal and instillation.

27. Lamp Bracket

a. Removal. Refer to figure 8 and remove the lamp bracket.

b. Cleaning and Inspection.

- (1) Clean the bracket with an approved cleaning solvent and dry thoroughly.
- (2) Inspect for cracks, breaks, and other damage.
- (3) Replace a damaged lamp bracket.

c. Installation. Refer to figure 8 and install the lamp bracket.

28. Contact Strip

a. Removal. Refer to figure 8 and remove the contact strip.

b. Cleaning and Inspection.

- (1) Clean all parts with an approved cleaning solvent and dry thoroughly.
- (2) Inspect for cracks, brinks, corrosion, and other damage.
- (3) Replace a damaged or' defective contact strip.

c. Installation. Refer to figure 8 and install the contact strip.

29. Mirror

a. Removal. Refer to figure 9 and remove the mirror.

b. Cleaning and Inspection.

- (1) Clean the mirror with a tissue or clean, lint free cloth.
- (2) Inspect for scratches and other damage.
- (3) Replace a damaged or defective mirror.

c. Installation. Refer to figure 9 and install the mirror.

30. Level Retainer and level

a. Removal.

- (1) Remove the mirror (para 29).
- (2) Refertko figure 9 and remove the level retainer and level.

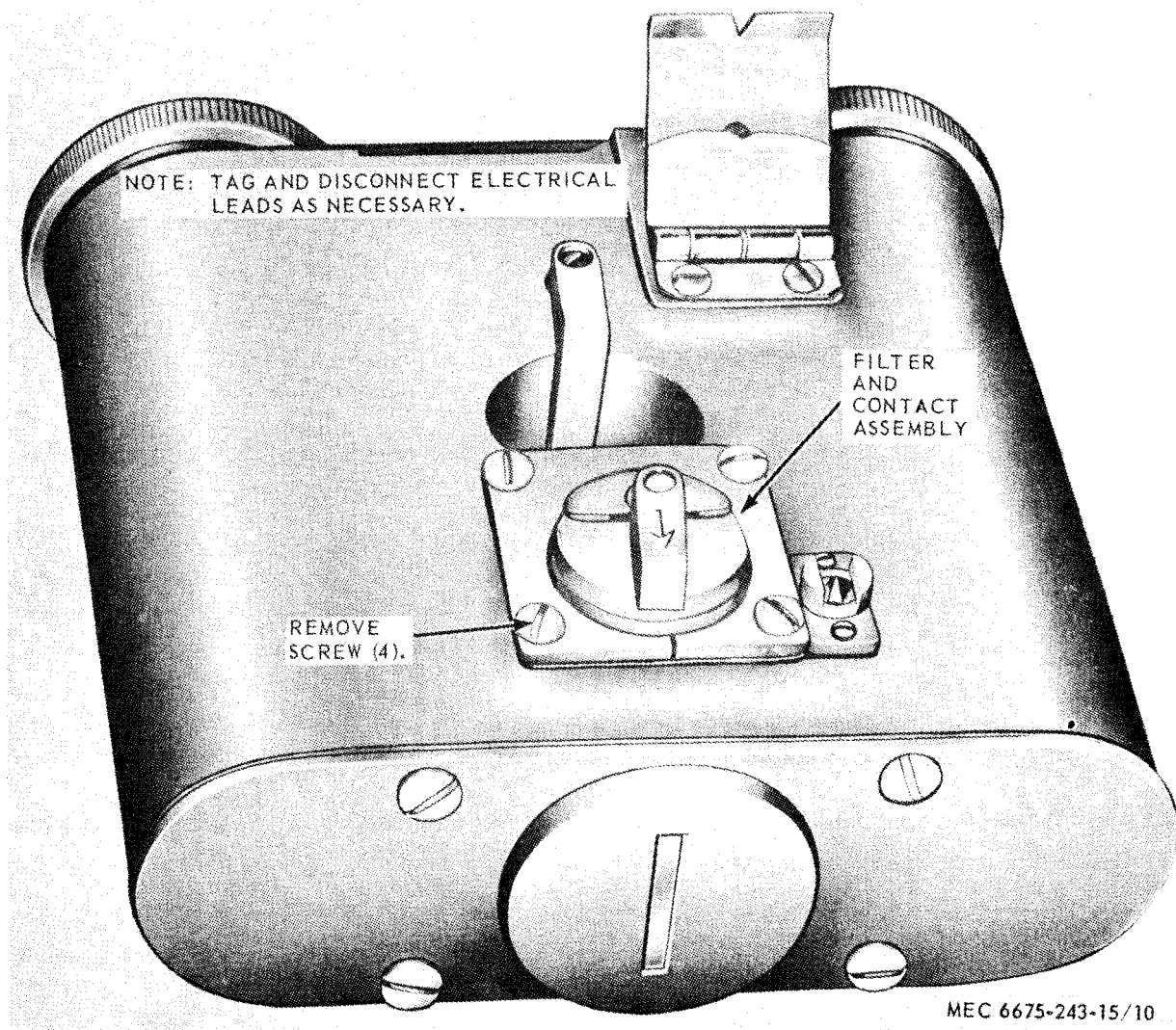


Figure 10. Filter and contact assembly, removal and installation.

b. Cleaning and Inspection.

- (1) Clean all parts with a clean, dry, lint free cloth.
- (2) Inspect for cracks, breaks, and other damage.
- (3) Replace a damaged or defective level retainer and level.

c. Installation.

- (1) Refer to figure 9 and install the level retainer and level.
- (2) Install the mirror (para 29).

31. Filter and Contact Assembly

a. Removal. Refer to figure 10 and remove the filter and contact assembly.

b. Cleaning and Inspection.

- (1) Clean the filter and contact assembly with a soft brush or clean, dry, lint free cloth.
- (2) Inspect for cracks, breaks, and other damage.
- (3) Replace a damaged or defective filter and contact assembly.

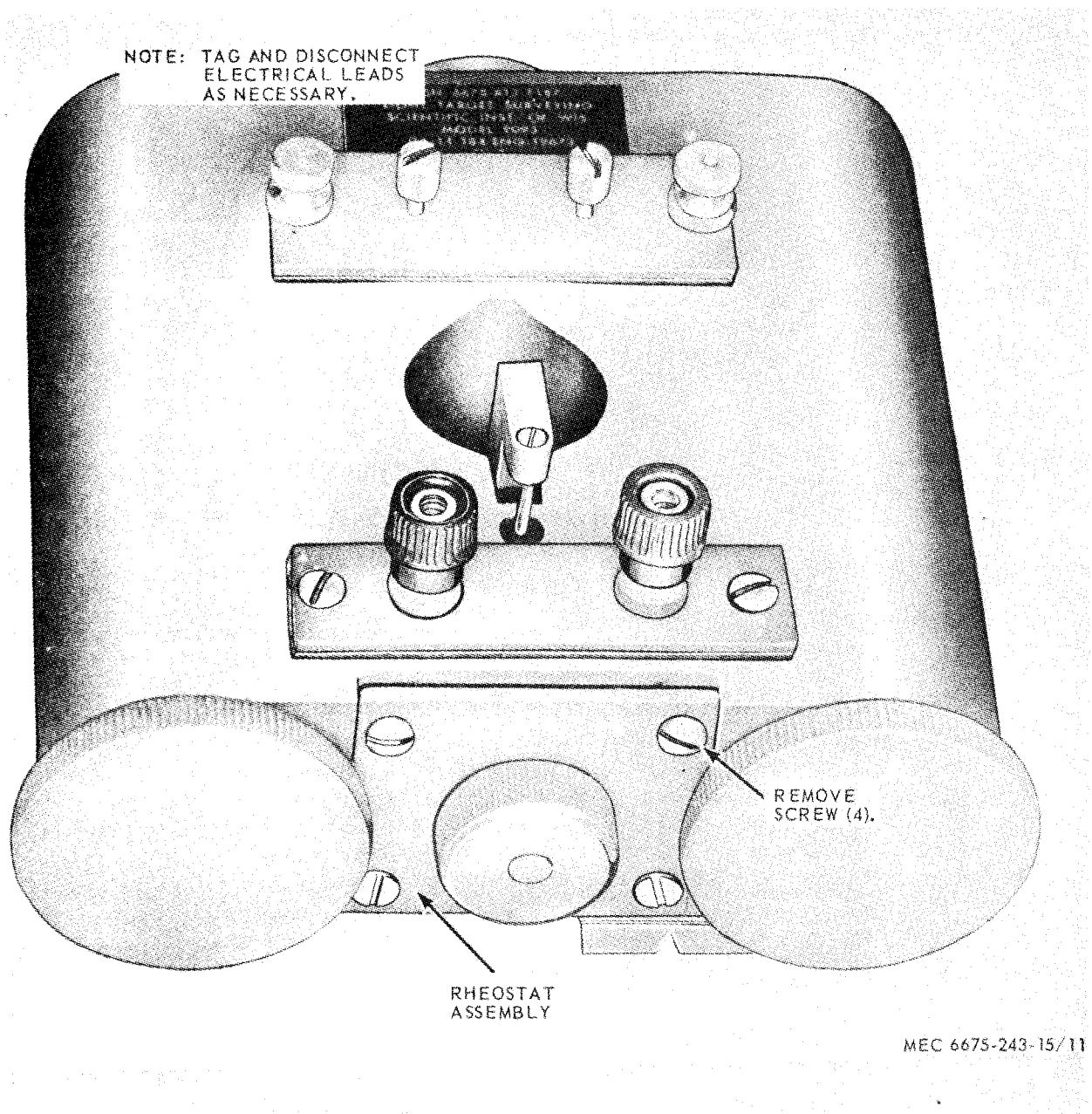


Figure 11. Rheostat, Removal and installation.

c. *Installation.* Refer to figure 10 and install the filter and contact assembly.

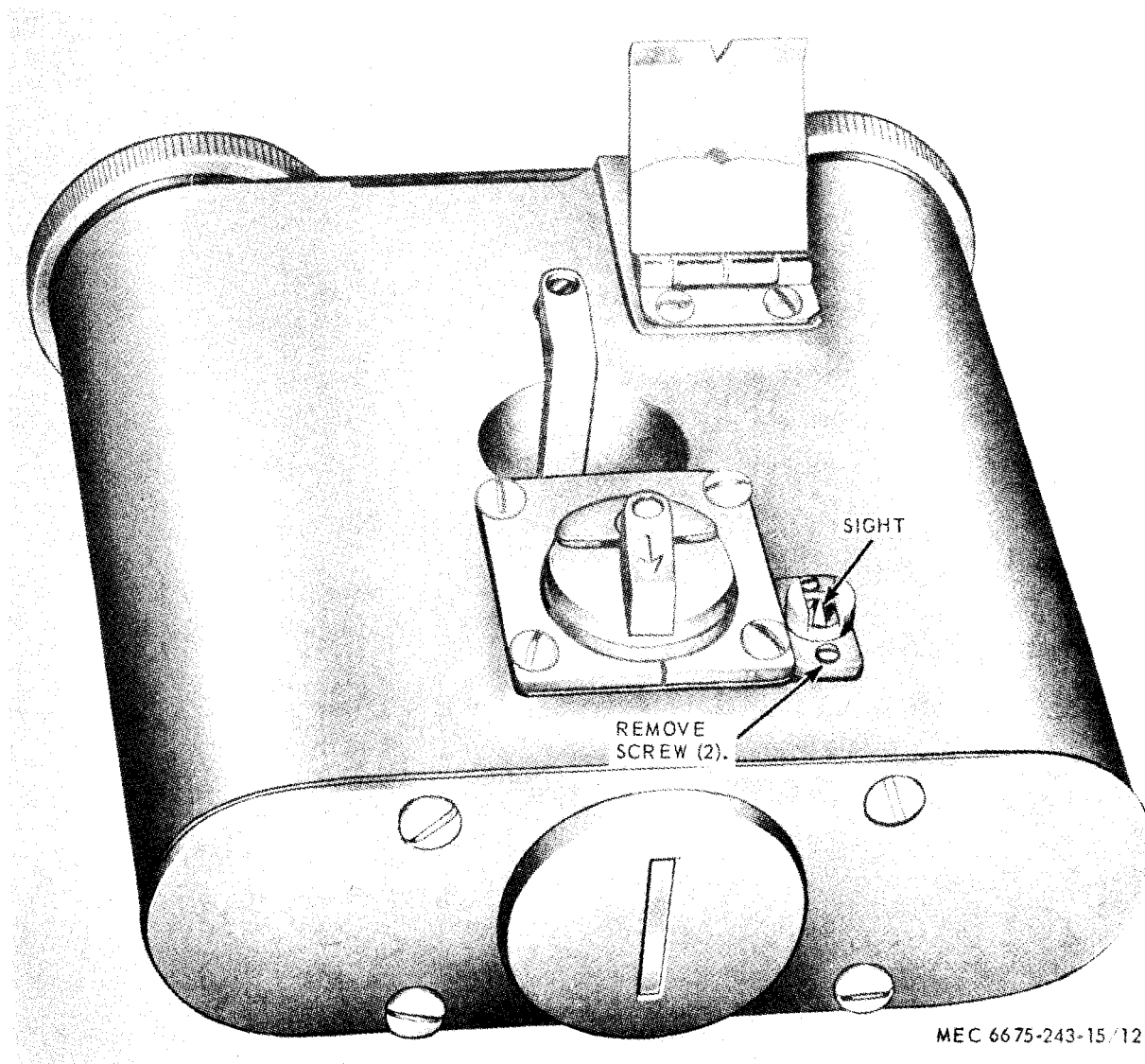
32. Rheostat

a. *Removal.*

- (1) Remove the rheostat knob (para 26).
- (2) Refer to figure 11 and remove the rheostat.

b. *Cleaning and Inspection.*

- (1) Clean all parts with an approved cleaning solvent and dry thoroughly.
- (2) Inspect for cracks, breaks, broken winding, corrosion, and other damage.
- (3) Replace a damaged or defective rheostat.



MEC 6675-243-15/12

Figure 12. Sight, removal and installation.

c. Installation.

- (1) Refer to figure 11 and install the rheostat.
- (2) Install the rheostat knob (para 26).

33. Sight

a. Removal. Refer to figure 12 and remove the sight.

b. Cleaning and Inspection.

- (1) Clean all parts with an approved cleaning solvent and dry thoroughly.
- (2) Inspect for cracks, breaks, and other damage.
- (3) Replace a damaged or defective sight.

c. Installation. Refer to figure 12 and install the sight.

CHAPTER 4

DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

34. General

When capture or abandonment of the surveying target light to an enemy is imminent, the responsible unit commander must make the decision either to destroy the equipment or render it inoperative. Based on this decision, orders are issued which cover the desired extent of destruction. Whatever method of demolition is employed, it is essential to destroy the same vital parts of all surveying target lights and all corresponding repair parts.

35. Demolition to Render the Equipment Inoperative

Use hammers, sledge hammers, crowbars, picks, axes, or any other tools which may be available to destroy the surveying target light.

36. Other Demolition Methods

a. Burning. Rack rags, clothing, or canvas under and around the surveying target light.

Saturate this packing with gasoline, oil, or diesel fuel and ignite.

b. Submersion. Totally submerge the surveying target light in a body of water to provide water damage and concealment. Salt water will do greater damage to metal parts than fresh water.

37. Training

All operators should receive thorough training in the destruction of the surveying target light. (Refer to FM 5-25.) Simulated destruction using all of the methods listed above should be included in the operator training program. It must be emphasized in training that demolition operations are usually necessitated by critical situations, when time available for carrying out destruction is limited. For this reason, it is necessary that operators be thoroughly familiar with all methods of destruction and be able to carry out demolition instructions without reference to this or any other manual.

CHAPTER 5

SHIPMENT AND LIMITED STORAGE

Section i. SHIPMENT WITHIN ZONE OF INTERIOR

38. Preparation of Equipment for Shipment

a. General. Detailed instructions for the preparation of the surveying target light for domestic shipment are outlined within this paragraph.

b. Inspection. Equipment will be inspected for any unusual conditions such as damage, accumulation of water, rusting, and pilferage. All deficiencies will be recorded on DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

c. Cleaning and Drying. Thorough cleaning and drying by an approved technique is the first essential procedure in any effective preservation process. Approved methods of clean-

ing and drying, types of preservatives, and methods of application are described in TM 38-230.

d. Painting. Paint all surfaces where paint has been removed or damaged. Refer to TM 9-213 for detailed cleaning and painting instructions.

e. Marking. Shall conform to MIL-STD-129.

39. Loading Equipment for Shipment

No specific instructions are required for loading the surveying target light for shipment.

Section ii. LIMITED STORAGE

40. Preparation of Equipment for Storage

a. General. Detailed instructions for preserving and maintaining the surveying target light in limited storage are outlined within this paragraph. Limited storage is defined as storage not to exceed 6 months.

b. Inspection. Equipment will be inspected for any unusual conditions such as damage, accumulation of water, rusting, and pilferage. All deficiencies will be recorded on DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

41. Inspection and Maintenance of Equipment in Storage

a. Inspection. When equipment has been

placed in storage, all scheduled preventive maintenance services, including inspection, will be suspended and preventive maintenance inspection will be performed as specified herein.

b. Worksheet and Preventive Maintenance. Applicable forms listed in TM 38-750 will be prepared for each major item of equipment when initially placed in limited storage and every 90 days thereafter. Perform required maintenance promptly to make sure equipment is mechanically sound and ready for immediate use.

CHAPTER 6

DIRECT AND GENERAL SUPPORT AND DEPOT MAINTENANCE INSTRUCTIONS

Section I. GENERAL

42. Scope

a. The following instructions are for direct and general support and depot maintenance personnel. They contain information that is beyond the scope of the tools, equipment, personnel, or supplies normally available to organizational maintenance.

b. Appendix I includes the list of publications applicable to direct and general support

and depot maintenance. Appendix III contains the maintenance allocation chart. The direct and general support and depot maintenance repair parts lists are listed in appendix IV.

43. Record and Report Forms

For record and report forms applicable to direct and general support and depot maintenance, refer to TM 38-750.

Section II. DESCRIPTION AND DATA

44. Description

For a complete description of the surveying target light, refer to paragraph 3.

45. Tabulated Data

a. *General.* Tabulated data for the surveying target light for direct and general support and depot maintenance is not required.

b. *Time Standards.* Table 1 lists the number

of man-hours required under normal conditions for various operations in the maintenance and repair of the surveying target light. The man-hours listed are not intended to be rigid standards. Under adverse conditions, the operations will take longer; but under ideal conditions with highly skilled mechanics, most of the operations can be accomplished in considerably less time.

Table 1. Time Standards

	Hours
<i>Remove and Replace-</i>	
18 BODY, CAB, HOOD AND HULL	
1808 CARRYING CASES :	
Case assembly, carrying-----	0.1
67 PRECISION INSTRUMENTS AND SYSTEMS, MECHANICAL ELECTRICAL	
6700 SURVEYING TARGET LIGHT :	
Light, target surveying	
(includes leveling and adjusting)-----	0.1
6702 OPTICS :	
Sight assembly-----	0.2
Mirror assembly-----	0.2
Window assembly	
(includes removal and installation of filter and contact assembly)-----	0.3
Filters	
(includes removal and installation of front plate assembly)-----	0.6

Table 1. Time Standards (Cont'd)

	Hours
Remove and Replace-	
6703 MECHANICAL, STRUCTURAL AND PRECISION PARTS :	
Housing assembly	
(includes removal and installation of front plate, contact strip, mirror, battery cap, rheostat locking wedge, light bracket, sight, filter and contact, locking wedge assemblies) .	1.5
Locking wedge assembly	0.1
Knob, rheostat	0.1
6704 BATTERIES:	
Battery	0.1
6705 LAMPS :	
Bracket assembly, lamp	0.1
Lamps	0.1
6710 CIRCUIT COMPONENTS:	
Rheostat assembly, potentiometer	0.1
6712 MOUNTED CONNECTING DEVICES:	
Contacts	
(with front plate assembly removed)	0.8
Contact strip assembly	0.1
6718 LEVEL:	
Level, circular	0.1

Section III. SPECIAL TOOLS AND EQUIPMENT

46. Special Tools and Equipment

No special tools or equipment are required by direct and general support and depot maintenance personnel to perform maintenance on the surveying target light.

47. Direct and General Support and Depot Maintenance Repair Parts

Direct and general support and depot main-

tenance repair parts are listed and illustrated in appendix IV.

48. Specially Designed Tools and Equipment

No specially designed tools or equipment are required by direct and general support and depot maintenance personnel to perform maintenance on the surveying target light.

Section IV. CONTACTS

49. General

This section contains information on the maintenance of the surveying target light which is the responsibility of direct and general support and depot maintenance. This maintenance includes the replacement of the front plate contacts and the filter and contact assembly contacts.

50. Front Plate Contacts

a. Removal.

- (1) Remove the front plate assembly (para 23).

- (2) Refer to figure 13 and remove the front plate contacts.

b. Cleaning, Inspection, and Repair.

- (1) Clean all parts with an approved cleaning solvent and dry thoroughly.
- (2) Inspect for cracks, breaks, bends, corrosion, and other damage.
- (3) Replace a damaged or defective contact.

c. Installation.

- (1) Refer to figure 13 and install the front plate contacts.

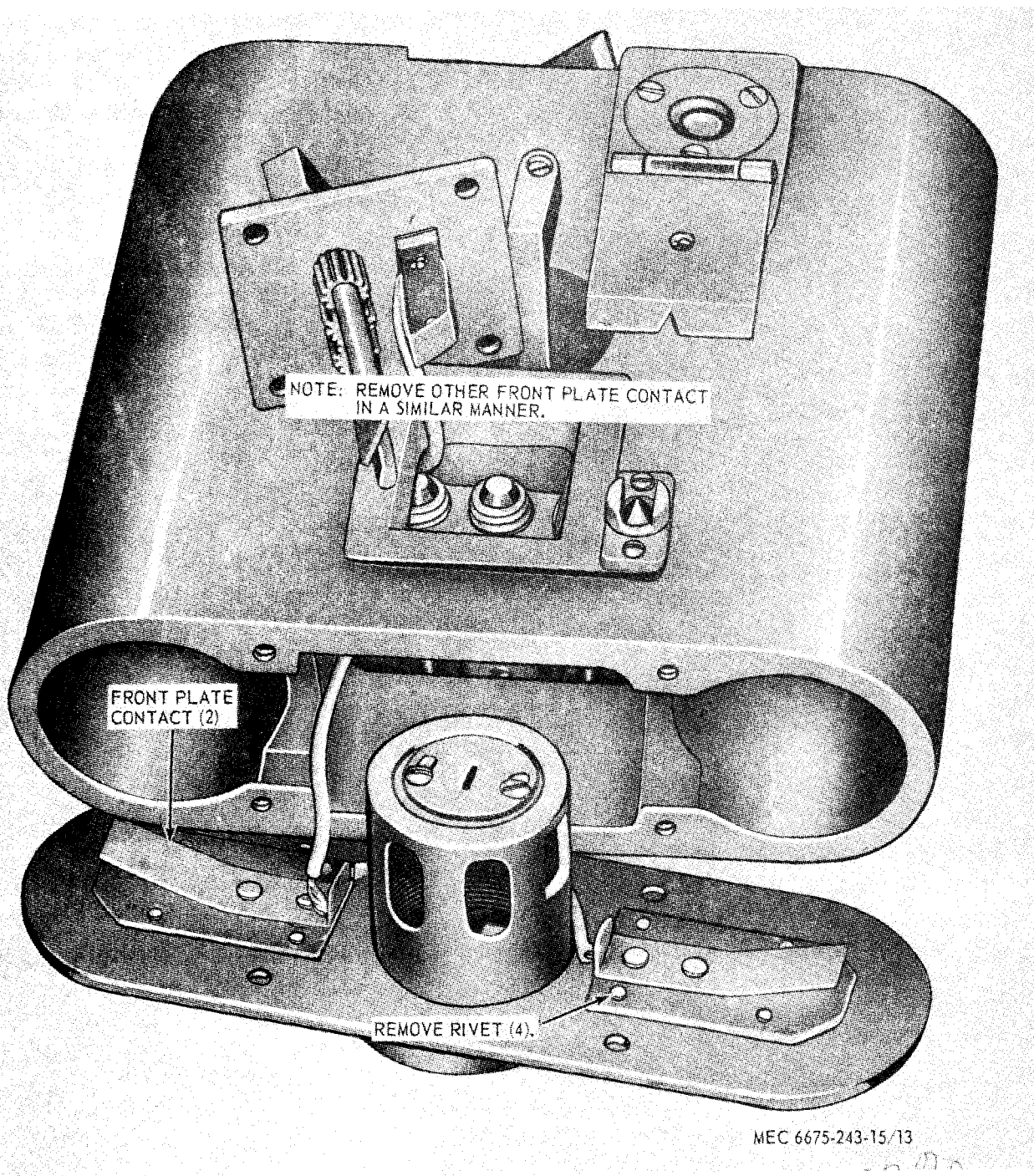


Figure 13. Front plate contacts, removal and installation.

(2) Install the front plate assembly (para 23).

51. Filter and Contact Assembly Contacts

a. Removal.

(1) Remove the filter and contact assembly (para 31).

(2) Refer to figure 14 and remove the filter and cent.aat assembly contacts.

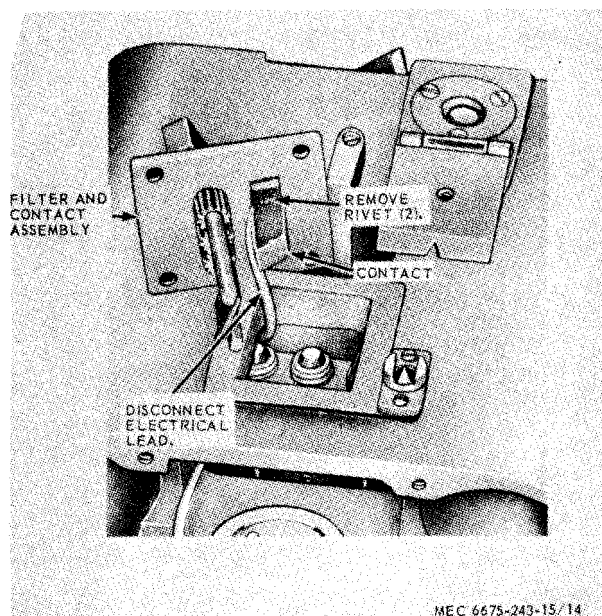


Figure 14. Filter and contact assembly contacts removal and installation.

b. Cleaning and Inspection.

- (1) Clean all parts with an approved cleaning solvent and dry thoroughly.
- (2) Inspect for cracks, breaks, corrosion, and other damage.
- (3) Replace a damaged or defective filter and contact assembly contact.

c. Installation.

- (1) Refer to figure 14 and install the 'filter and contact assembly contacts.
- (2) Install the filter and contact assembly (para. 31).

APPENDIX I

REFERENCES

1. Dictionaries of Terms and Abbreviations

AR 320-5 Dictionary of United States Army Terms
AR 320-50 Authorized Abbreviations and Brevity Codes

2. Painting and Preservation

TM 9-213 Painting Instructions for Field Use

3. Preventive Maintenance

TM 38-750 The Army Equipment Record Procedures

4. Publication Indexes

DA Pam 108-1 Index of Army Motion Pictures, Film Strips, Slides, and Phone-Recordings
DA Pam 310-1 Index of Administrative Publications
DA Pam 310-2 Index of Blank Forms
DA Pam 310-3 Index of Doctrinal, Training, and Organizational Publications
DA Pam 310-4 Index of Technical Manuals, Technical Bulletins, Supply Manuals, (types
 7, 8, and 9), Supply Bulletins, Lubrication Orders, and Modification
 Work Orders
DA Pam 310-5 Index of Graphic Training Aids and Devices
DA Pam 310-6 Index of Supply Catalogs and Supply Manuals

5. Shipment and Limited Storage

TM 38-230 Preservation, Packaging, and Packing of Military Supplies and Equip-
 ment

6. Training Aids

FM 21-6 Techniques of Military Instructions
FM 21-30 Military Symbols

APPENDIX II

BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

1. General

Section II lists the accessories, tools, and publications required for maintenance and operation by the operator, initially issued with, or authorized for the surveying target light,

2. Explanation of Columns Contained in Section II

a. Source Codes. The information provided in each column is as follows:

- (1) *Materiel.* This space is left blank for identification of agencies assigned supply responsibility for parts. Refer to appropriate Federal and Department of Army supply catalogs.
- (2) *Source.* The selection status and source of supply for each part are indicated by the following code symbol: P—applied to high mortality repair parts which are stocked in or supplied from the supply service depot system, and authorized for use at indicated maintenance level.
- (3) *Maintenance.* The lowest maintenance level authorized to use, stock, install or manufacture the part is indicated by the following code symbol: O—Organizational Maintenance.

b. Federal Stock Number. When a Federal stock number is available for a part, it will be shown in this column, and will be used for requisitioning purposes.

c. Description.

- (1) The item name and a brief description of the part are shown.
- (2) A five digit Federal supply code for manufacturers and/or other supply services is shown in parentheses followed by the manufacturer's part number. This number will be used for requisitioning purposes when no Federal stock number is indicated in the Federal stock number column.

d. Unit of Issue. If no abbreviation is shown in this column, the unit of issue is "each."

e. Quantity Authorized. This column lists the quantities of repair parts, accessories, tools, or publications authorized for issue to the equipment operator or crew as required.

f. Quantity Issued With Equipment. This column lists the quantities of repair parts, accessories, tools, or publications that are initially issued with each item of equipment. Those indicated by an asterisk are to be requisitioned through normal supply channels as required.

g. Illustrations. This column is subdivided into two columns which provide the following information:

- (1) *Figure number.* Provides identifying number of the illustration.
- (2) *Item number.* Provides the referenced number for the parts shown in the illustration.

Section II. BASIC ISSUE ITEMS LIST

Source codes			Recoverability	Federal stock No.	Description	Unit of Issue	Quantity authorized	Quantity issued with equipment	Illustration	
Material	Source	Maintenance							Fig. No.	Item No.
	P	O	-----	6135-120-1020	GROUP 31—BASIC ISSUE ITEMS, MANUFACTURER INSTALLED 3100—BASIC ISSUE ITEMS, MANUFACTURER OR DEPOT INSTALLED DEPARTMENT OF THE ARMY OPERATOR, ORGANIZATIONAL DIRECT AND GENERAL SUPPORT, AND DEPOT MAINTENANCE AND REPAIR PARTS MANUAL TM 5-6675-243-15 BATTERY: 1.5 volt, TYPE D CELL, BA30 (Repair Parts Manual Group 6704)	-----	4	4		
	P	O	-----	6240-797-2650	LAMP, INCANDESCENT; (24455) No. 14 (Repair Parts Manual Group 6705)	-----	3	3		

APPENDIX III

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

1. General

a. Section I provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. Section II designates overall responsibility for the performance of maintenance operations on the identified end item or component. The implementation of the maintenance tests upon the end item or component will be consistent with the assigned maintenance operations.

c. Section III lists the special tools and test equipment required for each maintenance operation as referenced from Section II.

d. Section IV contains supplemental instructions, explanatory notes and/or illustrations required for a particular maintenance function.

2. Explanation of Columns in Section II

a. Functional Group Number. The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes (obtained from TB 750-93-1) are listed on the MAC in the appropriate numerical sequence. These indexes are normally set up in accordance with their function and proximity to each other.

b. Component Assembly Nomenclature. This column contains a brief description of the components of each functional group.

c. Essentiality. The essentiality column reflects whether or not an assembly, or repair part, is combat essential to the tactical use of the end item. The letter "E" in this column indicates an item is combat essential.

d. Maintenance Operations and Maintenance Levels. This column lists the various maintenance operations (A through J) and indicates

the lowest maintenance level authorized to perform these operations. The symbol designations for the various maintenance levels are as follows:

O/C	-Operator or crew
O	-organizational
DS	-Direct Support
GS	-General Support
D	-Depot

The maintenance operations are defined as follows:

A-Service. Operations required periodically to keep the item in proper operating condition, i. e., to clean, preserve, drain, paint, and replenish fuel, lubricants, hydraulic, and deicing fluids, or compressed air supplies.

B-Adjust. Regulate periodically to prevent malfunction. Adjustments will be made commensurate with adjustment procedures and associated equipment specifications.

C-Align. Adjust two or more components of an electrical or mechanical system so that their functions are properly synchronized or adjusted.

D-Calibrate. Determine, check, or rectify the graduation of an instrument, weapon, or weapons system or components of a weapons system.

E-Inspect. Verify serviceability and detect incipient electrical or mechanical failure by close visual examination.

F-Test. Verify serviceability and detect incipient electrical or mechanical failure by measuring the mechanical or electrical characteristics of the item and comparing those characteristics with authorized standards. Tests will be made commensurate with test procedures and with calibrated tools and/or test equipment referenced in the MAC.

G-Replace. Substitute serviceable components, assemblies and subassemblies for unserviceable counterpart or remove and install the same item when required for the performance of other maintenance operations.

H-Repair. Restore to a serviceable condition by replacing unserviceable parts or by any other action required using available tools, equipment and skills-to include welding, grinding, riveting, straightening, adjusting and facing.

I-Overhaul. Restore an item to a completely serviceable condition (as prescribed by serviceability standards developed and published by the commodity command) by employing technique of "Inspect and Repair Only as Necessary" (IROAN). Maximum use of diagnostic and test equipment is combined with minimum disassembly during overhaul. "Overhaul" may be assigned to any level of maintenance except organizational, provided the time, tools, equipment, repair parts authorization, and technical skills are available at that level. Normally, overhaul as applied to end items, is limited to depot maintenance level.

J-Rebuild. Restore to a condition comparable to new by disassembling to determine the condition of each component part, and re-assembling using serviceable, rebuilt, or new assemblies, subassemblies, and parts.

e. Reference Note. This column, subdivided into columns "K" and "L," is provided for ref-

erencing the special tool and test equipment requirements (sec. III) and remarks (sec. IV) that may be associated with maintenance operations (sec. II).

3. Explanation of Columns in Section III

a. Reference Code. This column consists of a number and a letter separated by a dash. The number references the T&TE requirements column on the MAC. The letter represents the specific maintenance operation the item is to be used with. The letter is representative of columns A through J on the MAC.

b. Maintenance Level. This column shows the lowest level of maintenance authorized to use the special tool or test equipment.

c. Nomenclature. This column lists the name or identification of the tool or test equipment.

d. Tool Number. This column lists the manufacturer's code and part number, or Federal stock number, of tools and test equipment.

4. Explanation of Columns in Section IV

a. Reference Code. This column consists of two letters separated by a dash, both of which are references to section II. The first letter references column L and the second letter references a maintenance operation, columns A through J.

b. Remarks. This column lists information pertinent to the maintenance operation being performed, as indicated on the MAC (sec. H).

Section II. MAINTENANCE ALLOCATION CHART

Functional group number	Component assembly nomenclature	Essentiality	Maintenance level										Note ref	
			Maintenance operations										K	L
			A	B	C	D	E	F	G	H	I	J		
			Service	Adjust	Align	Calibrate	Inspect	Test	Replace	Repair	Overhaul	Rebuild	T&TE reqmt	Remarks
18 1808	BODY, CAB, HOOD AND HULL Carrying Case: Case Carrying, Assembly								O	O				

Functional group number	Component assembly nomenclature	Essentiality	Maintenance level											Note ref	
			Maintenance operations											K	L
			A	B	C	D	E	F	G	H	I	J			
			Service	Adjust	Align	Calibrate	Inspect	Test	Replace	Repair	Overhaul	Rebuild	T&TE reqmt	Remarks	
67	PRECISION INSTRUMENTS AND SYSTEMS, MECHANICAL ELECTRICAL														
6700	Survey Target Light: Light, Target Surveying -----								0	0					
6702	Optics: Sight Assembly ----- Mirror Assembly ----- Window Assembly ----- Filters -----								0 0 0 0						
6703	Mechanical, Structural and Precision Parts: Housing Assembly ----- Locking Wedge Assembly ----- Knob, Rheostat -----								0 0 0						
6704	Batteries: Battery -----								0/C						
6705	Lamps: Lamp, Bracket Assembly ----- Lamps -----								0 0/C						
6710	Circuit Components: Rheostat Assembly, Potentiometer -----								0	0					
6712	Mounted Connecting Devices: Contacts ----- Contact Strip Assembly -----								DS 0						
6718	Level: Level, Circular -----								0						

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

Reference code	Maintenance level	Nomenclature	Tool number
No special tools or test equipment required			

Section IV. REMARKS

Reference code	Remarks
No remarks required	

APPENDIX IV

ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT, AND DEPOT MAINTENANCE REPAIR PARTS LISTS

Section I. INTRODUCTION

1. General

a. This appendix lists repair parts for organizational, direct and general support, and depot maintenance. It indicates the quantity of repair parts required to be stocked by organizational maintenance as their prescribed load. It indicates the guide quantity factors to be used for initial repair parts stockage by direct and general support, and recommends quantities of repair parts for depot maintenance. Information and data contained herein serve as requisitioning reference material, and as a guide to determine stockage quantities of repair parts.

b. Price information for stock-type repair parts may be obtained from applicable Federal supply catalogs and/or Supply Management Data and Price List (ML) of the Department of Defense supply agencies.

c. Repair parts lists are arranged as follows:

- (1) Individual parts and major assemblies are listed alphabetically by item name within the functional groups.
- (2) Assembly components and subassemblies are indented and listed alphabetically by item name under major assemblies.
- (3) Bulk material is listed in functional group 9501.

d. Allowances are based on 350 hours operational per year.

2. Explanation of Repair Parts, Tools Lists, and Prescribed Load Listing (Table 2)

a. *Source Code.* This column is subdivided into four columns. The titles and information provided in each column are as follows:

- (1.) *Materiel.* This column is left blank. For identification of agencies assigned supply responsibility for parts, refer to appropriate Federal and Department of Army supply catalogs.
- (2) Source. The selection status and source of supply for each part are indicated by one of the following code symbols:
 - (a) P-applied to high mortality repair parts which are stocked in or supplied from the Army Supply System, and authorized for use at indicated maintenance categories.
 - (b) M-applied to repair parts which are not procured or stocked but are to be manufactured at indicated maintenance categories.
 - (c) X1-applied to repair parts which are not procured or stocked, the requirement for which will be supplied by use of higher assembly or components.
 - (d) X2-applied to repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.

Note. Source coding is not shown on common hardware items shown to be readily available in Army supply channels and through local procurement.

- (3) *Maintenance.*

- (a) The lowest maintenance level authorized to manufacture, assemble, and/or install the part is indicated by one of the following code symbols:

0-Organizational Maintenance
F-Direct Support Maintenance (DS)

- (b) This column is left blank when components of kits or sets are listed that are not applicable to the item of equipment, or when an item is source coded XI.

- (4) *Recoverability.* When no code is shown in the recoverability column the part is considered expendable.

b. Federal Stock Number. When a Federal stock number is available for a part, it will be shown in this column and will be used for requisitioning purposes.

c. Description.

- (1) The item name and a brief description of the part are shown.
- (2) A five-digit Federal supply code for manufacturers and/or other supply service is shown in parentheses, followed by the manufacturer's part number. This number will be used for requisitioning purposes when no Federal stock number is indicated in the Federal stock number column.

Example: (08645) 86453

- (3) Repair part quantities included in kits, sets, and assemblies, that differ from the actual quantity used in this specific end item, are listed in parentheses.
- (4) When repair parts are source coded "C," the manufacturer's part number will be used for local procurement.

Note. When a minimum stockage sufficient to repair one item and/or assembly is authorized, this quantity will be indicated to the Description column with the notation "minimum stockage of _____ is authorized."

d. Unit of Issue. If no abbreviation is shown in this column, the unit of issue is "each."

e. Quantity Incorporated in Unit. The actual number of parts used in the application indicated is shown in this column. A zero (0)

is shown when components of kits or sets are listed that are not applicable to this specific end item.

f. 15-Day Organizational Maintenance Allowance. Shown for each repair part is either a quantity or asterisk allocation which indicates the following:

- (1) A guide quantity factor is shown for each repair part authorized to be stocked by organizational maintenance. This quantity is based on past experience with similar items and the latest mortality data for 350 hours operation per year. It is the average quantity required to provide one prescribed load for 1-5 and/or 6-10 items of equipment, for a 15-day period under average combat conditions.

Note. Combat essential items which must be stocked or on order at organizational maintenance at all times, regardless of demand, will be identified in the allowance column by a quantity in parentheses.

- (2) The quantity of repair parts authorized for stockage in accordance with the number of prescribed loads authorized by the major commander are determined by using table 2.
- (3) Table 2 is a consolidation of items quantitatively allocated in this manual. Quantities listed are for one prescribed load for a 15-day period. A minimum stockage sufficient to repair one item and/or assembly is authorized (e. g., if 3 belts are required, then 3 belts are allocated as the minimum stockage). This quantity will be indicated in the minimum stockage authorization column.
- (4) Units and organizations authorized more than one prescribed load will multiply the quantity listed in the appropriate end item density spread column of 1-5 or 6-10 by the number of prescribed loads.
- (5) When more than 10 equipments require support, multiply the quantity listed in the 6-10 column by the number of equipments and the number of authorized prescribed loads, divide by 10, and round to the nearest whole number.

Table 2. Prescribed Load Listing

Federal stock No.	Description	Functional group	Minimum stockage authorization	Unit of issues	15 days organizational maintenance allowances	
					1-6	6-10
6135-120-1020	BATTERY, DRY: 1.5 volts, type D cell, BA30.	6704			1	1
6240-797-2650	LAMP, INCANDESCENT (24455) No. 14.	6705			(3)	(3)

Example: If the quantity listed in the 6-10 column is 4, the number of equipments is 17, and the number of authorized prescribed loads is 1, the following formula would be used:

$$4 \times 17 \times 1 \div 10 = 6.8$$

The resulting fraction is 0.8 therefore the authorized stockage is 7.

Example: If the quantity listed in the 6-10 column is 4, the number of equipments is 17, and the number of authorized prescribed loads is 3, the following formula would be used:

$$4 \times 17 \times 3 \div 10 = 20.4$$

The resulting fraction is 0.4; therefore the authorized stockage is 20.

Note. An exception is made for those units and organizations required to have on hand, boxed or packaged prescribed load(s) pursuant to a special mission assignment. Such prescribed load (s) will be computed or selected separately from quantities authorized for stockage at permanent station.

- (6) Repair parts required to perform organizational maintenance, which are not authorized for stockage are identified by an asterisk, and are to be requisitioned for immediate use only.
- (7) Subsequent changes to allowances will be limited as follows:
 - (a) No decrease in the stated quantity of combat essential items is authorized.
 - (b) No change in the range of items is authorized. If exception to the prescribed load listing or revision to allowances is considered necessary, a recommendation should be forwarded to the U. S. Army Mobility Equipment Center.
 - (c) Decreases in the stated quantity of items other than combat essential items are authorized to a minimum

quantity sufficient to repair one item and/or assembly and increases in the stated quantity are authorized for all items when justified by demand and usage experience. Detailed procedures for performing these adjustments are prescribed in AR 735-35.

g. Guide Quantities per 100 Equipments. Shown for each repair part applicable direct and general support, and/or depot maintenance is either an allowance factor or an asterisk allocation which indicates the following:

- (1) A guide quantity factor is shown for each part authorized to be stocked by direct and general support maintenance and supply support activities, and the number of repair parts recommended for depot maintenance. This factor is based on the latest mortality data for 350 hours operation per year and is the average quantity required by the various maintenance activities to provide maintenance and supply support for 100 items of equipment for a 15-day period under average combat conditions.
- (2) The quantities of repair parts authorized for stockage are determined using the following mathematical formula:

Quantity of equipment to be supported, multiplied by the listed allowance factor, divided by 100.

Fractions derived from the use of the above formula will be rounded to whole numbers as follows: If the result is 1 or more and includes a fraction that is 0.5 or more, the quantity is rounded to the next higher number.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 5, the following formula would be used:

$$30 \times 5 \div 100 = 1.5$$

The resulting fraction is 0.5; therefore, the stockage is 2. If the result is 1 or more and includes a fraction of less than 0.5, the quantity is rounded to the next lower number. When the computed result is less than 0.5, no quantity is authorized for direct and general support, and depot maintenance. However, if the item is combat essential, a quantity of 1 is authorized.

Example: If the number of equipment supported is 30 and the allowance factor for 100 equipments is 28, the following formula would be used:

$$30 \times 28 \div 100 = 8.4$$

The resulting fraction is less than 0.5; therefore, the stockage is 8.

- (3) In the guide quantity columns for direct and general support maintenance, additional repair parts authorized for use but not for initial stockage are listed without a guide quantity factor. These items are identified by an asterisk and may be added to or deleted from stock when recorded demand experience justifies a change in stockage objective.
- (4) Parts that may be required for depot maintenance, in addition to those allocated, are identified by an asterisk. These parts are to be requisitioned, when required, if not obtainable from reclamation, fabrication, or local procurement.
- (5) Combat essential items of a critical nature which must be stocked at direct and general support maintenance at all times, regardless of demand are identified in the allowance column by inclosing the allowance factor in parentheses.

h. Direct and General Support Maintenance 15-Da# Level.

- (1) Direct support (DS). This column

lists the initial guide quantity allowance factors of repair parts authorized for initial stockage by direct support maintenance activities to provide direct support maintenance for Mobility Command equipment and to provide organizational maintenance repair parts for supported unlit for a 15-day period. Additional repair parts identified by an asterisk are explained in *g* above. Upon establishment of supply records, recorded demand experience will be used to compute stockage objectives on authorized repair parts. Review of stockage objectives will be performed in the time cycle prescribed by major commanders.

- (2) *General support (GS).* This column lists initial guide quantity allocation factors of repair parts authorized for initial stockage by general support maintenance activities to provide general support maintenance for Mobility Command equipment for a 15-day period. Additional repair parts identified by an asterisk are explained in *g* above. Upon establishment of supply records, recorded demand experience will be used to compute stockage objectives on authorized repair parts. Review of the stockage objectives will be performed in the time cycle prescribed by major commanders.
- (3) *Units with TOE capability of performing partial or complete direct and general support maintenance for organic Mobility Command equipment.* Units with TOE capability of performing partial or complete direct and general support maintenance for organic Mobility Command equipment will be authorized to stock direct and/or general support repair parts only when specific agreements are made between the commander of the designated parts supply activity, normally DSU (Direct Support Units) and using unit. Parts so furnished are in addition to the prescribed load and will be adjusted as demands indicate.

- (4) *Units with TOE mission to provide maintenance for Mobility Command equipment of supported units.* Units organized under TOE's with the assigned mission to provide direct and general support maintenance for Mobility Command equipment of supported units are authorized to stock direct and general support repair parts. These repair parts will be issued from the appropriate parts supply activity (parts depot and/or DSU). Such stockage is in addition to the prescribed load and will be adjusted as demands indicate.

i. Depot Maintenance. This column lists the quantity of repair parts recommended for depot maintenance shops (non-TOE) to provide depot maintenance for 100 equipments. Additional repair parts are allocated by an asterisk, for immediate use only. Explanation of the asterisk allowance is contained in *g* above.

j. Illustrations. This column is subdivided into two columns as follows:

- (1) *Figure number.* Indicates the num-

ber of the illustration in which the part is shown.

- (2) *Item number.* Indicates the reference number used to point out the part in the illustration.

3. Abbreviations

AWG-American Wire Gage
dia-diameter
ft-foot (feet.)
id-inside diameter
in.-inch (es)
lg-long (length)
mtg-mounting (s)
No.-number
od-outside diameter
thk-thick (ness)
thd-thread (s) (cd)
w-watt (s)
w-wide (width)

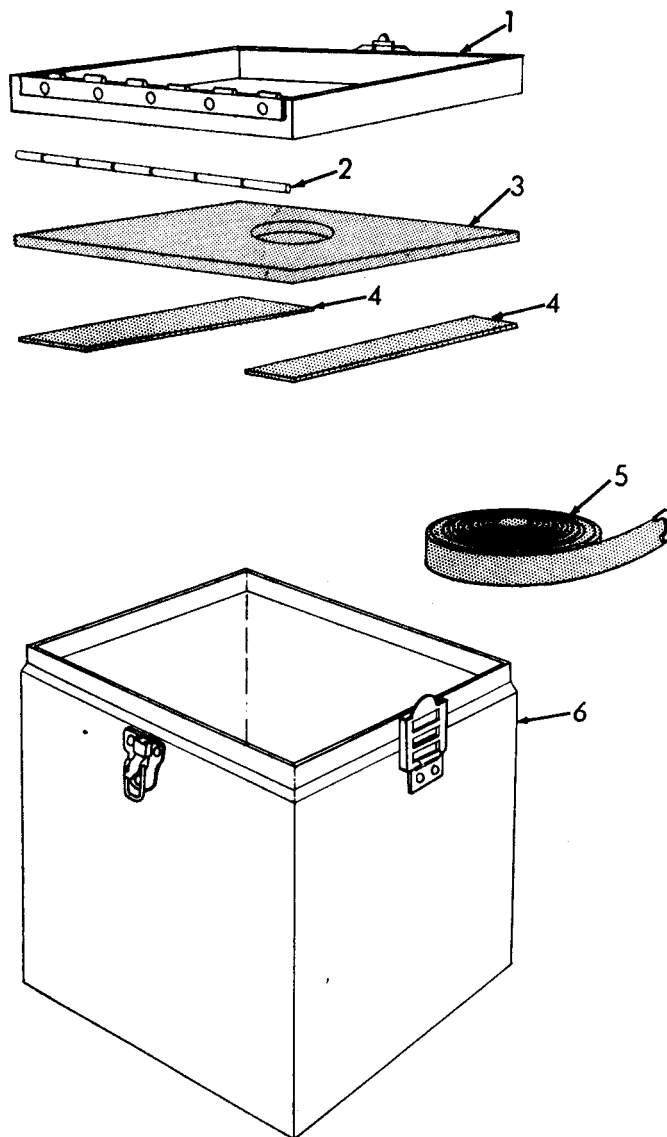
4. Index to Federal Supply Code for Manufacturers

24455-Lamp Division of Consumer Products Group GECCO.
96906-Military Standards.
97403-US Army Engineer Research and Development Laboratories.

LINE NO.	MATERIAL SOURCE	FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS					ILLUSTR		
						15 DAYS MAINTENANCE			DEPT MAINT	FIGURE NO.	ITEM NO.		
						ORGANIZATION							
						DS	GS						
						1-5	6-10	100 EQUIPMENTS					
SECTION II - REPAIR PARTS LIST													
GROUP 18 - BODY, CAB, HOOD AND HULL													
1808 - STOWAGE RACKS, BOXES, STRAPS, CARRYING CASES, CABLE REELS, HOSE REELS, ETC.													
0004	X20	5315-993-5483	CASE, CARRYING, ASSEMBLY	97403 D11350-16A	1	*	*	*	*	*	*	15	
0005	X1		BUCKLE: CASE	97403 11350-17-3	2	*	*	*	*	*	*	15 6	
0006	X20		CASE: CARRYING	97403 11350-17-1	1	*	*	*	*	*	*	15 1	
0007	X1		CATCH: CASE	97403 D11350-16-7	1	*	*	*	*	*	*	15 2	
0008	X20		COVER: CASE	97403 11350-17-2	1	*	*	*	*	*	*	15 4	
0009	X1		HINGE, STRUCTURAL, EXTRUDED	96906 MS20001-2-600	1	*	*	*	*	*	*	15 3	
0010	X20		PIN, HINGE	96906 MS20253-2-600	1	*	*	*	*	*	*	15 5	
0011	X20		PAD, RUBBER: CASE, FOAM RUBBER, 2 IN. W, 4 1/4 IN. LG, 1/4 IN. THK	97403 D11350-16-6	2	*	*	*	*	*	*		
0012	X20		PAD, RUBBER: COVER, RUBBER, 4 1/4 IN. W, 6 1/4 IN. LG, 1/4 IN. THK	97403 11350-17-4	1	*	*	*	*	*	*		
0013	X20		STRAP, CARRYING	97403 D11350-16-8	1	*	*	*	*	*	*		
0014				GROUP 67. PRECISION INSTRUMENTS AND SYSTEMS, MECHANICAL ELECTRICAL, ELECTRONIC									
0015			6700 - THEODOLITE										
0016	X20	6675-498-3767 6675-103-4118	LIGHT, TARGET SURVEYING	97403 D11350-1A	1	*	*	*	*	*	16		
0018	X20		BRACKET ASSEMBLY: LIGHT	97403 11350-11A	1	SEE	GRP	6705					
0019	X20		CAP ASSEMBLY: BATTERY	97403 11350-10A	2	SEE	GRP	6703					
0020	X20		CONTACT ASSEMBLY: STRIP	97403 11350-9A	1	SEE	GRP	6712					
0021	X20		FILTER AND CONTACT ASSEMBLY	97403 11350-13A	1	SEE	GRP	6712					
0022	X20		HOUSING: TARGET LIGHT	97403 11350-2-1	1	SEE	GRP	6703					
0023	X20		LEVEL, CIRCULAR	97403 11350-9-2	1	SEE	GRP	6718					
0024	X20		MIRROR ASSEMBLY	97403 11350-8A2	1	SEE	GRP	6702					
0025	X20		PLATE ASSEMBLY: FRONT	97403 11350-3A	1	SEE	GRP	6703					
0026	X20		RETAINER, LEVEL	97403 11350-9-5	1	SEE	GRP	6718					
0027	X20		RHEOSTAT ASSEMBLY: LIGHT	97403 11350-7A	1	SEE	GRP	6710					
0028	X20	SIGHT ASSEMBLY	97403 11350-8A	1	SEE	GRP	6702						
0029	X20	WEDGE ASSEMBLY: LOCKING	97403 11350-10-4	1	SEE	GRP	6703						
0030			6702 - OPTICS										
0031	X20	5305-550-5002 5305-050-3971	FILTER: GREEN	97403 11350-15-4	1	*	*	*	*	*	20 13		
0032	X20		FILTER: RED	97403 11350-15-3	1	*	*	*	*	*	20 2		
0033	X20		MIRROR ASSEMBLY	97403 11350-8A2	1	*	*	*	*	*	16 7		
0034	X1		HINGE	97403 11350-8-3	1	*	*	*	*	*			
0035	X1		MIRROR	97403 11350-8-4	1	*	*	*	*	*			
0036	O		SCREW, MACHINE: MIRROR ASSEMBLY NTS	96906 MS35233-13	2	*	*	*	*	*	16 8		
0037	O		SCREW, MACHINE: FILTER NTS	96906 MS35246-1	4	*	*	*	*	*	20 1		
0038	X20		SIGHT ASSEMBLY	97403 11350-8A	1	*	*	*	*	*	16		
0039	X20		BASE: SIGHT	97403 11350-8-1	1	*	*	*	*	*	16 16		
0040	X20		SIGHT	97403 11350-8-2	1	*	*	*	*	*	16 17		
0041	O		SCREW, MACHINE: SIGHT ASSEMBLY NTS	97403 11350-8-2	2	*	*	*	*	*	16 19		
0042			6703 - MECHANICAL, STRUCTURAL, AND PRECISION PARTS										
0043	X20	5305-558-2864	CAP ASSEMBLY: BATTERY	97403 11350-10A	2	*	*	*	*	*	16		
0044	X20		GASKET: CAP	97403 11350-10-1	2	*	*	*	*	*	16 6		
0045	X20		SCREW, MACHINE: CONTACT SPRING NTS	97403 11350-10-2	2	*	*	*	*	*	16 5		
0046	O		SPRING, HELICAL, COMPRESSION: CONTACT, BATTERY	96906 MS35233-31	2	SEE	GRP	6712					
0047	X20		HOUSING: TARGET LIGHT	97403 11350-10-3	2	SEE	GRP	6712					
0048	X20		KNOB: FILTER AND CONTACT ASSEMBLY	97403 11350-2-1	1	*	*	*	*	*	16 1		
0049	X20		PIN, SPRING: KNOB RETAINING, 1/16 IN. DIA, 1/4 IN. LG	97403 11350-15-5	1	*	*	*	*	*	20 10		
0050	X20		KNOB: RHEOSTAT	97403 11350-18-2	1	*	*	*	*	*	20 11		
0051	X20		SETSCREW: KNOB RETAINING	97403 11350-7-3	1	*	*	*	*	*	19 8		
0052	O		PLATE ASSEMBLY: FRONT	97403 11350-7-7	1	*	*	*	*	*	19 9		
0053	X20		CONTACT STRIP: FRONT PLATE	97403 11350-3A	1	*	*	*	*	*	17		
0054	X20	GASKET: FRONT PLATE ASSEMBLY	97403 11350-4A	2	SEE	GRP	6712						
0055	X20	HOUSING ASSEMBLY: WINDOW	97403 11350-4-3	1	*	*	*	*	*	17 3			
0056	X1	CAP, WINDOW	97403 11350-5A	1	*	*	*	*	*	17 6			
0057	X1	HOUSING, WINDOW	97403 11350-5-1	1	*	*	*	*	*				
0058	X1	GASKET	97403 11350-6-1	1	*	*	*	*	*				
0059	X1			97403 11350-6-3	1	*	*	*	*				

LINE NO.	SOURCE CODES		FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS						ILLUST	
	MATERIAL SOURCE	MAINT RECOVERABILITY					15 DAYS MAINTENANCE			DEPT MAINT	FIGURE NO	ITEM NO.		
							ORGANIZATION							
							DS	GS						
				MANUFACTURER'S			1-5	6-10	100 EQUIPMENTS					
				CODE	PART NO.									
0060	X1			GASKET	97403 11350-6-4	1								
0061	X1			RIVET, SOLID: 1/16 IN. DIA, 3/16 IN. LG, ALUMINUM	97403 D11350-5A9	4								
0062	O	5305-579-3029		SCREW, MACHINE: PAN HEAD, SLOTTED, No. 2-56 NC2A x 1/8 IN. LG	96906 M335233-1	2	*	*	*	*	*			
0063	X1			SHIELD	97403 11350-6-2	1						17 5		
0064	X1			WINDOW	97403 11350-5-3	1								
0065	X1			PLATE: FRONT	97403 11350-3-1	1						17 4		
0066	X1			RIVET, SOLID: CONTACT PLATE MTG	97403 11350-3A5	8	SEE GRP 67	2						
0067	X1			RIVET, SOLID: HOUSING ASSEMBLY WINDOW MOUNTING	97403 11350-3A6	4						17 9		
0068	O	5305-579-3029		SCREW, MACHINE: SHIELD MTG		2	*	*	*	*	*	17 8		
0069	X20	5305-543-2580		SCREW, MACHINE: FRONT PLATE ASSEMBLY MOUNTING	96906 M335233-43	4	*	*	*	*	*	17 7		
0070	X20			WEDGE ASSEMBLY: LOCKING	97403 11350-10-4	1	*	*	*	*	*	16		
0071	X20			SCREW, EXTERNALLY RELIEVED BODY: WEDGE ASSEMBLY, 4-40 THD SIZE, 3/4 IN. OVERALL LG, 1/8 IN. THD LG UNDER HD, FIL HD	97403 11350-10-5	2	*	*	*	*	*	16 14		
0072	X20			WEDGE, LOCKING	97403 11350-10-4	1	*	*	*	*	*	16 13		
0073				6704 = BATTERIES										
0074	P O	6135-120-1020		BATTERY, DRY: 1.5 VOLTS, TYPE D CELL, BA30		4	*	1	4	*	15	16 2		
0075				6705 = FUSES AND LAMPS										
0076	X20			BRACKET ASSEMBLY: LIGHT	97403 11350-11A	1	*	*	*	*	*	18		
0077	X20			COVER: BRACKET	97403 11350-12-1	1	*	*	*	*	*			
0078	X20			GASKET: LIGHT BRACKET ASSEMBLY	97403 11350-12-3	1	*	*	*	*	*	18 2		
0079	X20			HOLDER, LAMP	97403 11350-11-1	1	*	*	*	*	*	18 3		
0080	P O	6240-797-2650		LAMP, INCANDESCENT	24455 14	3	(3)	(3)	(6)	*	100	18 12		
0081	O	5315-855-0002		PIN, GROOVED, HEADLESS: HOLDER MTG, 1/8 IN. DIA, 1/2 IN. LG	96906 M335672-21	1	*	*	*	*	*	18 4		
0082	X20			SCREW, ADJUSTMENT: 4-48 NF2, 7/8 IN. LG, CRES, FLATPOINT	97403 11350-12-4	2	*	*	*	*	*	18 5		
0083	X20			THUMBSCREW: LIGHT BRACKET MTG	97403 11350-12-2	2	*	*	*	*	*	18 6		
0084				6710 = CIRCUIT COMPONENTS										
0085	M O			LEAD ASSEMBLY, ELECTRICAL: RHEOSTAT TO CONTACT STRIP ASSEMBLY AND FRONT PLATE CONTACT		2						19 11		
0086	X20	5975-892-7354		MANUFACTURE FROM: TERMINAL LUG: 18 AWG WIRE, No. 8 SCREW SIZE		4	*	*	*	*	*			
0087	P O	6145-233-7472		WIRE, ELECTRICAL (1ST LEAD 3 IN. REQUIRED) (2ND LEAD 6 IN. REQUIRED)										
0088	M O			LEAD ASSEMBLY, ELECTRICAL: RHEOSTAT TO FILTER AND CONTACT ASSEMBLY		1	SEE GRP 95A1					19 1		
0089	X20	6145-233-7472		MANUFACTURE FROM: WIRE, ELECTRICAL (6 IN. REQUIRED)			SEE GRP 95A1							
0090	X20	5905-239-6090		RHEOSTAT ASSEMBLY: LIGHT	97403 11350-7A	1	*	*	*	*	*	19 4		
0091	X20			GASKET: RHEOSTAT	97403 11350-7-2	1	*	*	*	*	*			
0092	X20			KNOB: RHEOSTAT	97403 11350-7-3	1	SEE GRP 67C3							
0093	X20			PLATE: RHEOSTAT	97403 11350-7-1	1	*	*	*	*	*	19 5		
0094	X20	5905-281-9048		RESISTOR: 2W, 10 OHM	97403 11350-7A8	1	*	*	*	*	*	19 2		
0095	O	5505-208-0154		SETSCREW	97403 D11350-7A7	1	*	*	*	*	*			
0096	X20			SPACER: RHEOSTAT, PLASTIC	97403 11350-7-4	1	*	*	*	*	*	19 3		
0097	X20			WASHER, NONMETALLIC: RHEOSTAT MTG, 0.375 IN. ID, 11/16 IN. OD, 1/16 IN. THK, PLASTIC	97403 11350-7-5	1	*	*	*	*	*	19 7		
0098	X20			WASHER, NONMETALLIC: RHEOSTAT MTG, RUBBER SYNTHETIC, 11/32 IN. ID, 11/16 IN. OD, 1/16 IN. THK	97403 11350-7-6	1	*	*	*	*	*	19 6		
0099	O	5305-637-7079		SCREW, MACHINE: RHEOSTAT ASSEMBLY MTG	96906 M335223-26	4	*	*	*	*	*	19 10		
0100				6712 = MOUNTED CONNECTING DEVICES										
0101	X20			CONTACT ASSEMBLY: STRIP	97403 11350-9A	1	*	*	*	*	*	18		
0102	X20			BINDING POST: BLACK	97403 11305-9A6	1	*	*	*	*	*	18 10		
0103	X20			BINDING POST: RED	97403 11305-9A5	1	*	*	*	*	*	18 9		
0104	X20			GASKET: CONTACT STRIP MTG	06444 11350-9-2	1	*	*	*	*	*	18 1		
0105	X20			INSULATOR, PLASTIC: BINDING POST, RED	97403 11350-9-3	1	*	*	*	*	*	18 14		
0106	X20			PLATE, CONTACT STRIP	97403 11350-9-1	1	*	*	*	*	*	18 7		
0107	X20			WASHER, NONMETALLIC: BINDING POST, RUBBER, 5/32 IN. ID, 3/8 IN. OD, 1/16 IN. THK	97403 11350-9-4	2	*	*	*	*	*	18 8		
0108	O	5310-827-7898		NUT, PLAIN ROUND: BINDING POST		3	*	*	*	*	*	18 13		
0109	X2F			CONTACT STRIP: FRONT PLATE	97403 11350-4A	2	*	*	*	*	*	17 2		

LINE NO.	SOURCE CODES		FEDERAL STOCK NUMBER	DESCRIPTION	UNIT OF ISSUE	QTY INCORPORATED IN UNIT	GUIDE QTY(S) PER MAJ EQUIPS						ILLUST		
	SOURCE	MAINT					RECOVERABILITY	15 DAYS MAINTENANCE				DEPO MAIN	FIGURE NO.	ITEM NO.	
								ORGANIZATION		DS					GS
								1-5	6-10	100	EQUIP				
MANUFACTURER'S					CODE	PART NO.									
0110	X1			RIVET, SOLID; CONTACT STRIP MTO, FRONT PLATE		8								17	1
0111	X20			FILTER AND CONTACT ASSEMBLY	97403 11350-13a	1	*	*	*	*	*	*	*	20	8
0112	X20			CAP	97403 11350-14-2	1	*	*	*	*	*	*	*	20	8
0113	X20			FILTER; PLASTIC, GREEN	97403 11350-15-4	1	SEE	GRP 6102							
0114	X20			FILTER; PLASTIC, RED	97403 11350-15-3	1	SEE	GRP 6102							
0115	X20			GASKET; CAP	97403 113550-14-4	1	*	*	*	*	*	*	*	20	7
0116	X20			GASKET; PLATE	97403 11350-14-3	1	*	*	*	*	*	*	*	20	5
0117	X20			KNOB; FILTER AND CONTACT ASSEMBLY	97403 11350-15-5	1	SEE	GRP 6103							
0118	X20			PIN, SPRING; KNOB RETAINING, 1/16 IN. DIA, 1/4 IN. LG	97403 11350-18-2										
0119	X1			SPRING, CONTACT	97403 11350-13-2	1	*	*	*	*	*	*	*	20	6
0120	X20			PLATE, CONTACT	97403 11350-14-1	1	*	*	*	*	*	*	*	20	6
0121	0	5305-050-3971		SCREW, MACHINE; FILTER MTO	96906 MS35246-1	1	SEE	GRP 6102							
0122	0	5305-550-5002		SCREW, MACHINE; CAP MTO	96906 MS 35233-13	2	*	*	*	*	*	*	*	20	9
0123	X20			SHAFT AND GEAR; CONTACT ASSEMBLY	97403 11350-15-1	2	*	*	*	*	*	*	*	20	3
0124	X20			SHAFT AND PINION; CONTACT ASSEMBLY	97403 11350-15-2	1	*	*	*	*	*	*	*	20	4
0125	0	5305-558-2864		SCREW, MACHINE; CONTACT SPRING MTO	96906 MS35233-31	2	*	*	*	*	*	*	*	16	3
0126	0	5305-637-7079		SCREW, MACHINE; CONTACT STRIP ASSEMBLY MOUNTING	96906 MS35223-26	2	*	*	*	*	*	*	*	18	11
0127	0	5305-045-1628		SCREW, MACHINE; FILTER AND CONTACT ASSEMBLY MTO, PAN MD, SLOTTED, No. 6-32 THD, 3/8 IN. LG	96906 MS35233-28	1	*	*	*	*	*	*	*	20	12
0128	X20			SPRING, HELICAL, COMPRESSION; CONTACT, BATTERY	97403 11350-10-3	2	*	*	*	*	*	*	*	16	4
0129				6718 - COMPASS AND LEVEL											
0130	X20			LEVEL, CIRCULAR	97403 11350-9-2	1	*	*	*	*	*	*	*	16	10
0131	X20			BUBBLE ILLUMINATOR; CLEAR PLASTIC	97403 11350-4-4	1	*	*	*	*	*	*	*		
0132	0	5330-292-0564		PACKING, PREFORMED; LEVEL MTO	96906 MS28784-12	1	*	*	*	*	*	*	*	16	9
0133	X20			RETAINER, LEVEL	97403 11350-9-5	1	*	*	*	*	*	*	*	16	11
0134	0	5305-050-3906		SCREW, MACHINE; RETAINER MTO		3	*	*	*	*	*	*	*	16	12
0135				GROUP 95 - GENERAL USE STANDARDIZED PARTS											
0136				9501 - BULK MATERIAL											
0137	P 0	6145-233-7472		WIRE, ELECTRICAL; 18 AWG		T	*	*	*	*	*	*	*		

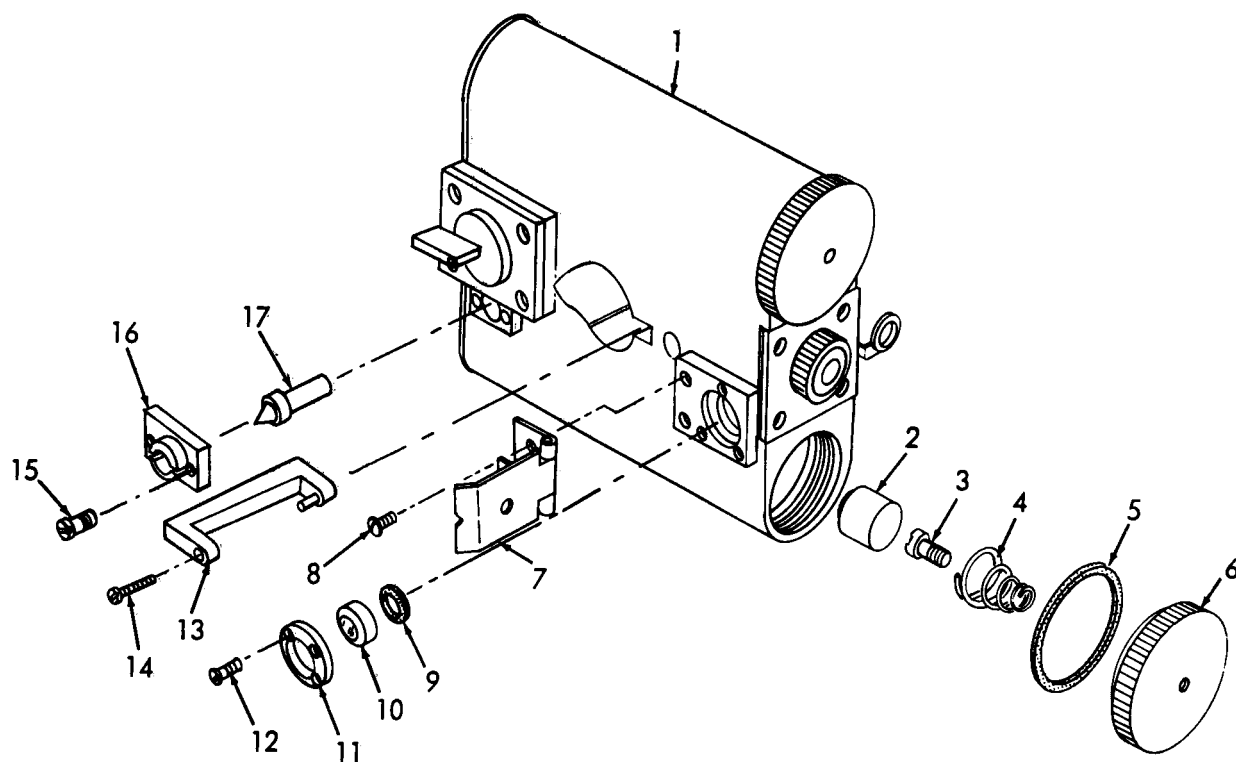


MEC 6675-243-15/15

INDEX TO PARTS, FIGURE 15

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	1808	COVER	4	1808	PAO
2	1808	PIN	5	1808	STRAP
3	1808	PAD	6	1808	CASE

Figure 15. case.

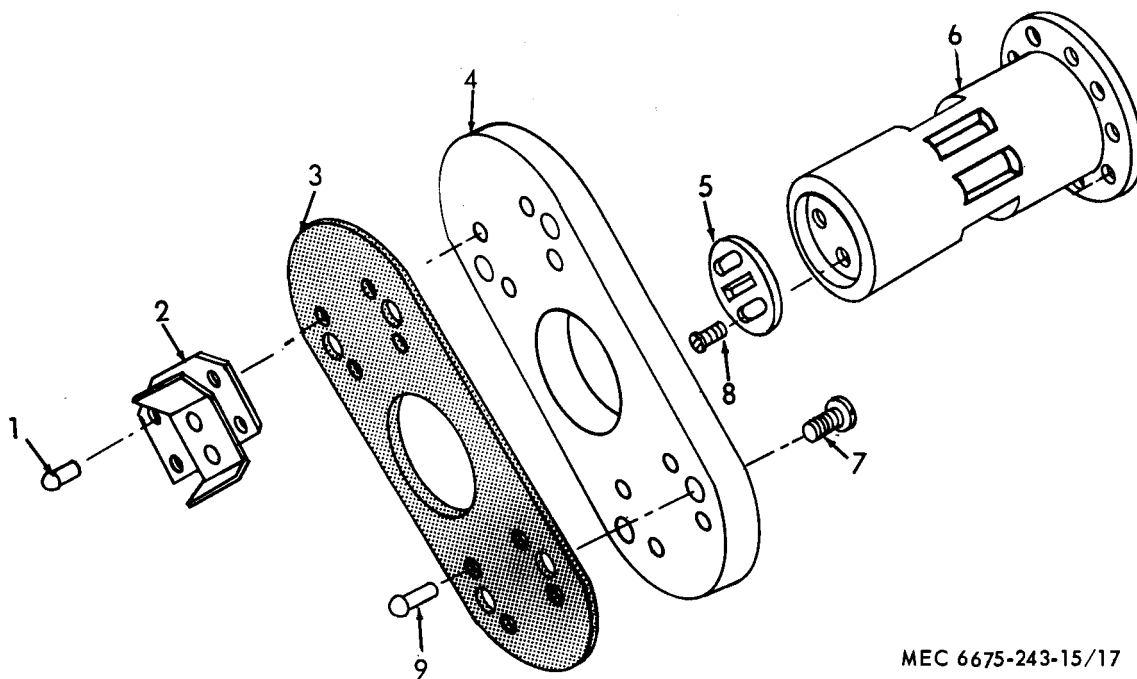


MEC 6675-243-15/16

INDEX TO PARTS, FIGURE 16

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	6703	HOUSING	10	6718	LEVEL
2	6704	BATTERY	11	6718	RETAINER
3	6712	SCREW	12	6718	SCREW
4	6712	SPRING	13	6703	WEDGE
5	6703	GASKET	14	6703	SCREW
6	6703	CAP	15	6702	SCREW
7	6702	MIRROR ASY	16	6702	BASE
8	6702	SCREW	17	6702	SIGHT
9	6718	PACKING			

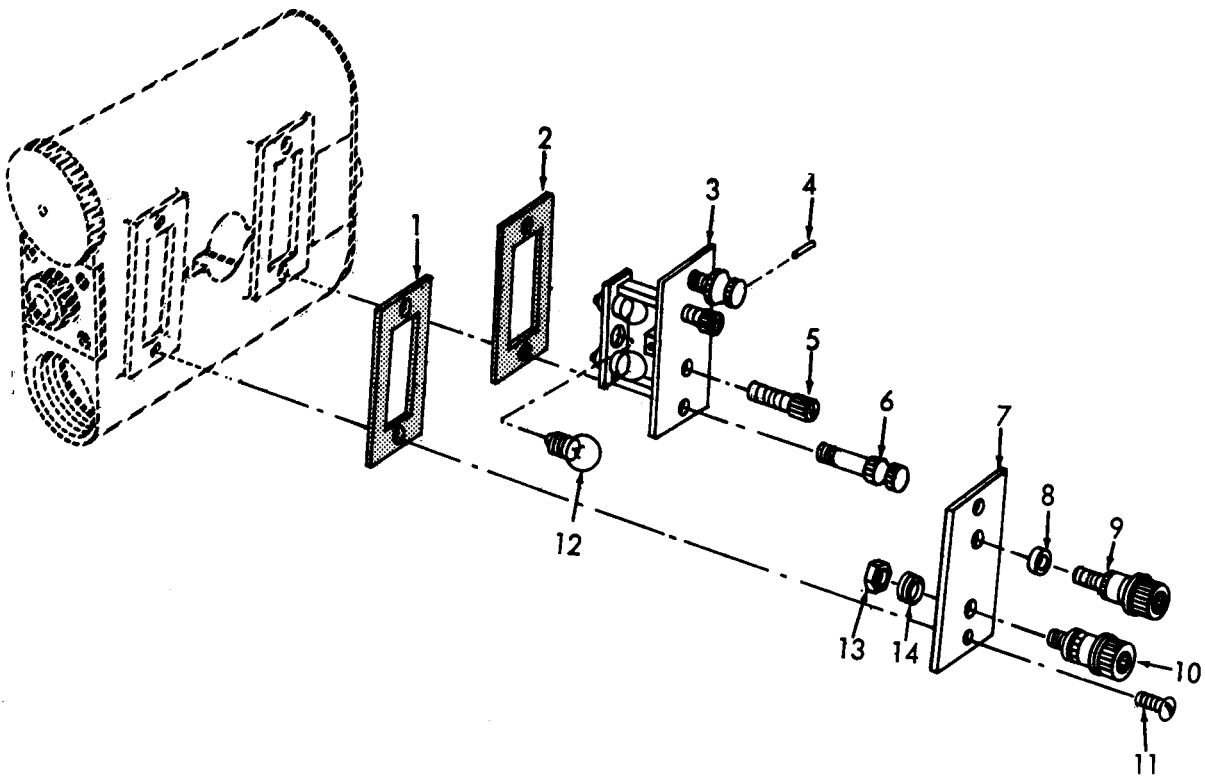
Figure 16. Light target surveying.



INDEX TO PARTS, FIGURE 17

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	6712	RIVET	4	6703	PLATE	7	6703	sCREW
2	6712	CONTACT STRIP	5	6703	SHIELD	8	6703	sCREW
3	6703	GASKET	6	6703	HOUSING AY	9	6703	RIVET

Figure 17. Plate.

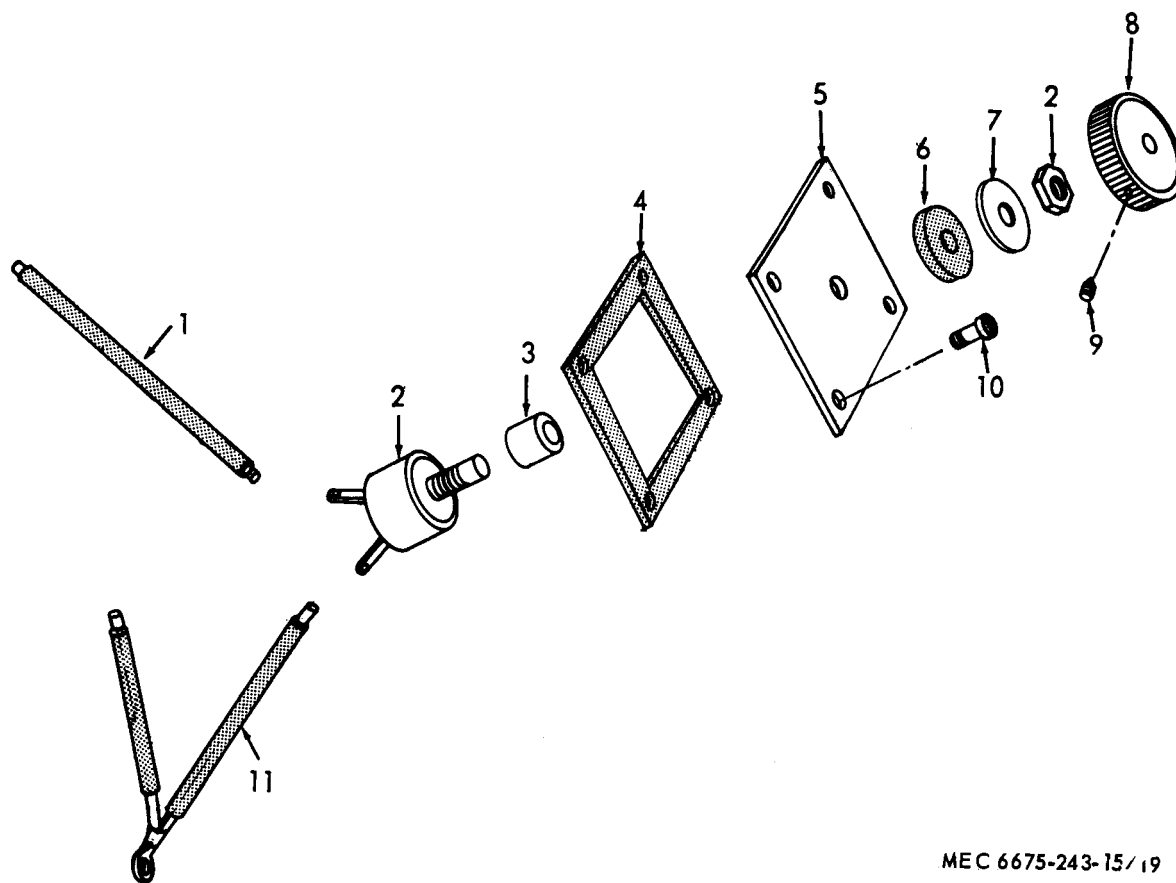


MEC 6675-243-15/18

INDEX TO PARTS, FIGURE 18

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	6712	GASKET	8	6712	WASHER
2	6705	GASKET	9	6712	BI NDI NG POST
3	6705	HOL OER	10	6712	BI NDI NG POST
4	6705	PI N	11	6712	SCREW
5	6705	SCREW	12	6705	LAMP
6	6705	THUMBSCREW	13	6712	NuT
7	6712	PLATE	14	6712	I NSULATOR

Figure 18. Bracket.



MEC 6675-243-15/19

INDEX TO PARTS, FIGURE 19

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	6710	LEAD AY	7	6710	WASHER
2	6710	RESISTOR	8	6703	KNOB
3	6710	SPACER	9	6703	sETSCREW
4	6710	GASKET	10	6710	sCREW
5	6710	PLATE	11	6710	LEAO AY
6	6710	WASHER			

Figure 19. Rheostat.

INDEX TO PARTS, FIGURE 20

REF NO.	FUNCT GROUP	ITEM NAME
1	6702	SCREW
2	6702	FILTER
3	6712	SHAFT-GEAR
4	6712	SHAFT-PINION
5	6712	GASKET
6	6712	PLATE
7	6712	GASKET
8	6712	CAP
9	6712	SCREW
10	6703	KNOB
11	6703	PIN
12	6712	SCREW
13	6702	FILTER

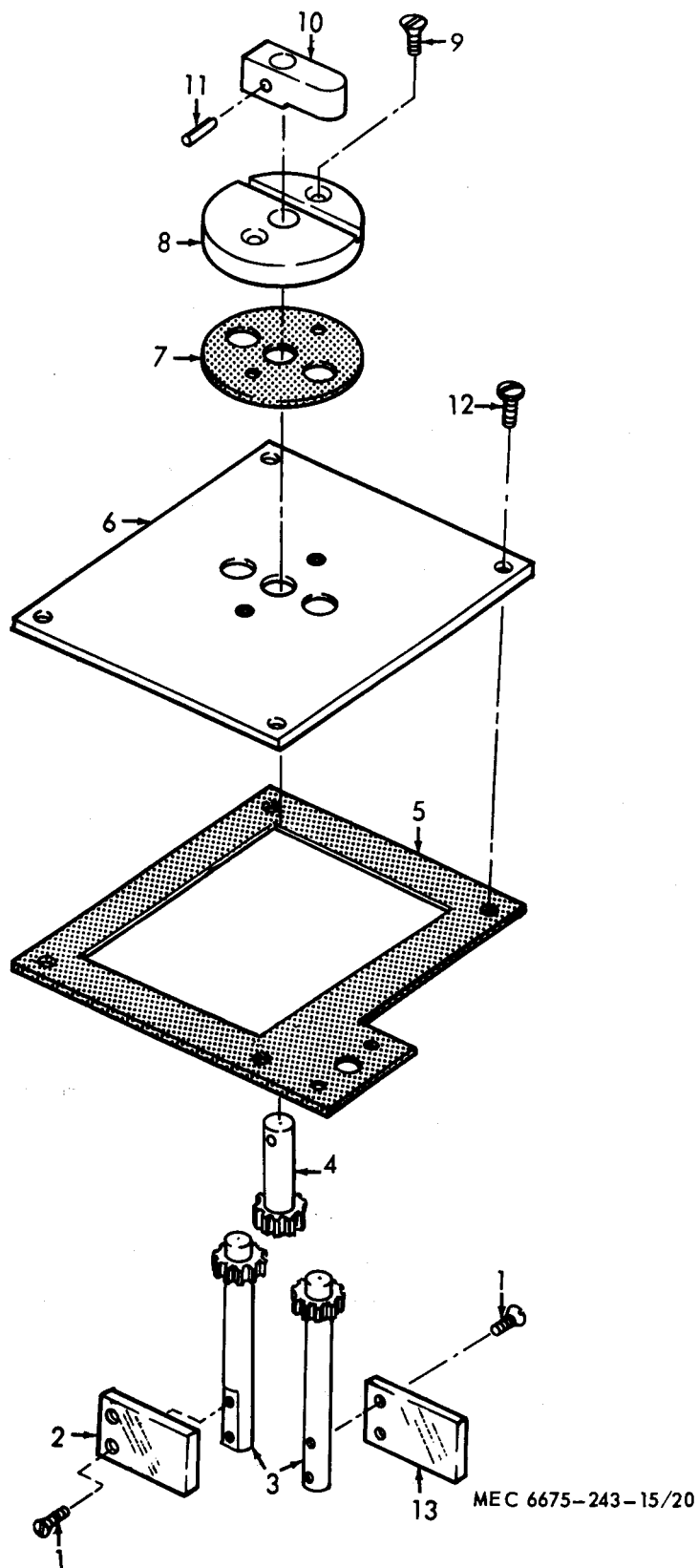


Figure 20. Filter and contact.

INDEX

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Contact strip assembly _____	28	13	Loading equipment for shipment ____	39	18
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General -----	34	17	Organizational maintenance repair		
Other demolition methods -----	36	17	parts -----	15	8
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inoperative -----	35	17	shipment _____	38	18
Training _____	37	17	Preparation of equipment for storage	40	18
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Front plate contacts _____	50	20	Sight -----	33	16
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Inspecting and servicing equipment ____	7	5	Troubleshooting:		
Inspection and maintenance of			General -----	19	10
equipment in storage _____	41	18	Illumination cannot be controlled ____	21	10
Installation or setting-up			No illumination in target light ----	20	10
instruction -----	8	5	Unpacking the equipment _____	6	5
Lamp bracket _____	27	13			

By Order of the Secretary of the Army:

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*General, United States Army,
Chief of Staff.*

Official:

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Army Tml (1)
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Fld Cored, DASA (8)
AMS (3)
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MAAG (1)
JBUSMC (1)
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 5-237 (5)
 5-262 (5)
 5-267 (1)
 5-278 (5)
 5-279
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 6-317
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 6-406
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NG: State AG (3)

USAR: Same as active Army except allowance is one (1) copy for each unit.
For explanation of abbreviations used, see AR 320-50.

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL MANUALS

SOMETHING WRONG WITH THIS MANUAL?



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

FROM: (YOUR UNIT'S COMPLETE ADDRESS)

PFC JOHN DOE
CoA, 3^d ENGINEER BN
FT. LEONARD WOOD MO 63108

DATE 16 DEC 74

PUBLICATION NUMBER

TM5-6115-200-20 AND P

DATE

1 APR 72

TITLE

GENERATOR SET 10 KW
NSN 6115-00-231-7286

BE EXACT... PIN-POINT WHERE IT IS

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

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.
6	2-1 a		
81		4-3	
125	line 20		

In line 6 of paragraph 2-1a the manual states the engine has 6 cylinders. The engine on my set only has 4 cylinders. Change the manual to show 4 cylinders.

Callout ^D on figure 4-3 is pointing at a bolt. In the key to fig. 4-3, item 16 is called a shim. Please correct one or the other.

I ordered a gasket, item 19 on figure B-16 by NSN 2910-00-762-3001. I got a gasket but it doesn't fit. Supply says I got what I ordered so the NSN is wrong. Please give me a good NSN.

TYPED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

JOHN DOE, PFC (268) 317-7111

SIGN HERE:

John Doe

DA FORM 2028-2 (TEST)
1 AUG 74

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PREVIOUS EDITIONS
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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

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

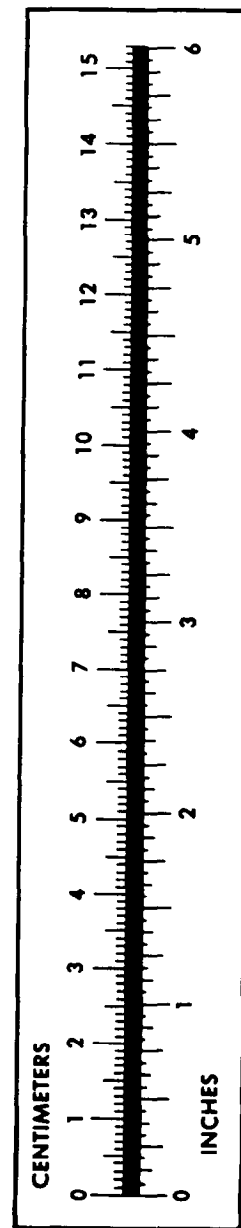
TEMPERATURE

$5/9(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 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
Quarts	Liters	0.473
Gallons	Liters	0.946
Ounces	Liters	3.785
Pounds	Grams	28.349
Short Tons	Kilograms	0.454
Pound-Feet	Metric Tons	0.907
Pounds per Square Inch	Newton-Meters	1.356
Miles per Gallon	Kilopascals	6.895
Miles per Hour	Kilometers per Liter	0.425
	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
Liters	Gallons	0.264
Grams	Ounces	0.035
Grams	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



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