# **TECHNICAL MANUAL**

### ORGANIZATIONAL MAINTENANCE REPAIR PARTS

# AND SPECIAL TOOLS LISTS

## FOR

# LASER INFRARED OBSERVATION SET

# AN/GVS-5

# (NSN 5860-01-062-3543)

HEADQUARTERS, DEPARTMENT OF THE ARMY 8 JUNE 1981 TECHNICAL MANUAL

No. 11-5860-201-20P

HEADQUARTERS DEPARTMENT OF THE ARMY WASHINGTON, DC 8 June 1981

#### **ORGANIZATIONAL MAINTENANCE REPAIR PARTS**

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LASER INFRARED OBSERVATION SET AN/GVS-5

#### (NSN 5860-01-062-3543)

Current as of 26 December 1980

#### **REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DR-SEL-ME-MQ, Fort Monmouth, NJ 07703.

In either case, a reply will be furnished direct to you.

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\* This manual supersedes TM 11-5860-201-20P, 7 September 1979.

### SECTION I INTRODUCTION

Code

#### 1. Scope

This manual lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of organizational maintenance of the AN/GVS-5. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

#### 2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence.

b. Section II. Special Tools List. Not applicable.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list, in alphameric sequence, of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

#### **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.

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

b. Source, Maintenance, and Recoverability (SMR) Codes.

(1) Source code. Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows: Code

#### Definition

PA-Item procured and stocked for anticipated or known usage.

Definition

- PD-Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.
- XA-Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
- XD-A support item that is not stocked. When required, item will be procured through normal supply channels.

#### NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) Maintenance code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code

Application/Explanation

O-Support item is removed, replaced, used at the organizational level.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes: Application/Explanation Code

- O-The lowest maintenance level capable of complete repair of the support item is the organizational level.
- F-The lowest maintenance level capable of complete repair of the support item is the direct support level.

#### TM 11-5860-201-20P

Code

#### Application/Explanation

D-The lowest maintenance level capable of complete repair of the support item is the depot level.

Z-Nonreparable. No repair is authorized.

(3) *Recoverability code.* Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

*Recoverbility codes* 

#### Definition

- Z—Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
- O-Reparable item. When uneconomically reparable, condemn and dispose at organizational level.
- F-Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.
- D-Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.

*c. National Stock Number.* Indicates the National stock number assigned to the item and will be used for requisitioning purposes.

*d. Federal Supply Code for Manufacturer (FSCM).* The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

e. *Part Number.* Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), 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.

#### NOTE

When a stock numbered item is requisitioned, the repair part received may have a different part number than the part being replaced.

*f. Description.* Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e. g., ea, in, pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned. *h. Quantity Incorporated in Unit.* Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly.

#### 4. Special Information

*a.* The following publications pertain to the AN/GVS-5 and its components:

TM 11-5860-201-10, Laser Infrared Observation Set AN/GVS-5

TM 11-5860-201-20, Laser Infrared Observation Set AN/GVS-5.

*b.* The illustrations in this manual are identical to those published in TM 11-5860-201-30P. Only those parts assigned the third position SMR maintenance code "C" or "O" are listed in the tabular listing therefore, there may be a break in the item number sequence. Only illustrations containing organizational authorized items appear in this manual.

c. National stock numbers (NSN's) that are missing from P source coded item have been applied for and will be added to this TM by future change/revision when they are entered in the Army Master Data File (AMDF). Until the NSN's are established and published, submit exception requisitions to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-MM, Fort Monmouth, NJ 00703 for the part required to support your equipment.

#### 5. How to Locate Repair Parts

*a.* When National stock number or part number is unknown.

(1) *First.* Using the table of contents, determine the functional group within which the item belongs. This is necessary since illustrations are prepared for functional groups and listings are divided into the same groups.

(2) *Second.* Find the illustration covering the functional group to which the item belongs.

(3) *Third.* Identify the item on the illustration and note the illustration figure and item number of the item.

(4) *Fourth.* Using the Repair Parts Listing, find the figure and item number noted on the illustration.

*b.* When National stock number or part number is known.

(1) *First.* Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.(2) Second After finding the figure and item

number, locate the figure and item number in the

repair parts list.

#### 6. Abbreviations

Not applicable.

(Next printed page is 4)

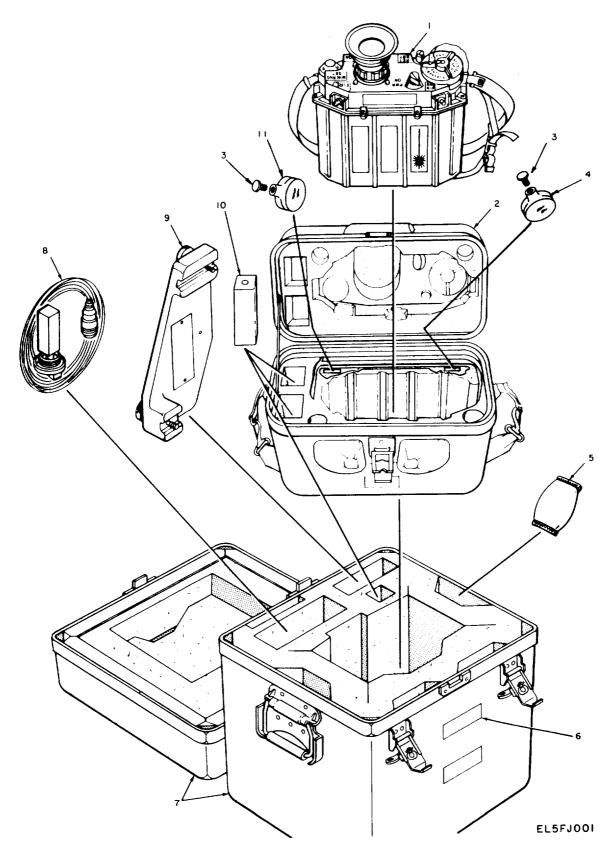


Figure 1. Laser Infrared Observation Set AN/GVS-5.

	TRATION	(2)	(3)	(4)	TM11-5860-201-20P (5)	(6) DESCRIPTION	(7)	(8) QTY
FIG I	(B) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER		USABLE U/M	INC IN UNIT
						GROUP 00 LASER INFRARED OBSERVATION	ſ	
						SET AN/GVS-5		
1 1	1	PDODD	5860-01-070-3803	80058	MX-9838/GVS-5	LASER, INFRARED OBSE	EA	1
1 2	2	PAOFF	5860-01-072-2885	80058	CY-7536/GVS-5	CASE, FIELD, LASER, IN	EA	1
1 3	3	PAOZZ	5305-00-833-8631	96906	MS18212-15	SCREW, MACHINE	EA	2
1 4	4	PA000		80063	SM-C-955638	FILTER ASSY, YELLOW	EA	1
1 5	5	PAOZZ		81349	M3464TYPE1	DESICCANT	EA	4
1 8	8	PAODD	5995-01-069-0969	80058	CX-13021/GVS-5	CABLE ASSEMBLY, SPEC	EA	1
1 9	9	PAOZZ	5860-01-069-4742	80058	MT-4832/GVS-5	MOUNT, ADAPTER	EA	1
1 1	10	PAOZZ	6140-01-042-9942	80058	BB-516-U	BATTERY, STORAGE	EA	3
1 1	11	PA000		80063	SM-C-955637	FILTER ASSY, RED	EA	1

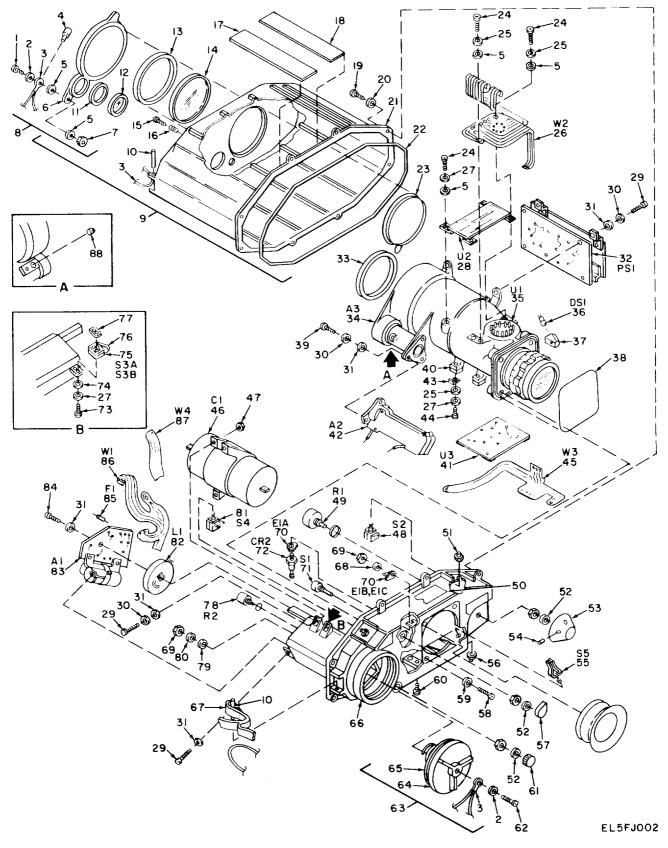


Figure 2. Laser Infrared Observation Device MX-9838/GVS-5.

(1)	TION II JSTRATION (B)	(2)	(3) NATIONAL	(4)	TM11-5860-201-2 (5)	0P (6) DESCRIPTION	(7)	(8) QTY INC
	ITEM NO	SMR CODE	STOCK NUMBER	FSCM	PART NUMBER	USABLE ON	U/M	IN
						GROUP 01 LASER INFRARED OBSERVATION DEVICE		
						MX-9838/GVS-5		
2	1	PAOZZ	5305-01-076-4890	80063	SM-C-852343	SCREW, MACHINE	EA	1
2	2	PAOZZ	5310-01-070-5550	80063	SM-C-852048	WASHER, SHOULDERED	EA	3
2	3	PAOZZ	5860-01-075-0047	80063	SM-C-852049	CABLE ASSEMBLY	EA	2
2	4	PAOZZ	5970-00-954-1622	81349	M23053/5-105-0	INSULATION SLEEVING	$\mathbf{FT}$	1
2	5	PAOZZ	5310-595-6761	96906	MS15795-802	WASHER, FLAT	EA	7
2	6	PAOZZ		80063	SM-D-955608-1	LENS PROTECTOR	EA	1
2	7	PAOZZ	5310-01-076-3181	80063	SM-C-852349	NUT, PLAIN, HEXAGON	EA	1
2	8	PA000		80063	SM-D-955608	LENS PROTECTOR ASSY	EA	1
2	10	PAOZZ	5315-01-074-5941	80063	SM-C-882415	PIN, STRAP	EA	3
2	17	PAOZZ	7690-01-070-9088	80063	SM-C-852140	LABEL	EA	1
2	18	PAOZZ	7690-01-070-9089	80063	SM-C-882408	LABEL	EA	1
2	53	PAOZZ	5355-01-074-5966	80063	SM-C-852038	KNOB	EA	1
2	54	PAOZZ	5305-717-6950	96906	MS51963-9	SETSCREW	EA	2
2	57	PAOZZ	5355-00-990-3173	96906	MS91528-0P1B	KNOB	EA	1
2	61	PAOZZ	5355-00-850-9799	96906	MS91528-0N1B	KNOB	EA	1
2	62	PAOZZ	5305-01-076-3164	80205	NAS1635-02LN4	SCREW, SELF-LOCKING	EA	1
2	63	PA000	5860-01-074-5957	80063	SM-D-852014	COVER, BATTERY BOX	EA	1
2	64	XAOZZ		80063	SM-D-852045	COVER, BATT MA	EA	1
2	65	PAOZZ	5330-00-582-2571	96906	MS9020-24	PACKING, PREFORMED	EA	1
2	67	PAOZZ	5340-01-074-5940	80063	SM-D-852037	STRAP ASSEMBLY, CARR	EA	1

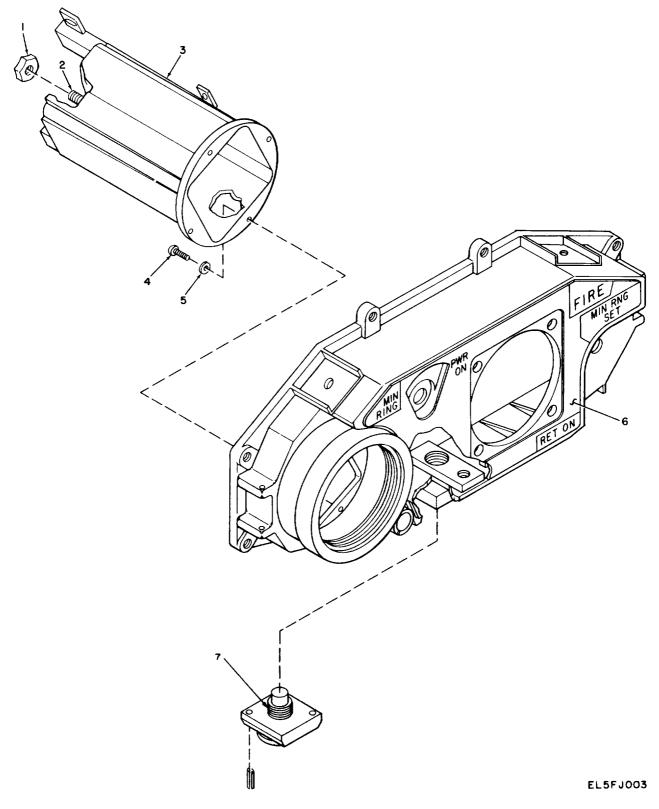


Figure 3. Control Panel Assembly

SECI	ION II					TM11-5860-201-20P		
	STRATION	(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8) QTY
(A) FIG NO	(B) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER		USABLE U/M	INC IN UNIT
						GROUP 0103 CONTROL PANEL ASSEMBLY		
3	6	XDOZZ		80063	SM-D-852136	PLATE, NOMENCLA	EA	1

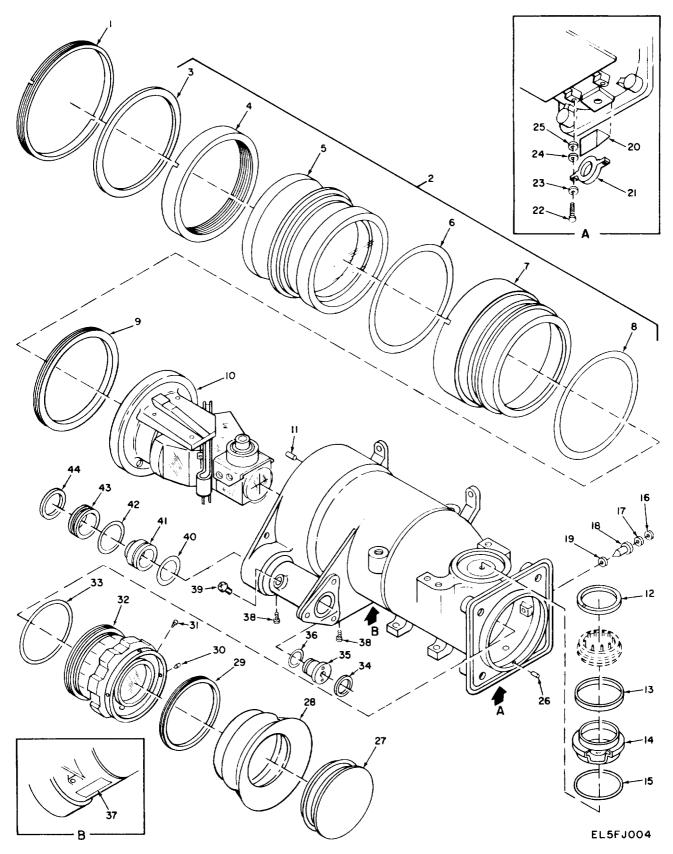


Figure 4. Optical Assembly, A3.

SECTIC	ON II					TM11-5860-201-20P		
	TRATION	(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8) QTY
(A) FIG NO	(B) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	USABLE ON CODE	U/M	INC IN UNIT
						GROUP 0104 OPTICAL ASSEMBLY, A3		
4	27	PAOZZ	5340-01-077-0982	80063	SM-C-852123	PLUG, PROTECTIVE, DUS	EA	1
4	28	PAOZZ	5860-01-071-4514	80063	SM-C-852244	EYESHIELD, OPTICAL I	EA	1

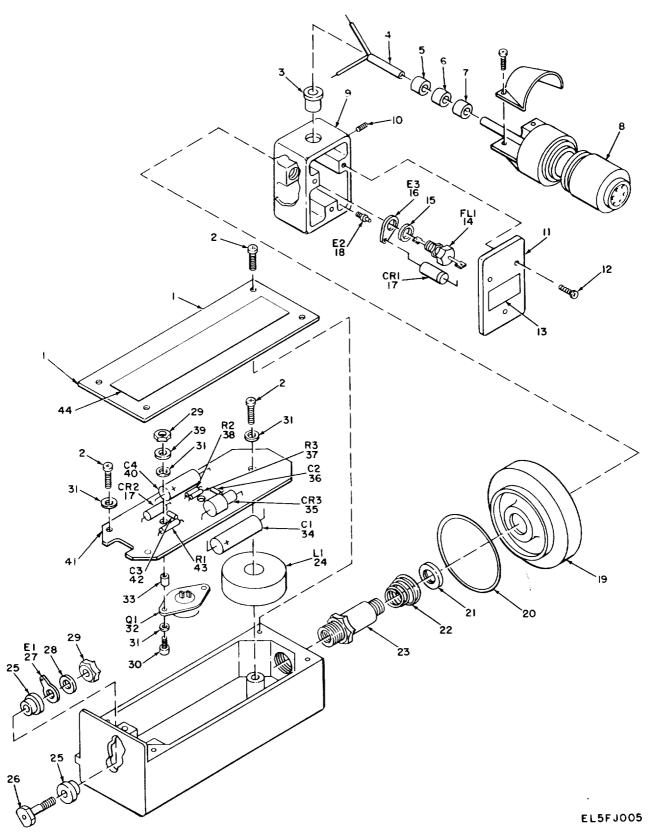


Figure 5. Cable Assembly, Special Purpose, Electrical CX-13021/GVS-5.

SECT	ION II					TM11-5860-201-20P		
(1) ILLU	STRATION	(2) J	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8) QTY
(A) FIG NO	(B) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER		USABLE U/M	ÎNC IN UNIT
						GROUP 0103 CONTROL PANEL ASSEMBLY		
3	6	XDOZZ		80063	SM-D-852136	PLATE, NOMENCLA	EA	1

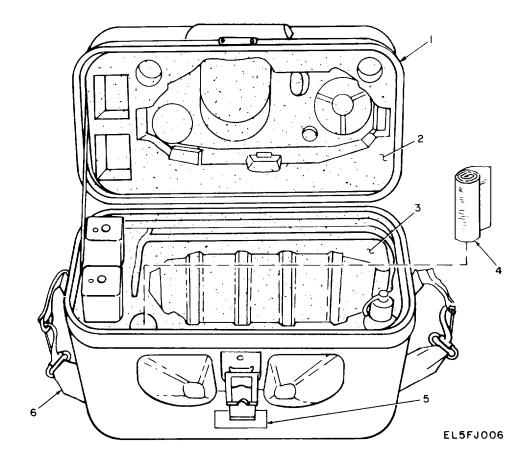


Figure 6. Case, Field, Laser Infrared Observation Device CY-7536/GVS-5.

SECTION	II					TM11-5860-201-20P					
(1) ILLUSTRA	ATTON	(2)	(3)	(4)	(5)	(6) DESCRIPTION				(7)	(8) OTY
(A) (	(B) ITEM	SMR	NATIONAL STOCK		PART	DESCRIPTION					INC
	NO	CODE	NUMBER	FSCM	NUMBER		USABLE	ON	CODE	U/M	UNIT
						GROUP 03 CASE, FIELD, LASER INFRARED	OBSERVA?	LION	1		
						DEVICE CY-7536/GVS-5					
6 1	1	PAOZZ	5330-01-074-5971	80063	SM-A-937841	PACKING, PREFORMED				$\mathbf{FT}$	1
6 4	4	PAOZZ		81348	NNN-P-40TY1C5S3 X5	PAPER, LENS CLEANER				BX	20
6 6	6	PAOZZ		81349	M1698TYPE1	STRAP				EA	1

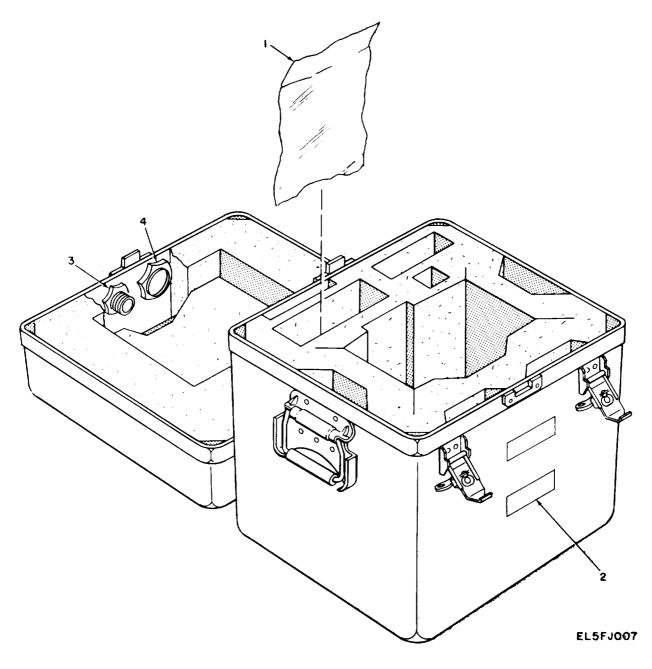


Figure 7. Case, Transit, Laser Infrared Observation Set CY-7535/GVS-5.

SECTI	II NC					TM11-5860-201-20P			
(1) ILLUS (A)	TRATION (B)	(2)	(3) NATIONAL	(4)	(5)	(6) DESCRIPTION		(7)	(8) QTY INC
FIG NO	ITEM NO	SMR CODE	STOCK NUMBER	FSCM	PART NUMBER		USABLE ON CODE	U/M	IN UNIT
						GROUP 04 CASE, TRANSIT, LASER INFRAR	ED		
						OBSERVATION SET CY-7535/GVS-5			
7	1	XDOZZ		80063	SM-C-852109	BAG, STORAGE		EA	1

SECTION IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

0201201			_ 510010				
STOCK N		FIGURE NO	ITEM NO	STOCK N	ריק כואו ד	FIGURE NO	ITEM NO
SIUCK	UMBER	NO	NO	SIUCK	IOMBER	NO	NO
5330-00	-582-2571	2	65	7690-01	-070-9089	2	18
	-582-2571	5	20		-071-4514	4	28
	-595-6761	2	5		-072-2885	1	2
	-717-6950	2	54		-074-5940	2	67
	-833-8631	1	3		-074-5941	2	10
	-850-9799	2	61		-074-5957	2	63
	-954-1622	2	4		-074-5965	5	13
	-990-3173	2	57		-074-5966	2	53
	-042-9942	1	10		-074-5971	6	1
5995-01	-069-0969	1	8		-075-0047	2	3
5860-01	-069-4742	1	9		-076-3164	2	62
5860-01	-070-3803	1	1	5310-01	-076-3181	2	7
5310-01	-070-5550	2	2	5305-01	-076-4890	2	1
7690-01	-070-9088	2	17	5340-01	-077-0982	4	27
		FIGURE	ITEM			FIGURE	ITEM
FSCM	PART NUMBER	NO	NO	FSCM	PART NUMBER	NO	NO
80058	BB-516-U	1	10	80063	SM-C-852048	2	2
80058	CX-13021/GVS-5	1	8	80063	SM-C-852049	2	3
80058	CY-7536/GVS-5	1	2	80063	SM-C-852109	7	1
96906	MS15795-802	2	5	80063	SM-C-852123	4	27
96906	MS18212-15	1	3	80063	SM-C-852140	2	17
96906	MS51963-9	2	54	80063	SM-C-852244	4	28
96906	MS9020-24	2	65	80063	SM-C-852288	5	13
96906	MS9020-24	5	20	80063	SM-C-852343	2	1
96906	MS91528-ON1B	2	61	80063	SM-C-852349	2	7
96906	MS91528-0P1B	2	57	80063	SM-C-882408	2	18
80058	MT-4832/GVS-5	1	9	80063	SM-C-882415	2	10
80058	MX-9838/GVS-5	1	1	80063	SM-C-955637	1	11
81349	M1698TYPE1	6	6	80063	SM-C-955638	1	4
81349	M23053/5-105-0	2	4	80063	SM-D-852014	2	63
81349	M3464TYPE1	1	5	80063	SM-D-852037	2	67
80205	NAS1635-02LN4	2	62	80063	SM-D-852045	2	64
81348	NNN-P-40TY1C5D3X5	6	4	80063	SM-D-852136	3	6
80063	SM-A-937841	6	1	80063	SM-D-955608	2	8
80063	SM-C-852038	2	53	80063	SM-D-955608-1	2	б

By Order of the Secretary of the Army:

E. C. MEYER General, United States Army Chief of Staff

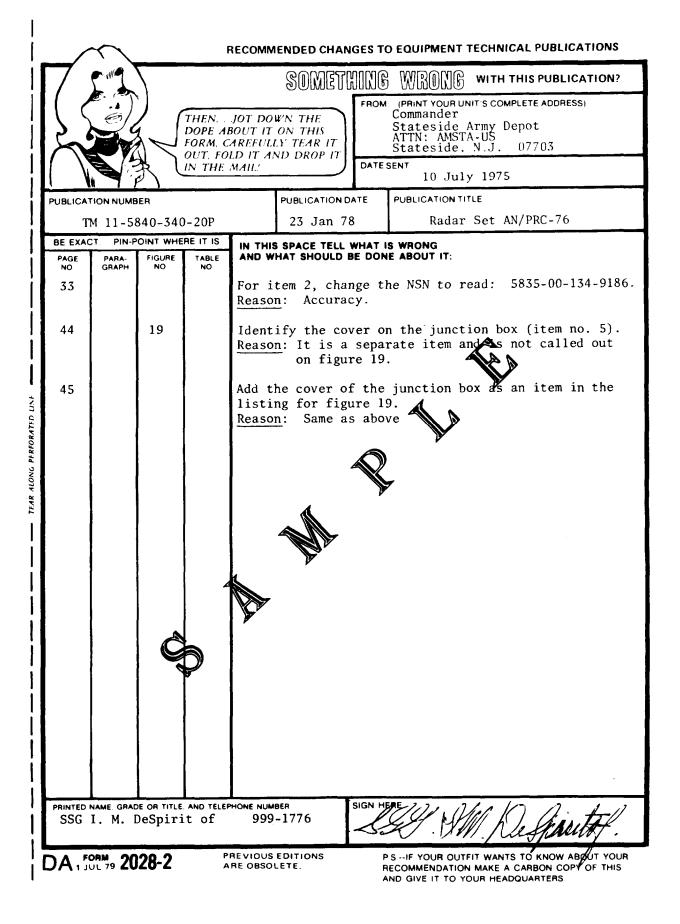
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#### THE METRIC SYSTEM AND EQUIVALENTS

#### **'NEAR MEASURE**

. 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

#### **VEIGHTS**

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

#### 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	
Square Feet	Square Meters	
Square Yards	Square Meters	
Square Miles	Square Kilometers	
Acres	Square Hectometers	
Cubic Feet	Cubic Meters	
Cubic Yards	Cubic Meters	
Fluid Ounces	Milliliters	
its	Liters	
arts	Liters	
allons	Liters	
Ounces	-	
Pounds	Grams	
Short Tons	Kilograms	
Pound-Feet	Metric Tons	
	Newton-Meters	
Pounds per Square Inch	Kilopascals	0.895
	TZ 1 1 1 T 1	0.405
Miles per Gallon	Kilometers per Liter	0.425
Miles per Gallon	Kilometers per Liter Kilometers per Hour	0.425 1.609
Miles per Gallon Miles per Hour	Kilometers per Liter	0.425 1.609 MULTIPLY BY
Miles per Gallon Miles per Hour O CHANGE	Kilometers per Liter Kilometers per Hour	1.609 MULTIPLY BY
Miles per Gallon Miles per Hour O CHANGE Centimeters	Kilometers per Liter Kilometers per Hour	1.609 MULTIPLY BY 0.394
Miles per Gallon Miles per Hour O CHANGE Centimeters Meters.	Kilometers per Liter Kilometers per Hour TO Inches	1.609 <b>MULTIPLY BY</b> 0.394 3.280
Miles per Gallon Miles per Hour O CHANGE Centimeters Meters. Meters.	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards	1.609 MULTIPLY BY 0.394 3.280 1.094
Miles per Gallon Miles per Hour O CHANGE Centimeters Meters Meters Kilometers	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles	1.609 MULTIPLY BY 0.394 3.280 1.094 0.621
Miles per Gallon Miles per Hour O CHANGE Centimeters Meters Meters Kilometers Square Centimeters	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches	1.609 <b>MULTIPLY BY</b> 0.394 3.280 1.094 0.621 0.155
Miles per Gallon Miles per Hour O CHANGE Centimeters Meters Meters Kilometers Square Centimeters Square Meters	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet	1.609 <b>MULTIPLY BY</b> 0.394 3.280 1.094 0.621 0.155 10.764
Miles per Gallon Miles per Hour Cochange Centimeters Meters Meters Glometers Square Centimeters Square Meters Square Meters	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards	1.609 <b>MULTIPLY BY</b> 0.394 3.280 1.094 0.621 0.155 10.764 1.196
Miles per Gallon Miles per Hour Contimeters Meters Meters Kilometers Square Centimeters Square Meters Square Meters Square Kilometers.	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles	1.609 <b>MULTIPLY BY</b> 0.394 3.280 1.094 0.621 0.155 10.764 1.196 0.386
Miles per Gallon Miles per Hour Contimeters Meters Meters Kilometers Square Centimeters Square Meters Square Meters Square Meters Square Hectometers	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Acres	1.609 <b>MULTIPLY BY</b> 0.394 3.280 1.094 0.621 0.155 10.764 1.196 0.386 2.471
Miles per Gallon Miles per Hour Centimeters Meters Kilometers Square Centimeters Square Meters Square Meters Square Hectometers Cubic Meters	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet	1.609 <b>MULTIPLY BY</b> 0.394 3.280 1.094 0.621 0.155 10.764 1.196 0.386 2.471 35.315
Miles per Gallon Miles per Hour Contimeters Meters Meters Square Centimeters Square Meters Square Meters Square Kilometers Square Hectometers Cubic Meters Cubic Meters	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Cubic Feet Cubic Yards	1.609 <b>MULTIPLY BY</b> 0.394 3.280 1.094 0.621 0.155 10.764 1.196 0.386 2.471 35.315 1.308
Miles per Gallon     Miles per Hour     Miles per Hour     Contimeters     Meters     Meters     Square Centimeters     Square Meters     Square Meters     Square Hectometers     Square Kilometers     Square Kilometers     Square Kilometers     Square Kilometers     Square Hectometers     Cubic Meters     Milliliters	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Cubic Feet Cubic Feet Cubic Yards Fluid Ounces	1.609 <b>MULTIPLY BY</b> 
Miles per Gallon Miles per Hour O CHANGE Centimeters Meters Meters Square Centimeters Square Meters Square Meters Square Kilometers Cubic Meters Cubic Meters Milliliters Milliliters	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Cubic Feet Cubic Feet Cubic Yards Fluid Ounces Pints	1.609 <b>MULTIPLY BY</b> 0.394 3.280 1.094 0.621 0.155 1.196 
Miles per Gallon Miles per Hour O CHANGE Centimeters Meters Meters Square Centimeters Square Meters Square Meters Square Meters Square Hectometers Cubic Meters Cubic Meters Milliliters Jiters	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Cubic Feet Cubic Feet Cubic Yards Fluid Ounces Pints Quarts	1.609 <b>MULTIPLY BY</b> 
Miles per Gallon Miles per Hour O CHANGE Centimeters Meters Meters Square Centimeters Square Centimeters Square Meters Square Meters Square Hectometers Cubic Meters Cubic Meters Milliliters iters 'ers	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Feet Square Miles Cubic Feet Cubic Feet Cubic Yards Fluid Ounces Pints Quarts Gallons	
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Miles per Gallon Miles per Hour Meters Kilometers Square Centimeters Square Meters Square Meters Square Meters Square Hectometers Cubic Meters Lubic Meters Milliliters iters 'ers 	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Feet Square Yards Square Miles Cubic Feet Cubic Feet Cubic Yards Fluid Ounces Pints Quarts Gallons Ounces Pounds	
Miles per Gallon Miles per Hour Meters. Meters. Square Centimeters Square Meters. Square Meters. Square Meters. Square Meters. Square Hectometers. Cubic Meters Lubic Meters Lubic Meters Liters. Liters. 	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Square Inches Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Feet Cubic Yards Fluid Ounces Pints Quarts Gallons Ounces Pounds Short Tons	
Miles per Gallon Miles per Hour Miles per Hour Meters Meters Square Centimeters Square Meters Square Meters Square Meters Square Meters Square Hectometers Cubic Meters Cubic Meters Liters Liters 	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Feet Cubic Yards Fluid Ounces Pints Quarts Gallons Ounces Pounds Pounds Pounds Pounds Pounds	
Miles per Gallon Miles per Hour Miles per Hour Meters Meters Square Centimeters Square Meters Square Meters Square Meters Square Meters Square Hectometers Cubic Meters Cubic Meters Liters Liters 	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Yards Fluid Ounces Pints Quarts Gallons Ounces Pounds Pounds Pounds per Square Inch	1.609       MULTIPLY BY       0.394       3.280       1.094       0.621       0.155       10764       1.196       0.386       2.471       35.315       1.308       0.034       2.113       1.057       0.264       0.035       2.205       1.102       0.738       0.145
Miles per Gallon Miles per Hour Miles per Hour Centimeters Meters. Meters. Meters. Square Centimeters Square Meters. Square Meters. Square Meters. Square Hectometers. Square Hectometers. Cubic Meters. Cubic Meters. Liters. Liters. ms.	Kilometers per Liter Kilometers per Hour TO Inches Feet Yards Miles Square Inches Square Feet Square Yards Square Miles Acres Cubic Feet Cubic Feet Cubic Yards Fluid Ounces Pints Quarts Gallons Ounces Pounds Pounds Pounds Pounds Pounds	1.609       MULTIPLY BY       0.394       3.280       1.094       0.621       0.155       10.764       1.196       0.386       2.471       35.315       1.308       0.034       2.113       1.057       0.264       0.035       2.205       1.102       0.738       0.145

#### 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

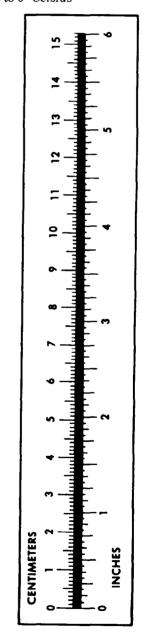
 $5/9(^{\circ}F - 32) = ^{\circ}C$ 

212° Fahrenheit is evuivalent to 100° Celsius

90° Fahrenheit is equivalent to 32.2° Celsius

32° Fahrenheit is equivalent to 0° Celsius

 $9/5C^{\circ} + 32 = {}^{\circ}F$ 



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