OPERATOR'S AND UNIT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

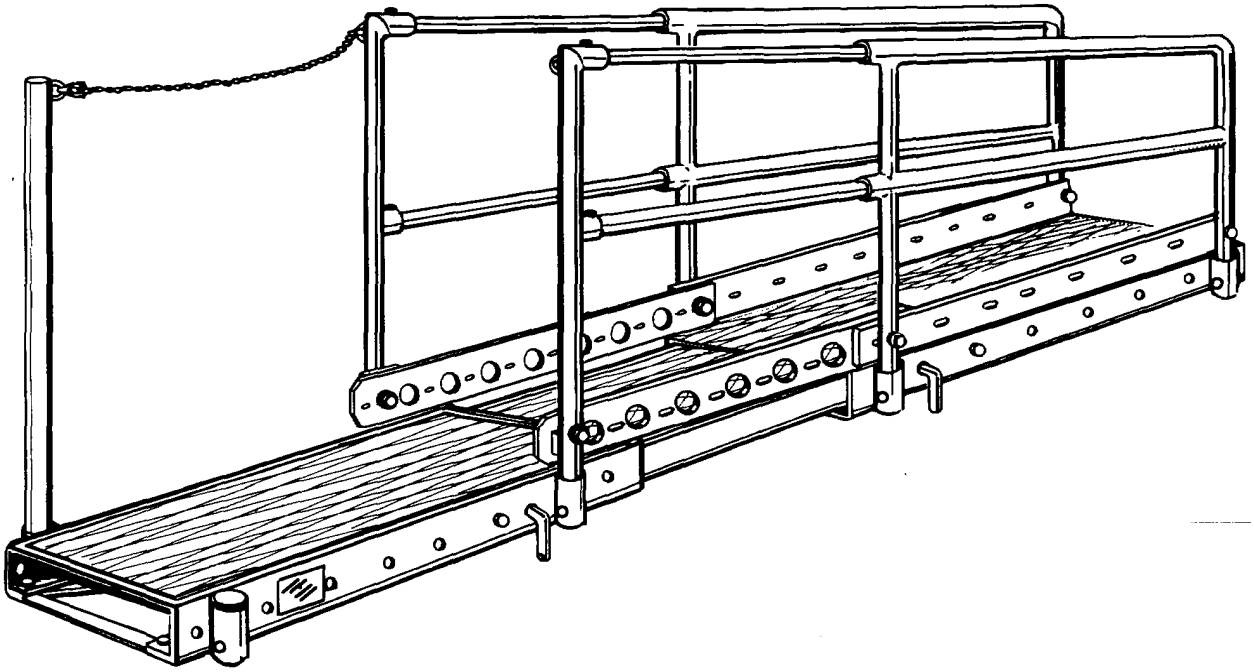
FOR

CATWALK

PILE DRIVER LEAD

NSN 3815-01-315-1479

MILITEC DEFENSE SYSTEMS-MODEL M146



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HEADQUARTERS, DEPARTMENT OF THE ARMY

24 April 1992

TECHNICAL MANUAL
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HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, *24 April 1992*

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Current as of 24 April 1992

REPORTING OF ERRORS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished direct to you.

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CHAPTER 1
INTRODUCTION

The Catwalk is a three-section walkway platform. It is positioned and anchored between a crane base and a pile driver lead (tower). It provides a solid walking surface for personnel to use when servicing a pile driving lead. It may be set up over mud, unstable ground, or water terrain.

The Catwalk is designed to be used with pile driving drop hammers weighting up to 1-1/2 tons and with a diesel hammer weighing up to 6 tons.

The Catwalk is constructed of steel material. The walking surface is diamond shaped expanded metal. The Catwalk length is adjustable from about 16 feet to 24 feet in 8" increments. Handrails are made from 2-1/2 inch diameter pipe. The center Handrails are adjustable in length to allow for the adjustable length of the Catwalk. Adjustable and fixed toe boards are used to strengthen the assembled catwalk and provide a safe walkway and staging surface for personnel and their tools.

In addition, two 10 ft. chain hand rails are provided. One chain may be hooked between the post at the end of the adjustable handrail post and the crane. The other chain is hooked between the adjacent post and the auxiliary post at the catwalk entrance. To allow a right or left side entry, the auxiliary (end) post, with its attached chain, may be positioned in either side of the catwalk.

It is shipped to the site, in a crate, in knockdown form. There are 9 parts groups with a total of 13 parts plus one box of hardware. Two 1/2" x 26" long pins, with locking clips and screw/washer/nut combinations, keep the assembled parts in position and are easily installed or removed for adjusting the catwalk length or for shipping knockdown. Screws and nuts used are limited to 1/4" and 1/2" sizes.

A 4" x 7" metal Data Plate is attached to the Outer Section of the walkway. This data plate has an illustration that will assist in the assembly and disassembly of the Catwalk.

There are no lubrication requirements for the Catwalk.

A minimum of two (2) assemblers are required to remove the components from the shipping crate, assemble them into position, and anchor the Catwalk between a crane mounting bracket and the lead. The estimated assembly time is two (2) hours. Unit knockdown, cleaning and packing in the crate require about three (3) hours.

The three-walkway platforms weigh about 85 lbs. each for a combined assembled weight of 285 lbs. Rails, tow boards, and chains add more weight. The shipping weight is 670 lbs.

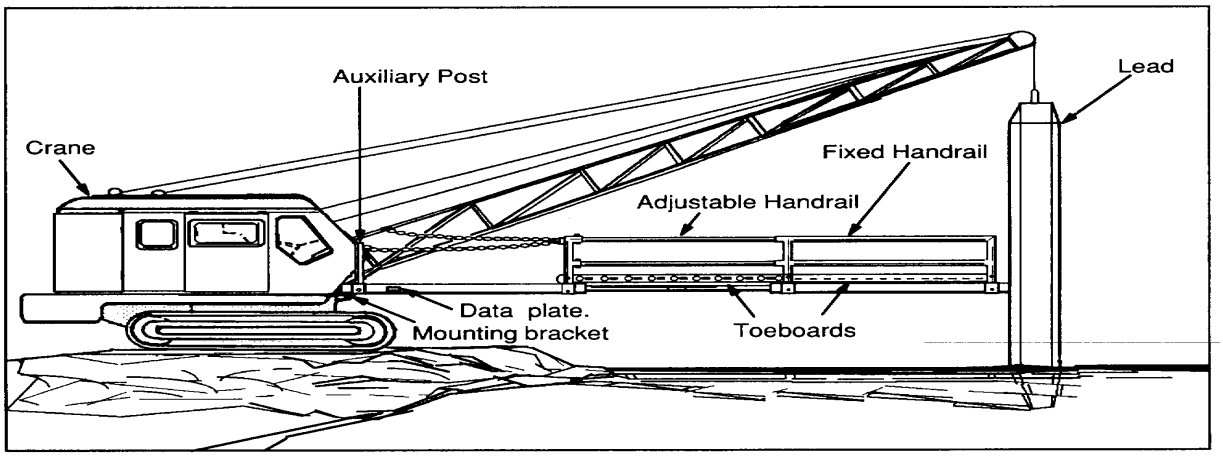


Figure 1. Catwalk

CHAPTER 2

CATWALK M-146

ASSEMBLY - DISASSEMBLY INSTRUCTIONS

This task covers:

Assembly and disassembly of the Catwalk

Initial Setup:

- **Equipment Conditions**
- **Crane located 16 to 24 feet from pile driver.**
- **Catwalk components removed from shipping crate.**

Tools and Special Tools

- **General mechanics tool kit SC 5180-90-N26.**

Personal Required - Two

NOTE

The following assembly instructions are guidelines for an ideal assembly environment. Actual assembly may vary according to time available, weather conditions, terrain, and available personnel.

WARNING

In some unusual terrain or climate conditions it may be safer to assemble the Catwalk on the ground and lift it into place with a crane.

ASSEMBLY

1. Install the First Outer Section.

Position or attach one of the Catwalk Outer Sections (13229E-5624) to the pile driver lead and place a vertical support underneath the other end (see Figure 2).

2. Install the Inner Section.

Slide the Catwalk Inner Section (13229E-5623) into the positioned Catwalk Outer Section (13229E-5624) and place a suitable vertical support underneath the end. To maintain alignment, of the two sections, temporarily insert Pin M146-101, (1/2" diameter x 26" long), thru the 5/8 hole in the Catwalk Outer Section and thru the aligned pipe channel in the Catwalk Inner Section.

4. Install the Second Outer Section.

Move the vertical support out of the way and slide the other Catwalk Outer Section (13229E-5624) into the Catwalk Inner Section. Install the vertical support under the end of the Catwalk Inner Section.

5. Adjusting the Catwalk Sections to Obtain Approximate Length.

Remove Pin installed in Step 3. Slide or adjust the Catwalk Outer Sections (13229E-5624) into the Inner Section (13229E-5623) so that Catwalk length spans the distance between the crane and the lead.

6. Adjusting the Catwalk Sections to Obtain Final Length.

Make the final adjustment by sliding Catwalk Outer Sections (13229E-5624) into the Catwalk Inner Section (13229E-5623) so that the nearest 5/8 hole aligns with a pipe channel in the Catwalk Inner Section. Position ends on crane and attaches.

7. Installing Pins and Fastening Hardware.

Insert Pin (M146-101) thru the 5/8 hole in either one of the Catwalk Outer Sections (13229E-5624) and thru the aligned pipe channel in the Catwalk Inner Section (13229E-5623). Install Clip (#16) thru hole in end of Pin to secure. Repeat for other Outer Section (13229E-5624).

Complete the assembly by installing (4) 1/2-13 x 2" lg. screws, (4) 1/2 "Lock washers, and (4) 1/2-13 Nuts thru the aligned 9/16 holes adjacent to pipe channels in Catwalk Inner Section (13229E-5623) with the aligned 5/8 holes in the Catwalk Outer Section (13229E-5624). Screws are installed from the inside of the Sections. (See section view in Figure 1).

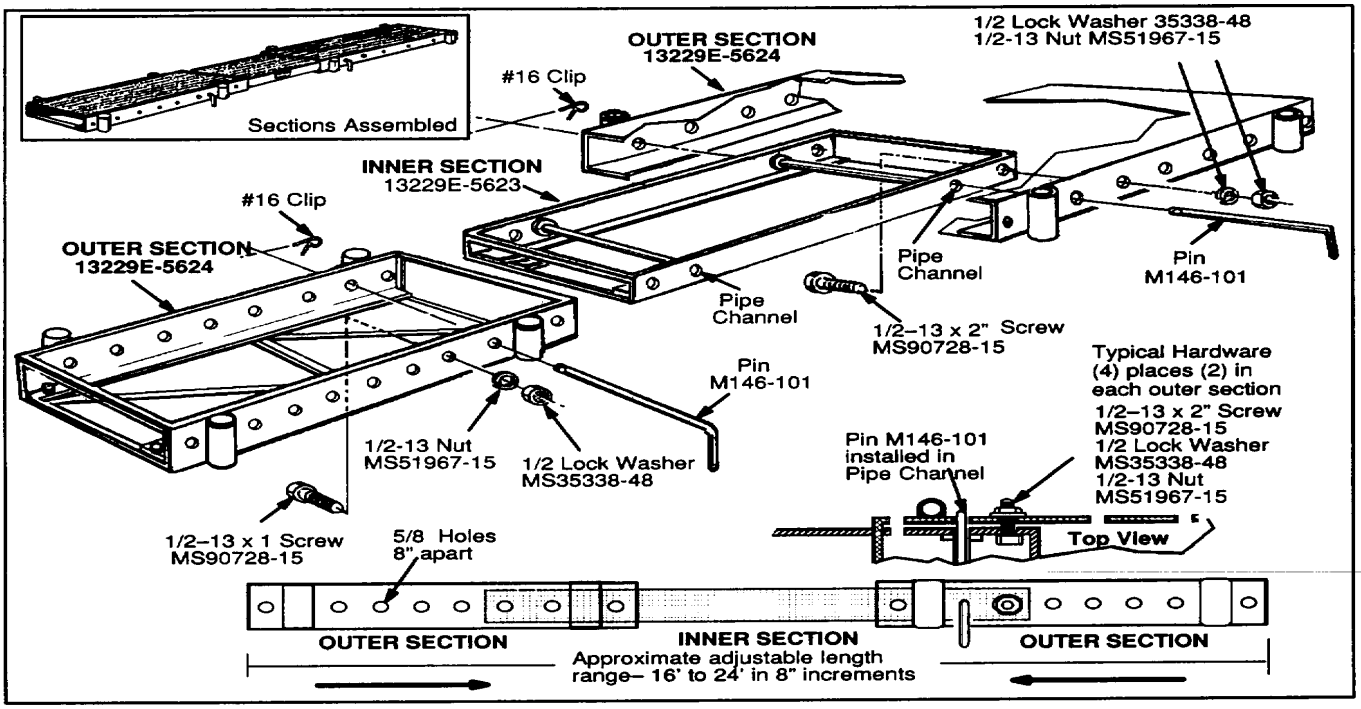


Figure 2. Assembling the Three Catwalk Sections

8. Install **Handrail.**

a. Insert Handrail (13229E-9998) into the pipe receivers on the Catwalk Outer Section nearest the lead (see Figure 3). Install so that the pipe receivers on the vertical members face the crane.

b. Positions opposite side Handrail (13229E-9998) the same way and guide into position into Outer Section pipe receivers.

9. Installing Hardware in Handrail.

a. Insert (1)1/4-20 x 3.5 (MS90728-20) screw through (1)1/4"flat washer (MS 27183-52) and then through the pipe receiver hole in the Catwalk Outer Section and through the aligned holes in the ends of the Handrail just installed. Install (1) 1/4-20 self locking nut (MS51922-1) to the screw and tighten.

b. Repeat for the (3) other pipe receivers on this Outer Section.

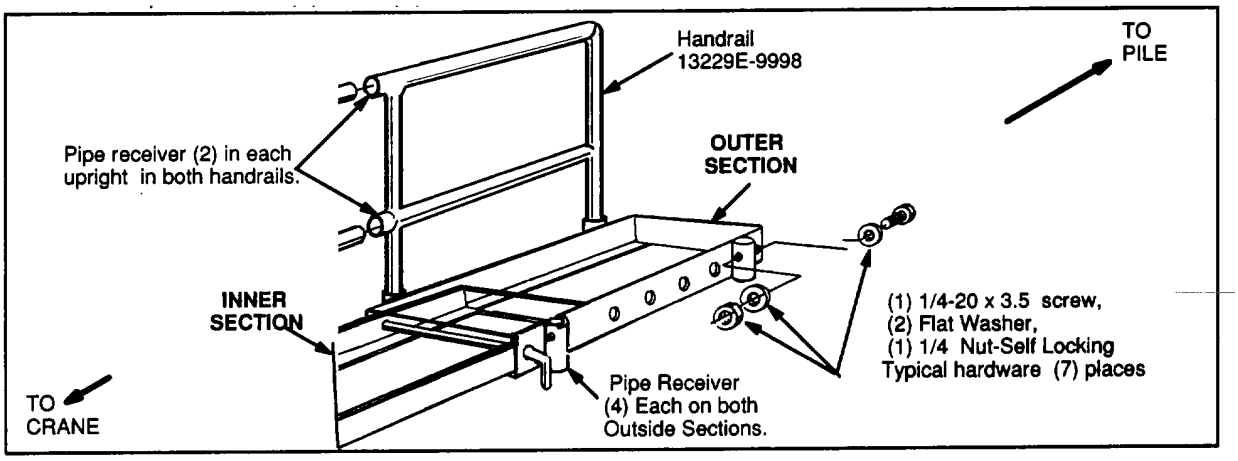


Figure 3. Assembling the Handrails to the Outer Section

10. Install Outer Toeboard and Hardware.

a. Place Outer Toeboard (13229E-4162) into position against Handrail (13229E-9998) and align the mounting holes (see Figure 4).

b. Insert (1) 1/4-20 x 3.5" (MS90728-20) screw through each end slot and through the aligned hole in the Handrail (13229E-9998). Install Flat washer (MS 27183-52), and 1/4-20 Self locking Nut (MS519122-1) to both screws and tighten. Repeat for other side.

11. Position (4) Handrails (13228E-9997) Inside Handrail (13229E-9998).

a. Install and hand tighten (4) 1/4-20 x 3" screws and fastening hardware through the holes in the ends of the Handrails (13228E-9997) to limit travel into Handrail (13229E-9998).

b. Slide the (4) Handrails, with the fastening hardware end towards you, horizontally into the pipe receivers of both Handrails (13229E-9998).

12. Install Post.

a. Insert Post (13228E-9996) into the crane side Catwalk Outer Section pipe receiver adjacent to the Catwalk Inner Section. Install Post with handrail pipe receivers pointed towards Handrail (13228E-9997). Repeat for other side.

b. Install 1/4-20 x 3.5" screw and 1/4 flat washer into each bottom end through the mounting holes in the pipe receivers (see Figure 4). Install (1) 1/4 flat washer (MS27183-52) and self locking nut (MS51922-1) to each screw and tighten.

13. Install Inner Toeboard and Hardware.

a. Place Inner Toeboard (13229E-4163) into position between Post (13228E-9996) and Hand rail (13228E-9998). Place the end of the toeboard with the flat spacer towards the Post. The rounded end of the towboard goes towards the crane end. Square end goes towards pile.

b. Install (2) 1/4-20 x 1 " screws (MS-90728-8) through both toeboards at end near pile, (2) 1/4-20 x 3.5" (MS90728-20) on each side at other end of Inner Toeboard. Forward screws mount through post uprights and rear screws is positioned through the slots in both toeboards.

NOTE

Circular openings in Inner Toeboard (13229E-4163) will provide clearance for the screw that mounts Outer Toeboard (1 3229E-4162) to end of Handrail (13228E-9996) (see Figure 4).

c. Install (1) 1/4 flat washer (MS-27183-52) and (1) 1/4-20 self- locking nut (MS519122-1) to each screw and tighten.

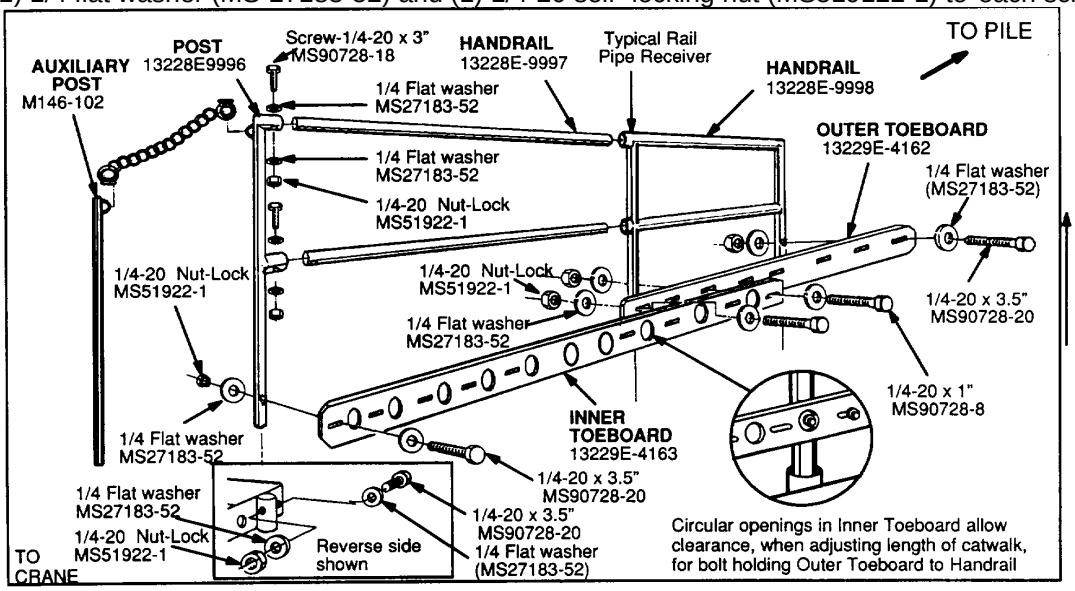


Figure 4. Installing Handrails, Posts, and Toeboards

14. Install Handrails to Post.

a. Remove the hand tightened 1/4 x 20 x 3" screw/ washer/ nut combination from the handrail (13228E-9997) mounting hole. Slide the Handrail (13228E-9997) out of the Handrail (13229E-9998) and into the pipe receiver on the Post (13228E-9996) .

b. Align the mounting holes and insert (1) 1/4-20 x 3" screw through a flat washer (MS27183-52) and through the mounting holes in both handrails. Install a flat washer (MS27183-52) and a self locking nuts and tighten.

c. Repeat for the other three Handrails (13228E-9997).

END OF TASK

DISASSEMBLY

1. Disassembly.

To disassemble the Catwalk for crating and shipment reverse the assembly procedures.

2. Storage of Hardware for Shipping.

a. To avoid loss or shortages of the mounting hardware put the 1/4" and the 1/2" screw/ washers/ nut combinations into their respective mounting holes in each component as each section or part of the Catwalk assembly is disconnected. Tighten enough to secure hardware on component.

b. Secure the chain lengths by attaching one end to a post hook and wrapping the chain around the post.

c. Package the components in its shipping crate and follow standard shipping procedures.

END OF TASK

APPENDIX A

UNIT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LISTS

SECTION I. INTRODUCTION

1. Scope.
This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of Unit Maintenance of the Catwalk-Pile Driver Lead. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

2. General.
In addition to Section I. Introduction, 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 by this RPSTL 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 ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name sequence. Repair kits are listed separately in their own functional group within Section II. Repair parts for repairable special tools are also listed in the section. Items listed are shown on the associated illustration (s)/figure(s).

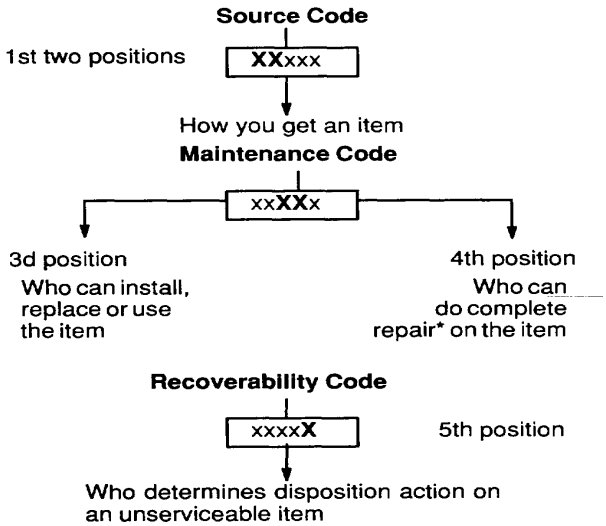
b *Section III. Special Tools List.* A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance.

c. Cross-reference Indexes. A list, in National Item Identification Number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric 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. The figure and item number index lists figure and item numbers in alphanumeric sequence and cross-references NSN, CAGE and part numbers

3. Explanation of Columns(Sections II and Ill)

a. ITEM NO. (Column (1). Indicates the number used to identify items called out in the illustration.

b. SMR CODE (Column (2)). The Source ,Maintenance, and Recoverability (SMR) code is a5-positioncode containing supply/requisitioning information, maintenance category authorization criteria and disposition instructions, as shown in the following breakout:



Complete Repair. Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the Repair" function in a use/user environment in order to restore serviceability to a failed item

SECTION I

(1) Source Code. The source code tells you how to get an item needed for maintenance, repair or overhaul of an end item/equipment. Explanations of source codes follows

Code	Application/Explanation
PA	Stocked items; use the applicable NSN to
PB	request/requisition items with these
PC**	source codes. They are authorized to the
PD	category indicated by the code entered in
PE	3d position of the SMR code.
PF	
PG	**Items coded PC are subject to deterioration
KD	Items with these codes are not to be
KF	requested/requisitioned individually..
KB	is part of a kit, which is authorized to the maintenance category indicated in the 3d position of the SMR code. The complete kit with the above source codes, except for those source must be requisitioned and applied.

MO-*(Made at UM AVUM Level)*	Items with these codes are not to be requested/ requisitioned
MF-*(Made at DS/ AVUM Level)*	individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLEON CODE OC) column and listed in the Bulk Material group of the repair parts list in this
ML-(Made at Specialized Repair Act (SRA))	RPSTL. If the item is authorized- to you by the 3d position code of the SMR code, but if the
MD-(Made at Depot)	source code indicates it is made at a higher level, order the item from the higher level of maintenance.

AO-(Assembled by UM/AVUM Level)	Items with these codes are not to be requested/requisitioned individually. The parts that
AF-(Assembled by DS/A VIM Level)	make up the assembled item must be requisitioned or fabricated and assembled at the level
AH-(Assembled by GS Category)	of maintenance indicated by the source code. If the 3d position code of the SMR code by
AL-(Assembled by SRA)	authorizes you to replace the item, but the source code indi-
AD-(Assembled by Depot)	cates the item is assembled at a bled at a higher level, order the item from the higher level of maintenance.

XA -	Do not requisition an XA -coded Item. Order its next higher assembly. (Also, refer to the NOTE below)
XB-	If an "XB" item is not available from salvage order it using the CAGE and part number given
XC-	Installation drawing, diagram, instruction sheet field service drawing, that is identified by the manufacturer's part number.
XD-	item is not stocked Order an "XD coded item through normal supply channels using the CAGE and part number given, if no NSN is available.

NOTE: Cannibalization or controlled exchange, when authorized may be used as source of supply for items coded "XA" or those aircraft support items restricted by requirements of AR 700-42.

(2) Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows

(a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of main-

Code	Application/Explanation
C-	Crew or operator maintenance done within unit or aviation unit maintenance
0-	Unit maintenance or aviation unit category can remove, replace and use the item
F-	Direct support or aviation intermediate level can remove, replace and use the item
H-	General support level can remove, replace and use the item
L-	Specialized repair activity can remove, replace and use the item.

D Depot level can remove, replaces and use the item intermediate level.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform authorized repair functions.) (NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes). This position will contain one of the following maintenance codes:

Codes	Application/Explanation
O	Unit maintenance or Aviation unit is the lowest level that can do complete repair of the item
F	Direct support or aviation intermediate is the lowest level that can do complete repair of the item.
H	General support is the lowest level that can do complete repair of the item.
L	Specialized repair activity is the lowest level that can do complete rep air of the item.
D	Depot is the lowest level that can do complete repair of the item
Z	Non reparable. No repair is authorized.
B	No repair is authorized. (No parts or special by means of its engineering drawings, specifications tools are authorized for the maintenance of an "B" coded item). However, the item may be reconditioned by adjusting, lubrication etc, at the user level.

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

Code	Application/Explanation
Z	Non reparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of the SMR code.
O	Reparable item. When uneconomically reparable, condemn and dispose of the item at unit maintenance or aviation unit level
F	Reparable item. . When uneconomically item at the direct support or aviation intermediate level.
H	Reparable item. Whe n uneconomically reparable, condemn and dispose of the item at the general support level all D-Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
L	Reparable item. Condemnation and disposal of item not authorized below specialized repair activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reason precious metal content, metal high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. *CAGEC (Column (3)).* The Commercial And Government Entity (CAGE) Code (C) is a 5-digit alphanumeric code which is used to identify the manufacturer, distributor or Government agency, etc that supplies the item.

d. *PART NUMBER (Column (4)).* Indicates the company, firm, corporation or Government activity), which controls the design and characteristics of the item standards and inspection requirements to identify item or range of items.

NOTE: When you use a NSN to requisition an item, the item you receive may have a different part number from the part order.

e. *DESCRIPTION AND USABLE ON CODE (UOC) (Column (5)).* This column includes the following information:

(1)The Federal item name and, when required, a minimum description to identify the item.
(2)Physical security classification. Not applicable
(3) Items that are included in kits and sets are below the name of the kit or set on Figure KIT.
(4) Spare/repair parts that make up and assembled item are listed immediately following the assembled item line entry.

(5) Part numbers for bulk materials are referenced in this column in the line item entry for item the manufactured/fabricated

(6) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC). Not applicable

(7) The usable on code, when applicable (see paragraph 5, Special information) (8)

(8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for (each special tool, special TMDE and other special support equipment. When density of equipment's supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.

(9) The statement "END OF FIGURE" appears just below the last item description in Column 5 for a given figure in both Section II and Section III

f. QTY (Column (6)). The QTY (quantity per figure column) 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 the figure where the item is identified/located in Section an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

4. Explanation of Columns (Section IV)

a. NATIONAL STOCK NUMBER (NSN) INDEX

(1)STOCK NUMBER column. This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine

NSN

digits of the NSN (i.e., 5305-01-674-1467)

NIIN

When using this column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) FIG. column. This column lists the number of, the figure where the item is identified/located in Section II and Section III

(3) ITEM column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line. column firm, corporation or Government activity), which the item number is that

b. *PART NUMBER INDEX.* Part numbers in this are listed by part number in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first be letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order.)

(1) CAGEC column. The Commercial And Government Entity (CAGE) Code (C) is a 5 digit alphanumeric code used to identify the manufacturer, distributor or Government agency, etc., that supplies the item.

(2) PART NUMBER column. Indicates the primary number used by the manufacturer (individual, 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

(3) STOCK NUMBER column. This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and CAGEC columns to the left.

(4) FIG. column. This column lists the number of the Figure where the item is identified/located in Section II and Section III.

(5) ITEM column The item number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

c. FIGURE AND ITEM NUMBER INDEX

(1) FIG. column. This column lists the number the figure where the item is identified/located in Section II and III.

(2) ITEM column. The item number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

(3) STOCK NUMBER column. This column lists the NSN for the item.

(4) CAGEC column. The Commercial and Government Entity (CAGE) Code (C) a 5 digit alphanumeric code used to identify the manufacturer, distributor or Government agency, etc., that supplies the item

(5) PART NUMBER Indicates the primary number used by the manufacturer (individual, 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

5. Special Information.

Use the following subparagraphs as applicable

a. USABLE ON CODE. Not Applicable.

B FABRICATION INSTRUCTIONS. Bulk materials required to manufacture items are listed in the Bulk Material Functional Group of this RPSTL. Part numbers for bulk materials are also referenced in the description manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in the appropriate appendices of this manual.

c. ASSEMBLY INSTRUCTION. Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in the appropriate appendices of this manual. Items that make up the assembly are listed immediately following the assembly item entry or reference is made to an applicable figure.

d. *KITS.* Line item entries for repair parts kits appear in group 9401 in Section II.

e. *INDEX NUMBERS.* Items, which have the word BULK in the figure column will have and index shown in the item, number column. This index number is a cross-reference between the National Number/Part Number Index and the bulk material list in Section II.

6. How to Locate Repair Parts.

a. When National Stock Number or Part Number is not Known

(1) First. Using the table of contents, determine the assembly group or subassembly group to which the prepared for assembly groups and subassembly groups, and listings are divided into the some groups.

(2) Second. Find the figure covering the assembly group subassembly group to which the item belongs.

(3) Third. Identify the item on the figure and use the Figure and Item Number Index to find the NSN.

b. When National Stock Number or Part Number is Known

(1) First. Using the National Stock Number or the Part Number Index, find the pertinent National Stock National Number or Part Number. The NSN index is in Item Identification Number (NIIN) sequence (see4.a(1)). The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see 4.b). Both indexes cross-reference you to the illustration/figure and item number of the item you are looking for.

(2) Second. Turn to the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

7. Abbreviations.

For standard abbreviations see MIL-STD-12D, Military Standard Abbreviations For Use on Drawings, Specifications, Standards And In Technical Documents.

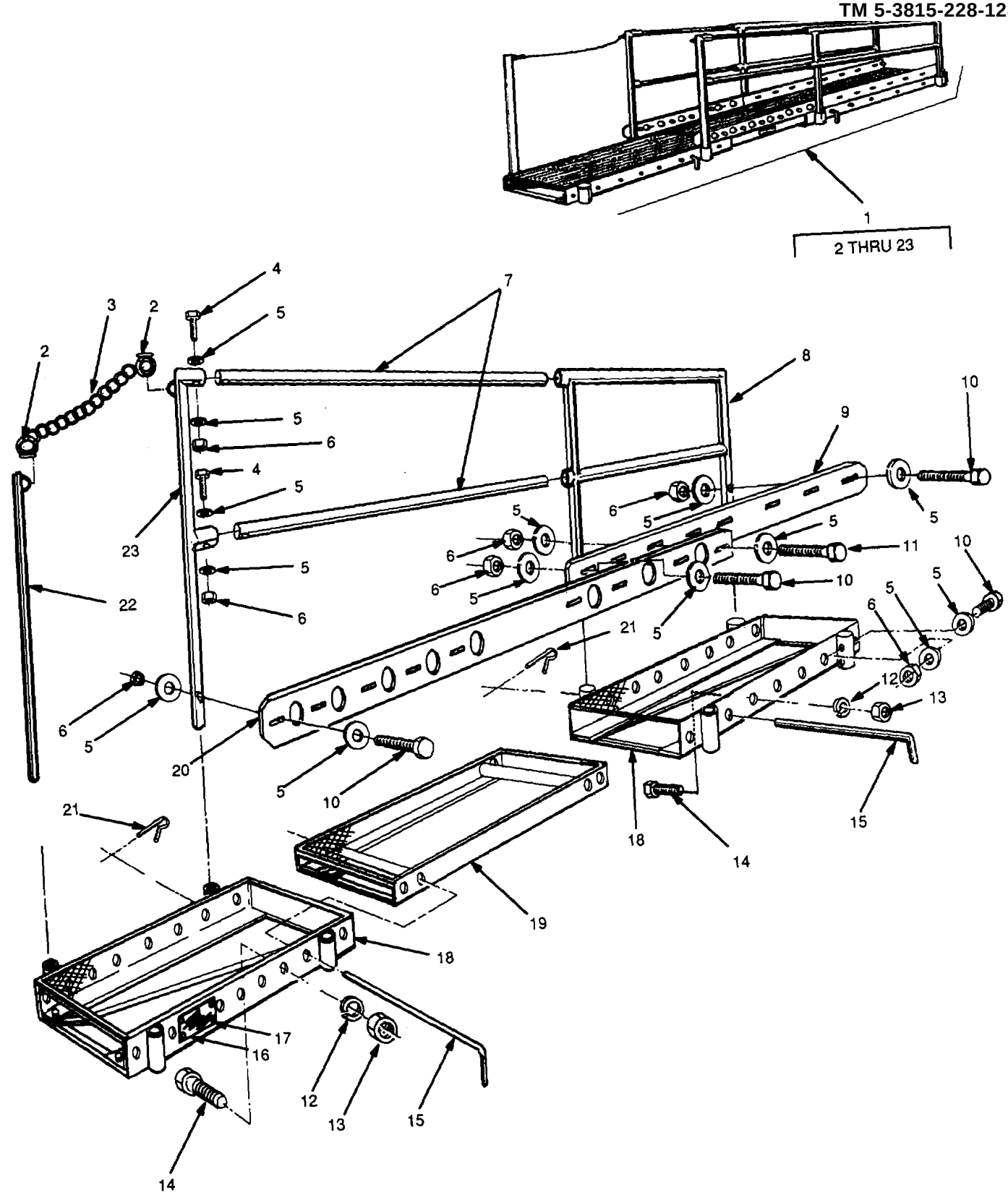


Figure 1. Catwalk

SECTION II

(1) ITEM NO.	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 7414 BASE DECK	
1.	PDOFF	97403	13229E5622	CATWALK	1
2.	PAOZZ	96508	7601401	. SNAP HOOK	4
3.	M00ZZ	81348	RR-C-271	. CHAIN, SAFETY, MADE FROM PART 819910	2
4.	PAOZZ	96906	MS 90728-18	. SCREW, CAP,HEXAGON H 1/4-20 X 3"	4
5.	PAOZZ	96906	MS27183-52	. WASHER, FLAT, .281 I.D	42
6.	PAOZ0	96906	MS51922-1	. NUT, SELF-LOCKING, HE 1/4-20	21
7.	PAOZZ	97403	13228E9997	. HANDRAIL	4
8.	PAOZZ	97403	13228E9998	. HANDRAIL	2
9.	PAOZZ	97403	13229E4162	. TOEBOARD, OUTER SECT	2
10.	PAOZZ	96906	MS90728-20	. SCREW, CAP,HEXAGON H 1/4-20 X 3.5"	13
11	PAOZZ	96906	MS90728-8	. SCREW, CAP, HEXAGON H 1/4-20 X 1"	4
12.	PAOZZ	80063	MS 35338-48	. WASHER, LOCK, 1/2"	4
13.	PAOZZ	96906	MS519 67-15	. NUT, PLAIN HEXAGON 1/2-13	4
14.	PAOZZ	96906	MS90728-115	. SCREW, CAP, HEXAGON H ½-13X2”	4
15.	PFOZZ	97403	M146-101	. PIN, HITCH	2
16.	PAOZZ	19207	12436601	. DATA PLATE VEH ASSEMBLY	1
17.	PFOZZ	81349	M24243/1-B403	. RIVET, BLIND	4
18.	PAOZZ	97403	13229E5624	. CATWALK, OUTSIDE SECT	2
19.	PAOZZ	97403	13229E5623	. CATWALK, INSIDE SECT	1
20.	PAOZZ	97403	13229E4163	. TOEBOARD, INNER SECT	2
21.	PAOZZ	65029	16	. CLIP	2
22.	PFOZZ	97403	M146-102	. POST, AUXILIARY	1
23	PAOZZ	97403	13228E9996	. POST	2

END OF FIGURE

(1) ITEM NO.	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 95 GENERAL USE & STANDARDIZED	
				PARTS	
				GROUP 9501 BULK MATERIAL	
				FIG. BULK	
1	PAOZZ	19207	819910	CHAIN WELDLESS.....	V

END OF FIGURE

SECTION IV

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5305-00-01702071	1	14			
5305-00-071-2515	1	4			
5305-00-071-2517	1	10			
5310-00-088-1251	1	6			
5305-00-225-3843	1	11			
5310-00-584-5272	1	12			
5310-00-761-3706	1	13			
5320-00-904-4136	1	17			
5310-01-274-3255	1	5			

CROSS - REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS27183-52	5310-01-274-3255	1	5
96906	MS51922-1	5310-00-088-1251	1	6
96906	MS51967-15	5310-00-761-3706	1	13
96906	MS90728-115	5305-00-071-2071	1	14
95906	MS90728-18	5305-00-071-2515	1	4
96906	MS90728-20	5305-00-071-2517	1	10
96906	MS90728-8	5305-00-225-3843	1	11
97403	M146-101		1	15
97403	M146-102		1	22
81349	M24243/1-8403	5320-00-904-4136	1	17
81348	RR-C-271		1	3
80063	SCB52887-4	5310-00-584-5272	1	12
19207	12436601		1	16
97403	13228E9996		1	23
97403	13228E9997		1	7
97403	13228E9998		1	8
97403	13229E4162		1	9
97403	13229E4163		1	20
97403	13229E5623		1	19
97403	13229E5624		1	18
65029	16		1	21
96508	7601401		1	2

CROSS REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG.	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
1	2		96508	7601401
1	3		dl348	RR-C-271
1	4	5305-00-071-2515	96906	MS90728-18
1	5	5310-01-274-3255	96906	MS27183-52
1	6	5310-00-083-1251	96906	MS51922-1
1	7		97403	13228E9997
1	8		97403	13228E999d
1	9		97403	13229E4162
1	10	5305-00-071-2517	96906	MS90723-20
1	11	5305-00-225-3343	96906	MS90728-8
1	12	5310-00-584-5272	80063	SC352887-4
1	13	5313-00-761-3706	96906	M551967-15
1	14	5305-00-071-2071	96906	MS90729-115
1	15		97403	M146-101
1	16		19207	12436601
1	17	5320-00-904-4136	81349	M24243/1-6403
1	19		97403	13219E5624
1	19		97403	13229E5623
1	20		97403	13229E4163
1	21		65029	16
1	22		97403	M146-102
1	Z3		97403	13228E9976

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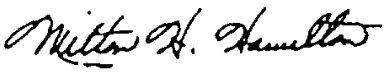
GORDON R. SULLIVAN
General, United States Army!
Chief of Staff

Official:



MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
01462

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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

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

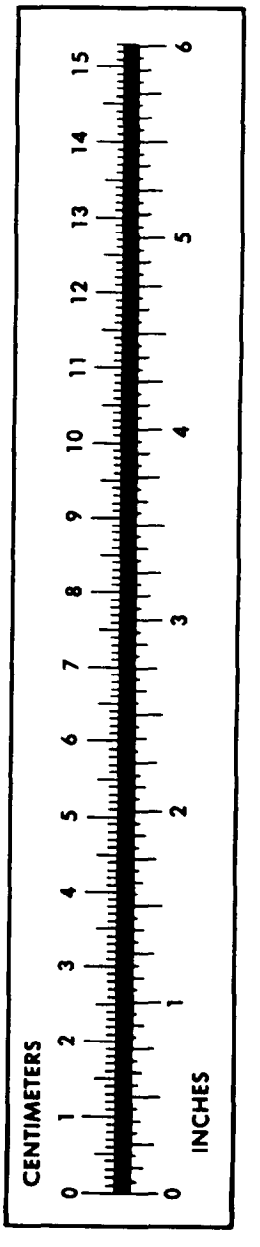
TEMPERATURE

5/9(°F - 32) = °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° + 32 =°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
ıts	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

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



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