

**TECHNICAL MANUAL
DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LISTS
(INCLUDING DEPOT MAINTENANCE REPAIR PARTS
AND SPECIAL TOOLS)
FOR
NONAIRCRAFT NICKEL-CADMIUM BATTERIES**

**BB-422/U (NSN 6140-00-789-2118)
BB-651/UIH6(V) (NSN 6140-00-935-5265)
BB-429/U (NSN 6140-00-996-3746)
BB-501/U (NSN 6140-00-134-0850)
BB-693/U (NSN 6140-00-862-2979)
BB-651/U (NSN 6140-01-037-7344)**

This copy is a reprint which includes current pages from
Change 1. The title was changed by Change 1.

TECHNICAL MANUAL

No. 11-6140-203-34P-3



HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 7 October 1977

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REPORTING OF ERRORS

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

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| | 01 Battery, Storage BB-613/U (Cell)..... | 19 | 8 |
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| | 01 Battery, Storage P/N18191-14 (Cell) or P/N43B034AC05G5. | 25 | 10 |
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*This manual, together with TM 11-6140-203-20P-3, supersedes so much of TM 11-6140-230-15-3, 1 December 1969, including Change 3, 23 December 1975 as pertains to repair parts and special tools list.

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 direct support and general support maintenance of the BB-422/U, BB-651/UIH6(V), BB-429/U, BB-501/U, BB-693/U, and BB-651/U. 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 III. 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 alphabetic 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.

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.

F - Support item is removed, replaced, used at the direct support 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:

Code *Application/Explanation*

F - The lowest maintenance level capable of complete repair of the support item is the direct support 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:

Recoverability

codes *Definition*

Z - Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.

A - Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. *National Stock Number.* Indicate the National

stock number assigned to the item and will be used for requisitioning purposes.

d. 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.

e. 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.

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

g. Unit of Measure (UIM). 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. Usable on codes are shown in the description column. Uncoded items are applicable to all models. Identification of the usable on codes used in this publication are:

| Code | Used on |
|------|----------------|
| AEI | BB-422/U |
| AV5 | BB-501/U |
| CJU | BB-693/U |
| 2YF | BB-651/UIH6(V) |
| 4HP | BB-429/U |
| DQ9 | BB-651/U |

b. The following publication pertains to the BB-422/U, BB-651/UIH6(V), BB-429/U, BB-501/U, BB-693/U, and BB-651/U and its components: TM 11-6140-203-15-3, Nonaircraft Nickel-Cadmium Batteries

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.

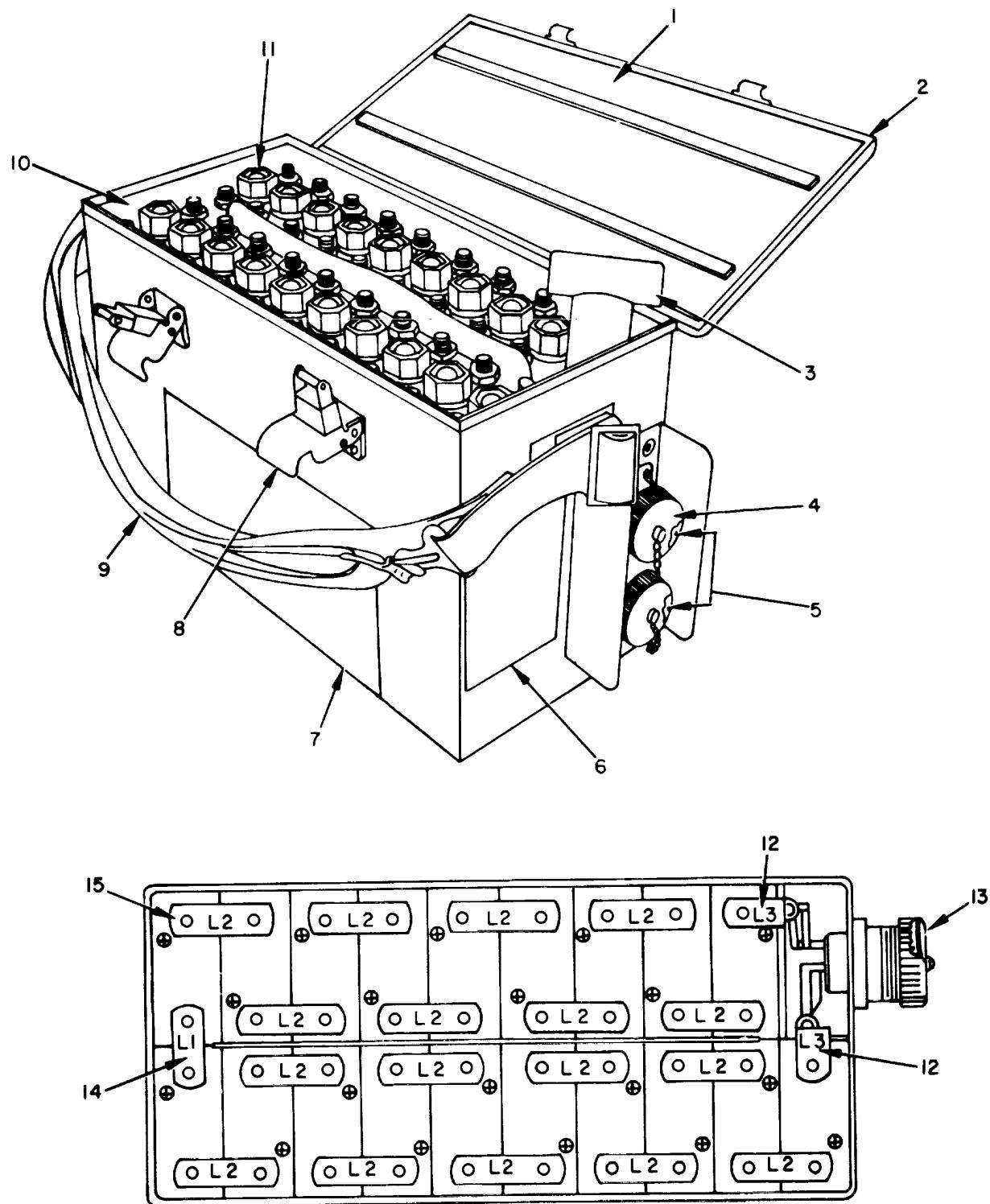
(1) *First.* Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphabetic sequence, cross-referenced to the illustration figure number and item number.

(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.)

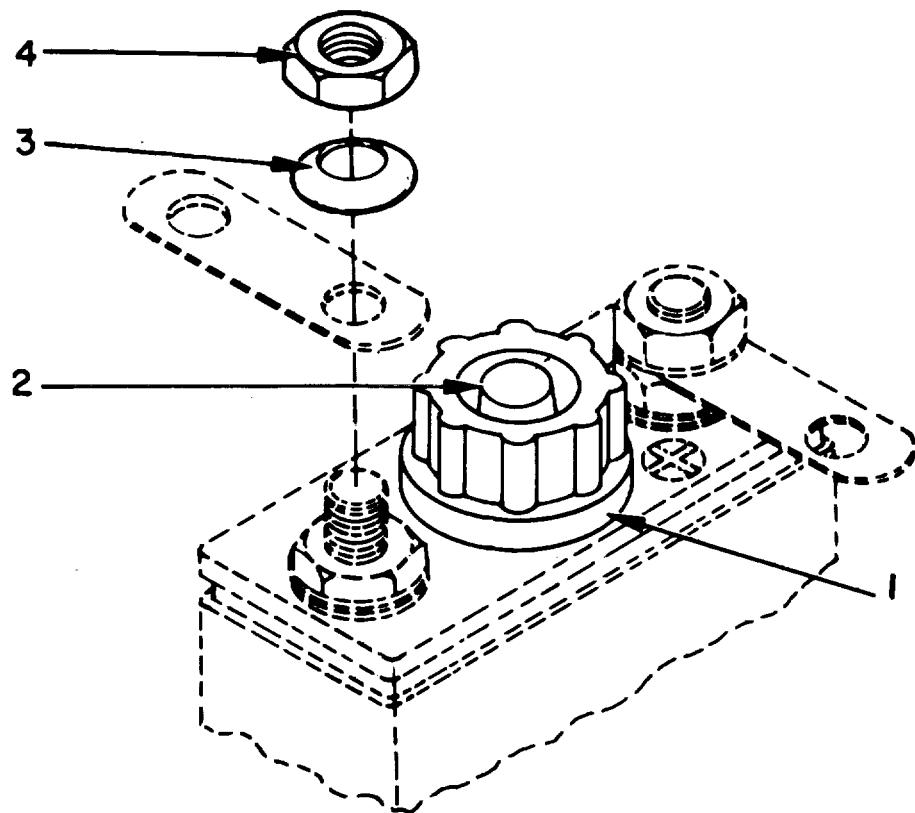


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Figure 1. Battery, Storage BB-422/U.

SECTION II

| (1) ILLUSTRATION (a) FIG NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|--|----|--------------------|------------------------------------|-----------------------|-------------|---|------------|---------------------------------|
| | | | | | | GROUP 00 BATTERY, STORAGE BB-422/U | | |
| 1 | 1 | PAFZZ | 6140-00-798-3593 | 23055 | 74025 | GASKET COVER | AE1 | EA 1 |
| 1 | 2 | PAFZZ | 6140-00-820-2277 | S50115283 | 80063 | COVER,BATTERY | AE1 | EA 1 |
| 1 | 3 | PAOZZ | 5120-00-618-5305 | SNC115287 | 80063 | WRENCH,VENT CAP | AE1 | EA 1 |
| 1 | 4 | PAOZZ | 5935-00-636-5983 | 2209-7 | 71468 | CAP,PROTECTIVE,DUST AND MOISTURE SEAL..... | AE1 | EA 2 |
| 1 | 5 | PAFZZ | 5935-00-069-6284 | SM0111936 | B0063 | CONNECTOR,RECEPTACLE,ELECTRICAL | AE1 | EA 2 |
| 1 | 6 | PAFZZ | 9330-00-877-2872 | MIL120693 | 81349 | PLASTIC SHEET.POLYAHIOE..... | AE1 | EA 1 |
| 1 | 7 | PAFZZ | 6140-00-826-1885 | 22199 | 74025 | BATTERY BOX..... | AE1 | EA 1 |
| 1 | 8 | PAFZZ | 5340-00-205-5184 | 22196-3 | 74025 | CATCH,LUGGAGE | AE1 | EA 4 |
| 1 | 9 | PAFZZ | 3940-00-797-7412 | SMC115280 | 80063 | SLING,ENDLESS | AE1 | EA 1 |
| 1 | 10 | PAFZZ | 5970-00-820-2177 | SM0115286 | 80063 | INSULATOR,PLATE..... | AE1 | EA 1 |
| 1 | 11 | PAFFA | 6140-00-014-6583 | 8B431U | 80058 | BATTERY,STORAGE CELL | AE1 | EA 19 |
| 1 | 12 | PAFZZ | 5940-00-820-2174 | 19577-43 | 74025 | LINK,BATTERY TERMINAL..... | AE1 | EA 2 |
| 1 | 13 | PAOZZ | 5330-00-822-3163 | 10343-20 | 74025 | PACKING,PREFOR4EO O RING | AE1 | EA 2 |
| 1 | 14 | PAFZZ | 5940-00-820-2175 | 9577-41 | 74025 | LINK,IATTERY TERMINAL | AE1 | EA 1 |
| 1 | 15 | PAFZZ | 5940-00-820-2176 | 9577-42 | 74025 | LTNK,IATTERY TERMINAL..... | AE1 | EA 17 |

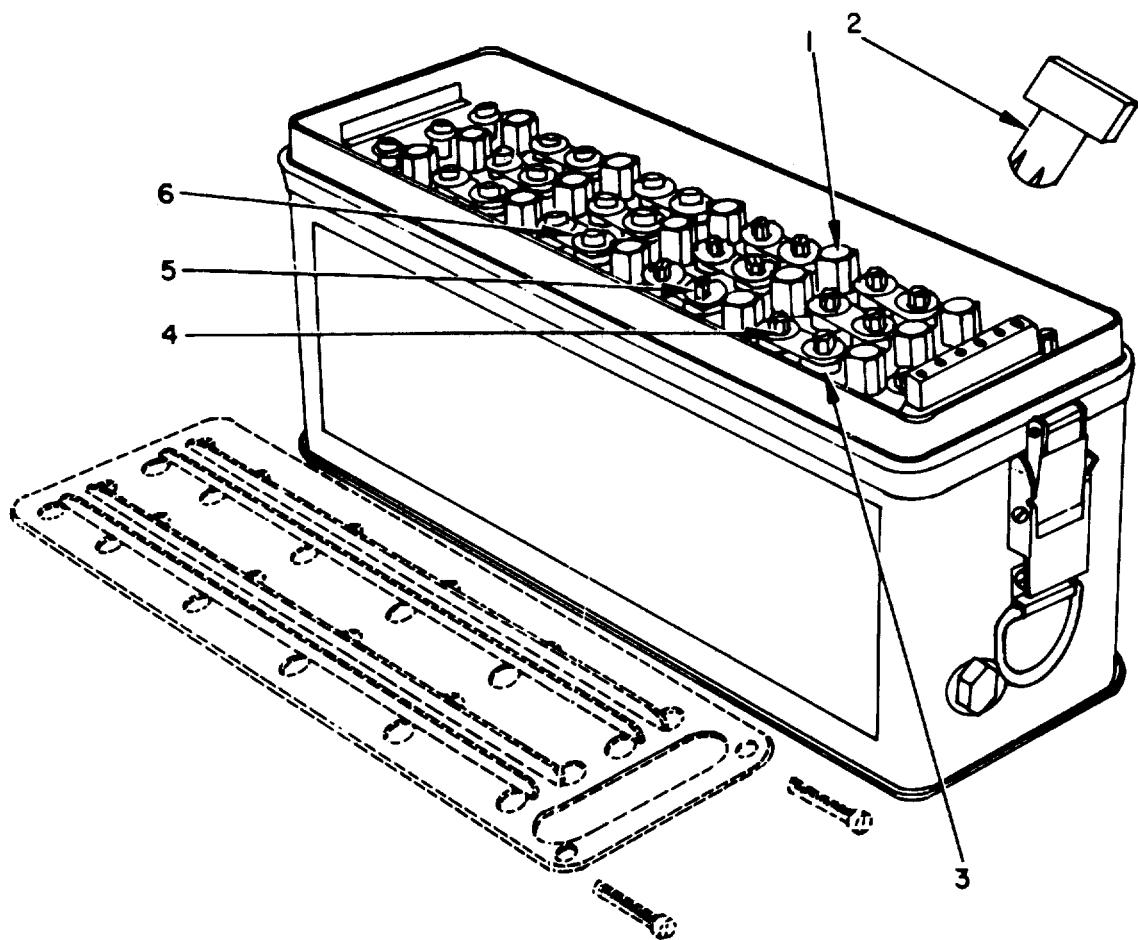


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Figure 2. Battery, Storage BB-h31/U (Cell).

SECTION II

| (1) ILLUSTRATION | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|---------------------|--------------------|--------------------|------------------------------------|-----------------------|-------------|---|------------|---------------------------------|
| (a) FIG NO. | (b) ITEM NO. | | | | | | | |
| 2 | 1 | PAOZZ | 5330-00-731-7366 | 10343-5 | 74025 | GROUP 01 BATTERY, STORAGE BB-431/U (CELL) PACKING, PREFORMED O RINGAE1 | EA | 19 |
| 2 | 2 | PAOZZ | 6140-00-676-3376 | 16934-1 | 74025 | FILLER CAP, BATTERY.....AE1 | EA | 19 |
| 2 | 3 | PAFZZ | 5310-00-822-7270 | 16128-17 | 7402S | IMSHER., SPRING TENSION.....AE1 | EA | 38 |
| 2 | 4 | PAFZZ | 5310-00-820-0952 | 15111-43 | 74025 | NUT, PLAIN,(HEXAGNAL).....AE1 | EA | 38 |

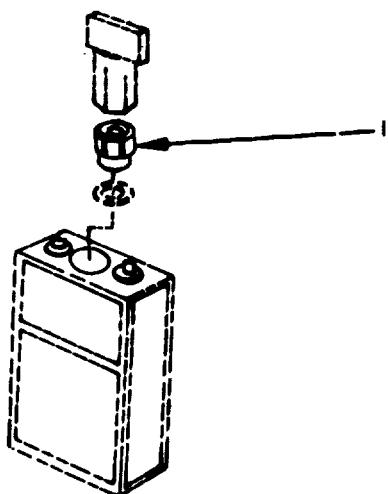


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Figure 3. Battery, Storage BB-651/UiH6(V).

SECTION II

| (1) ILLUSTRATION | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|---------------------|--------------------|--------------------|------------------------------------|-----------------------|-------------|--|------------|---------------------------------|
| (a) FIG NO. | (b) ITEM NO. | | | | | | | |
| | | | | | | GROUP 00 BATTERY, STORAGE BB-651/UIH6 (V) | | |
| 3 | 1 | PAFFA | 6140-00-889-1137 | BB436U | 80058 | BATTERY, STORAGE CELL | 2YF | EA 20 |
| 3 | 2 | PAOZZ | 5120-00-064-5326 | SCC204022 | 80063 | WRENCH. BATTERY FILLER CAP..... | 2YF | EA 1 |
| 3 | 3 | PAFZZ | 5310-00-983-8317 | MS75045-2 | 96906 | WASHER, FLAT | 2YF | EA 40 |
| 3 | 4 | PAFZZ | 5310-00-973-2654 | MS75044-2 | 96906 | WASHER,BSELLEVILLE | 2YF | EA 40 |
| 3 | 5 | PAFZZ | 5305-00-889-3073 | MS75043-2 | 96906 | SCREW,NACHINE..... | 2YF | EA 40 |
| 3 | 6 | XDFZZ | | SMB298151 | 80063 | LINK, BATTERY TERMINAL..... | 2YF | EA 18 |



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Figure 4. Battery, Storage BB-436/U (Cell).

SECTION II

| (1) <u>ILLUSTRATION</u> | | (2) | (3) | (4) | (5) | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) | (8) QTY INC IN UNIT |
|----------------------------|--------------------|-------------|-----------------------------|----------------|-------|--|-----|---------------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | PART NUMBER | FSCM | | U/M | |
| 4 | 1 | PAOZZ | 6140-00-983-9289 | MS75046-1 | 96906 | GROUP 01 BATTERY, STORAGE BB-436/U (CELL) FILLER CAP..... 2YF | EA | 20 |

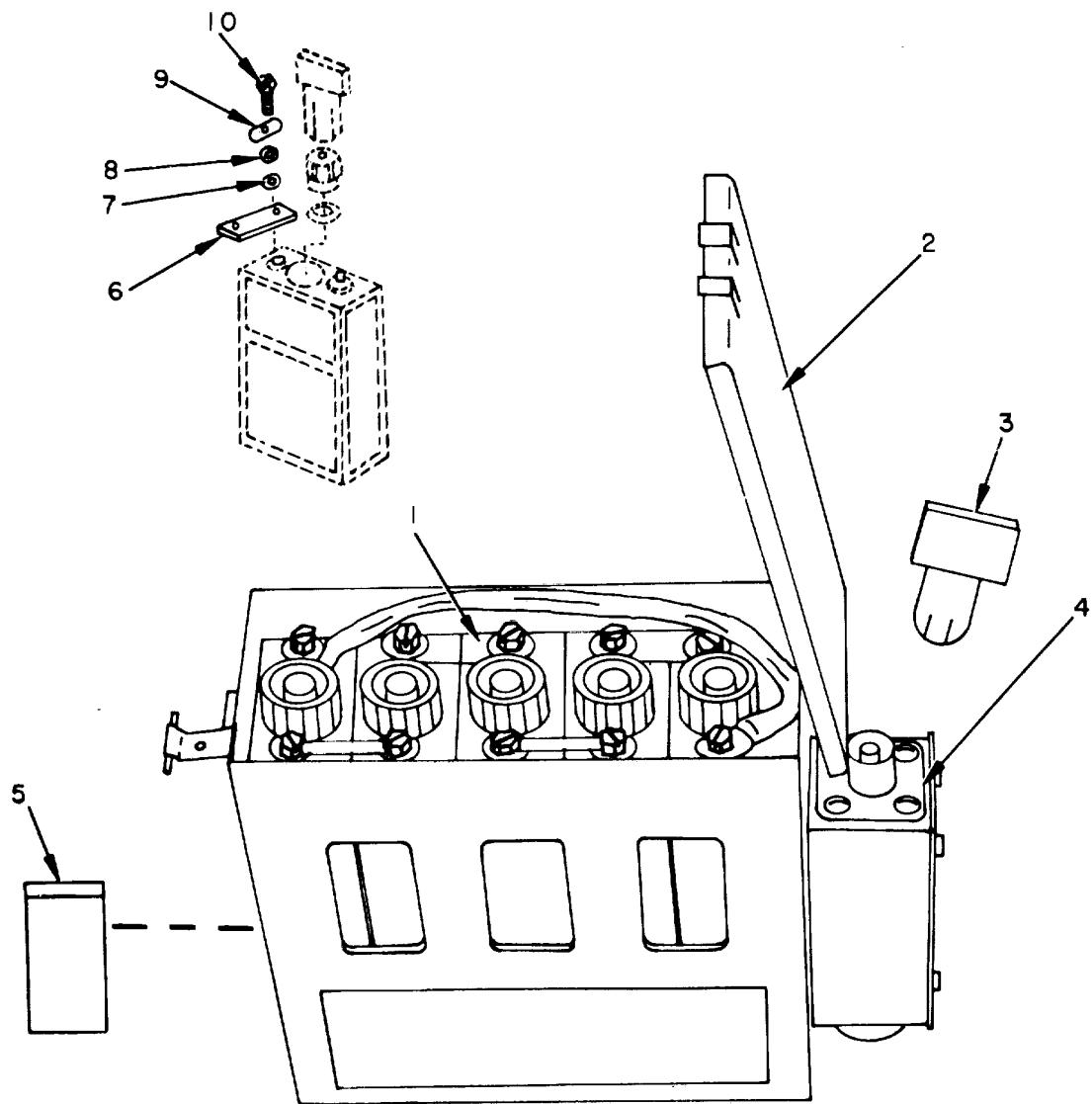
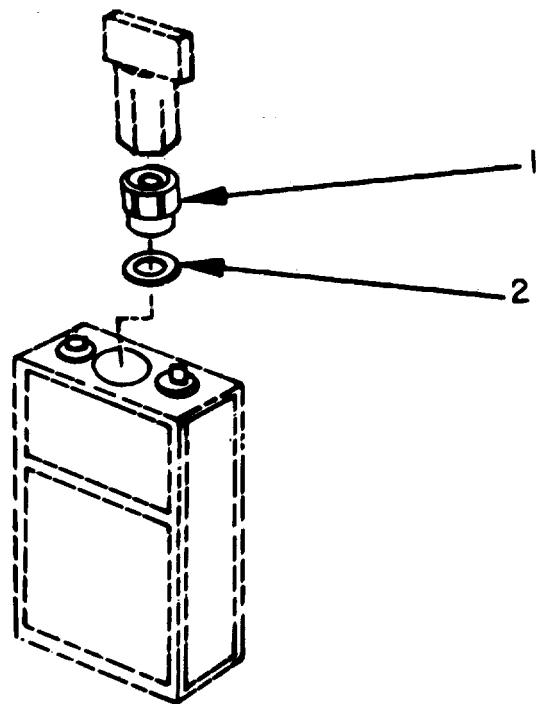


Figure 5. Battery, Storage BB-429/U.

SECTION II

| (1) ILLUSTRATION | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|---------------------|--------------------|--------------------|------------------------------------|-----------------------|----------------|--|------------|---------------------------------|
| (a) FIG NO. | (b) ITEM NO. | | | | | | | |
| | | | | | | GROUP 00 BATTERY, STORAGE BB-429/U | | |
| 5 | 1 | PAFFA | 6140-00-455-7634 | BB418U | 80058 | BATTERY, STORAGE4HP | EA | 5 |
| 5 | 2 | PAFZZ | 6140-00-116-5349 | Z23585 | 74025 | LINING, COVER4HP | EA | 1 |
| 5 | 3 | PAOZZ | 5120-00-618-5305 | SMC115287 | 80063 | WRENCH,VENT CAP4HP | EA | 1 |
| 5 | 4 | PAFZZ | 5935-00-003-7737 | MILC5015 | 1349 | RECEPTACLE ASSENLY4HP | EA | 1 |
| 5 | 5 | PAOZZ | 9330-00-877-2872 | MILP22035 | 81349 | PLASTIC SHEET,POLYAMIDE.....4W | EA | 1 |
| 5 | 6 | PAFZZ | 5940-00-134-0724 | 10371-118 | 74025 | LINK, BATTERY TERMINAL.....4HP | EA | 4 |
| 5 | 7 | PAFZZ | 5310-00-983-8317 | 25636-1 | 74025 | WASHER4HP | EA | 10 |
| 5 | 8 | PAFZZ | 5310-00-118-1977 | 16128-26 | 70472 | WASHER, SPRING TENSION4HP | EA | 10 |
| 5 | 9 | XDFZZ | | | | | | |
| 5 | 10 | PAFZZ | 6140-00-983-9289 | 18100-50 MS75046-1 | 74025 96906 | WASHER,PLA.IN4HF SCREW,MACHINIE.....4HP | EA EA | 2 10 |

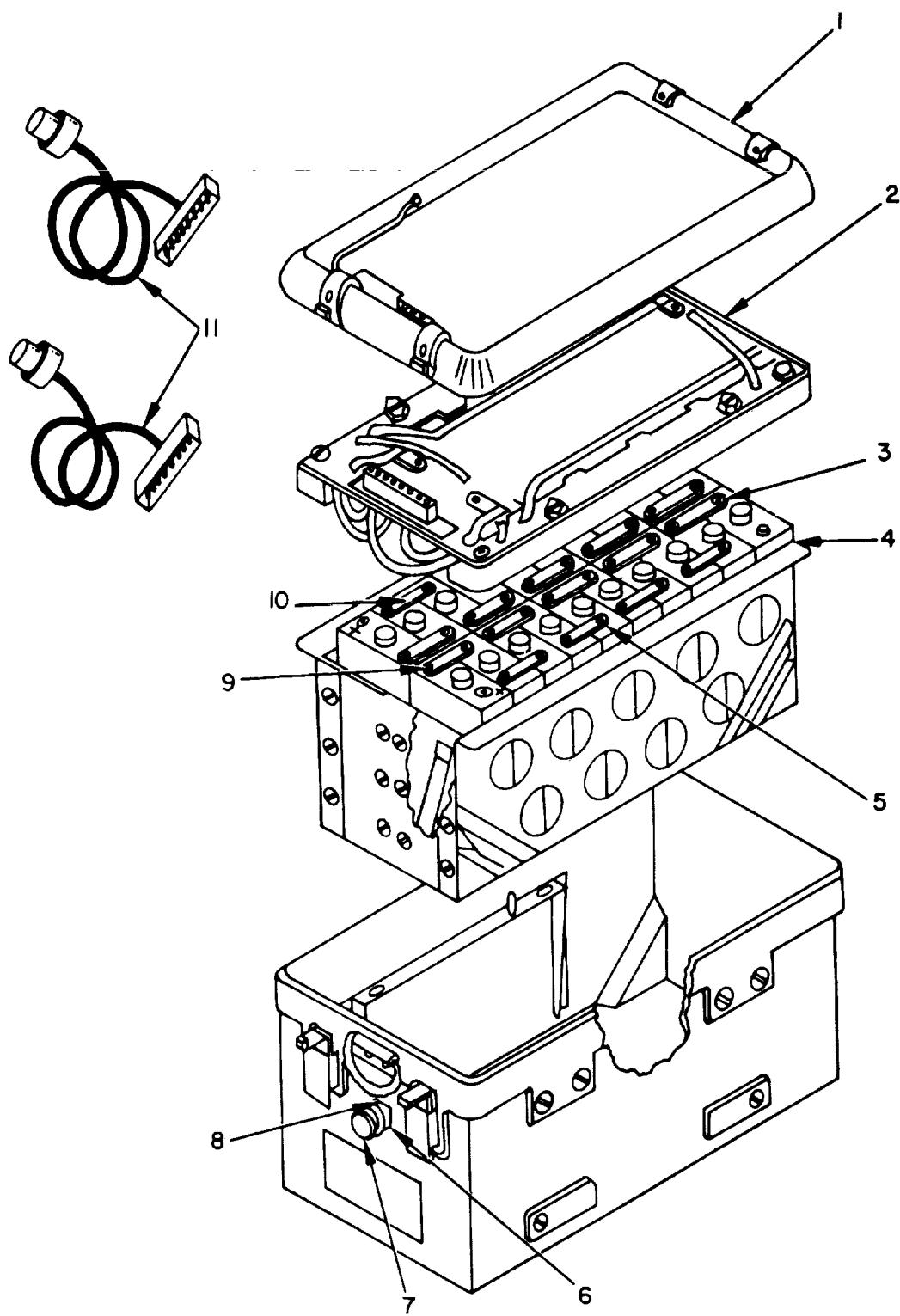


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Figure 6. Battery, Storage BB-418/U (Cell).

SECTION II

| (1) ILLUSTRATION | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|---------------------|--------------------|--------------------|--------------------------------------|-----------------------|----------------|--|------------|---------------------------------|
| (a) FIG NO. | (b) ITEM NO. | | | | | | | |
| 6 | 1 6 | PAOZZ PAOZZ | 6140-00-676-3376 5330-00-731-7366 | 1693-1 10343-5 | 74025 74025 | GROUP 01 BATTERY, STORAGE BB-418/U (CELL) FILLER CAP, BATTERY.....4HP PACKING, PREFORMED O RING4HP | EA EA | 5 5 |

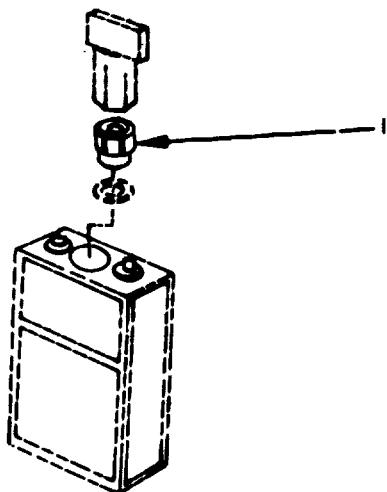


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Figure 7. Battery, Storage BB-501/U.

SECTION II

| (1) ILLUSTRATION | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|---------------------|----|--------------------|------------------------------------|-----------------------|-------------|---|------------|---------------------------------|
| 7 | 1 | PAFZZ | 5935-00-163-2823 | CA51513-1 | 71468 | GROUP 00 BATTERY, STORAGE BB-501/U | | |
| 7 | 2 | XDFZZ | | 10468-25 | 74025 | DUST COVER | AV5 | EA 1 |
| 7 | 3 | PAFZZ | 5305-00-889-3073 | MS75043-2 | 96906 | GASKET, RUBBER | AV5 | EA 1 |
| 7 | 4 | PAOZZ | 6140-00-134-0849 | 88613U | 80058 | SCREW, SLOTTED, HEX HEAD..... | AV5 | EA 40 |
| 7 | 5 | PAFZZ | 5310-00-973-2654 | MS75044-2 | 96906 | CELL ASSEMBLY..... | AV5 | EA 20 |
| 7 | 6 | PAFZZ | 5310-00-645-9849 | B27580 | 74025 | WASHER, BELLEVILLE | AV5 | EA 40 |
| 7 | 7 | PAOZZ | 4820-00-908-1571 | 190ARL | 98021 | NUT, SELF LOCKING | AV5 | EA 3 |
| 7 | 8 | PAFZZ | 530-00-259-0950 | MS20033-10 | 74025 | VENT VALVE ASSEMBLY | AV5 | EA 1 |
| 7 | 9 | PAOZZ | 5310-00-983-8317 | 25363-1 | 74025 | GASKET | AV5 | EA 1 |
| 7 | 10 | PAFZZ | 5940-00-134-0724 | 10371-118 | 74025 | WASHER, DOUBLE D | AV5 | EA 40 |
| 7 | 11 | PAOZZ | 5955-00-404-7535 | CX11935/U | 80058 | CONNECTOR, INTERCELL | AV5 | EA 18 |
| | | | | | | CABLE ASSEMBLY, PWR ELEC | AV5 | EA 2 |



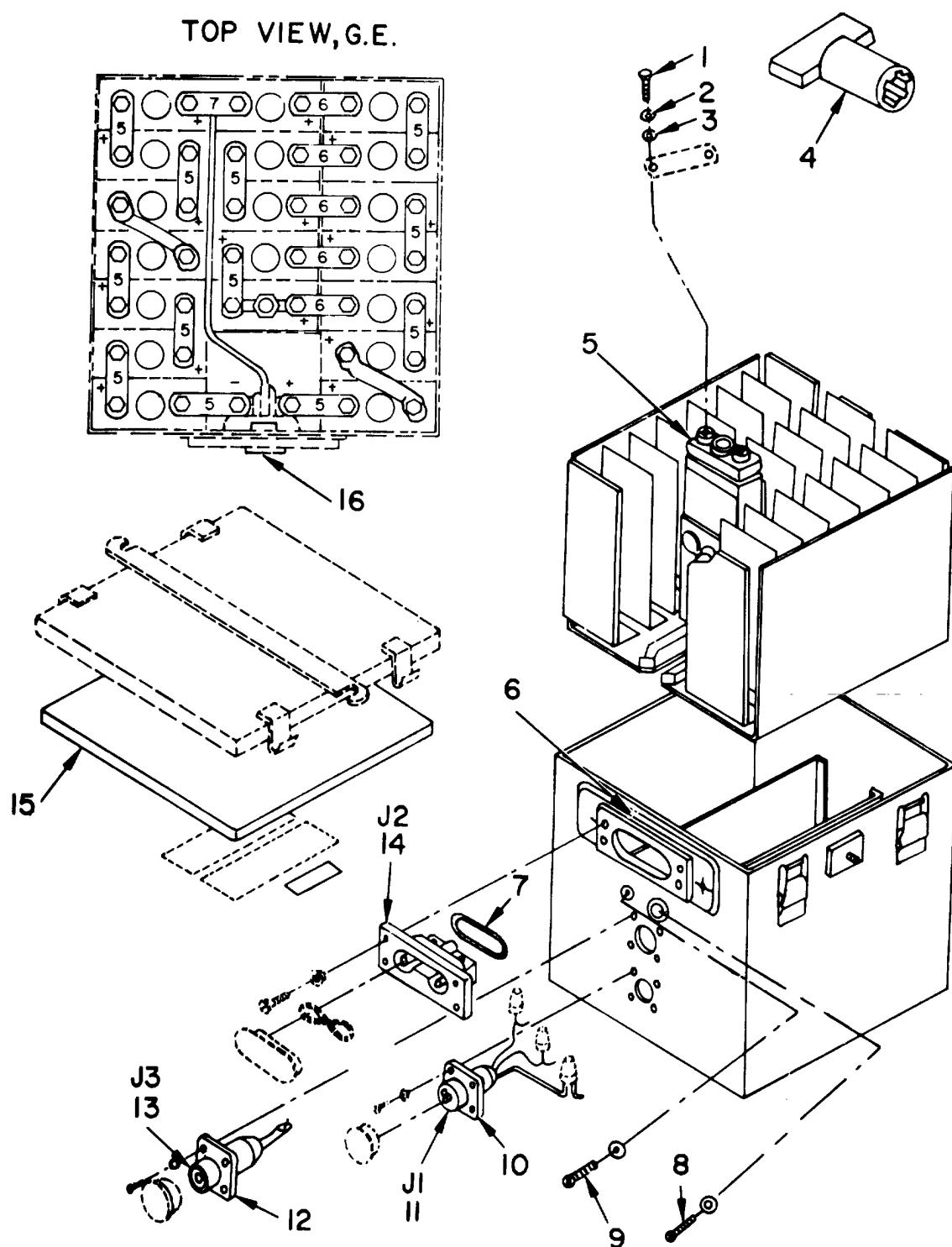
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Figure 8. Battery, Storage BB-613/U (Cell).

SECTION II

| (1) ILLUSTRATION (a) FIG NO. | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|--|---|--------------------|------------------------------------|-----------------------|-------------|---|------------|---------------------------------|
| 8 | 1 | PAOZZ | 6140-00-983-9289 | M575046-1 | 96906 | GROUP 01 BATTERY, STORAGE BB-613/U (CELL) VENT CAP | AV5 | EA 20 |

19/(20 blank)



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Figure 9. Battery, Storage BB-693/U (Sheet 1 of 2).

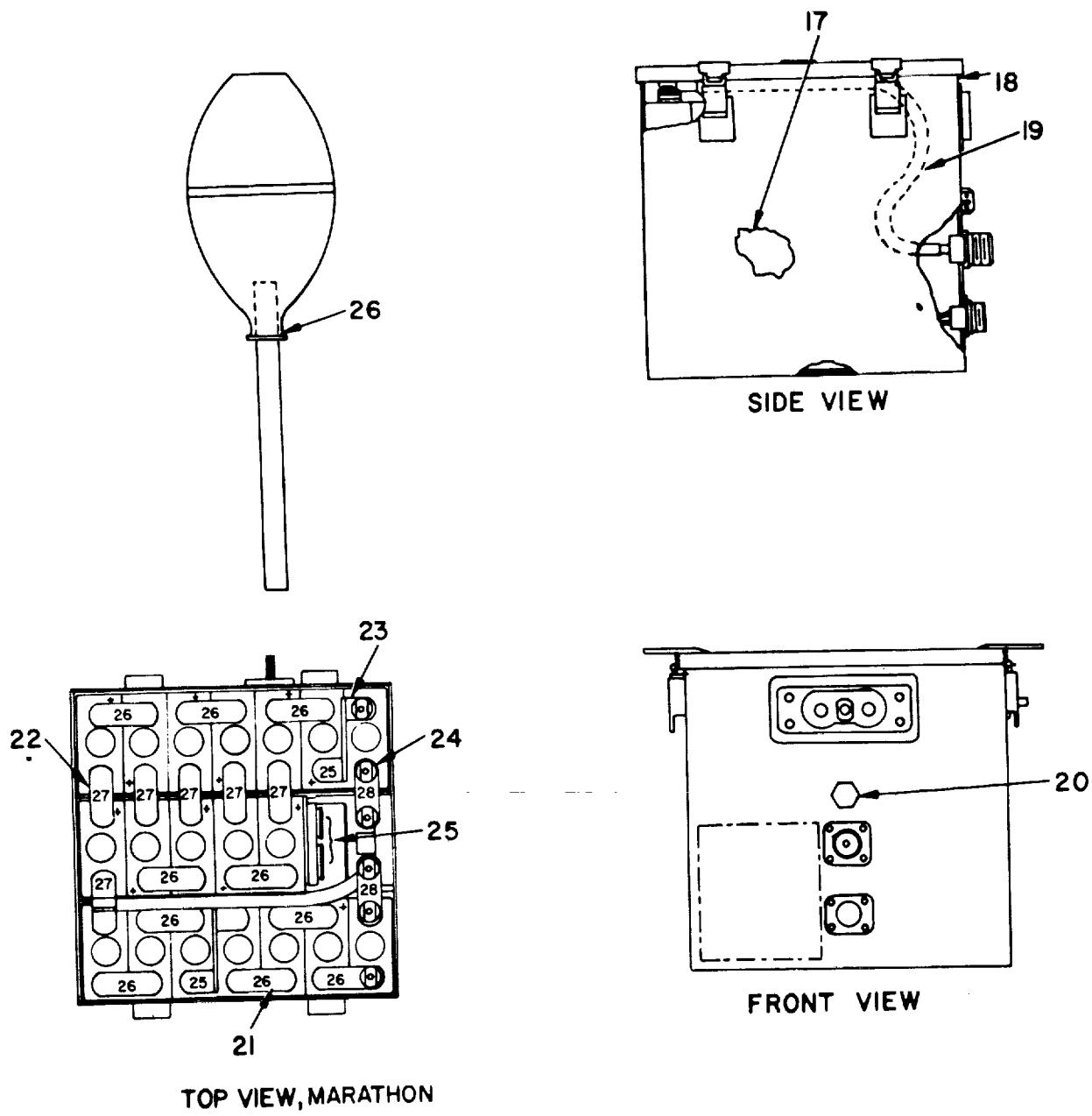
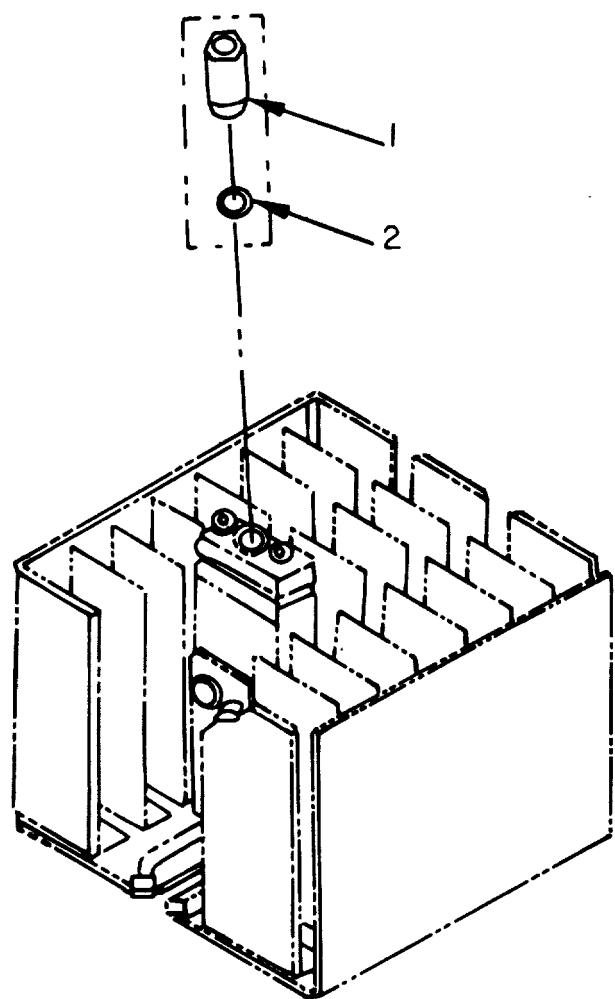


Figure 9. Battery, Storage BB-693/U (Sheet 2 of 2).

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SECTION II

| (1) ILLUSTRATION | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|---------------------|----|--------------------|------------------------------------|-----------------------|-------------|---|------------|---------------------------------|
| | | | | | | GROUP 00 BATTERY, STORAGE BB-693/U | | |
| 9 | 1 | PAFZZ | 5305-00-843-5808 | 10488-20 | 74025 | SCREW., SOCKET HEAD CAP | CJU | EA 40 |
| 9 | 2 | PAFZZ | 5310-00-739-4470 | 23591-1 | 74025 | WASHER. FLAT | CJU | EA 40 |
| 9 | 3 | PAFZZ | 5310-00-837-6117 | 16128-1 | 74025 | WASHER, SPRING TENSION | CJU | EA 40 |
| 9 | 4 | PAOZZ | 5120-00-618-5305 | SMC115287 | 80063 | WRENCH, BATTERY FILL | CJU | EA 1 |
| 9 | 5 | PAFFA | 6140-00-408-4936 | 18191-14 | 74025 | CELL, BATTERY STORAGE(MARATHONONLY) | CJU | EA 19 |
| 9 | 5 | PAFFA | 6140-00-408-4937 | 43B034AC05G5 | 19209 | CELL, BATTERY STORAGE (G.E. ONLY) | CJU | EA 19 |
| 9 | 6 | PAFZZ | 5330-00-067-8924 | 24583 | 74025 | RECTANGULAR, RING GASKET | CJU | EA 1 |
| 9 | 7 | PAFZZ | 5330-00-201-3642 | 162A8089P2 | 19209 | PACKING PREFORM 0 RING | CJU | EA 1 |
| 9 | 8 | PAOZZ | 4820-00-187-5522 | 178A3369G2 | 19209 | VALVE, PRESSURE RELIEF (G.E. ONLY) | CJU | EA 1 |
| 9 | 9 | PAOZZ | 6140-00-295-1721 | 162A8032G4 | 19209 | VALVE, PRESSURE RELIEF (G.E. ONLY) | CJU | EA 1 |
| 9 | 10 | PAFZZ | 5330-00-008-2162 | 17A3200BBP8 | 19209 | GASKET, CONNECTOR | CJU | EA 1 |
| 9 | 11 | PAFZZ | 5935-00-801-6616 | MS3102R1457P | 96906 | CONNECTOR, RECEPTACLE | CJU | EA 1 |
| 9 | 12 | PAFZZ | 5330-00-008-2162 | 178A3200BBP11 | 19209 | GASKET, CONNECTOR | CJU | EA 1 |
| 9 | 13 | PAFZZ | 5935-00-878-6941 | MS3102R1612S | 96906 | CONNECTOR, RECEPTACLE | CJU | EA 1 |
| 9 | 14 | PAFZZ | 5935-00-673-3621 | 16163-7 | 74025 | CONNECTOR, RECEPTACLE, ELECTRICAL | CJU | EA 1 |
| 9 | 15 | PAFZZ | 5330-00-008-2160 | 123C9326P21 | 19209 | GASKET COVER (G.E. ONLY) | CJU | EA 1 |
| 9 | 16 | PAFZZ | 4520-00-174-7771 | 965D34201 | 19209 | HEATER ASSEMBLY (G.E. ONLY) | CJU | EA 1 |
| 9 | 17 | PAFZZ | 6140-00-327-2138 | 28030 | 74025 | HEATER UNIT OR | CJU | EA 1 |
| 9 | 17 | PAFZZ | 6140-00-327-2125 | 28031 | 74025 | HEATER UNIT | CJU | EA 1 |
| 9 | 18 | XDFZZ | | 27101 | 74025 | GASKET COVER (MARATHON ONLY) | CJU | EA 1 |
| 9 | 19 | XDFZZ | | 27414 | 74025 | CABLE ASSEMBLY | CJU | EA 1 |
| 9 | 20 | PAOZZ | 4820-00-324-4335 | 28077 | 74025 | VALVE,PRESSURE RELIEF(MARATHONONLY) | CJU | EA 1 |
| 9 | 21 | PAFZZ | 5940-00-841-6626 | X16102-7 | 74025 | LINK, BATTERY TERMINAL | CJU | EA 6 |
| 9 | 22 | XDFZZ | 6140-00-402-6377 | 16167-1 | 74025 | LINK, BATTERY TERMINAL | CJU | EA 2 |
| 9 | 23 | PAFZZ | 5940-00-841-6627 | 16102-8 | 74025 | LINK, BATTERY TERMINAL | CJU | EA 2 |
| 9 | 24 | PAFZZ | 5940-00-841-6629 | 16102-6 | 74025 | LINK, BATTERY TERMINAL | CJU | EA 10 |
| 9 | 25 | PAFZZ | 6685-Ot328-SS98 | 27674 | 74025 | THERMOSTAT ASSEMBLY(MARATHONONLY) | CJU | EA 1 |
| 9 | 26 | PAOZZ | 6140-01-028-9287 | 28190 | 74025 | SYRINGE, BATTERY FILLER | CJU | EA 1 |

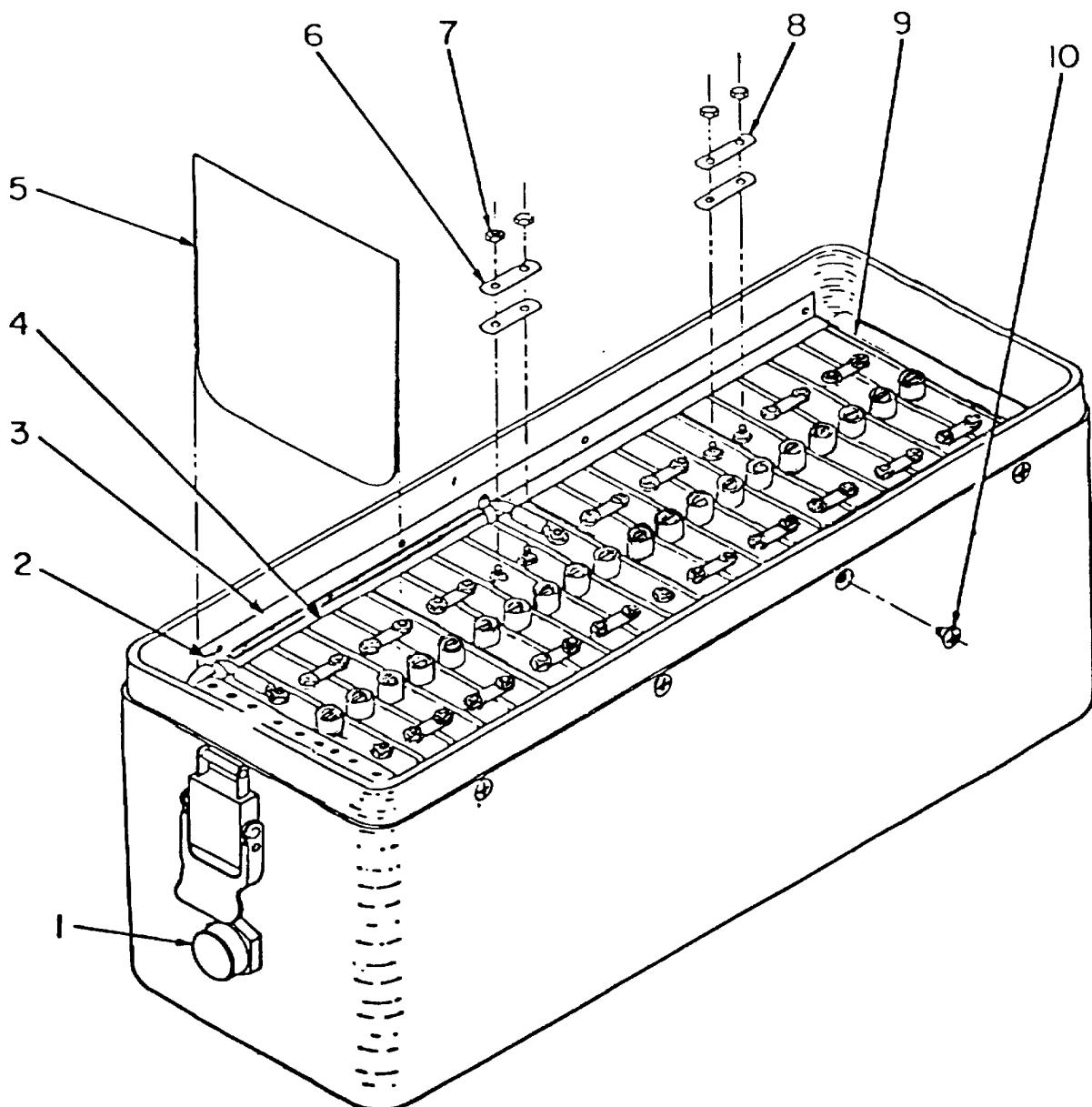


ELOYJO1O

Figure 10. Battery, Storage P/N 18191-14 (Cell) or P/N 43BO34AC05G5.

SECTION II

| (1) ILLUSTRATION | | (2) | (3) | (4) | (5) | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) | (8) QTY INC IN UNIT |
|---------------------|--------------------|-------------|-----------------------------|----------------|-------|---|-----|---------------------------------|
| (a) FIG NO. | (b) ITEM NO. | SMR CODE | NATIONAL STOCK NUMBER | PART NUMBER | FSCM | | U/M | |
| 10 | 1 | PAOZZ | 6140-00-676-3376 | Y16934-1 | 74025 | GROUP 01 BATTERY, STORAGE P/N 18191-14 (CELL) OR P/N 43D034AC05G5 FILLER CAP,CJU | EA | 19 |
| 10 | 2 | PAOZZ | 1330-00-731-7366 | 10343-5 | 74025 | PACKING, PREFORMED 0 RINGCJU | EA | 19 |

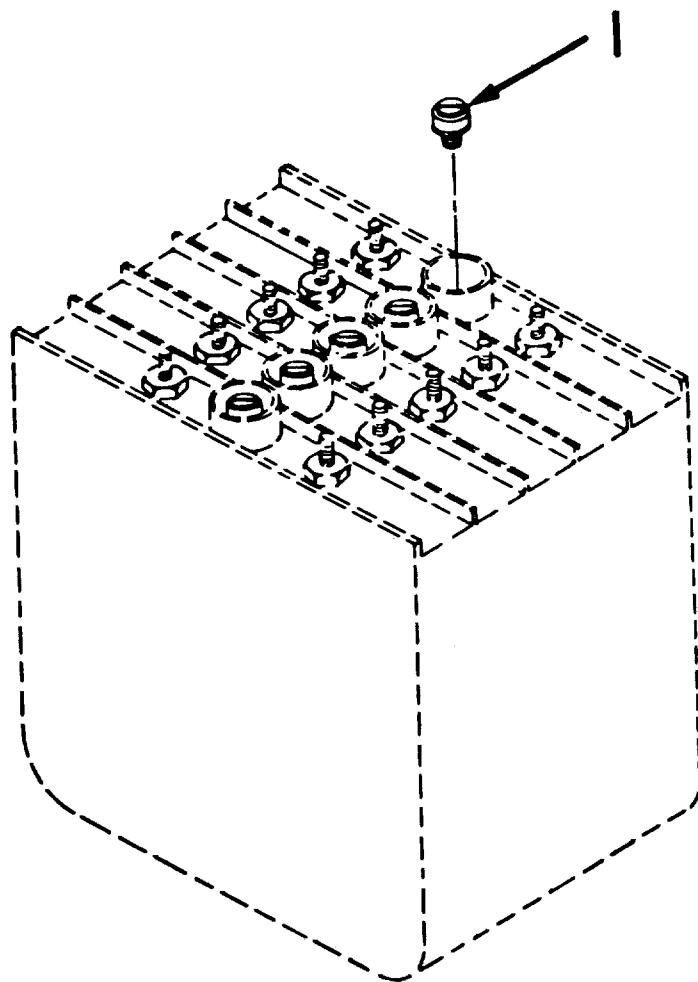


ELOYJO12

Figure 11. Battery, Storage BB-651/U.

SECTION II

| (1) ILLUSTRATION | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|---------------------|--------------------|--------------------|------------------------------------|-----------------------|-------------|---|------------|---------------------------------|
| (a) FIG NO. | (b) ITEM NO. | | | | | | | |
| 11 | 1 | PAFZZ | 6140-01-037-7343 | SMB794469 | 80063 | VALVE,PRESSURE | DQ9 | EA 1 |
| | 2 | PAFZZ | | MS3367-4-9 | 80063 | CABLE TIE..... | DQ9 | EA 4 |
| | 3 | PAFZZ | | SMC794470 | 80063 | HOLD DOWN ASSY..... | DQ9 | EA 2 |
| | 4 | PAFFA | | SMC794467 | 80063 | BATTERY,STORAGE | DQ9 | EA 4 |
| | 5 | PAFZZ | | SMB794474-1 | 80063 | SHIM,BATTERY | DQ9 | EA 1 |
| | 6 | PAFZZ | | SMA794476 | 80063 | CONNECTOR,INTERCELL | DQ9 | EA 32 |
| | 7 | PAFZZ | | NAS671-C6 | 80063 | NUT,FEX..... | DQ9 | EA 40 |
| | 8 | PAFZZ | | SMA794475 | 80063 | CONNECTOR,INTERCELL | DQ9 | EA 4 |
| | 9 | PAFZZ | | SMB794474-2 | 80063 | SHIM,BATTERY | DQ9 | EA 1 |
| | 10 | PAFZZ | | MS51959-27 | 80063 | SCREW,MACHINE..... | DQ9 | EA 8 |



ELOYJO13

Figure 12. Battery, Storage BB-651/U (Cell).

CHANGE 1 28

SECTION II

| (1) ILLUSTRATION | | (2) SMR CODE | (3) NATIONAL STOCK NUMBER | (4) PART NUMBER | (5) FSCM | (6) DESCRIPTION <i>USABLE ON CODE</i> | (7) U/M | (8) QTY INC IN UNIT |
|---------------------|--------------------|--------------------|------------------------------------|-----------------------|-------------|--|------------|---------------------------------|
| (a) FIG NO. | (b) ITEM NO. | | | | | | | |
| 12 | 1 | PAOZZ | | SMC794495 | 80063 | GROUP 01 BATTERY, STORAGE BB-651/U CELL VENT PLUG ASSY..... DQ9 | EA | 20 |

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

| STOCK NUMBER | FIGURE NO. | ITEM NO. | STOCK NUMBER | FIGURE NO. | ITEM NO. | | |
|------------------|---------------|----------|------------------|---------------|----------|----|----|
| PART NUMBER | FIG. FSCM NO. | ITEM NO. | PART NUMBER | FIG. FSCM NO. | ITEM NO. | | |
| 5935-00-003-7737 | 5 | 4 | 5330-00-731-7366 | 6 | 2 | | |
| 5330-00-008-2160 | 9 | 15 | 5330-00-731-7366 | 10 | 2 | | |
| 5320-00-008-2162 | 9 | 10 | 5310-00-739-4470 | 9 | 2 | | |
| 5330-00-008-2162 | 9 | 12 | 3940-00-797-7412 | 1 | 9 | | |
| 6140-00-014-6583 | 1 | 11 | 6140-00-798-3593 | 1 | 1 | | |
| 5120-00-064-5326 | 3 | 2 | 5935-00-801-6616 | 9 | 11 | | |
| 5330-00-067-8924 | 9 | 6 | 5310-00-820-0952 | 2 | 4 | | |
| 5935-00-069-6284 | 1 | 5 | 5940-00-820-2174 | 1 | 12 | | |
| 6140-00-116-5349 | 5 | 2 | 5940-00-820-2175 | 1 | 14 | | |
| 5310-00-118-1977 | 5 | 8 | 5940-00-820-2176 | 1 | 15 | | |
| 5940-00-134-0724 | 5 | 6 | 5940-00-820-2177 | 1 | 10 | | |
| 5940-00-134-0724 | 7 | 10 | 6140-00-820-2277 | 1 | 2 | | |
| 6140-00-134-0849 | 7 | 4 | 5330-00-822-3163 | 1 | 13 | | |
| 5935-00-163-2823 | 7 | 1 | 5310-00-822-7270 | 2 | 3 | | |
| 4520-00-174-7771 | 9 | 16 | 5310-00-826-1885 | 1 | 7 | | |
| 4820-00-187-5522 | 9 | 8 | 5310-00-837-6117 | 9 | 3 | | |
| 5330-00-201-3642 | 9 | 7 | 5940-00-841-6626 | 9 | 21 | | |
| 5340-00-205-5184 | 1 | 8 | 5940-00-841-6627 | 9 | 23 | | |
| 5330-00-259-0950 | 7 | 8 | 5940-00-841-6629 | 9 | 24 | | |
| 6140-00-295-1721 | 9 | 9 | 5305-00-843-5808 | 9 | 1 | | |
| 4820-00-324-4335 | 9 | 20 | 6140-00-855-7634 | 5 | 1 | | |
| 6140-00-317-2125 | 9 | 17 | 9330-00-877-2872 | 1 | 6 | | |
| 6140-00-327-2138 | 9 | 17 | 9330-00-877-2872 | 5 | 5 | | |
| 6685-00-328-5898 | 9 | 25 | 5935-00-878-6941 | 9 | 13 | | |
| 6140-00-402-6377 | 9 | 22 | 6140-00-889-1137 | 3 | 1 | | |
| 5995-00-404-7535 | 7 | 11 | 5305-00-889-3073 | 3 | 5 | | |
| 6140-00-408-4936 | 9 | 5 | 5305-00-889-3073 | 7 | 3 | | |
| 6140-00-408-4937 | 9 | 5 | 4820-00-908-1571 | 7 | 7 | | |
| 5120-00-618-5305 | 1 | 3 | 5310-00-973-2654 | 3 | 4 | | |
| 5120-00-618-5305 | 5 | 3 | 5310-00-973-2654 | 7 | 5 | | |
| 5120-00-618-5305 | 9 | 4 | 5310-00-983-8317 | 3 | 3 | | |
| 5935-00-636-5983 | 1 | 4 | 5310-00-983-8317 | 5 | 7 | | |
| 5310-00-645-9849 | 7 | 6 | 5310-00-983-8317 | 7 | 9 | | |
| 5935-00-673-3621 | 9 | 14 | 6140-00-983-9289 | 4 | 1 | | |
| 6140-00-676-3376 | 2 | 2 | 6140-00-983-9289 | 5 | 10 | | |
| 6140-00-676-3376 | 6 | 1 | 6140-00-983-9289 | 8 | 1 | | |
| 6140-00-676-3376 | 10 | 1 | 6140-00-028-9287 | 9 | 26 | | |
| 5330-00-731-7366 | 2 | 1 | 6140-00-037-7343 | 11 | 4 | | |
| BB418U | 80058 | 5 | 1 | SMC794470 | 80063 | 11 | 3 |
| BB431U | 80058 | 1 | 13 | SMC794495 | 80063 | 12 | 1 |
| BB436U | 80058 | 3 | 1 | SMD111936 | 80063 | 1 | 5 |
| BB613U | 80058 | 7 | 4 | SMD115283 | 80063 | 1 | 2 |
| B27580 | 74025 | 7 | 6 | SMD115286 | 80063 | 1 | 10 |
| CA51513-1 | 71468 | 7 | 1 | X16102-7 | 74025 | 9 | 21 |
| CX11935U | 80058 | 7 | 11 | Y16934-1 | 74025 | 10 | 1 |
| MILC5015 | 81349 | 5 | 4 | Z23585 | 74025 | 5 | 2 |
| MILM20639 | 81349 | 1 | 6 | 10343-20 | 74025 | 1 | 15 |
| MILP22035 | 74025 | 5 | 5 | 10343-5 | 74025 | 2 | 1 |
| MS20033-10 | 27822 | 7 | 8 | 10343-5 | 74025 | 6 | 2 |
| MS3102R14S7P | 96906 | 9 | 11 | 10343-5 | 74025 | 10 | 2 |
| M3102R16-12S | 96906 | 9 | 13 | 10371-118 | 74025 | 5 | 6 |
| MS3367-4-9 | 80063 | 11 | 2 | 10371-118 | 74025 | 7 | 10 |
| MS51959-27 | 80063 | 11 | 10 | 10468-25 | 55933 | 7 | 2 |
| MS75043-2 | 96906 | 3 | 5 | 10488-20 | 74025 | 9 | 1 |
| MS75043-2 | 96906 | 7 | 3 | 123C9326P21 | 19209 | 9 | 15 |
| MS75044-2 | 96906 | 3 | 4 | 15111-43 | 74025 | 2 | 4 |
| MS75044-2 | 96906 | 7 | 5 | 16102-6 | 74025 | 9 | 34 |
| MS75045-2 | 96906 | 3 | 3 | 16102-8 | 74025 | 9 | 23 |
| MS75046-1 | 96906 | 4 | 1 | 16128-1 | 74025 | 9 | 3 |
| MS75046-1 | 96906 | 5 | 10 | 16128-26 | 70472 | 5 | 8 |
| MS75046-1 | 96906 | 8 | 1 | 16128-17 | 74025 | 2 | 3 |
| NAS671-C6 | 80063 | 11 | 7 | 16163-7 | 74025 | 9 | 14 |
| SCC204022 | 80063 | 3 | 2 | 16167-1 | 74025 | 9 | 22 |
| SMA794475 | 80063 | 11 | 8 | 162A8032G4 | 19209 | 9 | 9 |
| SMA794476 | 80063 | 11 | 6 | 162A8089P2 | 19209 | 9 | 7 |
| SMB298151 | 80063 | 3 | 6 | 16934-1 | 74025 | 2 | 2 |
| SMB794469 | 80063 | 11 | 1 | 16934-1 | 74025 | 6 | 1 |
| SMB794474-1 | 80063 | 11 | 5 | 17A3200BBP11 | 19209 | 9 | 12 |
| SMB794474-2 | 80063 | 11 | 9 | 178A3200BBP8 | 19209 | 9 | 10 |
| SMC115280 | 80063 | 1 | 9 | 178A3369G2 | 19209 | 9 | 8 |
| SMC115287 | 80063 | 1 | 3 | 18100-50 | 74025 | 5 | 9 |
| SMC115287 | 80063 | 5 | 3 | 18191-14 | 74025 | 9 | 5 |
| SMC115287 | 80063 | 9 | 4 | 190ARL | 74025 | 7 | 7 |
| SMC794467 | 80063 | 11 | 4 | 2209-7 | 71468 | 1 | 4 |

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The Adjutant General*

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THE METRIC SYSTEM AND EQUIVALENTS

WEAR 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

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

$5/9(F - 32) = ^\circ C$
 212° Fahrenheit is equivalent to 100° Celsius

90° Fahrenheit is equivalent to 32.2° Celsius

32° Fahrenheit is equivalent to 0° Celsius

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

APPROXIMATE CONVERSION FACTORS

TO CHANGE

Inches.....
 Feet.....
 Yards.....
 Miles.....
 Square Inches.....
 Square Feet.....
 Square Yards.....
 Square Miles.....
 Acres.....
 Cubic Feet.....
 Cubic Yards.....
 Fluid Ounces.....
 nts.....
 arts.....
 allons.....
 Ounces.....
 Pounds.....
 Short Tons.....
 Pound-Feet.....
 Pounds per Square Inch.....
 Miles per Gallon.....
 Miles per Hour.....

TO

Centimeters.....
 Meters.....
 Meters.....
 Kilometers.....
 Square Centimeters.....
 Square Meters.....
 Square Meters.....
 Square Kilometers.....
 Square Hectometers.....
 Cubic Meters.....
 Cubic Meters.....
 Milliliters.....
 Liters.....
 Liters.....
 Liters.....
 Grams.....
 Kilograms.....
 Metric Tons.....
 Newton-Meters.....
 Kilopascals.....
 Kilometers per Liter.....
 Kilometers per Hour.....

MULTIPLY BY

2.540
 0.305
 0.914
 1.609
 6.451
 0.093
 0.836
 2.590
 0.405
 0.028
 0.765
 29.573
 0.473
 0.946
 3.785
 28.349
 0.454
 0.907
 1.356
 6.895
 0.425
 1.609

TO CHANGE

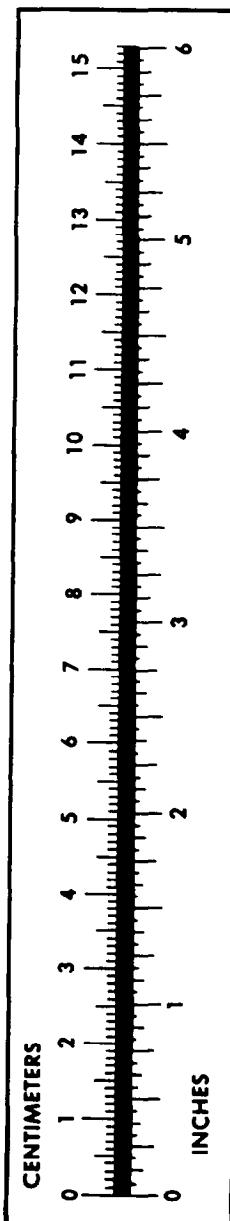
Centimeters.....
 Meters.....
 Meters.....
 Kilometers.....
 Square Centimeters.....
 Square Meters.....
 Square Meters.....
 Square Kilometers.....
 Square Hectometers.....
 Cubic Meters.....
 Cubic Meters.....
 Milliliters.....
 Liters.....
 Liters.....
 ers.....
 ms.....
 ograms.....
 Metric Tons.....
 Newton-Meters.....
 Kilopascals.....
 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.....
 Short Tons.....
 Pounds-Feet.....
 Pounds per Square Inch.....
 Miles per Gallon.....
 Miles per Hour.....

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
 2.354
 0.621



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