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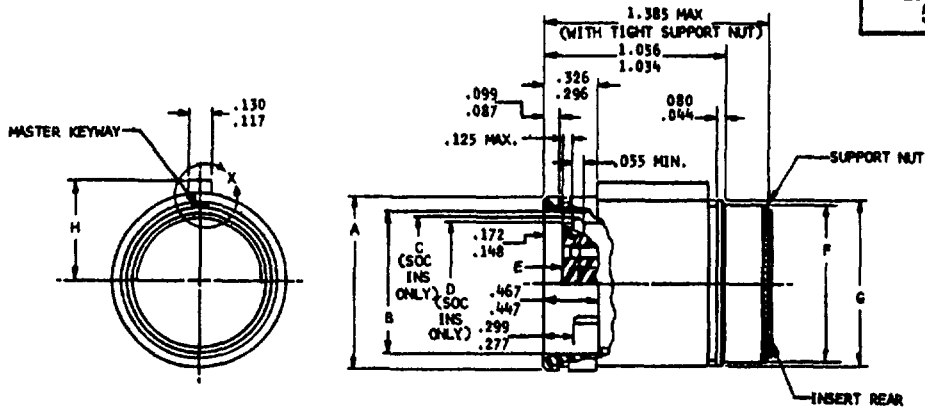


FIGURE 1  
CONNECTOR VIEW

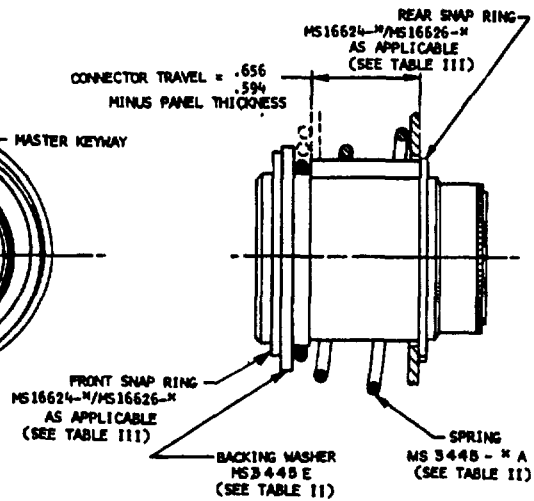
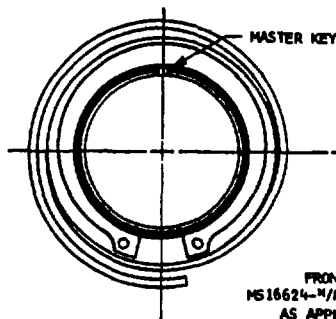
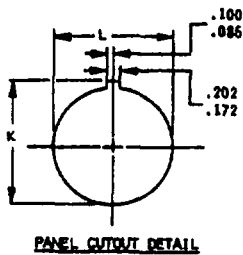
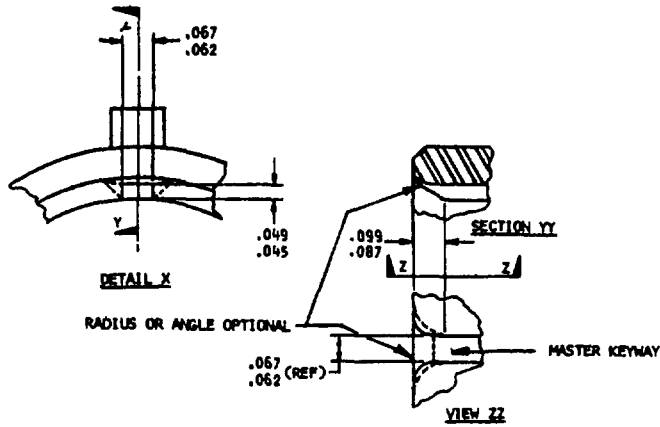
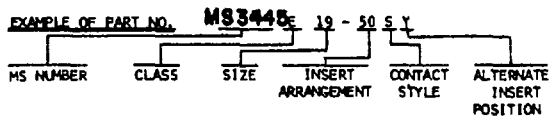


FIGURE 11  
CONNECTOR ASSEMBLY  
VIEW



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|  |                        |  |                                   |
|--|------------------------|--|-----------------------------------|
| PA NAVY-AS<br>Other Cust                 | International Interest | TITLE<br>CONNECTOR, PLUG, ELECTRIC, CRIMP TYPE,<br>RACK AND PANEL, SERIES 2<br>(CLASS E) | MILITARY STANDARD<br>MS3445(NAVY) |
| Procurement Specification<br>MIL-C-81703 | SUPERSEDES:            |  | SHEET 1 OF 5                      |

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TABLE I  
CONNECTOR AND PANEL  
CUTOUT DIMENSIONS

| SHELL SIZE DASH NO | A DIA. OVER FRONT OF SHELL | B I D SHELL | C DIA INSERT SEAL (SOC INS ONLY) | D DIA OF INSERT (SOC INS ONLY) | E POINT OF SPRING CONTACT  | F MAX DIA REAR | G DIA OVER REAR OF SHELL | H DIM FROM TO TOP OF KEY |
|--------------------|----------------------------|-------------|----------------------------------|--------------------------------|--|----------------|--------------------------|--------------------------|
| -3                 | 641/ 628                   | 454/ 446    | 380/ .362                        | 354/ 334                       | 138 MAX MEASURE WITH SQUARE NOSE PIN HAVING BASIC DIAMETER OF MATING CONTACT | 625            | 615/ 595                 | 442/ 422                 |
| -7                 | 797/ 784                   | 589/ 581    | 496/ .478                        | 470/ 450                       |  | 702            | 760/ 740                 | 504/ 484                 |
| -12                | 920/ 907                   | 723/ 715    | .636/ .618                       | 610/ 590                       |  | 828            | 867/ 847                 | 567/ 547                 |
| -19                | 1.048/1 035                | 862/ 854    | 776/ .756                        | 750/ 726                       |  | 953            | 1 010/ 990               | 639/ 619                 |
| -27                | 1 189/1 176                | 1 017/1 009 | 931/ 911                         | 905/ .880                      |  | 1 102          | 1 150/1 130              | 709/ 689                 |
| -37                | 1 356/1 343                | 1 139/1 131 | 1 053/ 1.038                     | 1 027/ 1.003                   |  | 1 266          | 1 322/1 302              | 796/ 776                 |

| SHELL SIZE DASH NO | K           | L           |
|--------------------|-------------|-------------|
| -3                 | 858/ 828    | .686/ .656  |
| -7                 | 999/ 969    | .827/ 797   |
| -12                | 1.124/1 094 | .968/ .938  |
| -19                | 1 249/1 219 | 1.077/1.047 |
| -27                | 1 390/1 360 | 1.218/1 188 |
| -37                | 1 546/1 516 | 1.390/1.360 |

| SHELL SIZE DASH NO | WEIGHT MAX (LBS)                           |            |            |            |
|--------------------|--|------------|------------|------------|
|                    | CLASS E                                    |            | CLASS F    |            |
|                    | PIN INSERT                                 | SOC INSERT | PIN INSERT | SOC INSERT |
| -3                 |  |            |            |            |
| -7                 |  |            |            |            |
| -12                | WEIGHTS WILL BE SUPPLIED IN LATER REVISION |            |            |            |
| -19                |  |            |            |            |
| -27                |  |            |            |            |
| -37                |  |            |            |            |

WEIGHT LISTED IS FOR CONNECTOR WITH SNAP RINGS, BACKING WASHER, SPRING, AND MAX DENSITY INSERT ARRANGEMENT LESS CONTACTS.

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|                                       |                        |   |                   |
|---------------------------------------|------------------------|---|-------------------|
| P A NAVY- AS                          | International Interest | TITLE   | MILITARY STANDARD |
| Other Cust                            |                        | CONNECTOR, PLUG, ELECTRIC, CRIMP TYPE, RACK AND PANEL, SERIES 2 (CLASS E) | MS 3445(NAVY)     |
| Procurement Specification MIL-C-81703 |                        | SUPERSEDES:   | SHEET 2           |

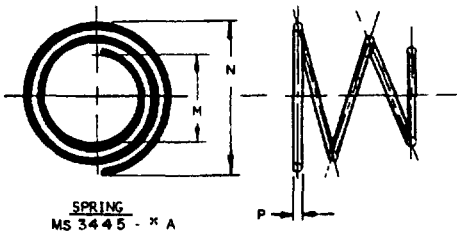
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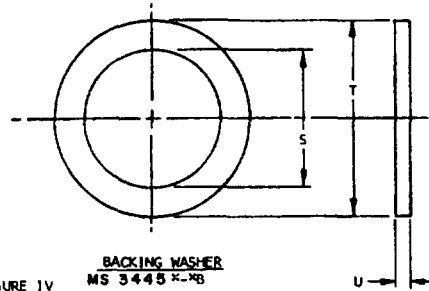
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SPRING  
MS 3445 - \* A

FIGURE III  
SPRING DETAIL



BACKING WASHER  
MS 3445 \*-B

FIGURE IV  
BACKING WASHER

SPRING MATERIAL STEEL  
FINISH BLACK OXIDE PER MIL-C-13924, CLASS 1  
CONSTRUCTION SPRING MUST BE MADE SO COILS WILL COLLAPSE WITHIN EACH OTHER AT A SOLID HEIGHT EQUAL TO THE WIRE DIAMETER

TABLE II  
SPRING AND BACKING  
WASHER DIMENSIONS

| SHELL<br>SIZE<br>DASH<br>NO | A -- SPRING |          |          |                          |                         |   |            |  | B -- BACKING WASHER |             |           |
|-----------------------------|-------------|----------|----------|--------------------------|-------------------------|---|------------|--|---------------------|-------------|-----------|
|                             | M<br>MIN    | N<br>MAX | P        | APPROX<br>FREE<br>LENGTH | TOTAL<br>TURNS<br>(REF) | SPG FORCE<br>AT "R" HEIGHT<br>(LBS MIN) | R<br>± 0.0 | SPG FORCE AT<br>P + .020 HEIGHT<br>(LBS MAX) | S                   | T           | U         |
| -3                          | 645         | 1 220    | 071/ 059 | 800                      | 3                       | 8                                       | 220        | 18   | 660/ 649            | .891/ .869  | 070/ 050  |
| -7                          | 775         | 1 350    | 073/ 064 | 1 250                    | 3                       | 10                                      | 230        | 18   | 815/ 804            | 1.172/1.150 | 110/ 090  |
| -12                         | 905         | 1 565    | 097/ 085 | 938                      | 2 1/3                   | 21                                      | 250        | 30   | 932/ 921            | 1.263/1.241 | 091/ 071  |
| -19                         | 1 025       | 1 705    | 097/ 085 | 1 875                    | 2 1/2                   | 27                                      | 250        | 45   | 1 060/1 049         | 1 391/1 369 | 081/ 061  |
| -27                         | 1 175       | 1 855    | 101/ 089 | 1 625                    | 2 5/8                   | 28                                      | 260        | 46   | 1 198/1 190         | 1 529/1.507 | 072/ 052  |
| -37                         | 1 345       | 2 105    | 126/ 114 | 1 250                    | 2 1/2                   | 28                                      | 280        | 48   | 1 367/1 357         | 1 816/1.794 | 060/ 040  |
| -61                         | 1 675       | 2 835    | 141/ 129 | 2.250                    | 2 1/2                   | 54                                      | 295        | 77   | 1 685/1.674         | 2.150/2.118 | .072/.052 |

EXAMPLE OF PART NO MS 3445 - 3 A  
MS NUMBER SIZE SPRING

EXAMPLE OF PART NO MS 3445 \*- 3 B  
MS NUMBER CLASS SIZE WASHER  
E= CAD PLATE  
L= NICKEL PLATE

TABLE III  
SNAP RING  
PART NUMBERS

| SHELL<br>SIZE<br>DASH<br>NO | FRONT SNAP<br>RING | REAR SNAP<br>RING |   |
|-----------------------------|--------------------|-------------------|---|
| -3                          | MS16624-4062       | MS16626-4059      | EXCEPT WITH BLACK OXIDE FINISH PER MIL-C-13924, CLASS 1 |
| -7                          | MS16624-4078       | MS16624-4075      | EXCEPT WITH BLACK OXIDE FINISH PER MIL-C-13924, CLASS 1 |
| -12                         | MS16626-4093       | MS16624-4087      | EXCEPT WITH BLACK OXIDE FINISH PER MIL-C-13924, CLASS 1 |
| -19                         | MS16624-4106       | MS16624-4100      | EXCEPT WITH BLACK OXIDE FINISH PER MIL-C-13924, CLASS 1 |
| -27                         | MS16624-4118       | MS16624-4112      | EXCEPT WITH BLACK OXIDE FINISH PER MIL-C-13924, CLASS 1 |
| -37                         | MS16624-4137       | MS16624-4131      | EXCEPT WITH BLACK OXIDE FINISH PER MIL-C-13924, CLASS 1 |
| -61                         | MS16624-4168       | MS16624-4162      | EXCEPT WITH BLACK OXIDE FINISH PER MIL-C-13924, CLASS 1 |

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|  |                           |  |                   |
|--|---------------------------|--|-------------------|
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|  |                           |  | MS3445(NAVY)      |
| Procurement Specification<br>MIL-C-81703 | SUPERSEDES:               |  | SHEET 3           |

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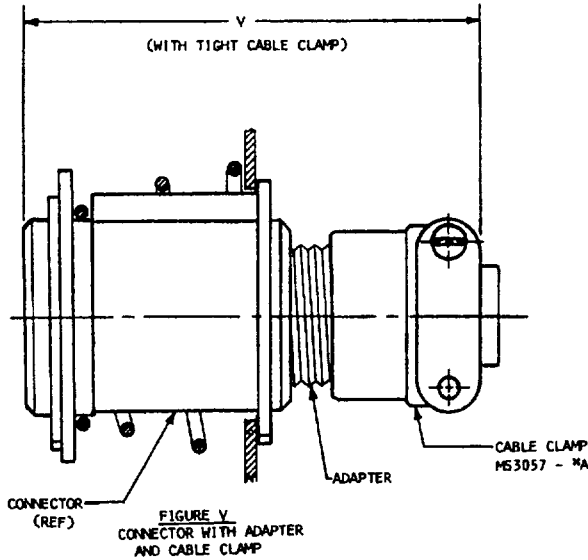


TABLE IV  
ADAPTER AND CABLE  
CLAMP INFORMATION

| SHELL SIZE DASH NO. | V LENGTH MAX | ADAPTER PART NUMBER | CABLE CLAMP PART NUMBER |
|---------------------|--------------|---------------------|-------------------------|
| -3                  | 2 234        | MS3445-3C           | MS3057-3A               |
| -7                  | 2 234        | MS3445-7C           | MS3057-4A               |
| -12                 | 2 297        | MS3445-12C          | MS3057-6A               |
| -19                 | 2 359        | MS3445-19C          | MS3057-8A               |
| -27                 | 2 359        | MS3445-27C          | MS3057-10A              |
| -37                 | 2 359        | MS3445-37C          | MS3057-12A              |

TABLE V  
ADAPTER  
DIMENSIONS

| SHELL SIZE DASH NO. | C -- ADAPTER |              |                   |
|---------------------|--------------|--------------|-------------------|
|                     | W I D        | X            | Y THREAD          |
| -3                  | 401/ 389     | 451/ 444     | 1/2-28 UNEF-2A    |
| -7                  | 506/ 494     | 572/ 565     | 5/8-24 UNEF-2A    |
| -12                 | .651/ 639    | 688/ 681     | 3/4-20 UNEF-2A    |
| -19                 | .781/ 769    | 813/ 806     | 7/8-20 UNEF-2A    |
| -27                 | 888/ 882     | 938/ 931     | 1-20 UNEF-2A      |
| -37                 | 1 052/ 1 040 | 1 118/ 1 111 | 1 3/16-18 UNEF-2A |

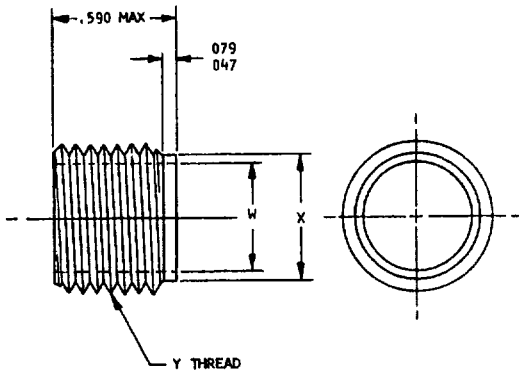


FIGURE VI  
ADAPTER DETAIL

EXAMPLE OF PART NO. MS 3445 - 12 C  
MS NUMBER                      SIZE                      ADAPTER

THIS ADAPTER IS INTENDED FOR USE WITH CLASS E CONNECTORS, WITH CABLE CLAMP.

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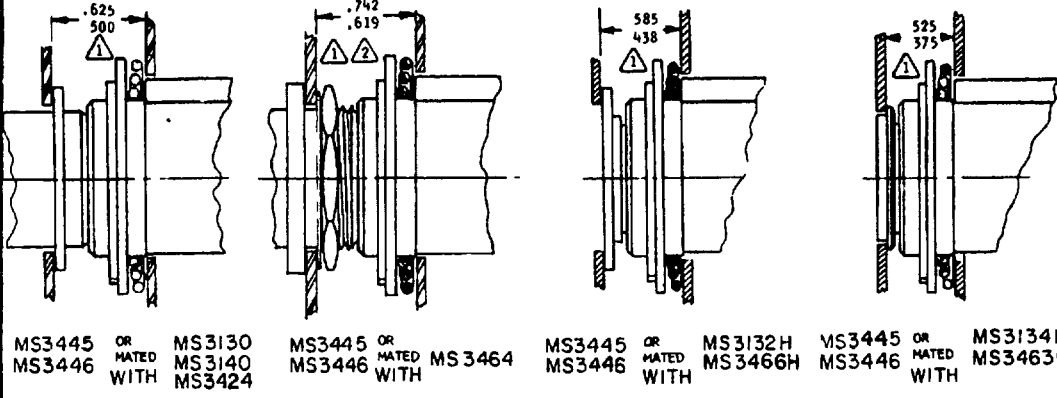
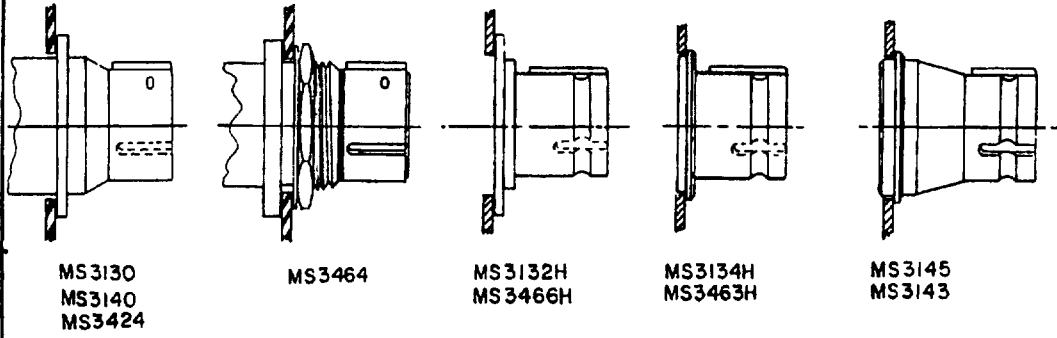
|  |                        |  |                   |
|--|------------------------|--|-------------------|
| P A. NAVY-AS<br>Other Cust               | International Interest | TITLE<br>CONNECTOR, PLUG, ELECTRIC, CRIMP TYPE, RACK AND PANEL, SERIES 2 (CLASS E) | MILITARY STANDARD |
|  |                        | SUPERSEDES   | MS 3445 (NAVY)    |
| Procurement Specification<br>MIL-C-81703 |                        |  | SHEET 4           |

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△ PANEL SEPARATION FOR DESIGN PURPOSES, IN HIGH VIBRATION AND/OR OTHER ADVERSE ENVIRONMENT APPLICATIONS, PANEL SEPARATION SHALL BE AS CLOSE TO THE MINIMUM ALLOWABLE DIMENSION AS FEASIBLE (MAX PANEL DEFLECTION .016 INCLUDED IN THIS DIMENSION) DIMENSION SHOWN IS TO BACK OF PANEL FOR ACTUAL PANEL SEPARATION, THE PANEL THICKNESS ON RECEPTACLE SIDE MUST BE SUBTRACTED FROM THE DIMENSION SHOWN.

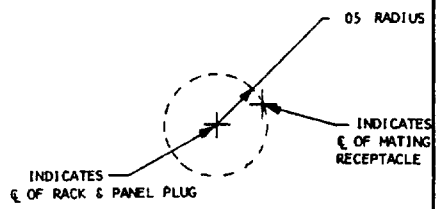
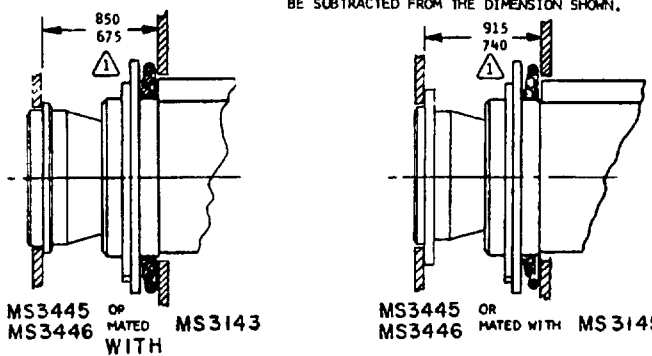


FIGURE VI  
MATING INFORMATION

RACK & PANEL INSTALLATION SHALL BE DESIGNED TO MAINTAIN CONNECTOR ALIGNMENT WITHIN .05 IN. AS SHOWN ABOVE.

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