

REV.
A

AS39029/10

FEDERAL SUPPLY CLASS
5999

RATIONALE

REVISE TO INCLUDE COMMENTS RECEIVED BY THE GOVERNMENT AND INDUSTRY SINCE 1988, INCORPORATES VARIOUS AMENDMENTS, REMOVE GOVERNMENT JARGON AS A RESULT OF THE WORD-FOR-WORD TRANSFERENCE OF AS39029 TO SAE, UPDATE SPECIFICATION REFERENCES, ALIGN SPECIFICATIONS WITH SAE GUIDELINES AS NEEDED, AND REVIEW SPECIFICATIONS FOR KNOWN TECHNICAL PROBLEMS.

NOTICE

THE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE LATEST ISSUE OF: SAE AS39029.

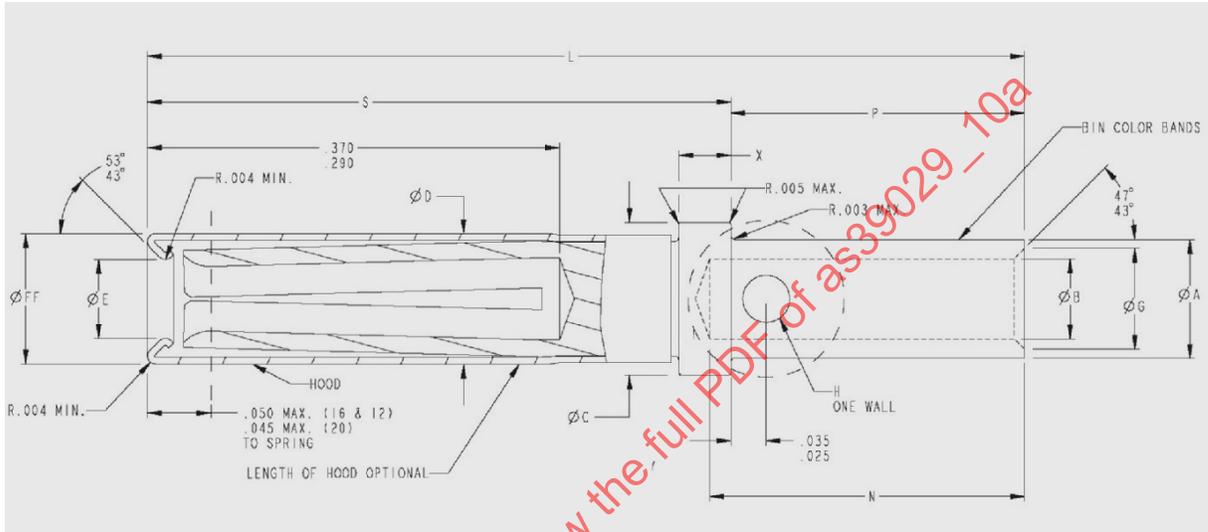
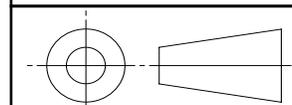


FIGURE 1 - AS39029/10 SOCKET CONTACT

TABLE 1 - CONTACT DIMENSIONS

| BIN CODE | A DIA | B DIA | C DIA | D DIA | E DIA | G DIA | H DIA | R | L MAX (REF) | N | P | S | X | FF MIN DIA REF ONLY | Q |
|----------|-------|-------|-------|-------|-------|-------|-------|------|-------------|------|------|------|------|---------------------|------|
| 138-142 | .078 | .050 | .103 | .078 | .044 | .066 | .032 | .051 | .656 | .186 | .171 | .485 | .033 | .060 | .032 |
| | .076 | .048 | .100 | .076 | .042 | .062 | .026 | .026 | | .157 | .160 | .479 | .029 | | .026 |
| 519-523 | .103 | .068 | .133 | .103 | .068 | .089 | .042 | --- | .759 | .284 | .257 | .500 | .048 | .087 | --- |
| | .101 | .066 | .130 | .101 | .065 | .083 | .036 | | | .250 | .246 | .494 | .044 | | |

THIRD ANGLE PROJECTION



CUSTODIAN: SAE AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029



AEROSPACE STANDARD

(R) CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE, THERMOCOUPLE (FOR MIL-DTL-26482 SERIES 2, AS81703 SERIES 3, MIL-DTL-83723 SERIES I AND III, AND MIL-DTL-83733 CONNECTORS)

AS39029/10
SHEET 1 OF 4

REV.
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ISSUED 2001-03 REVISED 2007-09

TABLE 2 - MARKING AND DESIGN CHARACTERISTICS

| BIN CODES | COLOR BANDS | | | MATING END SIZE | WIRE BARREL SIZE | TYPE | CLASS |
|-----------|-------------|--------|--------|-----------------|------------------|-----------------------------|-------|
| | 1ST | 2ND | 3RD | | | | |
| 138 | BROWN | ORANGE | GRAY | 20 | 20 | C-COPPER WITH GOLD FLASH | B |
| 139 | BROWN | ORANGE | WHITE | 20 | 20 | C-COPPER-NICKEL ALLOY | B |
| 140 | BROWN | YELLOW | BLACK | 20 | 20 | C-NICKEL-ALUMINUM/SILICON | B |
| 141 | BROWN | YELLOW | BROWN | 20 | 20 | C-NICKEL-CHROMIUM | B |
| 142 | BROWN | YELLOW | RED | 20 | 20 | C-IRON WITH CADMIUM PLATING | B |
| 519 | GREEN | BROWN | WHITE | 16 | 16 | C-COPPER WITH GOLD FLASH | B |
| 520 | GREEN | RED | BLACK | 16 | 16 | C-COPPER-NICKEL ALLOY | B |
| 521 | GREEN | RED | BROWN | 16 | 16 | C-NICKEL-ALUMINUM/SILICON | B |
| 522 | GREEN | RED | RED | 16 | 16 | C-NICKEL-CHROMIUM | B |
| 523 | GREEN | RED | ORANGE | 16 | 16 | C-IRON WITH CADMIUM PLATING | B |

TABLE 3 - TOOL REQUIREMENTS

| BIN CODE | BASIC CRIMPING TOOL | POSITIONER | INSTALLING TOOL | REMOVAL TOOL | |
|---------------------------|--|--|-----------------|---------------|----------------------|
| | | | | WIRED CONTACT | UNWIRED CONTACT |
| 138, 139, 140, 141, & 142 | <u>M22520/1-01</u> OR <u>M22520/2-01</u> | <u>M22520/1-02</u> RED OR <u>M22520/2-02</u> | M81969/14-11 | M81969/14-11 | M81969/30-05 RED |
| 519, 520, 521, 522, & 523 | <u>M22520/1-01</u> OR <u>M22520/7-01</u> | <u>M22520/1-02</u> BLUE OR <u>M22520/7-03</u> | M81969/14-03 | M81969/14-03 | M81969/30-06 BLUE |

TABLE 4 - PART NUMBERS

| AS39029 PART NUMBER | BIN CODE | SUPERSEDES PART NUMBER(S) |
|---------------------|----------|---------------------------|
| M39029/9-138 | 138 | M39029/10-20-20 C1 |
| M39029/9-139 | 139 | M39029/10-20-20 C2 |
| M39029/9-140 | 140 | M39029/10-20-20 C3 |
| M39029/9-141 | 141 | M39029/10-20-20 C4 |
| M39029/9-142 | 142 | M39029/10-20-20 C5 |
| M39029/9-519 | 519 | 5000-108-516 1/ |
| M39029/9-520 | 520 | 5000-108-416 1/ |
| M39029/9-521 | 521 | 5000-108-116 1/ |
| M39029/9-522 | 522 | 5500-108-216 1/ |
| M39029/9-523 | 523 | 5000-108-316 1/ |

NOTE 1/ MANUFACTURER'S CAGE CODE 14283

REQUIREMENTS: ALL REQUIREMENTS SHALL BE HEREIN AND AS39029.

1. DESIGN:

CONTACT SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1, TABLES 1 AND 2. DIMENSIONS ARE IN INCHES AND SHOWN AFTER PLATING. ALL DIMENSIONS PROVIDED IN PARENTHESES ARE METRIC EQUIVALENTS AND ARE GIVEN FOR GENERAL INFORMATION ONLY (SEE AS39029 SECTION 6). SPHERICAL END DIMENSIONS SHALL CONFORM TO AS39029. THE MAXIMUM GAP BETWEEN HOOD AND BODY OF CONTACT IS .010 in.

2. TOOLS:

TOOLS REQUIRED FOR CRIMPING CONTACTS TO WIRE/CABLE AND THE INSTALLING/REMOVAL FROM THE CONNECTOR SHALL BE IN ACCORDANCE WITH TABLE 3.

| | | | |
|---|--|-----------------------------------|-------------------------|
|  An SAE International Group | AEROSPACE STANDARD | AS39029/10 SHEET 2 OF 4 | REV. A |
| | (R) CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE, THERMOCOUPLE (FOR MIL-DTL-26482 SERIES 2, AS81703 SERIES 3, MIL-DTL-83723 SERIES I AND III, AND MIL-DTL-83733 CONNECTORS) | | |

3. PART NUMBERS:

CONTACT PART NUMBERS SHALL BE IN ACCORDANCE WITH TABLE 4. SUPERSEDING PART NUMBERS ARE AS SPECIFIED.

4. MATERIALS:

MATERIALS SHALL BE IN ACCORDANCE WITH AS39029.

5. MECHANICAL:

MECHANICAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

TENSILE STRENGTH SHALL BE AS SHOWN IN TABLE 5.

TABLE 5 - CONTACT TENSILE STRENGTH

| BIN CODE | TENSILE STRENGTH (LB) | |
|------------------------------|-----------------------|------------|
| | WIRE SIZE | AXIAL LOAD |
| 138, 139, 140, 141, & 142 | 24 | 6 |
| | 20 | 12 |
| 519, 520, 521, 522, & 523 | 20 | 14 |
| | 16 | 45 |

6. ELECTRICAL:

NOT REQUIRED.

7. ENVIRONMENTAL:

ENVIRONMENTAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

8. APPLICATION NOTES:

CONTACT MATES DIRECTLY INTO THE SOCKET OF AN AS39029/9.

CONTACT MATES DIRECTLY INTO AN AS39029/9 PIN AS SHOWN TABLE 6.

TABLE 6 - CONTACT MATING PART NUMBERS

| AS39029/10 BIN CODE | MATING AS39029/9 BIN CODE |
|---------------------|---------------------------|
| 138 | 132 |
| 139 | 133 |
| 140 | 134 |
| 141 | 135 |
| 142 | 136 |
| 519 | 514 |
| 520 | 515 |
| 521 | 516 |
| 522 | 517 |
| 523 | 518 |