FEDERAL SUPPLY CLASS
5935

RATIONALE

REVISION IS REQUIRED TO CORRECT THE ERROR IN THE THREAD SIZE FOR SHELL SIZE 32, TO IMPROVE THE DRAWING QUALITY AND TO UPDATE THE STANDARD FORMAT.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS50151.

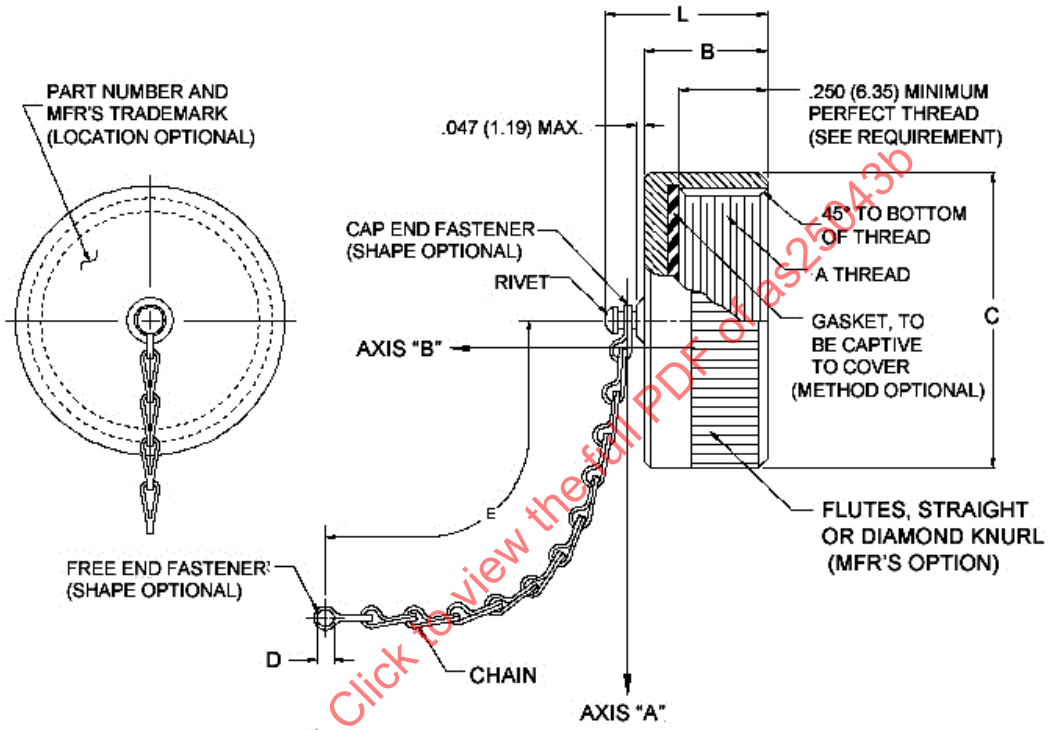
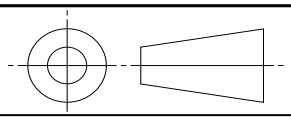



FIGURE 1 - COVER CONFIGURATION





THIRD ANGLE PROJECTION



ISSUED 2004-06 REVISED 2013-08

CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS50151

SAE Aerospace
An SAE International Group

# AEROSPACE STANDARD

(R) COVER, ELECTRICAL AS50151 CONNECTOR, RECEPTACLE, AN TYPE





**TO PLACE A DOCUMENT ORDER:** **Tel: 877-606-7323 (inside USA and Canada)** **Tel: 724-776-4970 (outside USA)**
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TABLE 1 - AS25043 DIMENSIONS (SEE FIGURE 1)

| DASH NO. ( - ) | COUPLING SHELL SIZE (REF) | A THREAD (PER AS8879) | B MAX | C MAX DIA | D +.010 (0.27) -.005 (0.12) DIA | E ±1 LINK | L MAX | SHELL SIZE RANGE (REF) |
|---|---|---|---|---|---|---|---|---|
| 8 | 8S | .500-28 UNEF-2B | .469 (11.9) | .688 (17.5) | .140 (3.6) | 4.000 (101.6) | .750 (19.1) | SMALL |
| 10 | 10S, 10SL | .625-24 UNEF-2B | | .813 (20.7) | | | | |
| 12 | 12S, 12SL | .750-20 UNEF-2B | | 1.000 (25.4) | | 4.500 (114.3) | | |
| 14 | 14S, 14SL | .875-20 UNEF-2B | | 1.125 (28.6) | | | | |
| 16 | 16, 16SL | 1.000-20 UNEF-2B | | 1.188 (30.2) | | | | |
| 18 | 18 | 1.125-18 UNEF-2B | | 1.344 (34.1) | | | | MEDIUM |
| 20 | 20 | 1.250-18 UNEF-2B | | 1.469 (37.3) | | 5.000 (127.0) | | |
| 22 | 22 | 1.375-18 UNEF-2B | | 1.594 (40.5) | | | | |
| 24 | 24 | 1.500-18 UNEF-2B | | 1.719 (43.7) | .171 (4.3) | 5.500 (139.7) | | |
| 28 | 28 | 1.750-18 UNS-2B | .531 (13.5) | 1.969 (50.0) | .187 (4.7) | 7.750 (196.9) | .812 (20.6) | LARGE |
| 32 | 32 | 2.000-18 UNS-2B | | 2.219 (56.4) | | | | |
| 36 | 36 | 2.250-16 UN-2B | | 2.469 (62.7) | | | | |
| 40 | 40 | 2.500-16 UN-2B | | 2.718 (69.0) | | | | |
| 44 | 44 | 2.750-16 UN-2B | | 2.969 (75.4) | | | | |
| 48 | 48 | 3.000-16 UN-2B | | 3.188 (81.0) | | | | |



REQUIREMENTS: ALL REQUIREMENTS SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF AS50151.

1. DIMENSIONS AND CONFIGURATION: SEE FIGURE 1 AND TABLE 1. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED AND APPLY AFTER PLATING. TOLERANCES ARE ±.016 (0.41) INCHES. METRIC EQUIVALENTS SHOWN IN PARENTHESES ARE FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1.000 INCH = 25.4 MILLIMETERS. TO INSURE SEALABILITY, THE CONNECTOR MATING SURFACE OF THE GASKET MUST BE LOCATED SUCH THAT THE ".250 (6.35) MINIMUM PERFECT THREAD" (MPT) DEPTH IS GREATER THAN THIS SURFACE LOCATION OF THE GASKET WHEN REFERENCED FROM THE END OF THE COVER.

2. MARKING: MANUFACTURER SYMBOL SHALL BE IN ACCORDANCE WITH AIR1351.

3. CONSTRUCTION: CAP END FASTENER SHALL ROTATE FREELY AFTER ASSEMBLED TO THE COVER.

4. MATERIAL:

   COVER - ALUMINUM ALLOY PER ASTM B211, B221, B26, B26M, B85, OR AMS-QQ-A-225/6, /7 OR /8

   GASKET - SILICONE ELASTOMER DISK PER A-A-59588 (.050 / .070 (1.27 / 1.78) THICK)
   CHAIN - STAINLESS STEEL SASH CHAIN PER RR-C-271, TYPE II, CLASS 3, GRADE B, PASSIVATED
   CHAIN END FASTENERS - COMMERCIAL GRADE OF STAINLESS STEEL, PASSIVATED

5. FINISH AVAILABILITY: (SEE TABLE 2)

TABLE 2 - FINISH

| FINISH CODE | FINISH DESCRIPTION |
|---|---|
| D | CADMIUM OLIVE DRAB OVER SUITABLE UNDERPLATE |
| DA | BLACK ANODIZE PER AMS-A-8625, TYPE II, CLASS 2 |
| DT | NICKEL FLUOROCARBON POLYMER IN ACCORDANCE WITH AMS2454 OVER A SUITABLE UNDERPLATE. |
| DY | PURE DENSE ELECTRODEPOSITED ALUMINUM IN ACCORDANCE WITH MIL-DTL-83488, TYPE II. FINAL FINISH SHALL BE NON-REFLECTIVE AND ELECTRICALLY CONDUCTIVE. |
| DZ | ZINC NICKEL IN ACCORDANCE WITH ASTM B841 OVER SUITABLE UNDERPLATE. FINAL FINISH SHALL BE BLACK AND ELECTRICALLY CONDUCTIVE. |

6. AIR LEAKAGE: THE AIR LEAKAGE RATE SHALL BE NOT GREATER THAN ONE ATMOSPHERIC CUBIC INCH PER HOUR ($4.5 \times 10^{-3}$ CUBIC CENTIMETERS PER SECOND). COVER SHALL BE MATED TO A DUMMY RECEPTACLE FIXTURE WITH EXTERNAL TREADS. CHOICE OF FIXTURE FINISH IS OPTIONAL. THE SPECIFIED LEAKAGE RATE SHALL BE APPLIED THROUGH THE CENTER OF THE FIXTURE AND NOT THROUGH THE FLANGE AND MOUNTING SURFACE AREA. A MODIFIED AS31051 DUMMY RECEPTACLE MAY ALSO BE USED.

7. CHAIN TENSILE LOAD: THE PROTECTIVE COVER AND CHAIN ASSEMBLY SHALL WITHSTAND A DEAD WEIGHT TENSILE LOAD OF 25 POUNDS APPLIED TO AXIS A AND B FOR A PERIOD OF 5 MINUTES WHEN MOUNTED TO AN AS31051 DUMMY RECEPTACLE. THERE SHALL BE NO SEPARATION OF THE CHAIN ASSEMBLY FROM THE PROTECTIVE COVER OR DAMAGE TO THE CHAIN ASSEMBLY.

8. CORROSION (SALT SPRAY): COVERS SHALL MEET THE REQUIREMENT OF AIR4789.

9. QUALIFICATION: INITIAL QUALIFICATION SHALL BE PERFORMED SEQUENTIALLY IN ACCORDANCE WITH TABLE 3 ON TWO (2) SMALL, MEDIUM, AND LARGE SHELL SIZE SPECIMENS (SEE TABLE 1). TEST SPECIMENS SHALL CONSIST OF EACH FINISH FOR WHICH QUALIFICATION IS DESIRED (SEE TABLE 2).

   a. QUALIFICATION BY SIMILARITY WITHOUT TESTING SHALL BE COMPARED TO THE SPECIFICATION DIMENSIONS (CERTIFICATION OF COMPLIANCE IS REQUIRED).

   b. PERIODIC QUALIFICATION SHALL BE PERFORMED EVERY 36 MONTHS AFTER INITIAL QUALIFICATION UNLESS SUBMITTAL DATE IS ADJUSTED BY THE QUALIFYING ACTIVITY (SEE APPLICATION NOTE). CORROSION TEST REQUIRED FOR INITIAL QUALIFICATION AND EVERY OTHER RETENTION CYCLE THEREAFTER.

TABLE 3 - QUALIFICATION AND QUALITY ASSURANCE (QA) TESTS

| QUALIFICATION TESTS | REQUIREMENT | TEST METHOD | QC TESTS |
|---|---|---|---|
| CONSTRUCTION | 2 & 3 | VISUAL EXAMINATION | REQUIRED |
| DIMENSIONS | FIGURE 1 & TABLE 1 | MEASURE & RECORD | REQUIRED |
| MATERIALS | 4 | CERTIFICATION | |
| FINISH | 5 & TABLE 2 | CERTIFICATION | |
| AIR LEAKAGE | 6 | EIA 364-2 | |
| CHAIN TENSILE STRENGTH | 7 | SEE REQUIREMENT | |
| CORROSION (FINISH CODE D) | 8 | EIA 364-26 TEST CONDITION D | |
| CORROSION (FINISH CODE DA) | 8 | EIA 364-26 TEST CONDITION B | |

10. QUALITY CONFORMANCE (QC) TESTS: SAMPLING SHALL BE 100%.

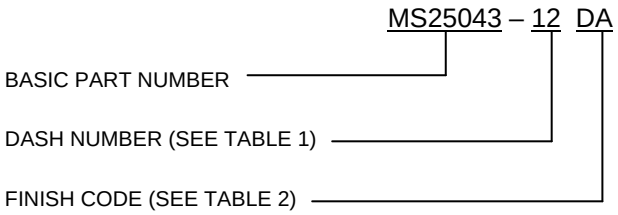
    a. INSPECTION LOT: AN INSPECTION LOT SHALL CONSIST OF ALL COVERS OF THE SAME TYPE PRODUCED UNDER ESSENTIALLY THE SAME CONDITIONS, AND OFFERED FOR INSPECTION AT ONE TIME.

    b. SAMPLING PLAN: STATISTICAL SAMPLING AND INSPECTION SHALL BE IN ACCORDANCE WITH ANSI/ASQ Z1.4 FOR GENERAL INSPECTION LEVEL II. THE ACCEPTABLE QUALITY LEVEL (AQL) SHALL BE 1.0 FOR MAJOR DEFECTS AND 4.0 FOR MINOR DEFECTS. MAJOR AND MINOR DEFECTS SHALL BE AS DEFINED IN MIL-STD-1916, "DoD PREFERRED METHODS FOR ACCEPTANCE OF PRODUCT," OR ANSI/ASQ Z1.4, "SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES."

    c. REJECTED LOTS: IF AN INSPECTION LOT IS REJECTED, THE CONTRACTOR MAY REWORK IT TO CORRECT THE DEFECTS, OR SCREEN OUT THE DEFECTIVE UNITS AND RESUBMIT FOR INSPECTION. RESUBMITTED LOTS SHALL BE INSPECTED IN ACCORDANCE WITH ANSI/ASQ Z1.4, TIGHTENED INSPECTION. SUCH LOTS SHALL BE SEPARATE FROM NEW LOTS AND SHALL BE CLEARLY IDENTIFIED AS INSPECTED LOTS. THE CONTRACTOR SHALL NOTIFY THE QUALIFYING ACTIVITY (SEE APPLICATION NOTE 3) IMMEDIATELY OF ANY QUALITY CONFORMANCE INSPECTION FAILURES WHICH RESULT IN A CHANGE IN CONTROL DRAWINGS OR PROCESS CONTROL INSPECTION POINTS. FAILURE TO NOTIFY THE QUALIFYING ACTIVITY MAY RESULT IN LOSS OF QUALIFICATION OF THAT PRODUCT.

    d. DISPOSITION OF SAMPLE UNITS: SAMPLE UNITS WHICH HAVE PASSED QUALITY CONFORMANCE INSPECTION MAY BE DELIVERED ON THE CONTRACT IF THE LOT IS ACCEPTED AND THE SAMPLE UNITS ARE STILL WITHIN SPECIFIED TOLERANCES.

11. PART NUMBER EXAMPLE (MS25043-12DA):




THE EQUIVALENT PROTECTIVE COVER SAE SPECIFICATION WHICH HAS SUPERSEDED THE MS25043 PART SPECIFICATION SHALL HAVE THE CORRESPONDING MS25043 PART NUMBER MARKED ON THE PART

12. SUPERSESSION PART NUMBERS: PART NUMBER SUPERSESSION FOR MILITARY APPLICATIONS ONLY (SEE TABLE 4).

TABLE 4 - PART NUMBER SUPERSESSION

| MS25043 DASH NO. (-) | MS25043 SUPERSEDED DASH NO. (-) | |
|---|---|---|
| 8DA | 8C | 8D |
| 10DA | 10C | 10D |
| 12DA | 12C | 12D |
| 14DA | 14C | 14D |
| 16DA | 16C | 16D |
| 18DA | 18C | 18D |
| 20DA | 20C | 20D |
| 22DA 1/ | 22C | 22D |
| 24DA | 24C | 24D |
| 28DA | 28C | 28D |
| 32DA | 32C | 32D |
| 36DA | 36C | 36D |
| 40DA | 40C | 40D |
| 44DA | 44C | 44D |
| 48DA | 48C | 48D |

1/ ALSO SUPERSEDES NAF-1307-3