FEDERAL SUPPLY CLASS
5935

RATIONALE

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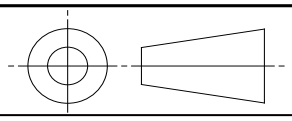
STABILIZED NOTICE

THIS DOCUMENT HAS BEEN DECLARED "STABILIZED" BY SAE AE-8C1 CONNECTORS COMMITTEE AND WILL NO LONGER BE SUBJECTED TO PERIODIC REVIEWS FOR CURRENCY. USERS ARE RESPONSIBLE FOR VERIFYING REFERENCES AND CONTINUED SUITABILITY OF TECHNICAL REQUIREMENTS. NEWER TECHNOLOGY MAY EXIST.

ISSUED 2014-09 REAFFIRMED 2019-11 STABILIZED 2025-04

THIRD ANGLE PROJECTION



For more information on this standard, visit
https://www.sae.org/standards/content/AS85049/148A/

CUSTODIAN: AE-8C1

PROCUREMENT SPECIFICATION: AS85049

SAE INTERNATIONAL

AEROSPACE STANDARD

INDIVIDUAL SHIELD TERMINATION, CONNECTOR, ELECTRICAL (CATEGORY 9)

AS85049™/148

REV. A

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NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS85049.

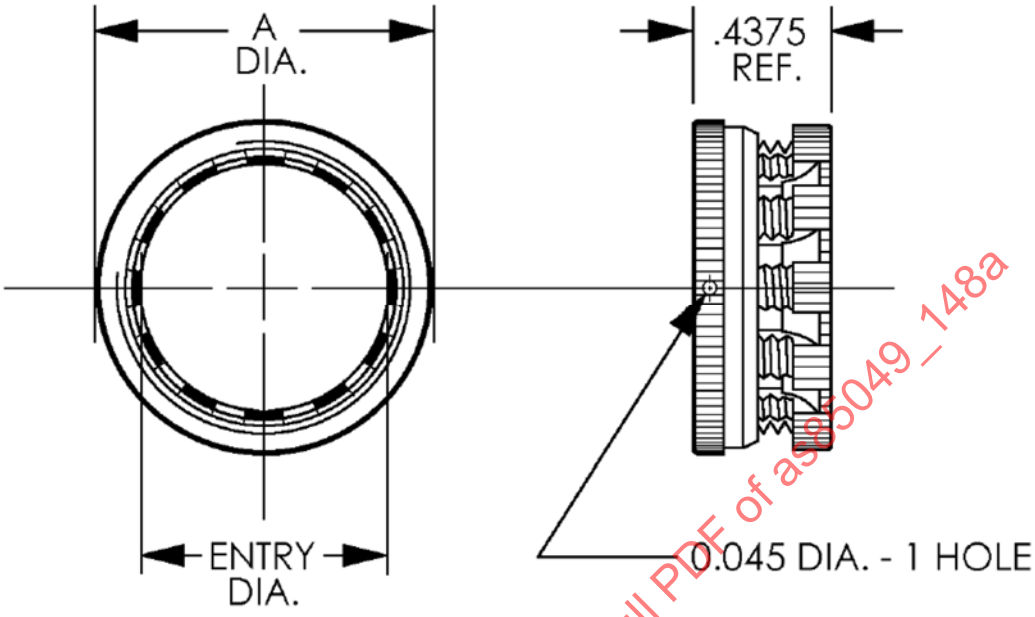

FIGURE 1 - INDIVIDUAL SHIELD TERMINATION

TABLE 1 - FIGURE 1 METRIC EQUIVALENTS

INCHES	MILLIMETERS
.045	1.143
.4375	11.1125

TABLE 2 - FIGURE 1 DIMENSIONS

DASH NUMBER	ENTRY DIAMETER	A DIA. MAX.	NUMBER OF SLOTS	WEIGHT IN POUNDS (GRAMS) REF.
2	.250 (6.350)	.545 (13.843)	3	.005 (2.268)
3	.375 (9.525)	.670 (17.018)	4	.006 (2.722)
4	.500 (12.700)	.795 (20.193)	6	.007 (3.175)
5	.625 (15.875)	.920 (23.368)	8	.009 (4.082)
6	.750 (19.050)	1.045 (26.543)	10	.010 (4.536)
7	.875 (22.225)	1.170 (29.718)	10	.011 (4.990)
8	1.000 (25.400)	1.295 (32.893)	12	.012 (5.443)
9	1.125 (28.575)	1.420 (36.068)	15	.014 (6.350)
10	1.250 (31.750)	1.687 (42.850)	15	.023 (10.433)
11	1.375 (34.925)	1.812 (46.025)	15	.032 (14.515)

REQUIREMENTS:

1. DESIGN AND CONSTRUCTION:

   THE SHIELD TERMINATION SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1 AND TABLE 2. DIMENSIONS ARE IN INCHES. METRIC EQUIVALENTS ARE IN PARENTHESES, GIVEN FOR INFORMATION ONLY, AND BASED ON 1 INCH = 25.4 MILLIMETERS. UNLESS OTHERWISE SPECIFIED, TOLERANCE SHALL BE .XX ± .03 (0.762 MILLIMETERS) AND .XXX ± .015 (0.381 MILLIMETERS). ANGULAR TOLERANCES SHALL BE X° ± 2°.

2. MATERIAL:

   a. BODY - ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B221 OR ASTM B211.

   b. NUT - ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B221 OR ASTM B211.

   c. SPRING - COPPER ALLOY.

   d. FRICTION WASHER - TEFLON.

3. FINISH:

   a. BODY - GOLD CHEMICAL CONVERSION COATING IN ACCORDANCE WITH MIL-DTL-5541, CLASS 3.

   b. NUT - GOLD CHEMICAL CONVERSION COATING IN ACCORDANCE WITH MIL-DTL-5541, CLASS 3.

4. SHIELD COMPENSATION: CAPTIVATED SPRING MEMBER IN CLAMP NUT COMPENSATES FOR DIFFERENCES IN SHIELD THICKNESS OF AT LEAST .020 INCH (0.508 MILLIMETER) BETWEEN ADJACENT SLOTS IN BODY.

5. SHIELD ACCOMMODATION: EACH SLOT IN BODY WILL ACCOMMODATE UP TO .180 INCH (4.572 MILLIMETERS) TOTAL SHIELD THICKNESS.

6. PART NUMBER: SEE EXAMPLES BELOW FOR REPLACEMENT AND NEW DESIGN APPLICATIONS.

REPLACEMENT PART NUMBER:

MS27741 -6

BASIC PART NUMBER

DASH NUMBER

NEW DESIGN PART NUMBER:

M85049/148 -6

BASIC PART NUMBER

DASH NUMBER

APPLICATION NOTES:

ASSEMBLY INSTRUCTIONS

THE FOLLOWING INSTRUCTIONS ARE SUGGESTED ASSEMBLY PROCEDURES ONLY. ACTUAL TERMINATION AND ASSEMBLY METHOD WILL DEPEND ON THE ACCEPTED TECHNIQUES OF THE USER. THE TERMINATION AND GROUND RING REQUIRES NO SPECIAL ASSEMBLY TOOLS AND CAN BE ASSEMBLED BY HAND. HOWEVER, THE USER MAY FIND IT PREFERABLE TO USE SOFT JAW PLIERS FOR FINAL TIGHTENING OF THE TERMINATION AND GROUND RINGS.

IN ALL CASES, A SELF-PIGTAILING TECHNIQUE FOR THE INDIVIDUAL SHIELDS IS USED, WITH THE POINT AT WHICH THE CONDUCTORS ARE EXTRACTED THROUGH THE SHIELDS TO BE DETERMINED BY THE PARTICULAR CONNECTOR INVOLVED. FOR SOLDER CONTACT CONNECTORS, THE LENGTH OF THE EXTRACTED CONDUCTOR WILL BE SHORTER THAN FOR THE CRIMP CONTACT CONNECTORS. IT IS SUGGESTED THAT ALL SHIELD PIGTAILS BE FLATTENED BEFORE INSTALLING THE TERMINATION AND GROUND RING.

TERMINATION AND GROUND RING:

a. PLACE TERMINATION AND GROUND RING ON WIRE BUNDLE OR CABLE WITH CASTELLATED (SLOTTED) FACE OF BODY TOWARD TERMINATION END OF CABLE (SEE FIGURE 2, STEP 1).

b. IF SHIELDED CONDUCTORS HAVE AN OUTER JACKET, STRIP JACKET TO DESIRED LENGTH. EXTRACT CONDUCTORS THROUGH SHIELDS AT LOCATION DESIRED FOR INSTALLATION OF THE TERMINATION AND GROUND RING. FLATTEN SHIELD PIGTAILS.

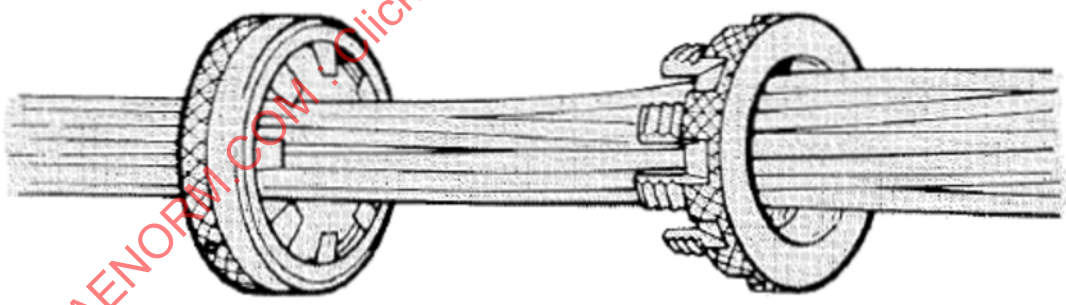

FIGURE 2 - STEP 1 OF ASSEMBLY INSTRUCTIONS

c. WITH SHIELDS HELD AGAINST WIRE BUNDLE, SEPARATE CLAMP NUT FROM BODY. FLARE SHIELDS OUTWARD, PERPENDICULAR TO THE WIRE BUNDLE (SEE STEP 1).

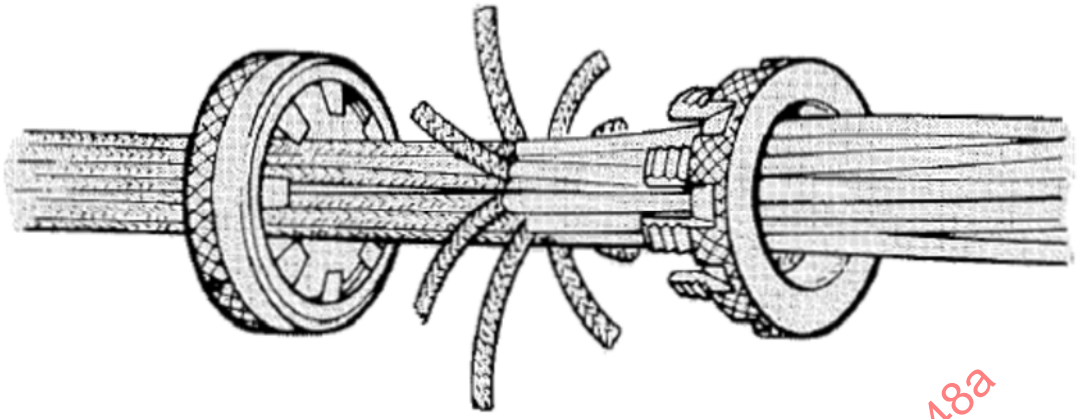

FIGURE 3 - STEP 2 OF ASSEMBLY INSTRUCTIONS

d. PLACE SHIELDS IN SLOTS OF BODY MAKING SURE SHIELDS ARE DISTRIBUTED AS UNIFORMLY AS POSSIBLE AMONG THE SLOTS (SPRING MEMBER IN CLAMP NUT WILL COMPENSATE FOR DIFFERENCES IN SHIELD THICKNESS OF AT LEAST .020 INCH (0.508 MILLIMETERS) BETWEEN ADJACENT SLOTS. IF DESIRED, SHIELDS CAN BE DOUBLED TO ACHIEVE MORE UNIFORM THICKNESS BETWEEN ADJACENT SLOTS (SEE STEP 2).

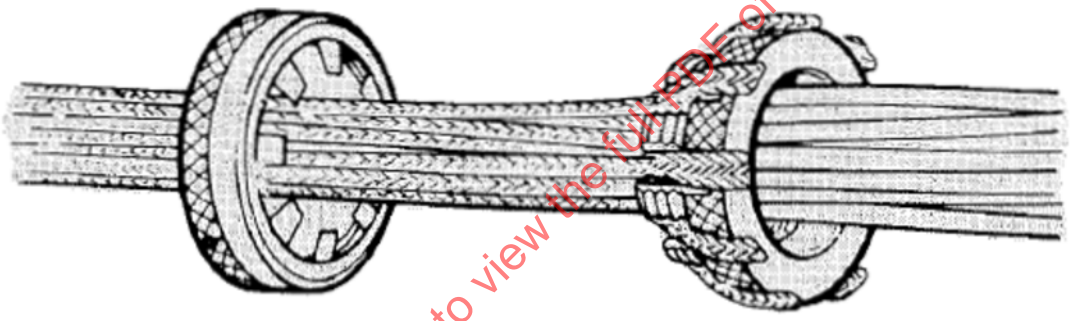

FIGURE 4 - STEP 3 OF ASSEMBLY INSTRUCTIONS

e. INSTALL GROUND LEAD IN TWO SLOTS OF BODY BY LOOPING AROUND A BODY TAB AS SHOWN IN STEP 3. CONNECT GROUND LEAD TO SELECTED TERMINATION POINT.

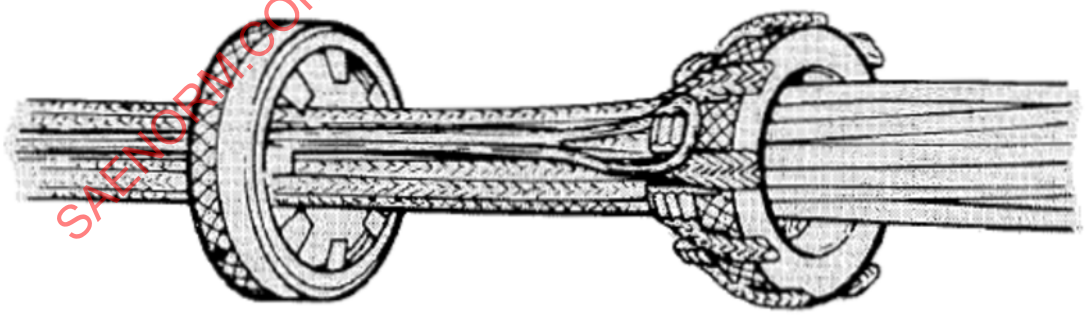

FIGURE 5 - STEP 4 OF ASSEMBLY INSTRUCTIONS