

INCH-POUND

MS27741A

9 July 2004

SUPERSEDING

MS27741 (USAF)

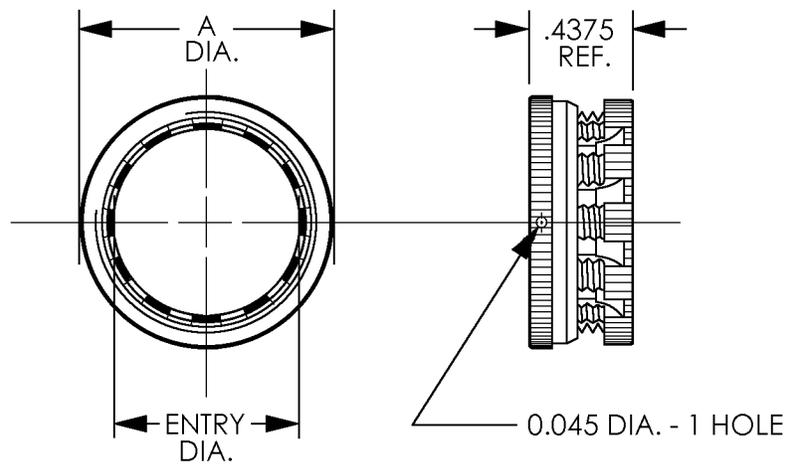
17 February 1971

DETAIL SPECIFICATION SHEET

CONNECTOR, ELECTRICAL, INDIVIDUAL SHIELD TERMINATION

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein
shall consist of this specification sheet.



Inches	mm
.045	1.143
.4375	11.1125

FIGURE 1. Dimensions and configurations.

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Dash number	Entry dia	A dia max	Number of slots	Weight in lbs (grams)
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)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are in parenthesis and given for information only.
3. Unless otherwise specified, tolerance shall be $0.XX \pm .03$ (.762 mm) and $0.XXX \pm .015$ (.381 mm).
4. Angular tolerances shall be $X^\circ \pm 2^\circ$.

FIGURE 1. Dimensions and configurations - Continued.

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Requirements:

Design and construction: See figures 1, 2, and 3.

Material:

- a. Body: Aluminum alloy in accordance with SAE-AMS-QQ-A-225 and ASTM B211.
- b. Nut: Aluminum alloy in accordance with SAE-AMS-QQ-A-225 and ASTM B211.
- c. Spring: Copper alloy
- d. Friction washer: Teflon.

Finish:

- a. Body: Gold iridite in accordance with MIL-C-5541.
- b. Nut: Gold iridite in accordance with MIL-C-5541.

Shield compensation: Captivated spring member in clamp nut compensates for differences in shield thickness of at least 0.020 inch (.508 mm) between adjacent slots in body.

Shield accommodation: Each slot in body will accommodate up to .180 inch (4.572 mm) total shield thickness.

Ground lead pullout. Retention of ground leads shall meet the requirements of SAE-AS21608.

Items described in this drawing are covered by US Patent No 3,465,092.

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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 TAG 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 TAG 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 crimp contact connectors. It is suggested that all shield pigtails be flattened before installing the TAG ring.

TAG Ring:

- a. Place TAG 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 TAG ring. Flatten shield pigtails.

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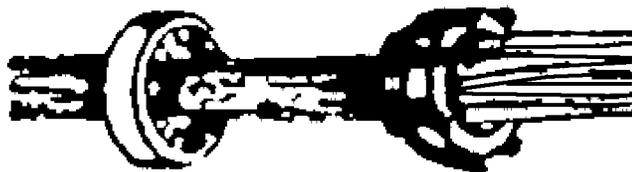
Step 1

- c. With shields held against wire bundle, separate clamp nut from body. Flare shields outward, perpendicular to wire bundle (see step 1).



Step 2

- 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 (.508 mm) between adjacent slots). If desired, shields can be doubled to achieve more uniform thickness between adjacent slots (see step 2).

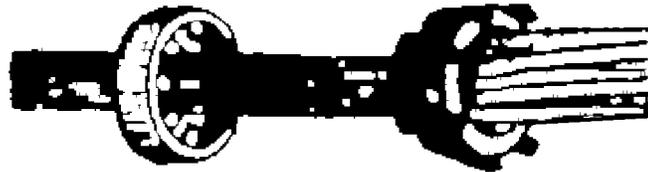


Step 3

- e. Install ground lead in 2 slots of body, by looping around a body tab as shown in step 3. Connect ground lead to selected termination point.

FIGURE 2. Assembly instructions.

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Step 4

- f. Fold shields over knurled surface of body and engage clamp nut aligning tabs of clamp nut spring with slots in body. Tighten securely as shown in step 4. Hand tightening can be used, but if preferred, soft jaw pliers can be used for final tightening.



Step 5

- g. Trim excess shields to desired length, either flush with surface of TAG ring or to any length desired. For future reparability, it is suggested at least .5 inch (12.7 mm) shield lengths be retained (see step 5).



Step 6

- h. If desired, safety wire can be installed through hole provided in clamp nut. Simply loop wire through hole and tighten as shown in step 6. With safety wire installed between two body tabs, it works similar to a cotter pin to prevent accidental loosening.

FIGURE 2. Assembly instructions - Continued.

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Step 7

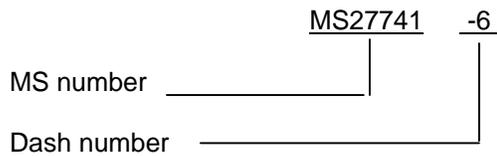
- i. TAG ring can be insulated by installing heat shrinkable sleeving over completed assembly (see step 7).

FIGURE 2. Assembly instructions - Continued.



FIGURE 3. Completed assembly.

Part or Identifying Number (PIN) example:



Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

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Reference documents. This document references the following:

MIL-C-5541	SAE-AMS-QQ-A-225
ASTM B211	SAE AS21608

CONCLUDING MATERIAL

Custodians:
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-4419-025)

Review activity:
Air Force - 99

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