

INCH - POUND

MIL-DTL-83413/4E  
31 October 2014  
SUPERSEDING  
MIL-DTL-83413/4D  
14 August 2013

DETAIL SPECIFICATION SHEET

CONNECTORS AND ASSEMBLIES, ELECTRICAL, AIRCRAFT  
GROUNDING: PLUGS, FOR TYPES I AND II GROUNDING ASSEMBLIES

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 and MIL-DTL-83413.

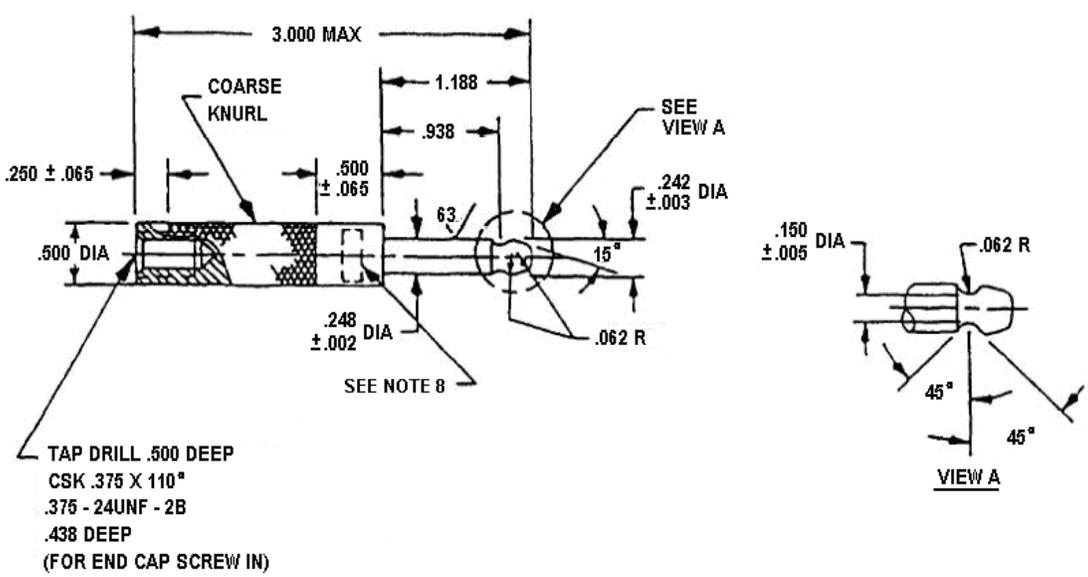


FIGURE 1. Plug, for types I and II grounding assemblies.

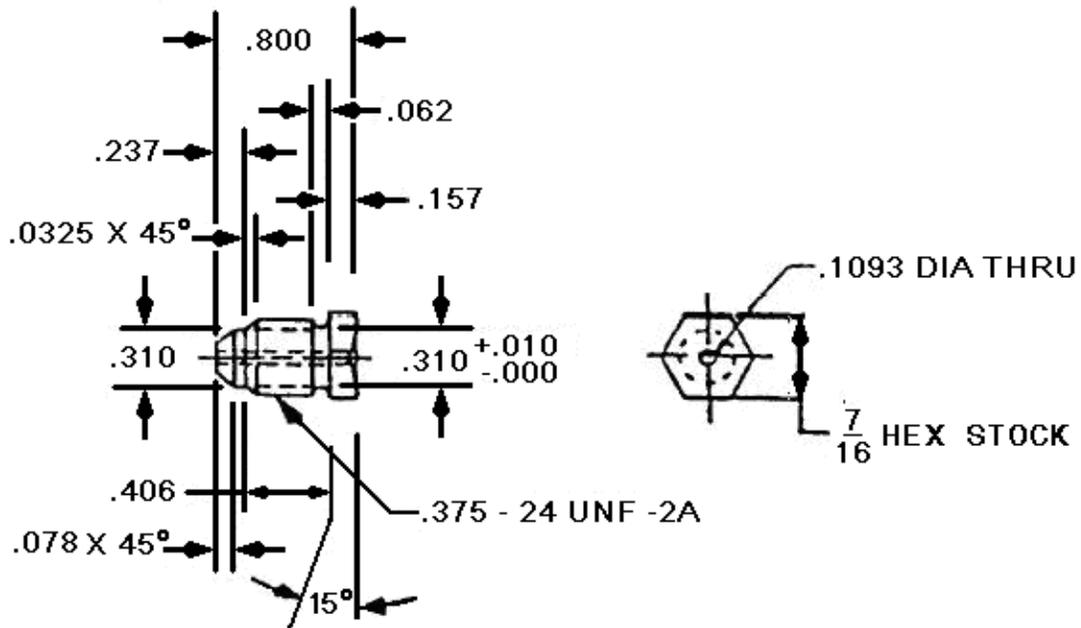
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Inches	mm	Inches	mm
.062	1.57	.438	11.13
.150	3.81	.500	12.70
.242	6.15	.938	23.83
.248	6.30	1.188	30.18
.250	6.35	3.000	76.20
.375	9.53		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerance is  $\pm .016$  (.41mm) for decimals and  $\pm 0.5^\circ$  for angles.
4. This plug will be used with a receptacle having a minimum bore diameter of .251 (6.38 mm) and a maximum bore diameter of .253 (6.43 mm) in accordance with ISO 46 and NATO STANAG 3632. Plugs must mate with receptacles within these dimensions to achieve mandatory international interoperability.
5. Break all sharp edges .010 - .020 (.25 mm – 51 mm).
6. The M83413/4-3 plug supersedes plugs with both cylindrical and hexagonal body shapes and various tip dimensions and is functionally interchangeable, although mating forces may vary slightly.
7. Optional hexagonal body shape allowed, see requirements.
8. Part or Identifying Number (PIN). In accordance with MIL-STD-1285.

FIGURE 1. Plug, for types I and II grounding assemblies – Continued.



Inches	mm	Inches	mm
.0325	0.83	.237	6.02
.062	1.57	.310	7.87
.078	1.98	.375	9.53
.1093	2.78	.406	10.31
.150	3.81	.800	20.32

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerance is  $\pm .016$  (.41mm) for decimals and  $\pm 0.5^\circ$  for angles.

FIGURE 2. End cap.

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REQUIREMENTS:

Dimensions and configuration: See figures 1 and 2.

Material: Stainless steel in accordance with SAE-AMS-S-7720, 300 series composition, condition A, passivated in accordance with SAE-AMS2700 for plugs and caps.

Dust: Not applicable.

Tensile strength: Not applicable.

Engagement: Not applicable.

Crush: Not applicable.

Durability: Durability test shall be performed in accordance with test procedure EIA-364-09. The following conditions shall apply:

- a. Test preparation: Connector shall be mated.
- b. 3000 cycles shall be completed.
- c. After 3000 cycles, the detent action test and the contact resistance test shall be performed. Contact resistance shall be .005 ohm maximum.

Contact resistance: .005 ohm maximum.

Mating receptacle: In accordance with MIL-DTL-83413/5 or MIL-DTL-83413/6. Use MIL-DTL-83413/6 for all qualification and quality conformance tests.

PIN: Apply permanently by stamping, etching, embossing or other means approved by the qualifying activity. Dash number marking is optional on PIN M83413/4-1 and -3. PIN is not required to be marked on M83413/4-2 end caps.

Qualification: Required. The activity responsible for qualification and the Qualification Products List (QPL) for this specification sheet is the DLA Land & Maritime- VQ, 3990 East Broad Street, Columbus, Ohio 43218-3990.

Supersession data: See table I.

TABLE I. Supersession data.

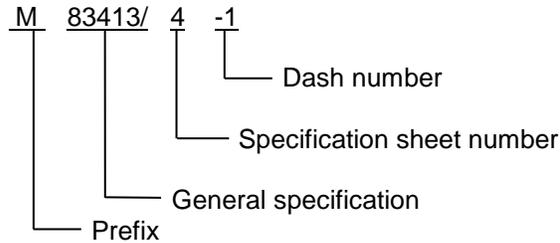
PIN	Description	Superseded PIN
M83413/4-1	M83413/4-3 plug with M83413/4-2 end cap attached	MS3493-3 MS3493-5
M83413/4-2	7/16 inch end cap	MS3493-2
M83413/4-3	Knurled cylindrical plug or unknurled hexagonal plug	MS3493-1 MS3493-4

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M83413/4-1 shall be supplied with the end caps screwed in the mating plug end.

A nominal 7/16-inch hexagonal shaped plug body may be used in lieu of the cylindrical shape shown on figure 1. If the hexagonal shaped body is used, knurling is not required and the .250 and .500 dimensions for positioning the knurling are not applicable.

Example of PIN: M83413/4-1



Certain provisions of this specification sheet are the subject of International Standardization Agreement NATO STANAG 3632 and ISO 46. When amendment, revision or cancellation of this specification sheet is proposed that will modify the international agreement concerned, the preparing activity will take appropriate action through international agreement standardization channels, including departmental standardization offices to change the agreement or make other appropriate accommodations.

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Referenced documents. In addition to MIL-DTL-83413, this document references the following:

- MIL-DLT-83413/5
- MIL-DTL-83413/6
- MIL-STD-1285
- SAE-AMS2700
- SAE-AMS-S-7720
- NATO STANAG 3632
- ISO 46
- EIA-364-09

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CONCLUDING MATERIAL

Custodians:

Army - AV  
Navy - AS  
Air Force - 85  
DLA - CC

Preparing activity:

DLA - CC

Review activities:

Army - AR, CR, CR4, MI  
Navy - MC  
Air Force - 02, 99

(Project: 5935 - 2014 - 122)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.