

INCH-POUND

MIL-DTL-24231/30A(SH)

26 April 2013

SUPERSEDING

MIL-C-24231/30(SH)

18 February 1992

DETAIL SPECIFICATION SHEET

CONNECTOR, PLUG, GLASS REINFORCED POLYMER, TYPE I, MOLDED, THREE- AND FOUR-CONDUCTOR

This specification is approved for use by the Naval Sea Systems Command and is available 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-24231.

REQUIREMENTS:

1. Dimensions and configuration: see [figures 1](#) through [8](#).
2. See table for cable types for molded plugs in MIL-DTL-24231.
3. All dimensions are in inches.
4. Tolerances shall be as follows, or as stated:
 - a. Decimals – ± 0.005 inch.
 - b. Fractions – $\pm \frac{1}{64}$ inch.
 - c. Angular dimensions – $\pm \frac{1}{2}$ degree.
5. Outside diameter may vary slightly after machine clean-up when 2-inch bar stock is used.

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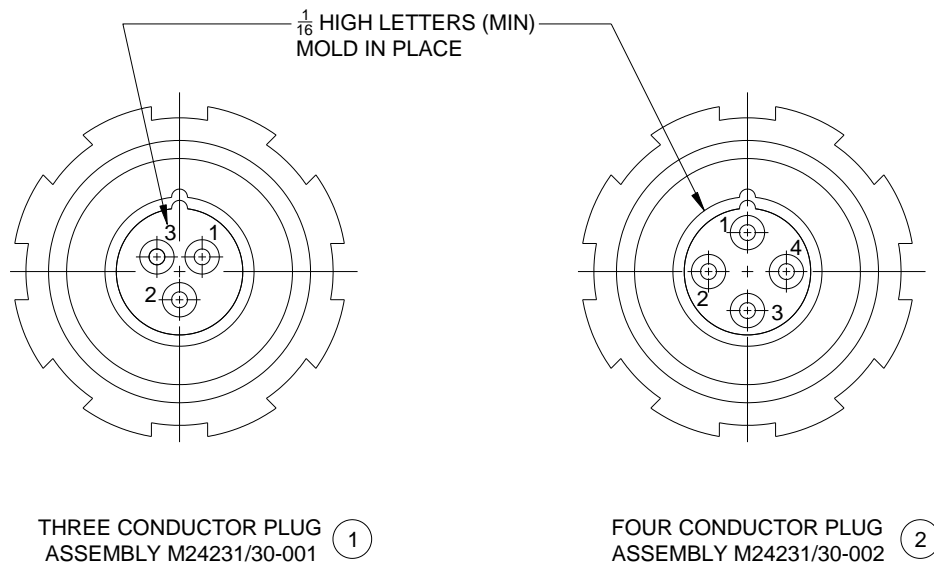
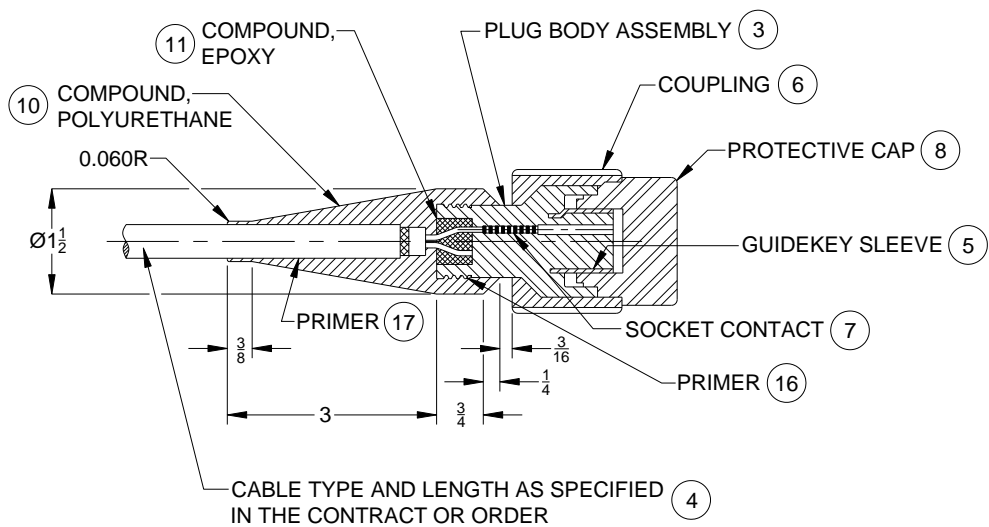


FIGURE 1. Connector, plug, glass reinforced polymer, molded, three- and four-conductor.

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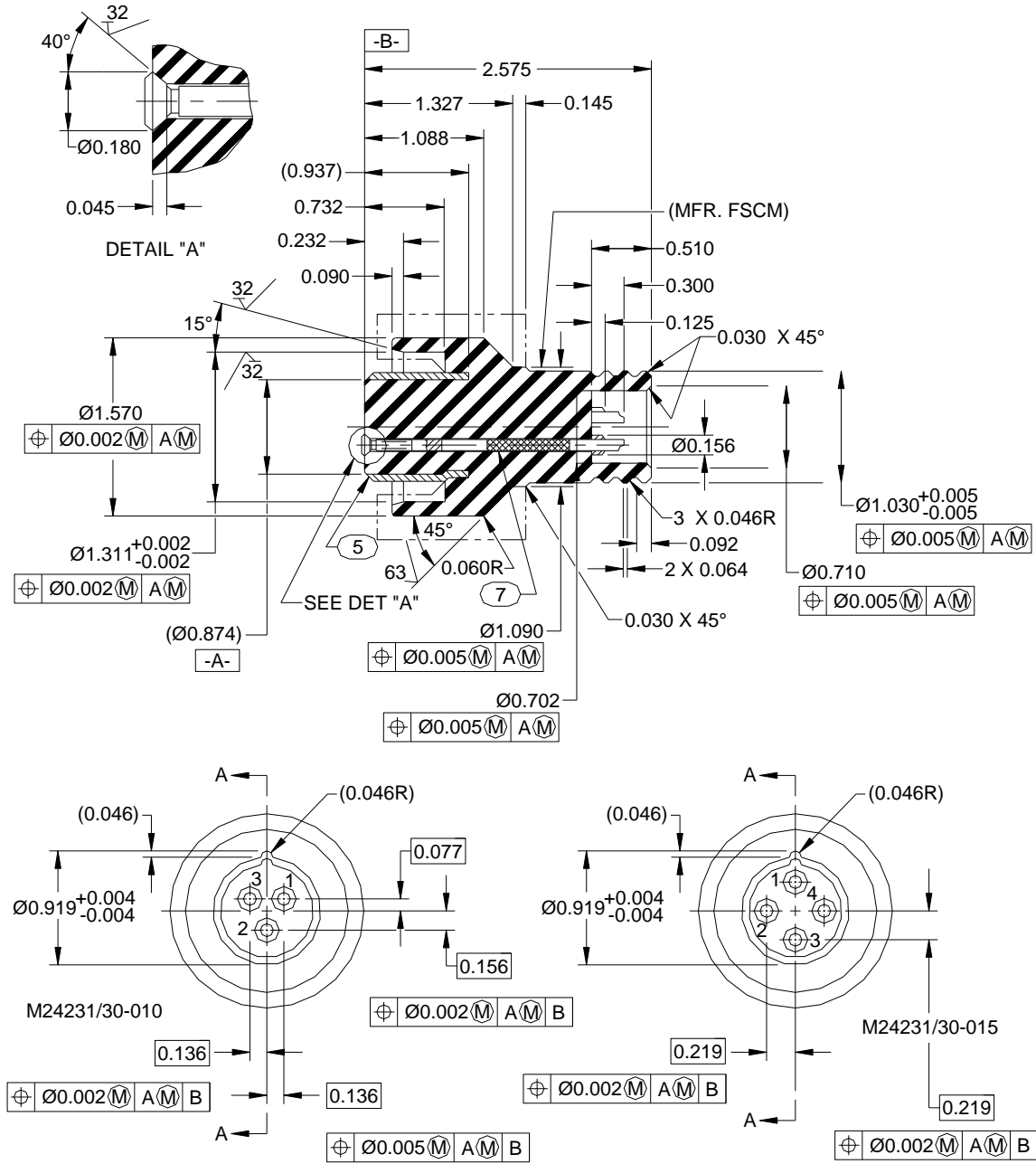
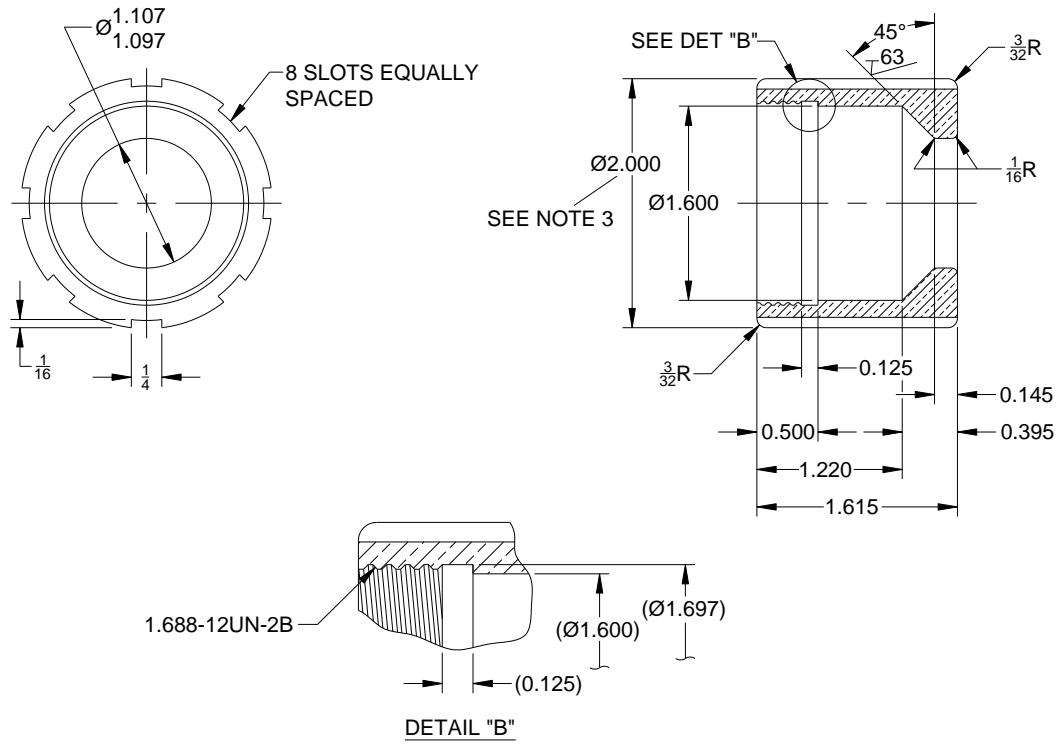


FIGURE 2. Plug, body assembly – M24231/30-010 and M24231/30-015.

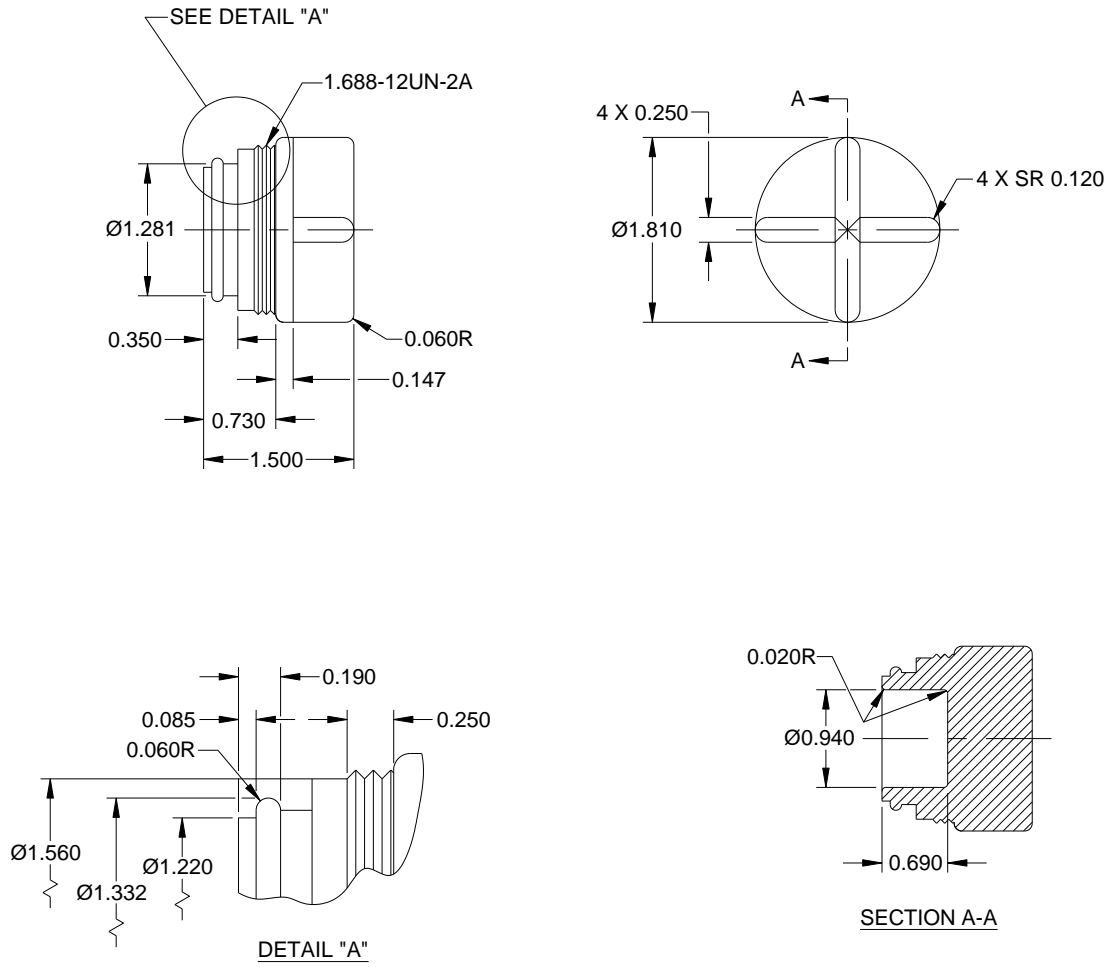
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$\sqrt[125]{}$ ALL OVER EXCEPT AS SHOWN.

FIGURE 3. Coupling – M24231/30-011. (6)

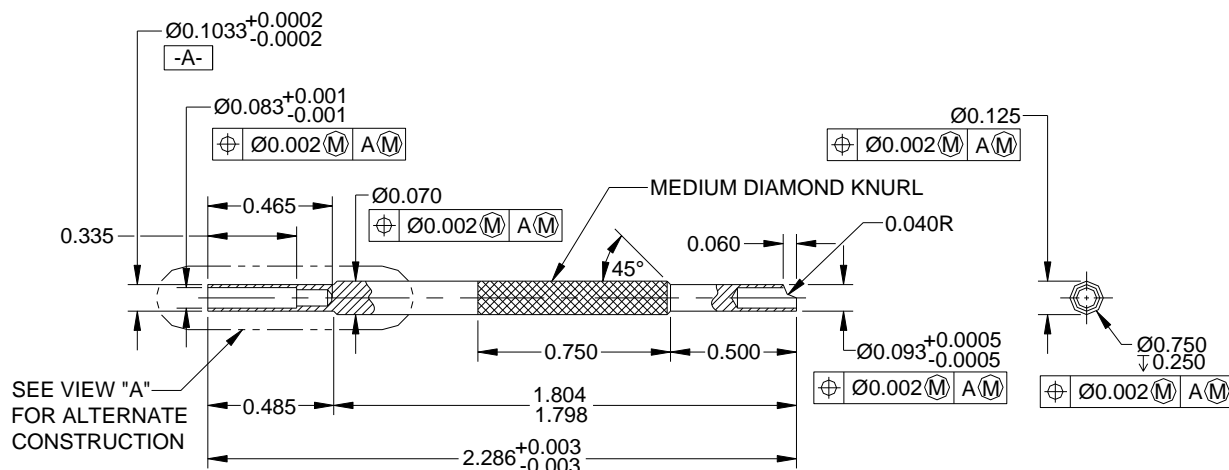
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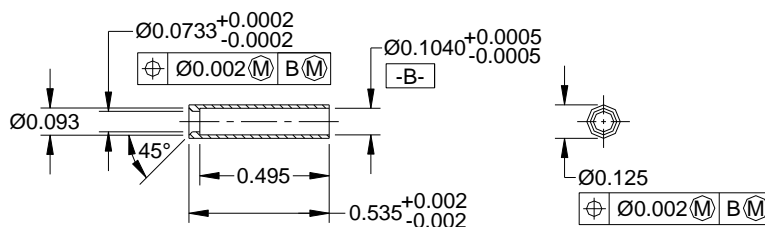
NOTE: DIMENSIONS SHOWN ARE FOR MOLD INFORMATION ONLY. ACTUAL PART DIMENSIONS MAY VARY BASED ON SHRINKAGE (SEE TABLE I).

FIGURE 4. Protective cap – M24231/30-012. (8)

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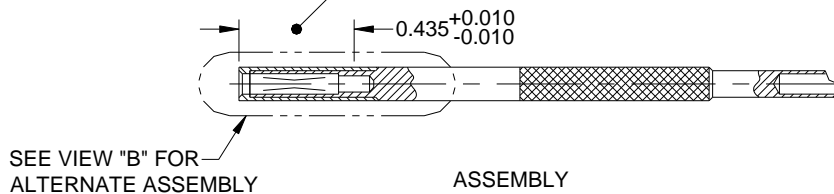


SOCKET CONTACT



SLEEVE

CRIMP SLEEVE AT LOCATION SHOWN AROUND CIRCUMFERENCE OF SOCKET AT 4 LOCATIONS 90° APART 0.006^{+0.003}/_{-0.003} INCH DEEP WITH 0.092^{+0.005}/_{-0.005} DIAMETER CRIMP DIE.



ASSEMBLY

FIGURE 5. Socket contact assembly – M24231/30-030.

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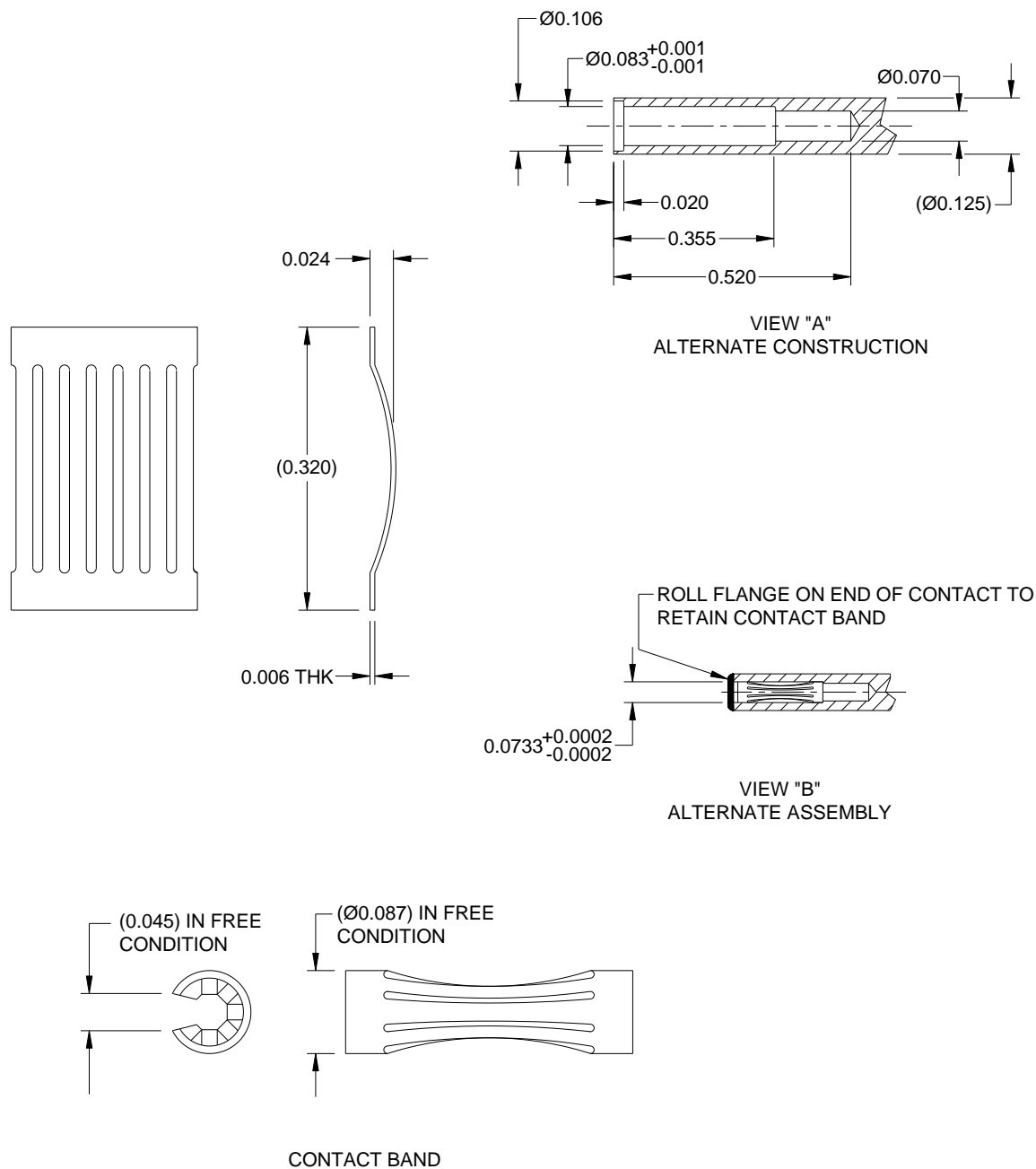


FIGURE 5. Socket contact assembly – M24231/30-030 - Continued.

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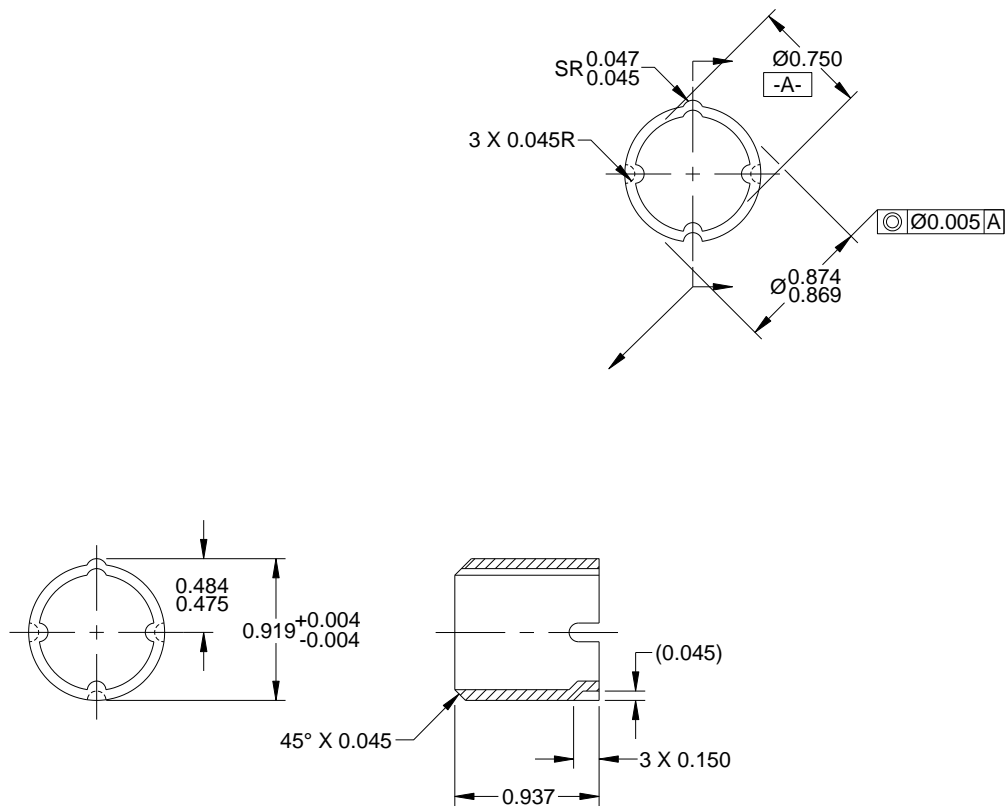
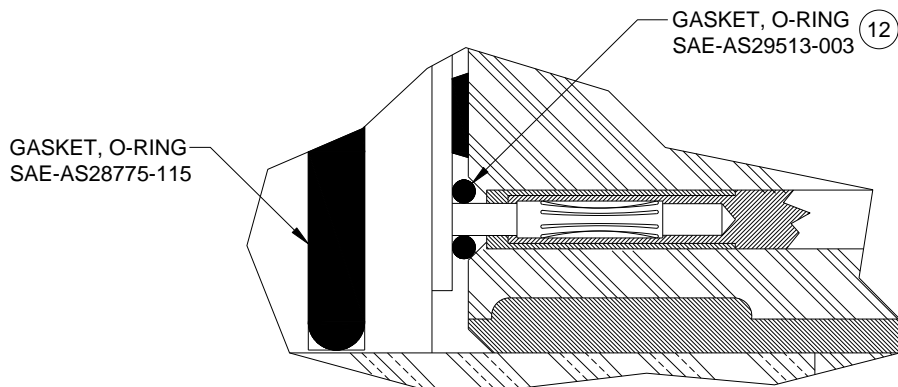
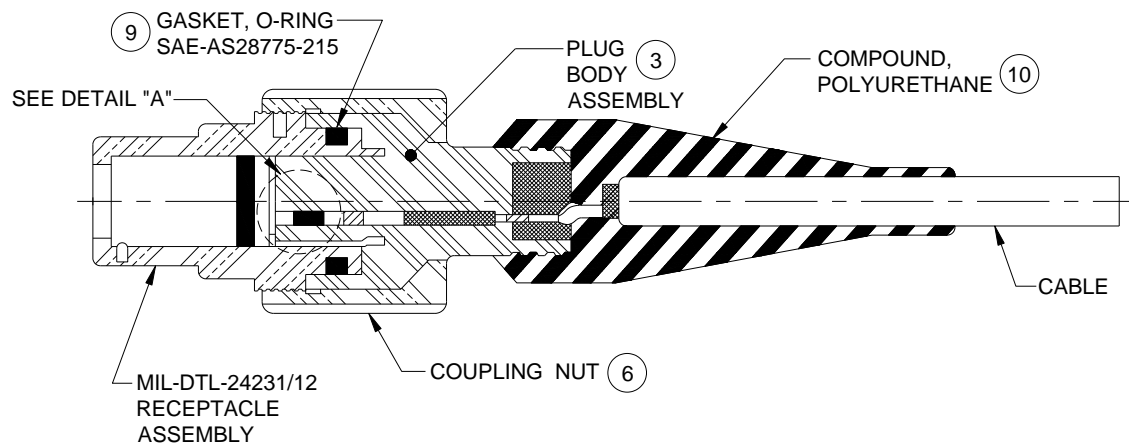


FIGURE 6. Guidekey sleeve – M24231/30-040. (5)

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FIGURE 7. Secondary o-ring seal assembly – M24231/30-050.

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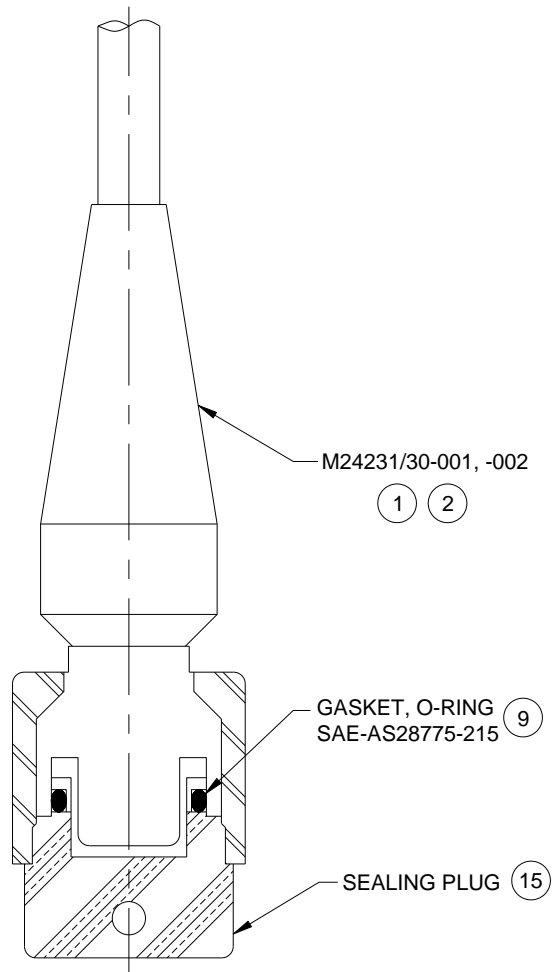


FIGURE 8. Sealing plug assembly – M24231/30-020.

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TABLE I. Parts list.

Item no. ^{1/}	Description ^{2/}	Quantity for M24231/30- ^{3/}		Material/specification	Remarks
		001	002		
1	Plug assembly, 3-conductor	1		463-6548331 ^{4/}	See figure 1 .
2	Plug assembly, 4-conductor		1	^{4/}	See figure 1 .
3	Glass-reinforced epoxy (GRE) plug body assembly	1	1	463-6548326 ^{5/}	See figure 2 .
4	Cable	As required		See ordering data.	See figure 1 .
5	Guidekey sleeve	1	1	463-6548329 Stainless steel, AISI Type 316L	See figure 6 .
6	Coupling	1	1	463-6548334 Ni-Al-BRZ, ASTM B150/B150M	See figure 3 .
7	Electrical socket contact assembly	3	4	463-6546692 Copper alloy 360, ASTM B121/B121M, ASTM B36/B36M, ASTM B16/B16M, and ASTM B124/B124M finish per ASTM B488, Code C, Type 2, Class 1.3, Ni under-coat per SAE-AMS-QQ-N-290 ^{6/}	See figure 5 and continuation of figure 5 .
8	Cap, protective	1	1	Neoprene rubber compound ASTM D2000, 2B3725B14C12EA14(7%) with 10% teflon powder	Nonpressure-proof, see figure 4 , durometer 85±5 when molded, shrinkage 1.2 – 1.3% max.
9	Gasket, O-ring			SAE-AS28775-215	Shown for information only. See figure 8 .
10	Compound, polyurethane	As required		^{8/}	See figure 1 .
11	Compound, epoxy	As required		Cast epoxy resin compound ^{7/}	Base EE4183 or RE2039, hardener HD-3561; see figure 1 .
12	Gasket, O-ring	3	4	SAE-AS29513-003	Lubricate with silicone compound, SAE-AS8660, see figure 7 .
13	Secondary o-ring sealing system	1	1	See item 12.	See figure 7 . Sealing system consists of appropriate number of item 12.
14	Sealing plug assembly ^{3/}	1	1	See items 1 and 2, and M24231/1, item 8.	Pressure-proof, see figure 8 , and figure 2 of MIL-DTL-24231/1E.
15	Sealing plug ^{3/}	1	1	Ni-Cu, Class A, QQ-N-281; see M24231/1, figure 2, item 8	Pressure-proof, see figure 8 .

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TABLE I. Parts list – Continued.

Item no. ^{1/}	Description ^{2/}	Quantity for M24231/30- ^{3/}		Material/specification	Remarks
		001	002		
16	Adhesive primer, rubber-to-plastic	As required		463-6548333 adhesive primer, rubber-to-metal, two-part, Type I, for polyurethane molding ^{9/} ; or rubber-to-metal primer and adhesive for neoprene ^{10/}	See figure 1 .
17	Adhesive primer, rubber-to-rubber	As required		463-6548332 adhesive primer, rubber-to-rubber, one-part, Type I, for polyurethane ^{11/} ; or adhesive one-part for neoprene ^{12/}	See figure 1 .
NOTES:					
^{1/} Item numbers are the same as encircled numbers shown on figures.					
^{2/} See applicable figure or table listed in remarks column for part numbers and dimensions.					
^{3/} Quantity is for one complete assembly of each size.					
^{4/} To be supplied molded to cable unless otherwise specified (see acquisition requirements in MIL-DTL-24231).					
^{5/} Glass reinforced epoxy (GRE), Fiberite Corp., Winona, MA, part no. E-2748, CAGE 07314, or equal.					
^{6/} Electrical socket contact, Hugin Industries, Los Altos, CA, part no. 04008, CAGE 1P172, or equal.					
^{7/} Hysol base EE4183 or RE2039, hardener HD-3561, Hysol Division, Dexter Corporation, Olean, NY, CAGE 04347, or equal.					
^{8/} Molding compound to be procured in accordance with S9320-AM-PRO-020.					
^{9/} PR-420, Products Research and Chem. Corp., Glendale, CA, or equal.					
^{10/} Chemlok 205 primer, Chemlok 234B adhesive, Hughson Chem Corp., Div. of Lord Corp., Erie PA, or equal.					
^{11/} PR-1523M, Products Research and Chem. Corp., Glendale, CA, or equal.					
^{12/} Chemlok 234B adhesive, or equal.					

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.

Preparing activity:
Navy – SH
(Project 5935-2011-079)

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>.