INCH-POUND

MS24265T
1 December 2016
SUPERSEDING
MS24265R
20 August 2009

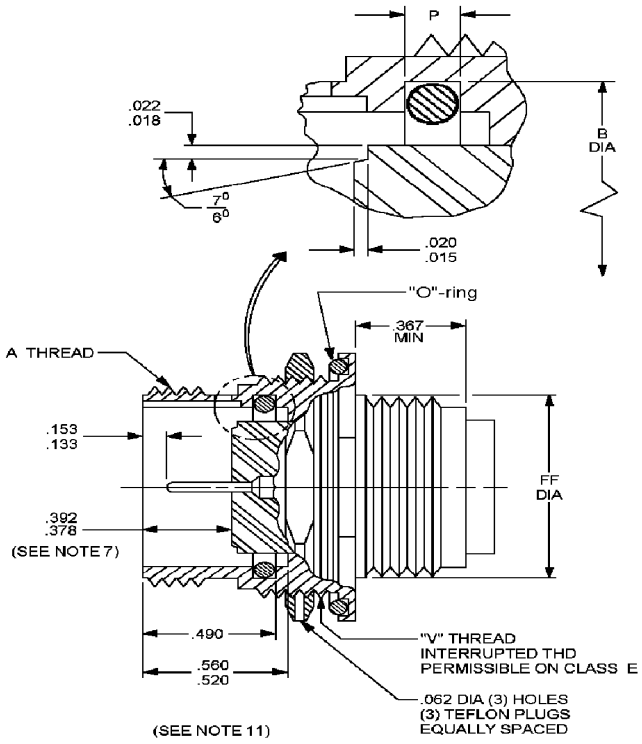
DETAIL SPECIFICATION SHEET

CONNECTORS, RECEPTACLE, ELECTRICAL, SINGLE HOLE MOUNT, MINIATURE, CLASSES E, F, G, H AND R

Inactive for new design after 14 November 1977.
For new design, use MIL-DTL-83723, series III.

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-26500.

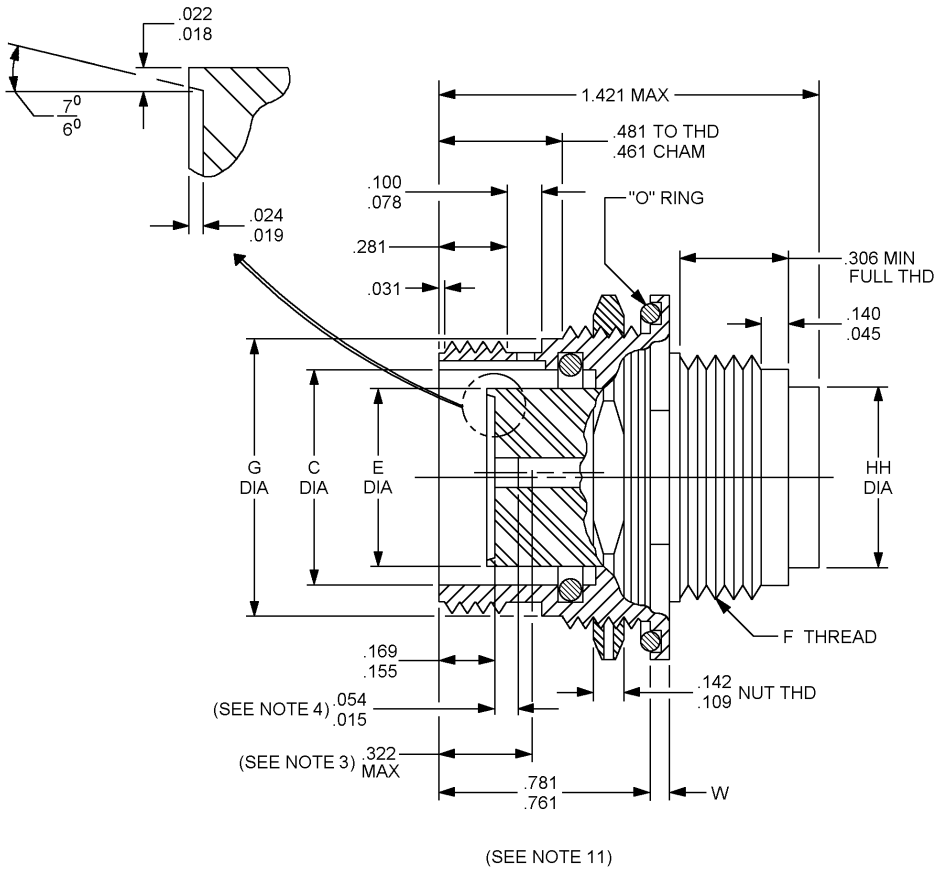


Style P
(pin insert)

FIGURE 1. Receptacle, threaded, for classes E, F, G, and R.

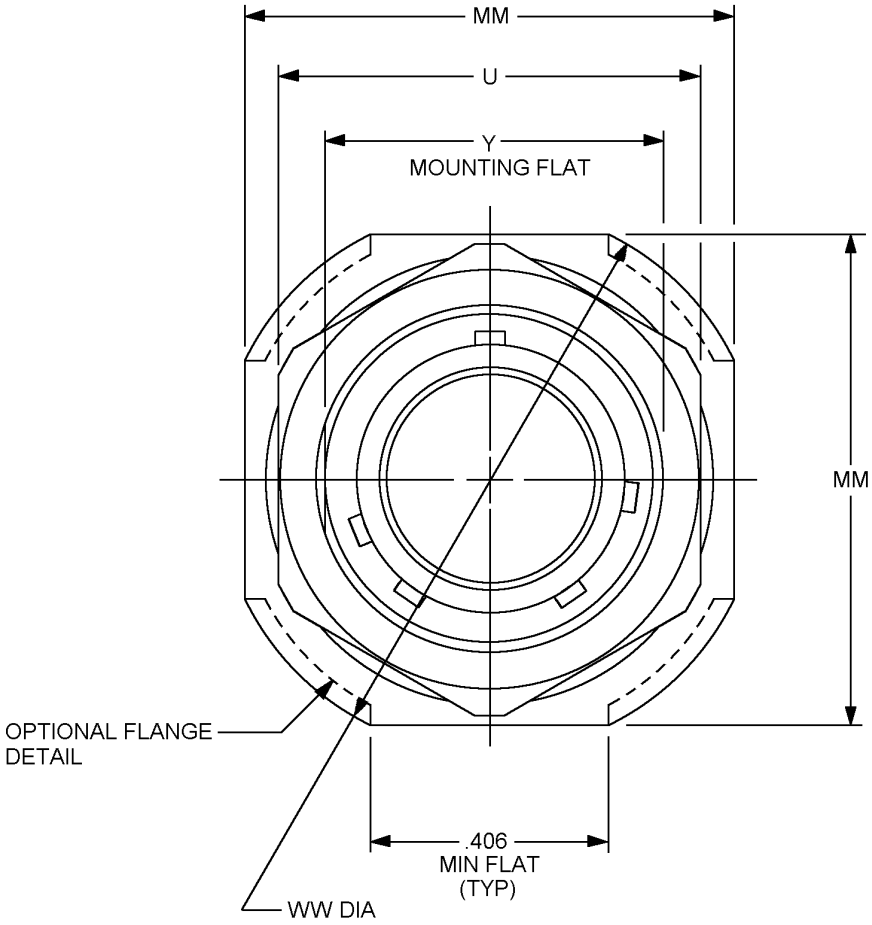
AMSC N/A

FSC 5935



Style S
(socket insert)

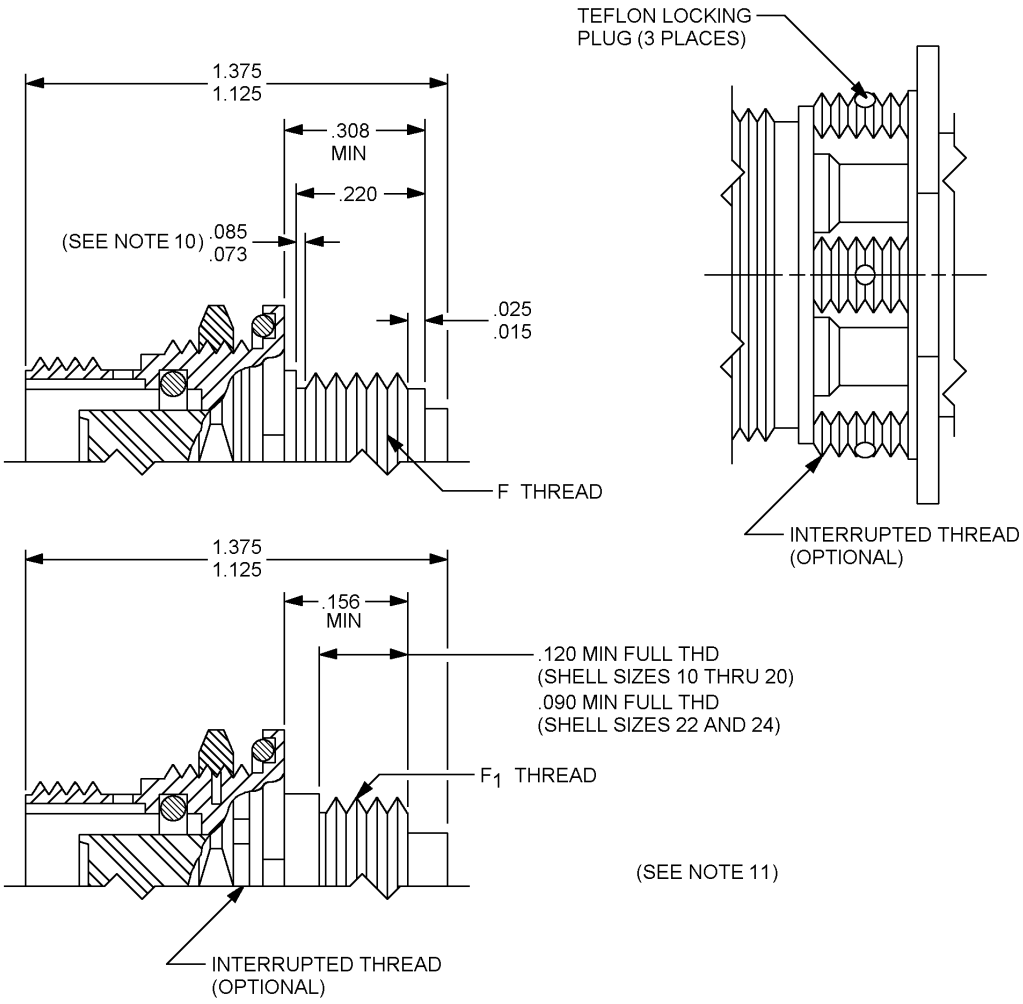
FIGURE 1. Receptacle, threaded, for classes E, F, G and R - Continued



(SEE NOTE 11)

Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.015	0.38	.045	1.14	.140	3.56	.322	8.18	.490	12.45
.018	0.46	.054	1.37	.142	3.60	.367	9.32	.520	13.21
.019	0.48	.062	1.57	.153	3.89	.378	9.60	.560	14.22
.020	0.51	.078	1.98	.155	3.94	.392	9.96	.781	19.84
.022	0.56	.100	2.54	.169	4.29	.406	10.31	.761	19.33
.024	0.61	.109	2.77	.281	7.14	.461	11.71	.768	19.51
.031	0.79	.133	3.38	.306	7.77	.481	12.21	1.421	36.09

FIGURE 1. Receptacle, threaded, for classes E, F, G and R – Continued



OPTIONAL SHELL DESIGN FOR CLASSES F, G AND R

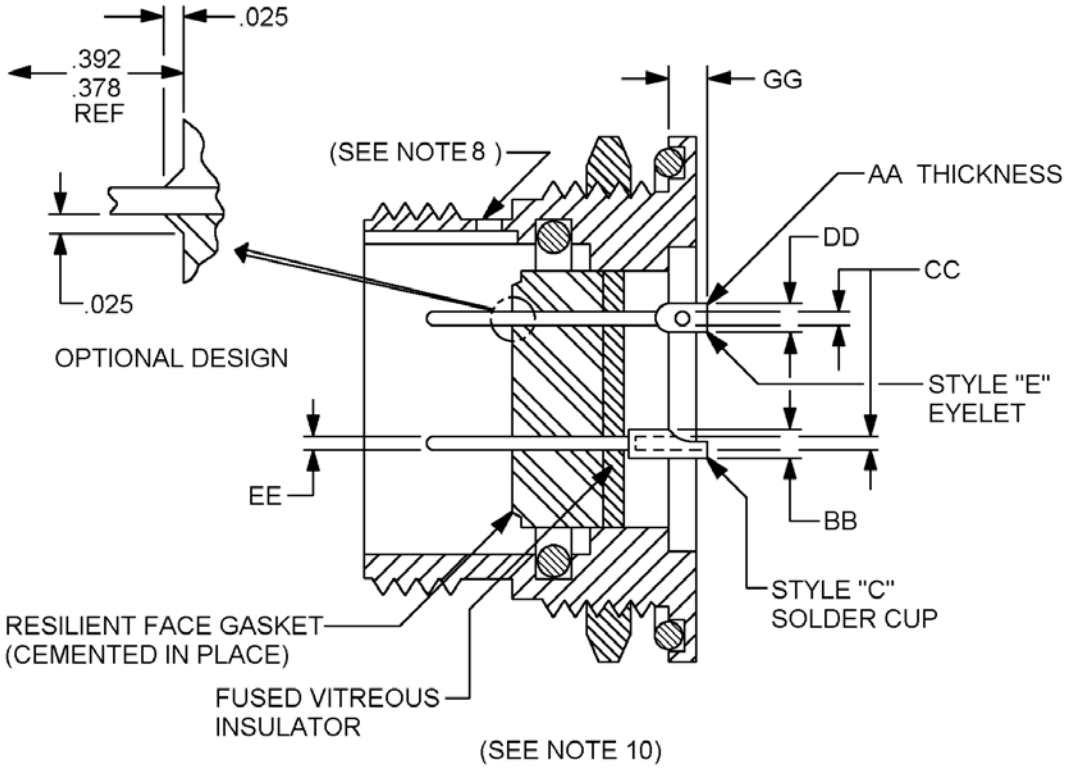
Inches	mm	Inches	mm	Inches	mm	Inches	mm
.015	0.38	.090	2.29	.220	5.59	.392	9.96
.025	0.64	.120	3.05	.308	7.82	1.125	28.58
.073	1.85	.156	3.96	.378	9.60	1.375	34.92
.085	2.16						

FIGURE 1. Receptacle, threaded, for classes E, F, G and R – Continued

NOTES:

1. Dimensions are in inches. Unless otherwise specified, tolerances on decimals is ± .005.
2. Metric equivalents are given for general information only.
3. All diameters to be concentric with each other within .015 TIR.
4. All diameters in the same plane to be concentric with each other within .004 TIR.
5. True position (TP) tolerances specified are for maximum material conditions (MMC).
6. Distance between end of shell and the point at which a gauge pin having the same basic diameter as the mating contact and a square face, engages socket contact spring.
7. Dimensions on pin and socket contact locations and end of shells to insert faces apply when contacts are placed in inserts for inspection or application.
8. Dimensions .133 may reduce to .118 minimum under pressure caused by molded cable assemblies or sharp cable bends. Use tool MIL-I-81969/17 to assemble contacts into this connector, and use tool MIL-I-81969/19 to remove contacts from this connector.
9. Thread relief groove is optional on shell. When groove is omitted, the length of full thread from front of shell will be .310 minimum and thread runout .385 maximum.
10. Thread relief groove is optional on shell. When groove is omitted, the length of full thread from rear of shell will be .221 minimum.
11. Environment resistant (class F and R) receptacles, type T - aluminum shell material. Grounding environment resistant (class G) receptacles, type T - aluminum shell material. Environment resistant (class E) receptacles, type T - stainless steel shell material. These receptacles mate with plug MS24266 type T.

FIGURE 1. Receptacle threaded for classes E, F, G and R – Continued.



STYLE P
(PIN INSERT)

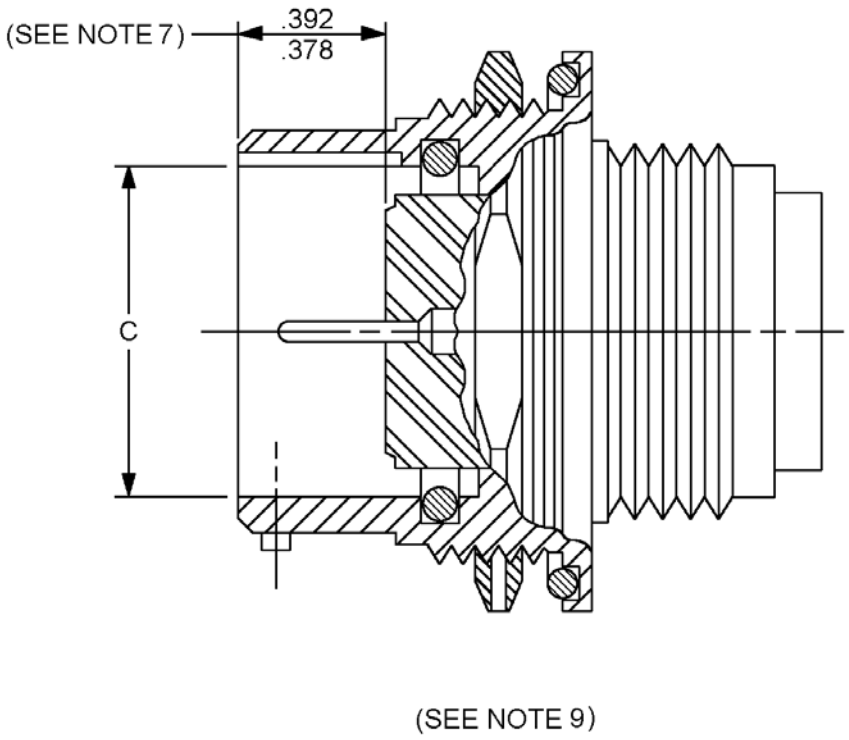
Inches	mm	Inches	mm	Inches	mm	Inches	mm
.015	0.38	.090	2.29	.220	5.59	.392	9.96
.025	0.64	.120	3.05	.308	7.82	1.125	28.58
.073	1.85	.156	3.96	.378	9.60	1.375	34.92
.085	2.16						

FIGURE 2. Receptacle, threaded, insert design for class H (hermetic), type T.

NOTES:

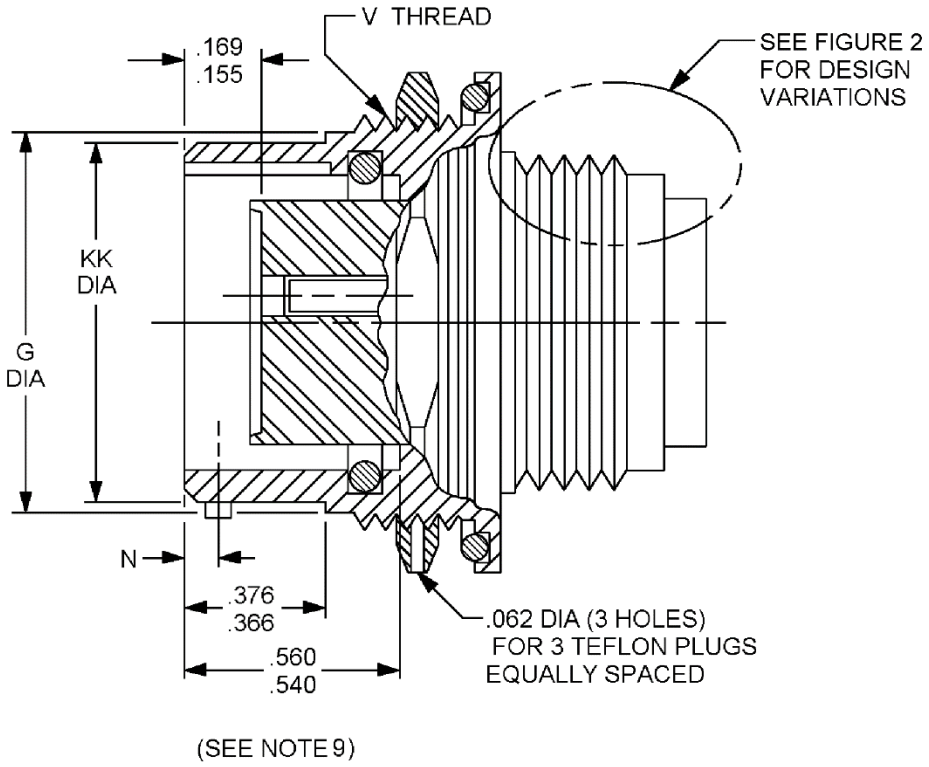
1. Dimensions are in inches. Unless otherwise specified, tolerances on decimals is ± .005.
2. Metric equivalents are given for information only.
3. All diameters to be concentric with each other within .015 TIR.
4. All diameters in the same plane to be concentric with each other within .004 TIR.
5. True position (TP) tolerances specified are for maximum material conditions (MMC).
6. Distance between end of shell and the point at which a gauge pin having the same basic diameter as the mating contact and a square face, engages socket contact spring.
7. Dimensions on pin and socket contact locations and end of shells to insert faces apply when contacts are placed in inserts for inspection or application.
8. Thread relief groove is optional on shell. When groove is omitted, the length of full thread from front of shell shall be .310 minimum and thread runout .385 maximum.
9. Thread relief groove is optional on shell. When groove is omitted, the length of full thread from rear of shell shall be .221 minimum.
10. Hermetic (class H) receptacle, type T. These receptacles mate with plug MS24266, type T, stainless steel shell material.

FIGURE 2. Receptacle, threaded, shell design for class H (hermetic), type T – Continued.



STYLE P
(PIN INSERT)

FIGURE 3. Receptacle, bayonet, type B, insert.



STYLE S
(SOCKET INSERT)

FIGURE 3. Receptacle, bayonet, type B, insert – Continued.

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.004	0.10	.062	1.57	.366	9.30	.392	9.96
.005	0.13	.155	3.94	.376	9.55	.540	12.80
.010	0.25	.169	4.29	.378	9.60	.560	14.22
.025	0.64						

NOTES:

1. Dimensions are in inches. Unless otherwise specified, tolerances on decimals is ± .005.
2. Metric equivalents are given for general information only.
3. All diameters to be concentric with each other within .015 TIR.
4. All diameters in the same plane to be concentric with each other within .004 TIR.
5. True position (TP) tolerances specified are for maximum material conditions (MMC).
6. Distance between end of shell and the point at which a gauge pin having the same basic diameter as the mating contact and a square face, engages socket contact spring.
7. Dimensions on pin and socket contact locations and end of shells to insert faces apply when contacts are placed in inserts for inspection or application.
8. Dimensions .133 may reduce to .118 minimum under pressure caused by molded cable assemblies or sharp cable bends. Use tool MIL-I-81969/17 to assemble contacts into this connector, and use tool MIL-I-81969/19 to remove contacts from this connector.
9. Environment resistant (class F and R) receptacles, type B - aluminum shell material.
   Grounding environment resistant (class G) receptacles, type B - aluminum shell material.
   Environment resistant (class E) receptacles, type B - stainless steel shell material.
10. Thread relief groove is optional on shell. When groove is omitted, the length of full thread from front of shell will be .310 minimum and thread runout .385 maximum.

FIGURE 3. Receptacle, bayonet, type B, insert – Continued.

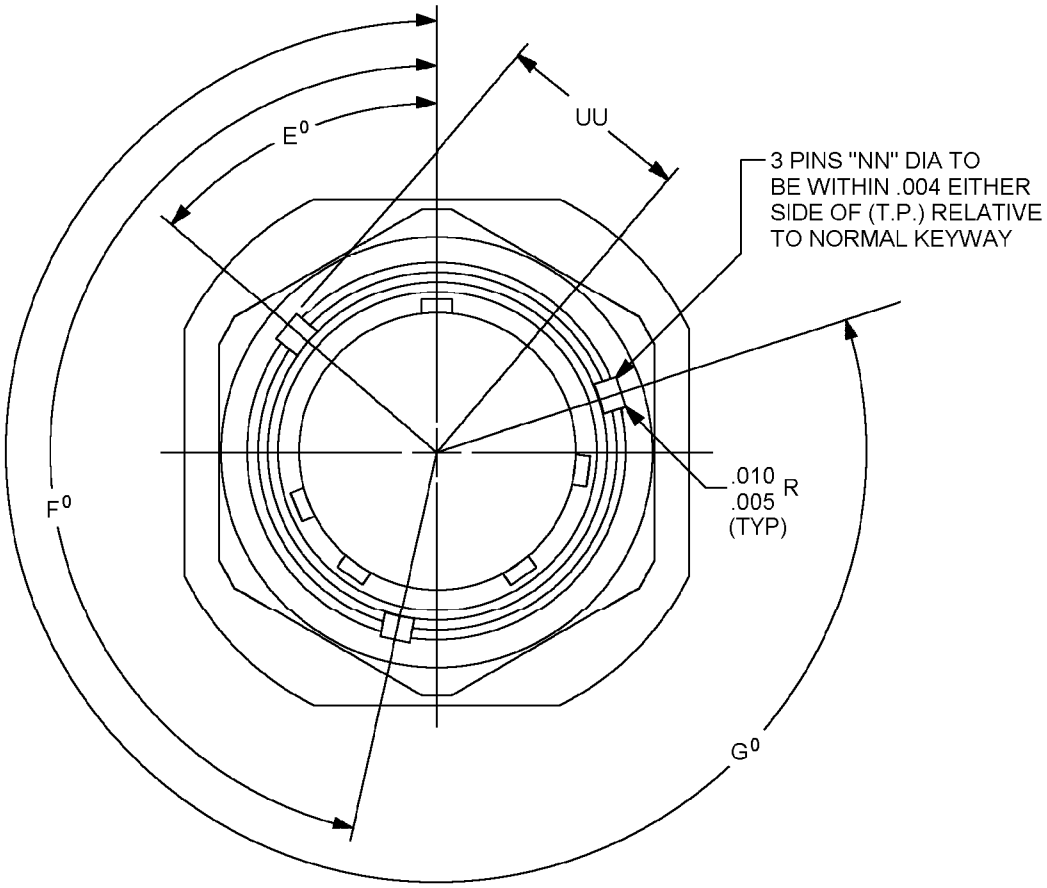
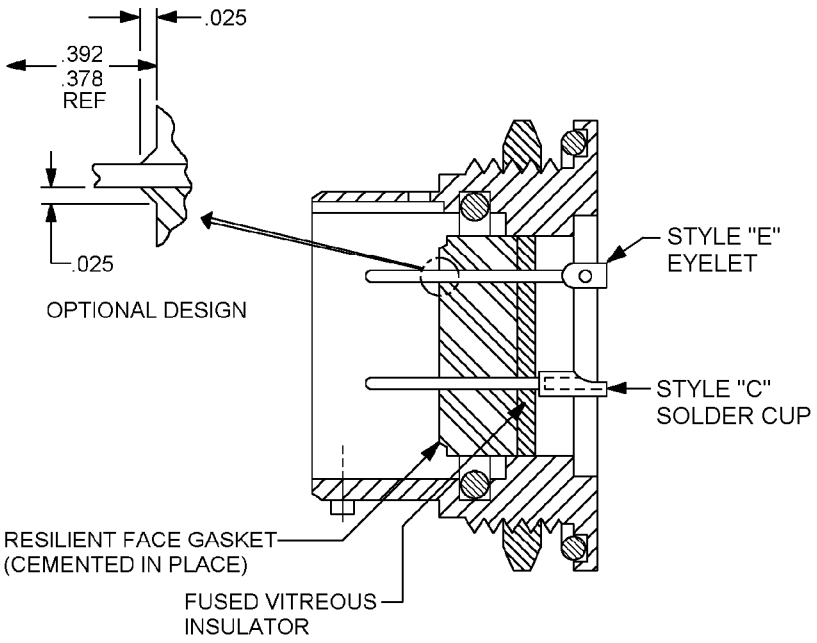


FIGURE 4. Receptacle, bayonet, hermetic (class H).



Inches	mm
.004	0.10
.005	0.13
.010	0.25
.025	0.64
.062	1.57
.155	3.94
.169	4.29
.366	9.30
.376	9.55
.378	9.60
.392	9.96
.540	12.80
.560	14.22

STYLE P (PIN INSERT)
HERMETIC (CLASS “H” RECEPTACLES, TYPE “B”)
THIS RECEPTACLE MATES WITH MS24266, TYPE “B”

NOTES:
1. Dimensions are in inches. Unless otherwise specified, tolerances on decimals is ± .005.
2. Metric equivalents are given for information only.
3. All diameters to be concentric with each other within .015 TIR.
4. All diameters in the same plane to be concentric with each other within .004 TIR.
5. True position (TP) tolerances specified are for maximum material conditions (MMC).
6. Distance between end of shell and the point at which a gauge pin having the same basic diameter as the mating contact and a square face, engages socket contact spring.
7. Dimensions on pin and socket contact locations and end of shells to insert faces apply when contacts are placed in inserts for inspection or application.

FIGURE 4. Receptacle, bayonet, hermetic (class H) - Continued.

Shell size	A UNEF-2A coupling	B dia	C dia + .005 (0.13) - .000 (0.00)	E max Insert dia	F UNEF-2A access
8	.562-24 (14.27)	.508 (12.90)	.428 (10.87)	.318 (8.08)	.437-28 (11.10)
10	.687-24 (17.45)	.636 (16.15)	.530 (13.46)	.394 (10.01)	.562-24 (14.27)
12	.875-20 (22.22)	.806 (20.47)	.700 (17.78)	.564 (14.33)	.750-20 (19.05)
14	.937-20 (23.80)	.875 (22.22)	.769 (19.53)	.633 (16.08)	.812-20 (20.62)
16	1.062-18 (26.97)	1.002 (25.45)	.896 (22.76)	.76 (19.30)	.937-20 (23.80)
18	1.187-18 (30.15)	1.108 (28.14)	1.002 (25.45)	.866 (22.00)	1.062-18 (26.97)
20	1.312-18 (33.32)	1.233 (31.32)	1.127 (28.62)	.991 (25.17)	1.187-18 (30.15)
22	1.437-18 (36.50)	1.358 (34.49)	1.252 (31.80)	1.116 (28.35)	1.312-18 (33.32)
24	1.562-18 (39.67)	1.483 (37.67)	1.377 (34.98)	1.241 (31.52)	1.437-18 (36.50)

FIGURE 5. Receptacle dimensions.

Shell size	F_1 -36NS-2A	F_1 pitch dia	FF max dia	FF min dia (see note 9)	G max dia
8	.4340 (11.024)	.4151/.4114 (10.544/10.450)	.437 (11.10)	.428 (10.87)	.561 (14.25)
10	.5634 (14.310)	.5454/.5415 (13.853/13.754)	.562 (14.27)	.554 (14.07)	.696 (17.68)
12	.7334 (18.628)	.7154/.7115 (18.171/18.072)	.750 (19.05)	.728 (18.49)	.875 (22.22)
14	.8032 (20.401)	.7841/.7806 (19.916/19.827)	.812 (20.62)	.796 (20.22)	.935 (23.75)
16	.9302 (23.627)	.9110/.9074 (23.139/23.048)	.938 (23.82)	.923 (23.44)	1.062 (26.97)
18	1.0362 (26.319)	1.0171/1.0134 (25.834/25.740)	1.062 (26.97)	1.029 (26.14)	1.187 (30.15)
20	1.1611 (29.492)	1.1431/1.1385 (29.034/28.918)	1.182 (30.02)	1.156 (29.36)	1.312 (33.32)
22	1.2862 (32.669)	1.2670/1.2633 (32.182/32.088)	1.312 (33.32)	1.279 (32.49)	1.437 (36.50)
24	1.4111 (35.842)	1.3931/1.3885 (35.385/35.268)	1.432 (36.37)	1.406 (35.71)	1.562 (39.67)

FIGURE 5. Receptacle dimensions – Continued.

Shell size	HH max grommet dia	KK dia + .000 (0.00) - .005 (0.13)	MM	N dia + .000 (0.00) - .004 (0.10)	NN dia + .000 (0.00) - .003 (0.07)	P dia + .000 (0.00) - .005 (0.13)
8	.328 (8.33)	.536 (14.30)	.979 (24.97)	.101 (2.56)	.078 (1.98)	.076 (1.93)
10	.420 (10.67)	.659 (16.74)	1.104 (28.04)	.094 (2.39)	.093 (2.36)	.089 (2.26)
12	.580 (14.73)	.829 (21.06)	1.291 (32.79)			
14	.664 (16.86)	.898 (22.81)	1.391 (35.33)			
16	.769 (19.53)	1.025 (26.34)	1.516 (38.51)			
18	.920 (23.37)	1.131 (28.73)	1.641 (41.68)			
20	1.033 (26.24)	1.256 (31.90)	1.766 (44.86)			
22	1.152 (29.26)	1.381 (35.08)	1.954 (49.63)			
24	1.282 (32.56)	1.506 (38.25)	2.079 (52.81)			

Shell size	S	U max hex	UU + .000 (0.00) - .009 (0.22)	V UNEF-2A
8	.605 (15.37)	.828 (21.03)	.310 (7.87)	.625-20-UN-2A (15.88)
10	.730 (18.64)	.953 (24.21)	.374 (9.50)	.750-20 (19.05)
12	.917 (23.29)	1.140 (28.46)	.459 (11.66)	.937-20 (23.80)
14	.980 (24.89)	1.250 (31.75)	.494 (12.55)	1.000-20 (25.40)
16	1.105 (28.07)	1.329 (33.76)	.557 (14.15)	1.125-20-UN-2A (28.58)
18	1.225 (31.12)	1.455 (36.96)	.610 (15.49)	1.250-20-UN-2A (31.75)
20	1.350 (34.29)	1.642 (41.71)	.673 (17.09)	1.375-18- (34.92)
22	1.475 (37.46)	1.705 (43.31)	.735 (18.67)	1.500-20-UN-2A (38.10)
24	1.600 (40.64)	1.892 (48.06)	.798 (20.27)	1.625-18 (41.28)

FIGURE 5. Receptacle dimensions – Continued.

Shell size	W ± .020 (0.51)	WW dia max	Y ± .003 (0.08)	Z dia
8	.117 (2.97)	1.068 (27.13)	.593 (15.06)	.635 (16.13)
10		1.192 (30.28)	.718 (18.24)	.760 (19.30)
12		1.380 (35.05)	.905 (22.99)	.947 (24.05)
14		1.505 (38.23)	.968 (24.59)	1.010 (25.65)
16		1.630 (41.40)	1.093 (27.76)	1.135 (28.83)
18		1.740 (44.20)	1.217 (30.91)	1.260 (32.00)
20		1.860 (47.24)	1.342 (34.09)	1.385 (35.18)
22	.148 (3.76)	2.040 (51.82)	1.467 (37.26)	1.510 (38.35)
24		2.160 (54.86)	1.592 (40.44)	1.635 (41.53)

Position	Shell size 8			Shell size 10			Shell sizes 12 thru 24		
	E °	F°	G°	E°	F°	G°	E°	F°	G°
Normal	60	180	300	60	180	300	50	170	290
6	46	166	286	46	166	286	50	170	290
7	46	166	286	46	166	286	50	170	290
8	60	180	300	60	180	300	50	170	290
9	89	209	329	89	209	329	50	170	290
Y	---	---	---	60	180	300	50	170	290

FIGURE 5. Receptacle dimensions – Continued.

Size of contact	Type of contact	AA	BB	CC dia min	DD	EE dia	GG max
12	Solder cup		.150 (3.81)	.112 (2.84)		.095/ .093 (2.41) (2.36)	.235 (5.97)
12	Eyelet	.035 (0.89)			.200 (5.08)		
16	Solder cup		.103 (2.61)	.069 (1.75)		.063/ .061 (1.60) (1.55)	
16	Eyelet	.025 (0.64)			.125 (3.18)		
20	Solder cup		.077 (1.96)	.042 (1.07)		.041/ .039 (1.04) (0.99)	.165 (4.19)
20	Eyelet	.015 (0.38)			.080 (2.03)		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. All diameters to be concentric with each other within .015 TIR.
4. All diameters in the same plane to be concentric with each other within .004 TIR.
5. True position (TP) tolerances specified are for maximum material conditions (MMC).
6. Distance between end of shell and the point at which a gauge pin having the same basic diameter as the mating contact and a square face, engages socket contact spring.
7. Dimensions on pin and socket contact locations and end of shells to insert faces apply when contacts are placed in inserts for inspection or application.
8. Dimensions .133 may reduce to .118 minimum under pressure caused by molded cable assemblies or sharp cable bends. Use tool MIL-I-81969/17 to assemble contacts into this connector, and use tool MIL-I-81969/19 to remove contacts from this connector.
9. The accessory threads may be formed with an optional modified major diameter. The following details apply: The major diameter of a truncated accessory thread shall be greater than FF min. The width of the flat across the top of the thread may increase as the truncation approaches FF min. All other features of the accessory thread, including the theoretical crest apex and the flank angle, shall meet standard thread form limits. The truncation of the major diameter shall not be less than the pitch diameter.

FIGURE 5. Receptacle dimensions – Continued.

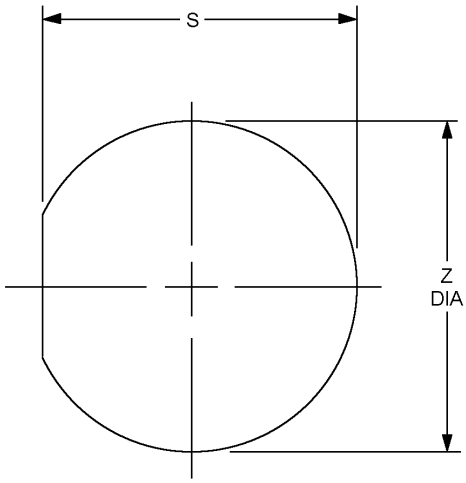


FIGURE 6. Panel cut-out.

Weight chart		
Maximum connector weight in pounds		
Pin insert		
MS PIN	Less contacts	With contacts
MS24265R8T2PN	.027 (0.68)	.029 (0.74)
MS24265R10T2PN	.045 (1.14)	.047 (1.19)
MS24265R10T5PN	.044 (1.12)	.048 (1.22)
MS24265R10T20PN	.045 (1.14)	.049 (1.24)
MS24265R12T3PN	.061 (1.55)	.066 (1.68)
MS24265R12T12PN	.059 (1.50)	.069 (1.75)
MS24265R14T3PN	.073 (1.85)	.083 (2.11)
MS24265R14T4PN	.073 (1.85)	.087 (2.21)
MS24265R14T7PN	.073 (1.85)	.086 (2.16)
MS24265R14T12PN	.073 (1.85)	.086 (2.18)
MS24265R14T15PN	.073 (1.85)	.086 (2.18)
MS24265R16T10PN	.084 (2.13)	.102 (2.59)
MS24265R16T24PN	.084 (2.13)	.104 (2.64)
MS24265R16T8PN	.102 (2.59)	.131 (3.33)
MS24265R18T11PN	.101 (2.56)	.125 (3.18)
MS24265R18T14PN	.101 (2.56)	.127 (3.22)
MS24265R18T31PN	.100 (2.54)	.127 (3.22)
MS24265R20T16PN	.116 (2.95)	.144 (3.66)
MS24265R20T25PN	.114 (2.90)	.152 (3.86)
MS24265R20T28PN	.115 (2.92)	.150 (3.81)
MS24265R20T39PN	.115 (2.92)	.150 (3.81)
MS24265R20T41PN	.115 (2.92)	.149 (3.78)
MS24265R22T12PN	.134 (3.40)	.177 (4.50)
MS24265R22T19PN	.137 (3.50)	.172 (4.37)
MS24265R22T32PN	.138 (3.50)	.181 (4.60)
MS24265R22T55PN	.133 (3.38)	.180 (4.57)
MS24265R24T43PN	.153 (3.89)	.208 (5.28)
MS24265R24T57PN	.152 (3.86)	.205 (5.21)
MS24265R24T61PN	.150 (3.81)	.201 (5.10)

FIGURE 7. Weights for threaded connectors, classes F, G and R.

Weight chart		
Maximum connector weight in pounds		
Socket insert		
MS PIN	Less contacts	With contacts
MS24265R8T2SN	.028 (0.71)	.030 (0.76)
MS24265R10T2SN	.046 (1.17)	.048 (1.22)
MS24255R10T5SN	.046 (1.17)	.049 (1.24)
MS24265R10T20SN	.046 (1.17)	.050 (1.27)
MS24265R12T3SN	.063 (1.60)	.060 (1.73)
MS24265R12T12SN	.060 (1.52)	.070 (1.78)
MS24265R14T3SN	.079 (2.01)	.088 (2.24)
MS24265R14T4SN	.075 (1.90)	.089 (2.26)
MS24265R14T7SN	.075 (1.90)	.087 (2.21)
MS24265R14T12SN	.075 (1.90)	.088 (2.24)
MS24265R14T15SN	.075 (1.90)	.087 (2.21)
MS24265R16T10SN	.086 (2.18)	.104 (2.64)
MS24265R16T24SN	.086 (2.18)	.106 (2.69)
MS24265R18T8SN	.105 (2.67)	.133 (3.38)
MS24265R18T11SN	.104 (2.64)	.127 (3.22)
MS24265R18T14SN	.106 (2.67)	.131 (3.33)
MS24265R18T31SN	.104 (2.64)	.130 (3.30)
MS24265R20T16SN	.122 (3.10)	.150 (3.81)
MS24265R20T25SN	.120 (3.05)	.157 (3.99)
MS24265R20T28SN	.120 (3.05)	.154 (3.91)
MS24265R20T39SN	.120 (3.05)	.154 (3.91)
MS24265R20T41SN	.120 (3.05)	.154 (3.91)
MS24265R22T12SN	.141 (3.58)	.183 (4.65)
MS24265R22T19SN	.144 (3.66)	.178 (4.52)
MS24265R22T32SN	.144 (3.66)	.187 (4.75)
MS24265R22T55SN	.139 (3.93)	.185 (4.70)
MS24265R24T43SN	.158 (4.01)	.212 (5.38)
MS24265R24T57SN	.157 (3.99)	.209 (5.31)
MS24265R24T61SN	.155 (3.94)	.205 (5.21)

FIGURE 7. Weights for threaded connectors, classes F, G and R – Continued.

REQUIREMENTS

Dimensions and configurations: See figures 1 through 8.

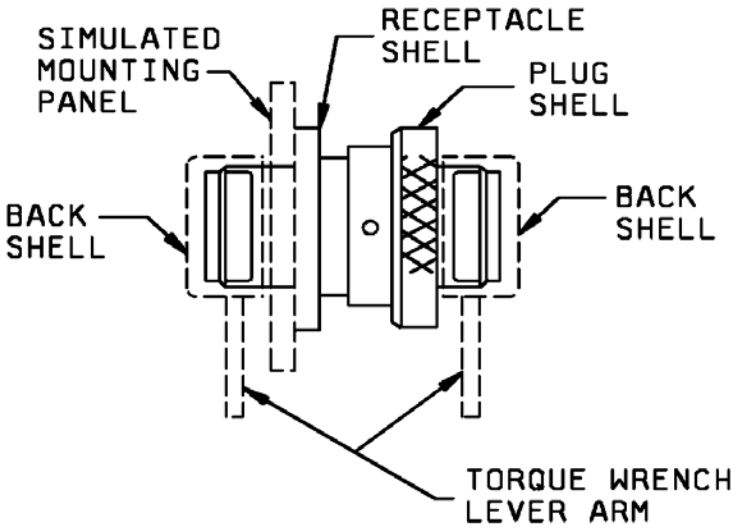
Connector mating: This connector mates with MS24266 and MS27615, type B.

Insert arrangement: See MIL-STD-1554.

Contacts: Shall be in accordance with SAE-AS39029.

For accessories used on this connector, see MIL-DTL-26500.

Accessory thread strength: Connectors with rear accessory threads with optional modified major diameters shall be capable of withstanding the accessory thread strength test. The following details apply: The accessory thread torque for shell size 8 shall be 75 ± 5 inch-pounds. The accessory thread torque for shell size 10 shall be 100 ± 5 inch-pounds. The accessory thread torque for shell size 12 shall be 140 ± 5 inch-pounds. The accessory thread torque for shell sizes 14 through 18 shall be 150 ± 5 inch-pounds. The accessory thread torque for shell sizes 20 through 24 shall be 175 ± 10 inch-pounds. Mated connector pairs shall be mounted as in normal service to a rigid panel. The torque wrench shall be attached as shown in the figure below. After mating the plug and receptacle connectors, a torque shall be applied to the accessory end of the plug at a rate of approximately 10 pound-inches per second until the required torque is achieved. The applied load shall be held for 1 minute, then the load shall be released. The test shall then be repeated on the accessory end of the receptacle.



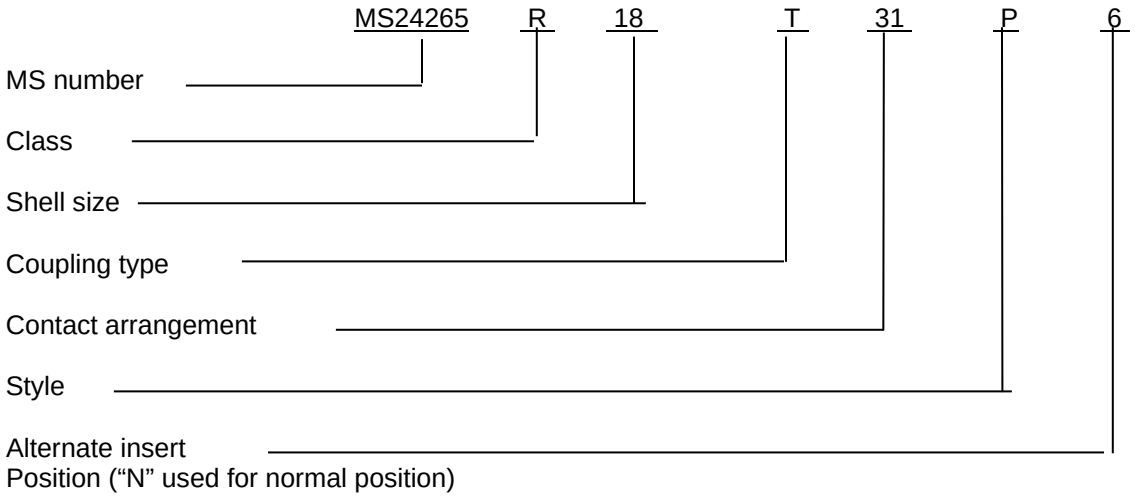
TEST SET-UP - REAR ACCESSORY THREAD STRENGTH

Following accessory thread strength testing, connectors shall be unmated and inspected for damage or breakage through a device having approximately 3X magnification.

Initial qualification and group C requalification (connectors with accessory threads with modified major diameters): Qualification shall be in accordance with MIL-DTL-26500, except the following additional test group shall be required on two mated pairs in each shell size. For initial qualification, accessory thread strength testing may be included in group 1, following the initial visual and mechanical examination:

Visual and mechanical examination.
Accessory thread strength.
Visual and mechanical examination.

Part or Identifying Number (PIN) example:



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 previous issue.

Referenced documents. In addition to MIL-DTL-26500, this document references the following:

SAE-AS39029
MIL-DTL-83723
MIL-I-81969/17
MIL-I-81969/19
MIL-STD-1554
MS24266
MS27615

CONCLUDING MATERIAL

Custodians:
Army – CR
Air Force - 85
DLA - CC

Review activity:
Army – AV
Air Force - 99

Preparing activity:

DLA -CC

(Project 5935-2016-184)

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.