

INCH-POUND

MIL-DTL-83513/5H  
w/AMENDMENT 3  
3 April 2012  
SUPERSEDING  
w/AMENDMENT 2  
21 January 2010

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, RECTANGULAR, MICROMINIATURE,  
MOUNTING HARDWARE

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-83513.

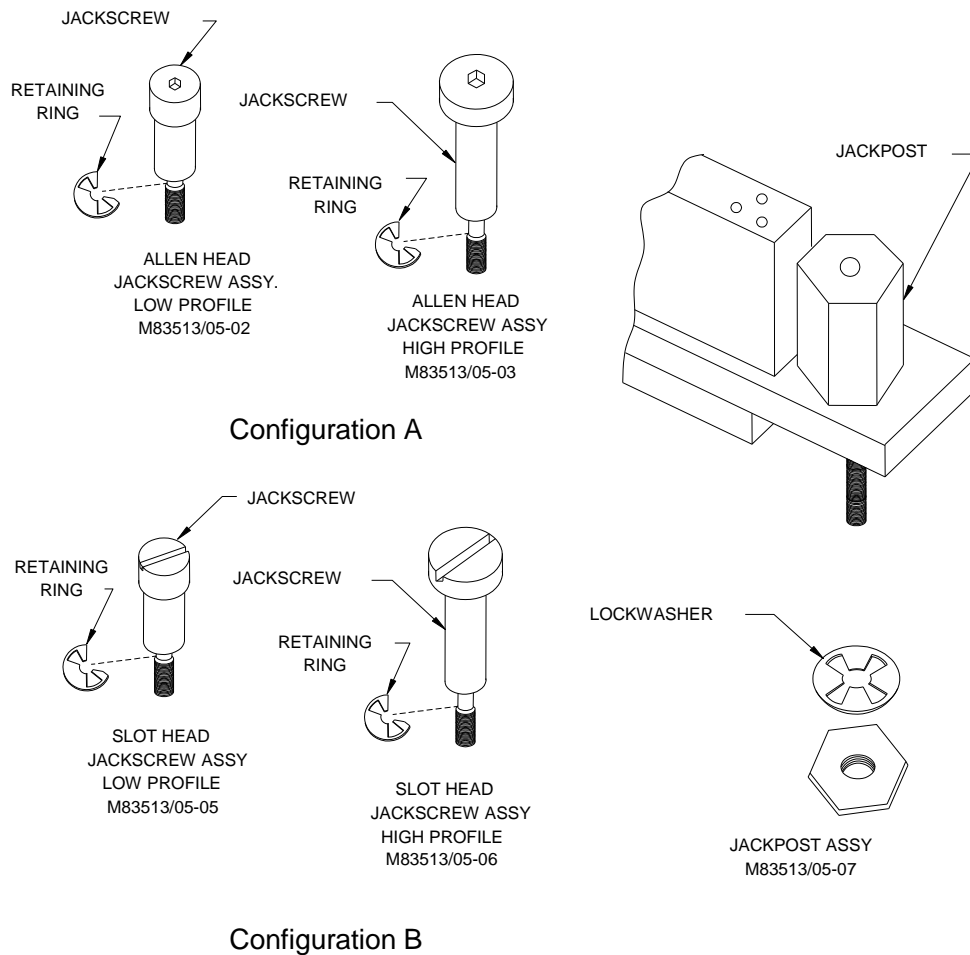
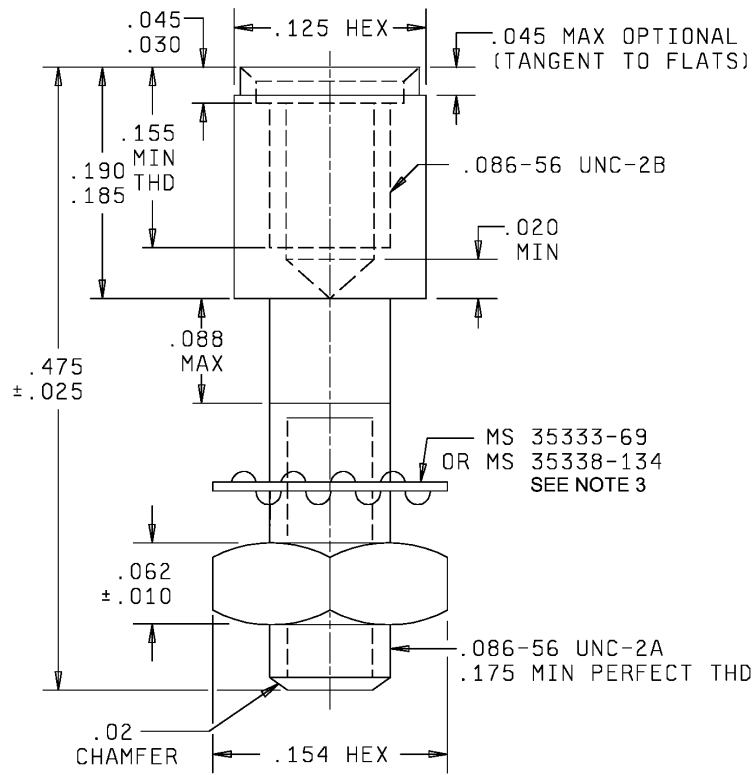


FIGURE 1. Mounting hardware types .050 spacing.

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JACKPOST ASSY M83513/05-07

CONFIGURATION A

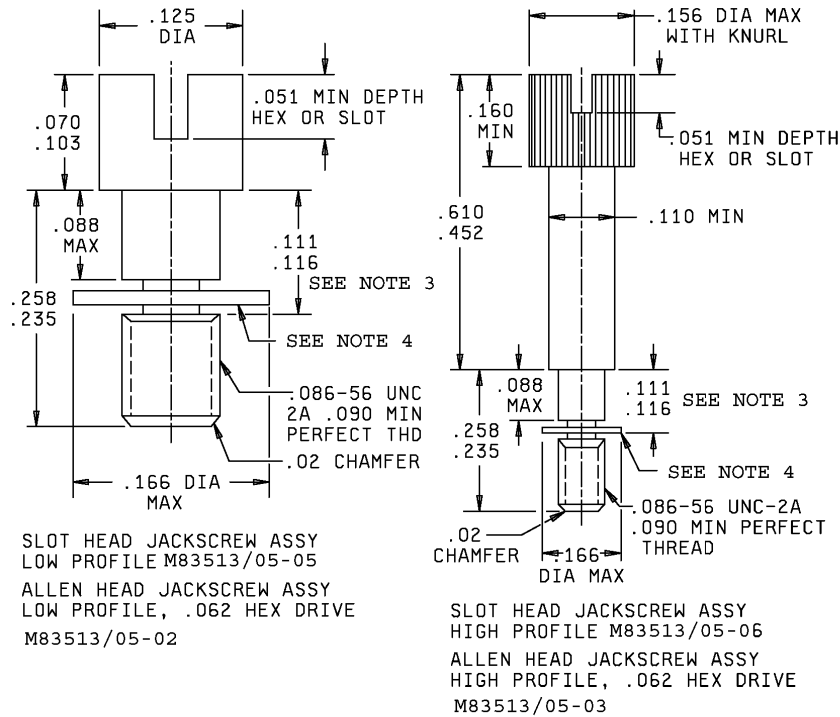
Inches	mm	Inches	mm
.010	0.25	.088	2.24
.020	0.51	.125	3.18
.025	0.64	.154	3.91
.030	0.76	.155	3.94
.040	1.02	.175	4.45
.045	1.14	.185	4.70
.062	1.57	.190	4.83
.086	2.18	.475	12.07

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. MS35333-69 in accordance with NASM35333 and MS35338-134 in accordance with NASM35338. (Copies of these documents are available online from <http://www.aia-aerospace.org/> or from the Aerospace Industries Association of America, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3901.)

FIGURE 2. Dimensions and configurations.

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CONFIGURATION B

Inches	mm	Inches	mm
.005	0.13	.112	2.84
.02	0.51	.116	2.95
.051	1.30	.118	3.00
.070	1.78	.125	3.18
.083	2.11	.156	3.96
.086	2.18	.160	4.06
.088	2.24	.166	4.22
.090	2.29	.235	5.97
.103	2.62	.240	6.10
.108	2.74	.258	6.55
.110	2.79	.452	11.48
.111	2.82	.610	15.49

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Bottom of E ring slot.
4. E ring Part or Identifying Number (PIN): AER03006000SQ3LN1 or AER03006000SQ3LR1 in accordance with ASME-B18.24.  
(Copies of these documents are available online at <http://www.asme.org> or from the ASME International, Three Park Avenue, New York, NY 10016-5990.)

FIGURE 2. Dimensions and configurations - Continued.

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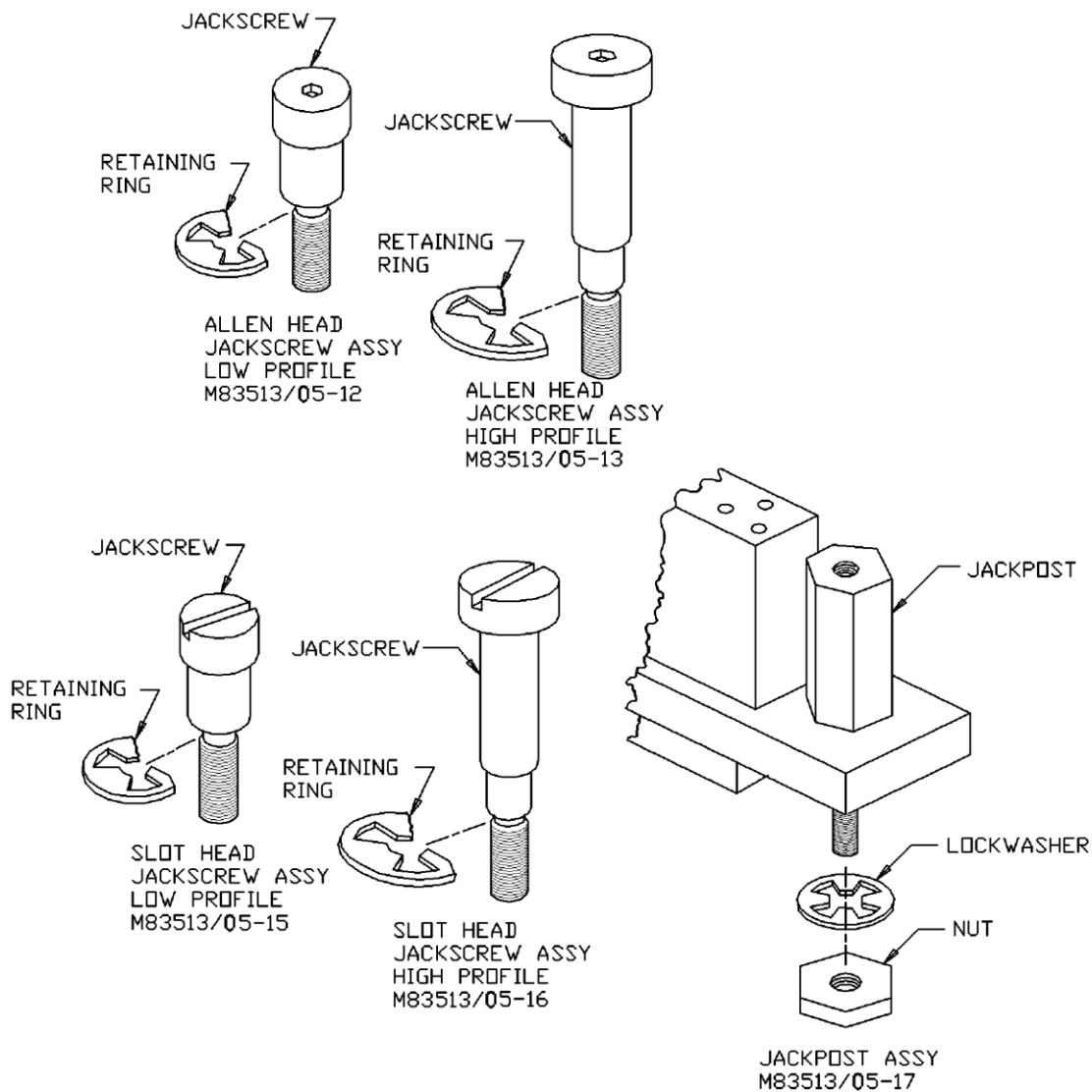
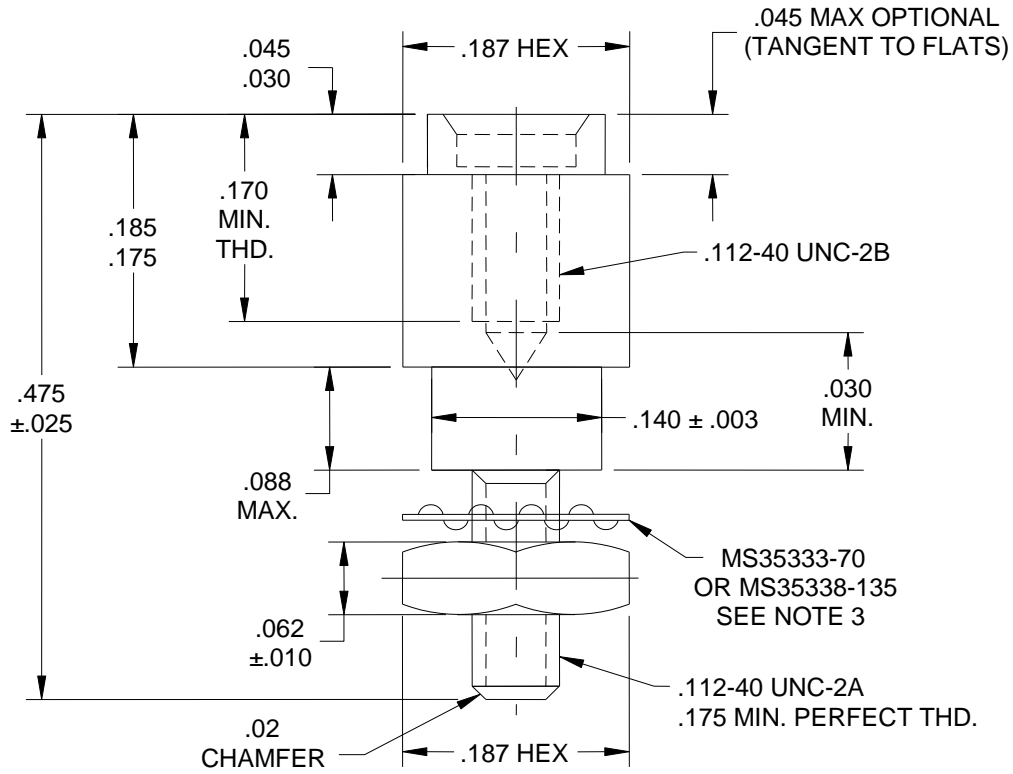


FIGURE 3. Mounting hardware types (100 cavity connectors).

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Jackpost assembly M83513/05-17

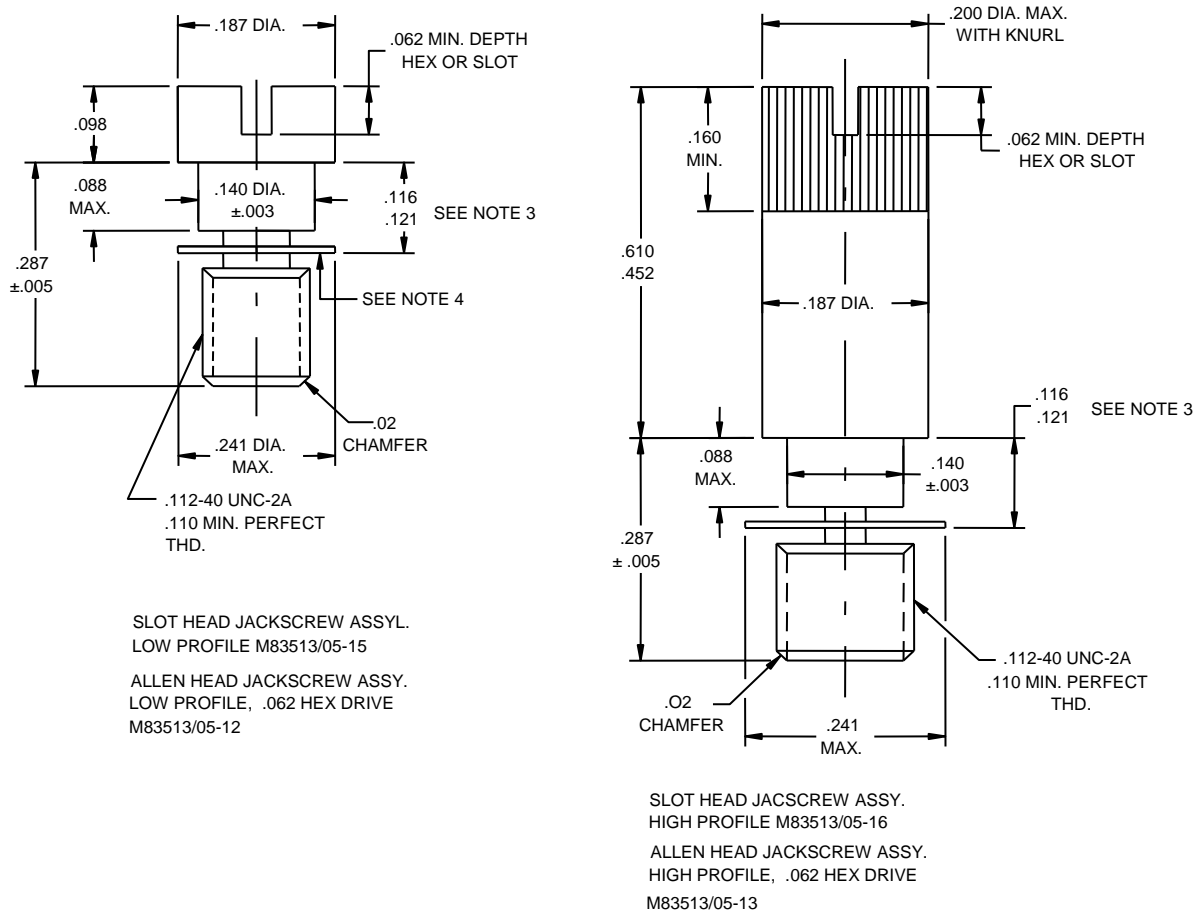
Inches	mm	Inches	mm
.003	0.08	.088	2.24
.010	0.25	.112	2.84
.02	0.51	.140	3.56
.025	0.64	.170	4.32
.030	0.76	.175	4.45
.040	1.02	.185	4.70
.045	1.14	.187	4.75
.062	1.57	.215	5.46
		.475	12.07

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. MS35333-70 in accordance with NASM35333 and MS35338-135 in accordance with NASM35338. (Copies of these documents are available online from <http://www.aia-aerospace.org/> or from the Aerospace Industries Association of America, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3901.)

FIGURE 4. Dimensions and configuration (100 cavity connector).

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Inches	mm	Inches	mm
.003	0.08	.118	3.00
.005	0.13	.121	3.07
.02	0.51	.140	3.56
.062	1.57	.160	4.06
.088	2.24	.187	4.75
.098	2.49	.193	4.90
.108	2.74	.200	5.08
.110	2.79	.240	6.10
.112	2.84	.287	7.29
.116	2.95	.452	11.48
.111	2.82	.610	15.49

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Bottom of E ring slot.
4. E ring PIN: AER03012000SQ3LN1 or AER03012000SQ3LR1 in accordance with ASME-B18.24. (Copies of these documents are available online at <http://www.asme.org> or from the ASME International, Three Park Avenue, New York, NY 10016-5990.)

FIGURE 4. Dimensions and configuration (100 cavity connector) - Continued.

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REQUIREMENTS:

Dimensions and configurations: See figures 1 through 4.

Material and finish:

Jackscrew: Shall be corrosion resistant steel, nonmagnetic corrosion resistant steel having a minimum tensile strength of 125,000 psi.

Jackpost and nut: Corrosion resistant steel in accordance with ASTM A484/A484M and either ASTM A276 or ASTM A582/A582M, passivated in accordance with SAE-AMS2700.

Clip and washers: Corrosion resistant steel in accordance with ASTM A240/A240M; passivated in accordance with SAE-AMS2700. Does not meet the 2.0 μ permeability requirements of the basic specification.

Application:

Mounting hardware not furnished with connectors. All dash numbers fit configurations A and B connectors only (MIL-DTL- 83513/1 through MIL-DTL-83513/4 and MIL-DTL-83513/6 through MIL-DTL-83513/9, except for configuration C which is for 100 cavity arrangement only and uses No. 4-40 mounting hardware. Two complete assemblies as shown are supplied with each dash number.

Installation:

M38513/05-02, -03, -05, -06, -12, -13, -15, and -16 jackscrew with retaining ring: Place jackscrew (either slotted or hex, long or low profile types) through mounting hole in connector flange then slide retaining ring into slot in jackscrew.

M83513/05-07 and -17 jackpost: Place jackpost through mounting hole in connector flange and mounting panel (if used). Place lockwasher over screw threads then screw on nut and torque as required.

Mounting torque: Mounting torque shall be as specified in table I.

TABLE I. Jackpost mounting torque.

Jack post size	Installation torque (in-lbs)	
	Metal shell	Plastic shell
2(.086)-56	3.0 - 4.0	2.25 - 2.75
4(.112)-40	5.0 - 6.0	N/A

Mating torque: Jackpost mating torque shall be as specified in table II.

TABLE II. Jackpost mating torque.

Jack post size	Mating jackscrew torque (in-lbs)	
	Metal shell	Plastic shell
2(.086)-56	1.0 - 2.5	1.0 - 1.75
4(.112)-40	4.0 - 4.5	N/A

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Broached sockets: Broached sockets shall be in accordance with ASME-18.3 unless otherwise specified in the PIN.

Qualification of hardware only: To obtain qualification of hardware only, the hardware shall be installed on a qualified connector and shall be subjected to the tests below in accordance with MIL-DTL-83513. Sample size, if qualifying all hardware configurations, shall be four connector pairs. One sample with hardware installed from configuration A and B low profile, one sample with hardware installed from configurations A and B high profile, One sample with hardware installed from configuration C low profile, and one sample with hardware installed from configuration C high profile.

Visual and mechanical inspection  
Vibration  
Shock  
Salt spray

PIN: See figures 1 through 4. If removal of broach petal is required add the suffix "RP" to the end of the PIN. Example M83513/05-02RP.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

Referenced documents. In addition to MIL-DTL-83513, this document references the following:

MIL-DTL-83513/1	MIL-DTL-83513/8	ASME-B18.24
MIL-DTL-83513/2	MIL-DTL-83513/9	ASME-B18.3
MIL-DTL-83513/3	ASTM A240/A240M	NASM35333
MIL-DTL-83513/4	ASTM A276	NASM35338
MIL-DTL-83513/6	ASTM A484/A484M	SAE-AMS2700
MIL-DTL-83513/7	ASTM A582/A582M	

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CONCLUDING MATERIAL

Custodians:

Army - CR  
Navy - EC  
Air Force - 85  
NASA - NA  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5935-2011-100)

Review activities:

Army - AT, MI  
Navy - AS, CG, MC SH  
Air Force - 99

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.daps.dla.mil/>.