[INCH–POUND]
A–A–59590/24B
24 March 2013
SUPERSEDING
A–A–59590/24A
17 October 2007

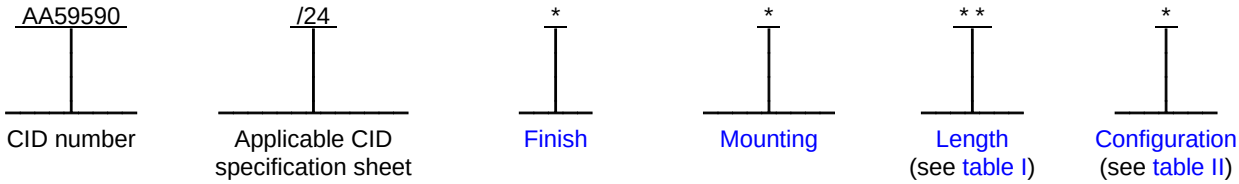
COMMERCIAL ITEM DESCRIPTION
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE, SCREW ACTUATED DRIVE .500 X .450 INCH BODY SIZE, WITH VISUAL LOCK INDICATION AND SCREW RETENTION

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

The complete requirements for procuring electrical card holders described herein shall consist of this document and the latest issue in effect of A–A–59590.

CLASSIFICATION/PART IDENTIFICATION NUMBER (PIN). This commercial item description (CID) specification sheet uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see notes).



Example: AA59590/24ET48E is the PIN for a nickel plated, 4.8 inches (122 mm) long card holder with a visual lock indication and a screw self-locking element. The card holder also features two tapped 0-80 UNF mounting holes for use with fasteners.

SALIENT CHARACTERISTICS.

Interface and physical dimensions. The card holders supplied to this CID specification sheet shall be as specified herein (see figures 1, 2, 3, 4, and table I) and meet the general requirements of CID A–A–59590.

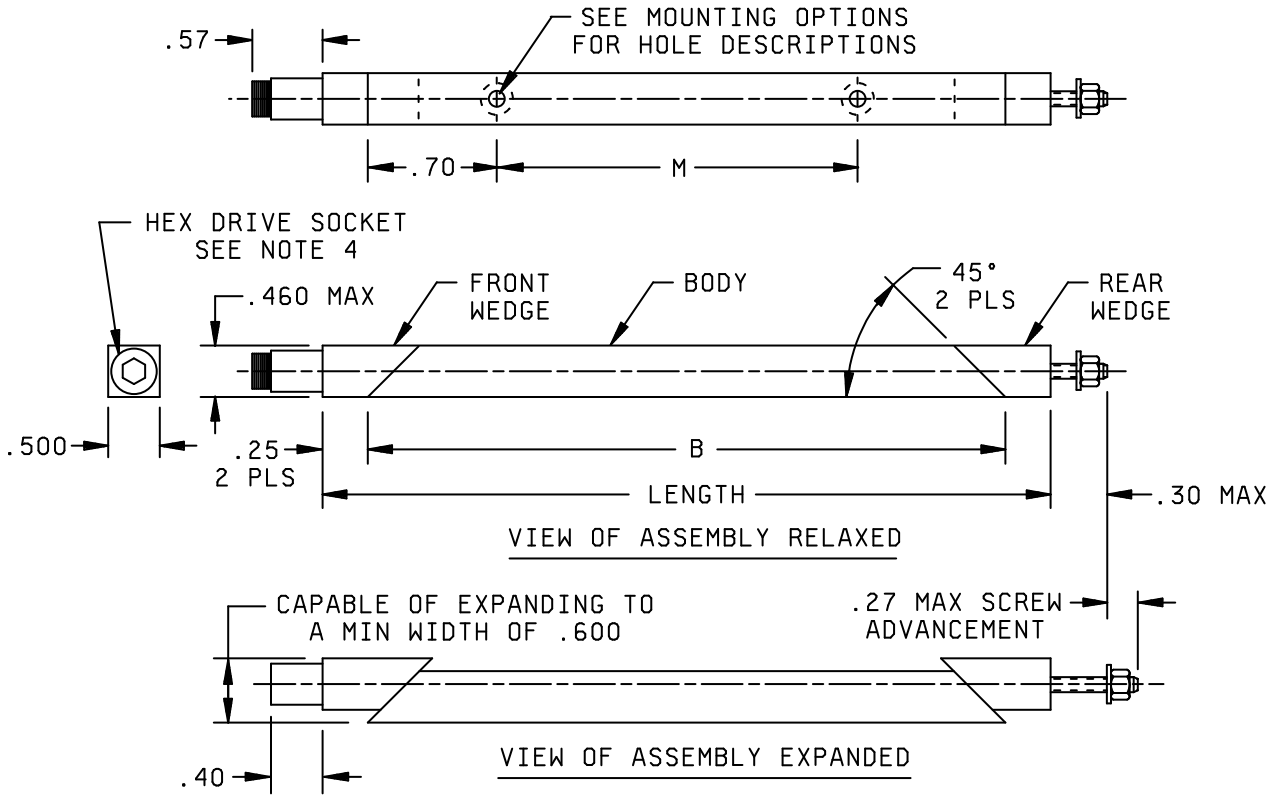
Material. Unless otherwise specified herein, the card holder materials shall be as specified in A–A–59590.

Performance. Card holders shall hold the circuit card assembly it is attached to firmly in its installed position and prevent loosening or movement as a result of shock and vibration. The card holder shall also provide a thermal transfer path from the circuit card assembly to the cold plate or heat sink surfaces.

Actuating screw hex drive socket. The dimension for hex drive socket shall be as specified on figure 1.

Screw retention (see figure 2). The screw retention feature is intended to prevent the unintentional disassembly of the card holder. The self-locking nut used for the screw retention feature shall be fabricated of a corrosion resistant material.

Visual lock indicator (see figure 3). Card holders shall have a visual indicator to show when the card holder assembly is in its relaxed (unlocked) state. When the card holder assembly is in the relaxed state, the end of the actuating screw shall display a red band on the side of the screw. When the actuating screw on the card holder has been tightened so that the assembly is in the expanded (locked) position, this red band shall be concealed.



Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.156	3.96	.27	6.9	.40	10.2	.500	12.7	.600	15.24
.25	6.4	.30	7.6	.460	11.68	.57	14.5	.70	17.8

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. Unless otherwise specified, tolerances are ±.02 inch (0.51 mm) for two place decimals and ±.010 inch (0.25 mm) for three place decimals.
3. The tolerance for the mounting hole spacing is ±.005 inches (0.13 mm).
4. The across flats dimension for hex drive socket shall be .156 inch (3.96 mm) for mounting options "J", "N", "T", and "V". The across flats dimension for hex drive socket shall be a metric dimension of 3.0 mm (.118 inch) across flats for mounting option "G".

FIGURE 1. Relaxed and expanded dimensions, basic configuration.

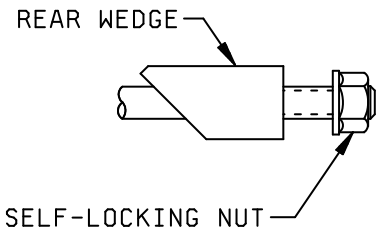


FIGURE 2. Screw retaining self-locking nut details.

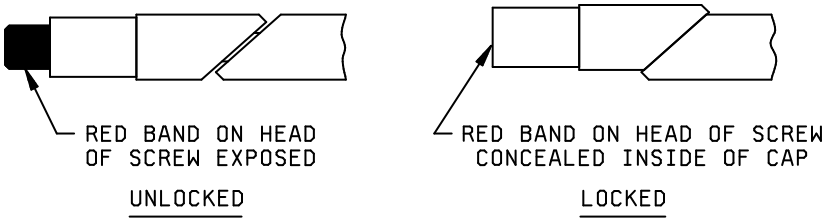


FIGURE 3. Visual lock indicator details.

Cold plate dimensions. The recommend cold plate slot width to accommodate the circuit card assembly with attached card holder is .525 inch (13.3 mm) plus the thickness of the printed board of the circuit card assembly (see A–A–59590).

Nominal installation torque. When card holders are used in cold plate applications, the nominal installation torque of each card holder shall be as follows: 31 inch-pounds (3.5 N-m) for assemblies using no options or option "W" and 34 to 36 inch-pounds (3.8 to 4.1 N-m) for assemblies using options "D" or "E".

Finish. The finish materials shall be as specified in A–A–59590. The wedge body finishes available for this CID specification sheet are as follows: "B" (black anodize), "C" (gold chemical film), "E" (electroless nickel), "H" (hard black anodize), or "R" (clear chemical film).

Mounting. The mounting designators shall be as specified in A–A–59590. Except when using mounting option “N”, two mounting holes are required on the card holders. The mounting options available for this CID specification sheet are as follows: "J" (rivet mounting holes), "N" (no mounting holes), "T" (tapped 0-80 UNF 2B holes), "V" (tapped 2-56 UNC 2B holes), or "G" (tapped M2.5 x.45 metric holes). See figure 1 and table I for mounting hole spacing requirements. Card holders using mounting option “J” may be shipped unassembled.

Rivet mounting holes. The holes used for rivet mounting shall be .136 inch (3.45 mm) diameter, countersunk 100 degrees by .190/.200 inch (4.83/5.08 mm) diameter through holes with an access/clearance counterbore of .190/.200 inch (4.83/5.08 mm) diameter by .390 inch (9.91 mm) deep.

Rivets. This card holder uses rivet style B as specified in A–A–59590 when rivet mounting is used.

Length, expanded, and relaxed dimensions. The length designator shall be as specified in A–A–59590 and the lengths available for this CID specification sheet are listed in table I. The length, expanded, and relaxed dimensions shall be as specified on figure 1.

TABLE I. Assembly dimensions (see figure 1).

PIN length designator	Dimension "LENGTH" ±.02 (0.5 mm)	Dimension "B" ±.03 (0.8 mm)	Dimension "M" ±.005 (0.13 mm)
28	2.8 (71 mm)	2.30 (58.4 mm)	.90 (22.9 mm)
38	3.8 (97 mm)	3.30 (83.8 mm)	1.90 (48.3 mm)
48	4.8 (122 mm)	4.30 (109.2 mm)	2.90 (73.7 mm)
58	5.8 (147 mm)	5.30 (134.6 mm)	3.90 (99.1 mm)

Configuration. The configuration of a card holder shall be as specified in table II. The details of a particular configuration consist of those on figures 1, 2 and 3, and may include those on figures 4 and 5. The correct PIN configuration identifier for each option is listed in table II. Card holders not requiring the options described by table II shall leave the configuration position in the PIN blank.

TABLE II. Configuration.

Configuration designator	Applicable figures	Hardware added to basic configuration
	1, 2 and 3	No changes from basic configuration
W	1, 2, 3 and 4	Lockwasher and flat washer
E	1, 2, 3 and 5	Screw self-locking element
D	1, 2, 3, 4 and 5	Lockwasher, flat washer, and screw self-locking element

Lockwasher and flat washer (see figure 4). The use of a lockwasher and flat washer located under the screw head will provide for additional resistance to loosening of the card holder assembly from shock and vibration. Card holders requiring a lockwasher and flat washer option shall include a suffix "W" in the PIN (see classification and notes herein).

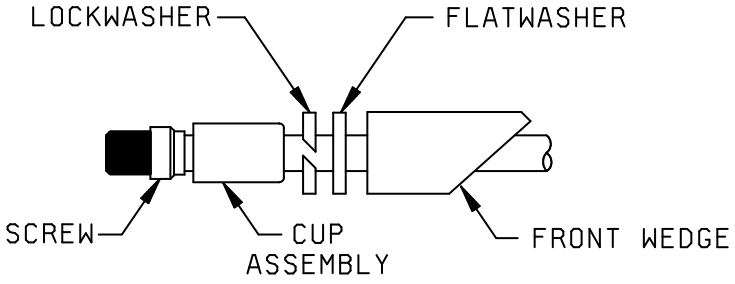


FIGURE 4. Lockwasher and flat washer details.

Screw self-locking element (see figure 5). The use of a self-locking element on the screw will provide a prevailing-torque for increased resistance to loosening of the card holder assembly from shock and vibration. The screw self-locking element shall be as specified in A–A–59590. Card holders requiring a screw self-locking element shall include configuration identifier "E" in the PIN (see classification and notes herein).

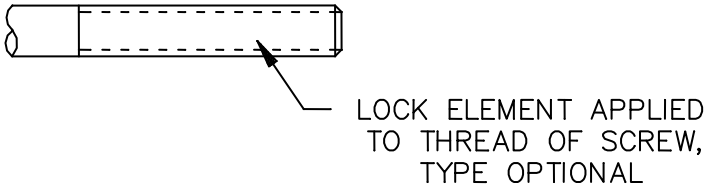


FIGURE 5. Screw self-locking element details.

Lockwasher, flat washer, and screw self-locking element. Card holders requiring a lockwasher, flat washer, and screw self-locking element option shall include a suffix "D" in the PIN (see classification and notes herein).

NOTES.

PIN. The PIN should be used for Government purposes to buy commercial products to this CID specification sheet. See the classification section for PIN format example.

Source of documents.

Commercial Item Description.

A–A–59590 – Holder, Electrical Card, Wedge Retainers, 3 Piece, Screw Actuated Drive, General Requirements For.

(Copies of these documents are available online at https://assist.dla.mil/quicksearch or https://assist.dla.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111–5094.)

Ordering data. Ordering data shall be as specified in A–A–59590.

Commercial products. As part of the market analysis and research effort, this CID specification sheet was coordinated with the following manufacturers of commercial products. At the time of CID specification sheet preparation and coordination, these manufacturers were known to have commercial products that would meet the requirements of this CID specification sheet. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict procurement to only the manufacturers shown.)

Manufacturer CAGE	Manufacturer name and address	Manufacturer contact information
61081	Calmark – A Division of Pentair Electronic Packaging 7328 Trade Street San Diego, CA 92121–3410	Telephone: (858) 740–2400 Toll Free: (800) 854–7086 Facsimile: (858) 740–2430 Electronic mail: sales@calmark.com URL: www.calmark.com
5BG68	American Circuit Card Retainers, Inc. 2310 E. Orangethorpe Avenue Anaheim, CA 92806–1231	Telephone: (714) 738–6194 Facsimile: (714) 446–0119 E-mail: sales@accrmfg.com URL: http://www.accrmfg.com

Part number supersession data. These CID specification sheet PINs supersedes the following manufacturer's part numbers as shown in table III. The CID PINs listed in table III are only for length designator "28". See table IV for CID PIN construction using other available lengths for this specification sheet. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE III. Commercial part number supersession data.

PIN designator AA59590/24	Vendor similar designator or type part number 1/ 2/	
	CAGE 61081	CAGE 5BG68
BJ28	VA255CR2.80HR	3500VBA–2.80HR
BN28	VA255CR2.80R	3500VBA–2.80R
BT28	VA255CR2.80T0R	3500VBA–2.80T0R
BV28	VA255CR2.80T2R	3500VBA–2.80T2R
BG28	MVA255CR2.80TM2.5R	3500MVBA–2.80TM2.5R
BJ28W	WVA255CR2.80HR	3500VWBA–2.80HR
BN28W	WVA255CR2.80R	3500VWBA–2.80R
BT28W	WVA255CR2.80T0R	3500VWBA–2.80T0R
BV28W	WVA255CR2.80T2R	3500VWBA–2.80T2R
BG28W	MWVA255CR2.80TM2.5R	3500MVWBA–2.80TM2.5R
BJ28E	VA255CR2.80HLR	3500VBA–2.80HLR
BN28E	VA255CR2.80LR	3500VBA–2.80LR
BT28E	VA255CR2.80T0LR	3500VBA–2.80T0LR
BV28E	VA255CR2.80T2LR	3500VBA–2.80T2LR
BG28E	MVA255CR2.80TM2.5LR	3500MVBA–2.80TM2.5LR
BJ28D	WVA255CR2.80HLR	3500VWBA–2.80HLR
BN28D	WVA255CR2.80LR	3500VWBA–2.80LR
BT28D	WVA255CR2.80T0LR	3500VWBA–2.80T0LR
BV28D	WVA255CR2.80T2LR	3500VWBA–2.80T2LR
BG28D	MWVA255CR2.80TM2.5LR	3500MVWBA–2.80TM2.5LR

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/24	Vendor similar designator or type part number 1/ 2/	
	CAGE 61081	CAGE 5BG68
CJ28	V255CR2.80HR	3500VCG–2.80HR
CN28	V255CR2.80R	3500VCG–2.80R
CT28	V255CR2.80T0R	3500VCG–2.80T0R
CV28	V255CR2.80T2R	3500VCG–2.80T2R
CG28	MV255CR2.80TM2.5R	3500MVCG–2.80TM2.5R
CJ28W	WV255CR2.80HR	3500VWCG–2.80HR
CN28W	WV255CR2.80R	3500VWCG–2.80R
CT28W	WV255CR2.80T0R	3500VWCG–2.80T0R
CV28W	WV255CR2.80T2R	3500VWCG–2.80T2R
CG28W	MWV255CR2.80TM2.5R	3500MVWCG–2.80TM2.5R
CJ28E	V255CR2.80HLR	3500VCG–2.80HLR
CN28E	V255CR2.80LR	3500VCG–2.80LR
CT28E	V255CR2.80T0LR	3500VCG–2.80T0LR
CV28E	V255CR2.80T2LR	3500VCG–2.80T2LR
CG28E	MV255CR2.80TM2.5LR	3500MVCG–2.80TM2.5LR
CJ28D	WV255CR2.80HLR	3500VWCG–2.80HLR
CN28D	WV255CR2.80LR	3500VWCG–2.80LR
CT28D	WV255CR2.80T0LR	3500VWCG–2.80T0LR
CV28D	WV255CR2.80T2LR	3500VWCG–2.80T2LR
CG28D	MWV255CR2.80TM2.5LR	3500MVWCG–2.80TM2.5LR
EJ28	VEN255CR2.80HR	3500VEN–2.80HR
EN28	VEN255CR2.80R	3500VEN–2.80R
ET28	VEN255CR2.80T0R	3500VEN–2.80T0R
EV28	VEN255CR2.80T2R	3500VEN–2.80T2R
EG28	MVEN255CR2.80TM2.5LR	3500MVEN–2.80TM2.5R
EJ28W	WVEN255CR2.80HR	3500VWEN–2.80HR
EN28W	WVEN255CR2.80R	3500VWEN–2.80R
ET28W	WVEN255CR2.80T0R	3500VWEN–2.80T0R
EV28W	WVEN255CR2.80T2R	3500VWEN–2.80T2R
EG28W	MWVEN255CR2.80TM2.5R	3500MVWEN–2.80TM2.5R

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/24	Vendor similar designator or type part number 1/ 2/	
	CAGE 61081	CAGE 5BG68
EJ28E	VEN255CR2.80HLR	3500VEN–2.80HLR
EN28E	VEN255CR2.80LR	3500VEN–2.80LR
ET28E	VEN255CR2.80T0LR	3500VEN–2.80T0LR
EV28E	VEN255CR2.80T2LR	3500VEN–2.80T2LR
EG28E	MVEN255CR2.80TM2.5LR	3500MVEN–2.80TM2.5LR
EJ28D	WVEN255CR2.80HLR	3500VWEN–2.80HLR
EN28D	WVEN255CR2.80LR	3500VWEN–2.80LR
ET28D	WVEN255CR2.80T0LR	3500VWEN–2.80T0LR
EV28D	WVEN255CR2.80T2LR	3500VWEN–2.80T2LR
EG28D	MWVEN255CR2.80TM2.5LR	3500MVWEN–2.80TM2.5LR
HJ28	VHA255CR2.80HR	3500VBH–2.80HR
HN28	VHA255CR2.80R	3500VBH–2.80R
HT28	VHA255CR2.80T0R	3500VBH–2.80T0R
HV28	VHA255CR2.80T2R	3500VBH–2.80T2R
HG28	MVHA255CR2.80TM2.5LR	3500MVBH–2.80TM2.5R
HJ28W	WVHA255CR2.80HR	3500VWBH–2.80HR
HN28W	WVHA255CR2.80R	3500VWBH–2.80R
HT28W	WVHA255CR2.80T0R	3500VWBH–2.80T0R
HV28W	WVHA255CR2.80T2R	3500VWBH–2.80T2R
HG28W	MWVHA255CR2.80TM2.5LR	3500MVWBH–2.80TM2.5R
HJ28E	VHA255CR2.80HLR	3500VBH–2.80HLR
HN28E	VHA255CR2.80LR	3500VBH–2.80LR
HT28E	VHA255CR2.80T0LR	3500VBH–2.80T0LR
HV28E	VHA255CR2.80T2LR	3500VBH–2.80T2LR
HG28E	VMHA255CR2.80TM2.5LR	3500MVBH–2.80TM2.5R
HJ28D	WVHA255CR2.80HLR	3500VWBH–2.80HLR
HN28D	WVHA255CR2.80LR	3500VWBH–2.80LR
HT28D	WVHA255CR2.80T0LR	3500VWBH–2.80T0LR
HV28D	WVHA255CR2.80T2LR	3500VWBH–2.80T2LR
HG28D	MWVHA255CR2.80TM2.5LR	3500MVWBH–2.80TM2.5LR

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/24	Vendor similar designator or type part number 1/ 2/	
	CAGE 61081	CAGE 5BG68
RJ28	VR255CR2.80HR	3500VCC–2.80HR
RN28	VR255CR2.80R	3500VCC–2.80R
RT28	VR255CR2.80T0R	3500VCC–2.80T0R
RV28	VR255CR2.80T2R	3500VCC–2.80T2R
RG28	MVR255CR2.80TM2.5LR	3500MVCC–2.80TM2.5R
RJ28W	WVR255CR2.80HR	3500VWCC–2.80HR
RN28W	WVR255CR2.80R	3500VWCC–2.80R
RT28W	WVR255CR2.80T0R	3500VWCC–2.80T0R
RV28W	WVR255CR2.80T2R	3500VWCC–2.80T2R
RG28W	MWVR255CR2.80TM2.5LR	3500MVWCC–2.80TM2.5R
RJ28E	VR255CR2.80HLR	3500VCC–2.80HLR
RN28E	VR255CR2.80LR	3500VCC–2.80LR
RT28E	VR255CR2.80T0LR	3500VCC–2.80T0LR
RV28E	VR255CR2.80T2LR	3500VCC–2.80T2LR
RG28E	VMR255CR2.80TM2.5LR	3500MVCC–2.80TM2.5LR
RJ28D	WVR255CR2.80HLR	3500VWCC–2.80HLR
RN28D	WVR255CR2.80LR	3500VWCC–2.80LR
RT28D	WVR255CR2.80T0LR	3500VWCC–2.80T0LR
RV28D	WVR255CR2.80T2LR	3500VWCC–2.80T2LR
RG28D	MWVR255CR2.80TM2.5LR	3500MVWCC–2.80TM2.5LR

1/ The CID PINs listed are only for length designator "28".
2/ The manufacturer's part number shall not be used for procurement to the requirements of this CID specification sheet. At the time of preparation of this CID specification sheet, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown. For actual part marking requirements, see the marking paragraph in A–A–59590.

TABLE IV. Example of PIN with available length designators.

PIN designator AA59590/24	Vendor similar designator or type part number 1/ 2/	
	CAGE 61081	CAGE 5BG68
ET28E	VEN255CR2.80T0LR	3500VEN–2.80T0LR
ET38E	VEN255CR3.80T0LR	3500VEN–3.80T0LR
ET48E	VEN255CR4.80T0LR	3500VEN–5.80T0LR
ET58E	VEN255CR5.80T0LR	3500VEN–5.80T0LR

1/ The manufacturer's part number shall not be used for procurement to the requirements of this CID specification sheet. At the time of preparation of this CID specification sheet, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown. For actual part marking requirements, see the marking paragraph in A–A–59590.

2/ Other lengths are available on request.

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.

MILITARY INTERESTS:

Custodians:
Army – CR
Navy – EC
Air Force – 85
DLA – CC

Review activity:
Air Force – 99

CIVIL AGENCY COORDINATING ACTIVITY:

GSA – FAS

Preparing activity:
DLA – CC

Project 5998–2012–024

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