

[INCH-POUND]  
A-A-59590/7C  
7 August 2013  
SUPERSEDING  
A-A-59590/7B  
22 April 2010

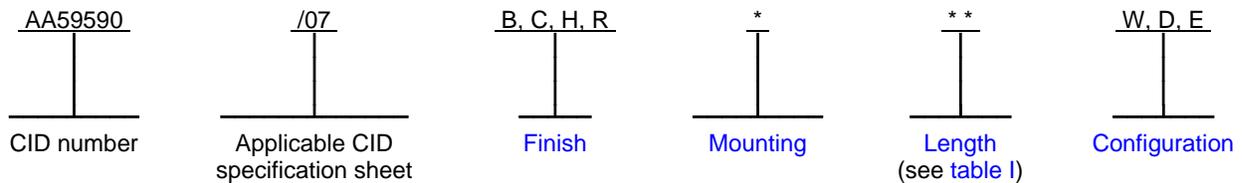
COMMERCIAL ITEM DESCRIPTION  
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE,  
SCREW ACTUATED DRIVE, .220 X .220 INCH BODY SIZE

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 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: AA59590/07HJ48D is the PIN for a hard black anodize finished, 4.8 inch (121.9 mm) long card holder.  
The card holder also features two counterbored through holes for rivet mounting, and a combination of a lockwasher,  
flat washer, and screw self-lock element for added resistance to loosening.

SALIENT CHARACTERISTICS.

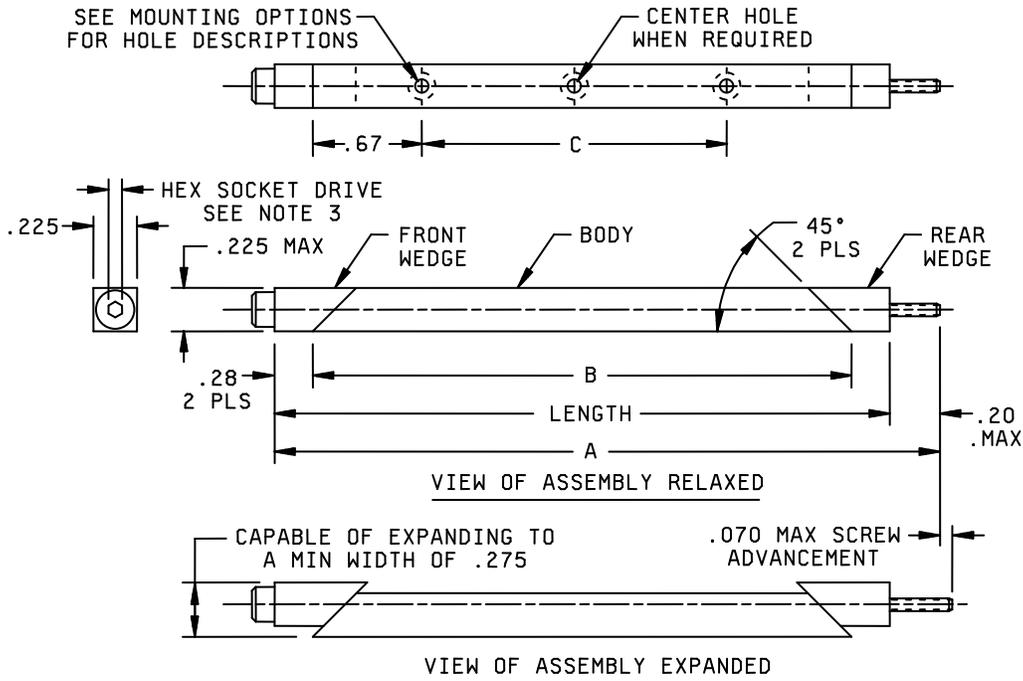
Performance. Card holders shall hold the circuit card assembly it is attached to firmly in its installed position and  
prevent loosening or movement as a result of shock and vibration. When the card holder is installed properly, it is  
capable of withstanding 60g/6ms of shock, 25 G-rms of vibration, and provides from 2 to 4 degrees C/W/inch thermal  
resistance transfer between the circuit card assembly and the heat sink surfaces.

Interface and physical dimensions. The card holders supplied to this CID specification sheet shall be as specified on  
[figures 1, 2, 3](#), in [table I](#), and [A-A-59590](#).

Actuating screw hex drive socket. The across flats dimension for the hex drive socket shall be as follows: .094 inch  
(2.38 mm) for mounting options "J", "K", "N", "T", "R", "V", and "S" and .098 inch (2.5 mm) for mounting options "G"  
and "M".

Material. Unless otherwise specified herein, the card holder materials shall be as specified in [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: 6 inch-pounds (0.68 N-m) for assemblies using no options or option "W" and 8  
inch-pounds (0.90 N-m) for assemblies using options "E" or "D".



Inches	mm	Inches	mm	Inches	mm
.070	1.78	.225	5.72	.28	7.1
.20	5.1	.275	6.99	.67	17.0

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. Unless otherwise specified, tolerances are  $\pm 0.02$  inch (0.51 mm) for two place decimals and  $\pm 0.010$  inch (0.25 mm) for three place decimals.
3. The across flats dimension for hex drive socket shall be .094 inch (2.38 mm) for mounting options "J", "K", "N", "T", "R", "V", and "S". The across flats dimension for hex drive socket shall be a metric dimension of .098 inch (2.5 mm) across flats for mounting options "G" and "M".

FIGURE 1. Relaxed and expanded dimensions.

Cold plate slot width dimensions (when applicable). The recommend cold plate slot width to accommodate the circuit card assembly with attached card holder is .250 inch (6.35 mm) plus the thickness of the printed board of the circuit card assembly (see [A-A-59590](#)).

Finish. The finish designator 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), "H" (hard black anodize), or "R" (clear chemical film).

**Mounting.** The mounting designators shall be as specified in [A-A-59590](#). The mounting options available for this CID specification sheet are as follows: "J" or "K" (rivet mounting holes), "N" (no mounting holes), "T" or "R" (tapped 0-80 UNF 2B holes), "V" or "S" (tapped 2-56 UNC 2B holes), or "G" or "M" (tapped M2.5 x.45 metric holes). Card holders using mounting option "J" may be shipped unassembled. See [figure 1](#) for mounting hole spacing requirements.

**Mounting holes and locations (when required).** Two mounting holes are required on card holders less than 5.30 inches (134.6 mm) in length. Three mounting holes are required on card holders 5.30 inches (134.6 mm) or greater in length. The third mounting hole shall be centered on the mounting body. See [figure 1](#) and table I for mounting hole locations and spacing requirements.

**Rivet mounting holes.** The holes used for rivet mounting shall be .066 to .073 inch (1.68 to 1.85 mm) diameter through holes, countersunk 100 degrees by .140 inch (3.56 mm) diameter with an access/clearance counterbore hole of .156 inch (3.96 mm) diameter by .160 to .175 inch (4.06 to 4.45 mm) deep.

**Rivets.** This card holder uses rivet type A as specified in [A-A-59590](#) when rivet mounting is used.

**Length, expanded, and relaxed dimensions.** The length, expanded, and relaxed dimensions shall be as specified on [figure 1](#). The length designator shall be as specified in [A-A-59590](#) and the available lengths for this specification sheet are listed in table I.

TABLE I. Additional assembly dimensions (see [figure 1](#)). 1/

PIN length designator	Dimension "LENGTH" ±.02 (0.5)	Dimension "A" (maximum)	Dimension "B" ±.03 (0.8)	Dimension "C" ±.005 (0.13)
18	1.8 (45.7)	2.10 (53.3)	1.24 (31.5)	.75 (19.1)
23	2.3 (58.4)	2.60 (66.0)	1.74 (44.2)	.40 (10.2)
28	2.8 (71.1)	3.10 (78.7)	2.24 (56.8)	.90 (22.9)
30	3.0 (76.2)	3.30 (83.8)	2.44 (62.0)	1.10 (27.9)
33	3.3 (83.8)	3.60 (91.4)	2.74 (69.6)	1.40 (35.6)
35	3.5 (88.9)	3.80 (96.5)	2.94 (74.7)	1.60 (40.6)
38	3.8 (96.5)	4.10 (104.1)	3.24 (82.3)	1.90 (48.3)
43	4.3 (109.2)	4.60 (116.8)	3.74 (95.0)	2.40 (61.0)
48	4.8 (121.9)	5.10 (129.5)	4.24 (107.7)	2.90 (73.7)
53	5.3 (134.6)	5.60 (142.2)	4.74 (120.4)	3.40 (86.4)
58	5.8 (147.3)	6.10 (154.9)	5.24 (133.1)	3.90 (99.1)
63	6.3 (160.0)	6.60 (167.6)	5.74 (145.8)	4.40 (111.8)
68	6.8 (172.7)	7.10 (180.3)	6.24 (158.5)	4.90 (124.5)
73	7.3 (185.4)	7.60 (193.0)	6.74 (171.2)	5.40 (137.2)
78	7.8 (198.1)	8.10 (205.7)	7.24 (183.9)	5.90 (149.9)
83	8.3 (210.8)	8.60 (218.4)	7.74 (196.6)	6.40 (162.6)
88	8.8 (223.5)	9.10 (231.1)	8.24 (209.3)	6.90 (175.3)

1/ Dimensions are in inches. Millimeters, in parenthesis, are given for general information only.

Configuration. The configuration of a card holder shall be as specified in [table II](#). The details of a particular configuration consist of those on [figure 1](#), and may include those on figures 2 and 3. Card holders not requiring the following option shall leave the configuration position in the PIN blank.

TABLE II. Configuration.

Configuration	Applicable figures	Hardware options
	<a href="#">1</a>	No added options
W	<a href="#">1</a> and <a href="#">2</a>	Lockwasher and flat washer
E	<a href="#">1</a> and <a href="#">3</a>	Screw self-locking element
D	<a href="#">1</a> , <a href="#">2</a> , and <a href="#">3</a>	Lockwasher, flat washer and screw self-locking element

Lockwasher and flat washer (see [figure 2](#)). The use of a lockwasher and flat washer located under the screw head will provide additional resistance to loosening of the card holder assembly from shock and vibration. Card holders requiring a lockwasher and flat washer shall include a suffix "W" in the PIN (see [table I](#), [classification](#) and [notes](#)).

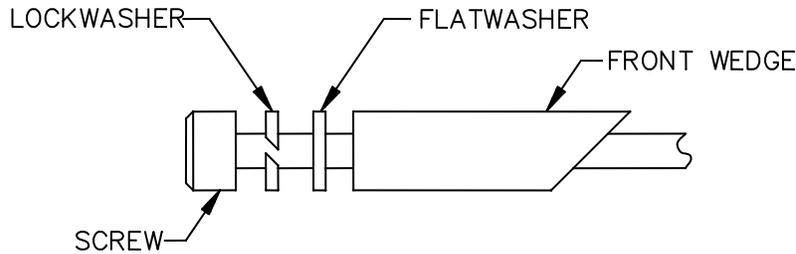


FIGURE 2. Lockwasher and flat washer details.

Screw self-locking element (see [figure 3](#)). 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 [table I](#), [classification](#) and [notes](#)).

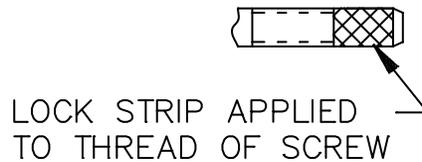


FIGURE 3. Screw self-locking element details.

Lockwasher, flat washer, and screw self-locking element. Card holders requiring a lockwasher, flat washer, and screw self-locking element configuration shall include a suffix "D" in the PIN (see [table I](#), [classification](#) and [notes](#)).

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 <http://quicksearch.dla.mil> 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.)

<u>Manufacturer CAGE</u>	<u>Manufacturer name and address</u>	<u>Manufacturer contact information</u>
18915	Birtcher – A Division of Pentair Electronic Packaging 7238 Trade Street San Diego, CA 92121-3410	Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 679-4555 URL: <a href="http://www.birtcherproducts.com">www.birtcherproducts.com</a>
61081	Calmark – A Division of Pentair Electronic Packaging 7238 Trade Street San Diego, CA 92121-3410	Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 740-2430 Electronic mail: <a href="mailto:sales@calmark.com">sales@calmark.com</a> URL: <a href="http://www.calmark.com">www.calmark.com</a>
5BG68	American Circuit Card Retainers, Inc. 2310 E. Orangethorpe Avenue Anaheim, CA 92806-1231	Telephone: (714) 738-6194 Facsimile: (714) 446-0119 E-mail: <a href="mailto:sales@accrmfg.com">sales@accrmfg.com</a> URL: <a href="http://www.accrmfg.com">http://www.accrmfg.com</a>
3E7U8	Wakefield Solutions 200 Towerview Court Cary, NC 27513	Telephone: (919) 469-2004 Facsimile: (919) 469-2827 E-mail: <a href="mailto:wedgelocks@wakefield.com">wedgelocks@wakefield.com</a> URL: <a href="http://www.wakefield.com">www.wakefield.com</a>

Part number supersession data. This CID specification sheet PINs supersede the following manufacturer's part numbers in [table III](#) and on DESC Drawing 84103 ([table IV](#)) as shown. The CID PINs listed in [table III](#) are only for length designator "28". See [table V](#) 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 AA59590/07	Vendor similar designator or type part number <a href="#">1/</a> <a href="#">2/</a>			
	CAGE 18915	CAGE 61081	CAGE 5BG68	CAGE 3E7U8
BJ28	42-6-B	A230-2.80H	3220BA-2.80H	422B-280RSB
BN28	42-6-B-A	A230-2.80	3220BA-2.80	422B-280ASB
BT28	42-6-B-T	A230-2.80T0	3220BA-2.80T0	422B-280TSB
BV28	42-6-B-S	A230-2.80T2	3220BA-2.80T2	422B-280SSB
BG28	42-6-B-M	MA230-2.80TM2.5	3220MBA-2.80TM2.5	422B-280MMB
BJ28W	42-6-B-LF	WA230-2.80H	3220WBA-2.80H	422B-280RSB-W
BN28W	42-6-B-LF-A	WA230-2.80	3220WBA-2.80	422B-280ASB-W
BT28W	42-6-B-LF-T	WA230-2.80T0	3220WBA-2.80T0	422B-280TSB-W
BV28W	42-6-B-LF-S	WA230-2.80T2	3220WBA-2.80T2	422B-280SSB-W
BG28W	42-6-B-LF-M	MWA230-2.80TM2.5	3220MWBA-2.80TM2.5	422B-280MMB-W
BJ28E	42-6-B-L	A230-2.80HL	3220BA-2.80HL	422B-280RSB-P
BN28E	42-6-B-A-L	A230-2.80L	3220BA-2.80L	422B-280ASB-P
BT28E	42-6-B-T-L	A230-2.80T0L	3220BA-2.80T0L	422B-280TSB-P
BV28E	42-6-B-S-L	A230-2.80T2L	3220BA-2.80T2L	422B-280SSB-P
BG28E	42-6-B-M-L	MA230-2.80TM2.5L	3220MBA-2.80TM2.5L	422B-280MMB-P
BJ28D	42-6-B-LF-L	WA230-2.80HL	3220WBA-2.80HL	422B-280RSB-WP
BN28D	42-6-B-LF-A-L	WA230-2.80L	3220WBA-2.80L	422B-280ASB-WP
BT28D	42-6-B-LF-T-L	WA230-2.80T0L	3220WBA-2.80T0L	422B-280TSB-WP
BV28D	42-6-B-LF-S-L	WA230-2.80T2L	3220WBA-2.80T2L	422B-280SSB-WP
BG28D	42-6-B-LF-M-L	MWA230-2.80TM2.5L	3220MWBA-2.80TM2.5L	422B-280MMB-WP
CJ28	42-6	230-2.80H	3220CG-2.80H	422B-280RSG
CN28	42-6-A	230-2.80	3220CG-2.80	422B-280ASG
CT28	42-6-T	230-2.80T0	3220CG-2.80T0	422B-280TSG
CV28	42-6-S	230-2.80T2	3220CG-2.80T2	422B-280SSG
CG28	42-6-M	M230-2.80TM2.5	3220MCG-2.80TM2.5	422B-280MMG
CJ28W	42-6-LF	W230-2.80H	3220WCG-2.80H	422B-280RSG-W
CN28W	42-6-LF-A	W230-2.80	3220WCG-2.80	422B-280ASG-W
CT28W	42-6-LF-T	W230-2.80T0	3220WCG-2.80T0	422B-280TSG-W
CV28W	42-6-LF-S	W230-2.80T2	3220WCG-2.80T2	422B-280SSG-W
CG28W	42-6-LF-M	MW230-2.80TM2.5	3220MWCG-2.80TM2.5	422B-280MMG-W

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/07	Vendor similar designator or type part number <a href="#">1/</a> <a href="#">2/</a>			
	CAGE 18915	CAGE 61081	CAGE 5BG68	CAGE 3E7U8
CJ28E	42-6-L	230-2.80HL	3220CG-2.80HL	422B-280RSG-P
CN28E	42-6-A-L	230-2.80L	3220CG-2.80L	422B-280ASG-P
CT28E	42-6-T-L	230-2.80T0L	3220CG-2.80T0L	422B-280TSG-P
CV28E	42-6-S-L	230-2.80T2L	3220CG-2.80T2L	422B-280SSG-P
CG28E	42-6-M-L	M230-2.80TM2.5L	3220MCG-2.80TM2.5L	422B-280MMG-P
CJ28D	42-6-LF-L	W230-2.80HL	3220WCG-2.80HL	422B-280RSG-WP
CN28D	42-6-LF-A-L	W230-2.80L	3220WCG-2.80L	422B-280ASG-WP
CT28D	42-6-LF-T-L	W230-2.80T0L	3220WCG-2.80T0L	422B-280TSG-WP
CV28D	42-6-LF-S-L	W230-2.80T2L	3220WCG-2.80T2L	422B-280SSG-WP
CG28D	42-6-LF-M-L	MW230-2.80TM2.5L	3220MWCG-2.80TM2.5L	422B-280MMG-WP
HJ28	42-6-B3	HA230-2.80H	3220BH-2.80H	422B-280RSH
HN28	42-6-B3-A	HA230-2.80	3220BH-2.80	422B-280ASH
HT28	42-6-B3-T	HA230-2.80T0	3220BH-2.80T0	422B-280TSH
HV28	42-6-B3-S	HA230-2.80T2	3220BH-2.80T2	422B-280SSH
HG28	42-6-B3-M	MHA230-2.80TM2.5	3220MBH-2.80TM2.5	422B-280MMH
HJ28W	42-6-B3-LF	WHA230-2.80H	3220WBH-2.80H	422B-280RSH-W
HN28W	42-6-B3-LF-A	WHA230-2.80	3220WBH-2.80	422B-280ASH-W
HT28W	42-6-B3-LF-T	WHA230-2.80T0	3220WBH-2.80T0	422B-280TSH-W
HV28W	42-6-B3-LF-S	WHA230-2.80T2	3220WBH-2.80T2	422B-280SSH-W
HG28W	42-6-B3-LF-M	MWHA230-2.80TM2.5	3220MWBH-2.80TM2.5	422B-280MMH-W
HJ28E	42-6-B3-L	HA230-2.80HL	3220BH-2.80HL	422B-280RSH-P
HN28E	42-6-B3-A-L	HA230-2.80L	3220BH-2.80L	422B-280ASH-P
HT28E	42-6-B3-T-L	HA230-2.80T0L	3220BH-2.80T0L	422B-280TSH-P
HV28E	42-6-B3-S-L	HA230-2.80T2L	3220BH-2.80T2L	422B-280SSH-P
HG28E	42-6-B3-M-L	MHA230-2.80TM2.5L	3220MBH-2.80TM2.5L	422B-280MMH-P
HJ28D	42-6-B3-LF-L	WHA230-2.80HL	3220WBH-2.80HL	422B-280RSH-WP
HN28D	42-6-B3-LF-A-L	WHA230-2.80L	3220WBH-2.80L	422B-280ASH-WP
HT28D	42-6-B3-LF-T-L	WHA230-2.80T0L	3220WBH-2.80T0L	422B-280TSH-WP
HV28D	42-6-B3-LF-S-L	WHA230-2.80T2L	3220WBH-2.80T2L	422B-280SSH-WP
HG28D	42-6-B3-LF-M-L	MWHA230-2.80TM2.5L	3220MWBH-2.80TM2.5L	422B-280MMH-WP

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/07	Vendor similar designator or type part number <u>1/</u> <u>2/</u>			
	CAGE 18915	CAGE 61081	CAGE 5BG68	CAGE 3E7U8
RJ28	42-6-CC	R230-2.80H	3220CC-2.80H	422B-280RST
RN28	42-6-CC-A	R230-2.80	3220CC-2.80	422B-280AST
RT28	42-6-CC-T	R230-2.80T0	3220CC-2.80T0	422B-280TST
RV28	42-6-CC-S	R230-2.80T2	3220CC-2.80T2	422B-280SST
RG28	42-6-CC-M	MR230-2.80TM2.5	3220MCC-2.80TM2.5	422B-280MMT
RJ28W	42-6-CC-LF	WR230-2.80H	3220WCC-2.80H	422B-280RST-W
RN28W	42-6-CC-LF-A	WR230-2.80	3220WCC-2.80	422B-280AST-W
RT28W	42-6-CC-LF-T	WR230-2.80T0	3220WCC-2.80T0	422B-280TST-W
RV28W	42-6-CC-LF-S	WR230-2.80T2	3220WCC-2.80T2	422B-280SST-W
RG28W	42-6-CC-LF-M	MRW230-2.80TM2.5	3220MWCC-2.80TM2.5	422B-280MMT-W
RJ28E	42-6-CC-L	R230-2.80HL	3220CC-2.80HL	422B-280RST-P
RN28E	42-6-CC-A-L	R230-2.80L	3220CC-2.80L	422B-280AST-P
RT28E	42-6-CC-T-L	R230-2.80T0L	3220CC-2.80T0L	422B-280TST-P
RV28E	42-6-CC-S-L	R230-2.80T2L	3220CC-2.80T2L	422B-280SST-P
RG28E	42-6-CC-M-L	MR230-2.80TM2.5L	3220MCC-2.80TM2.5L	422B-280MMT-P
RJ28D	42-6-CC-LF-L	WR230-2.80HL	3220WCC-2.80HL	422B-280RST-WP
RN28D	42-6-CC-LF-A-L	WR230-2.80L	3220WCC-2.80L	422B-280AST-WP
RT28D	42-6-CC-LF-T-L	WR230-2.80T0L	3220WCC-2.80T0L	422B-280TST-WP
RV28D	42-6-CC-LF-S-L	WR230-2.80T2L	3220WCC-2.80T2L	422B-280SST-WP
RG28D	42-6-CC-LF-M-L	MWR230-2.80TM2.5L	3220MWCC-2.80TM2.5L	422B-280MMT-WP

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. Supersession information.

Superseded (old) PIN in accordance with DESC Drawing 84103	Superseding (new) CID PIN	Superseded (old) PIN in accordance with DESC Drawing 84103	Superseding (new) CID PIN
84103-38B	AA59590/07BJ28	84103-38C	AA59590/07CJ28
84103-39B	AA59590/07BJ30	84103-39C	AA59590/07CJ30
84103-40B	AA59590/07BJ35	84103-40C	AA59590/07CJ35
84103-41B	AA59590/07BJ38	84103-41C	AA59590/07CJ38
84103-42B	AA59590/07BJ48	84103-42C	AA59590/07CJ48
84103-43B	AA59590/07BJ53	84103-43C	AA59590/07CJ53
84103-44B	AA59590/07BJ58	84103-44C	AA59590/07CJ58

TABLE V. Example of PIN with available length designators.

PIN designator AA59590/07	Vendor similar designator or type part number <u>1/</u> <u>2/</u>			
	CAGE 18915	CAGE 61081	CAGE 5BG68	CAGE 3E7U8
HJ18D	42-4-B3-LF-L		3220WBH-1.80HL	422B-180RSH-WP
HJ23D	42-5-B3-LF-L	WHA230-2.30HL	3220WBH-2.30HL	422B-230RSH-WP
HJ28D	42-6-B3-LF-L	WHA230-2.80HL	3220WBH-2.80HL	422B-280RSH-WP
HJ30D	<u>3/</u>	WHA230-3.00HL	3220WBH-3.00HL	422B-300RSH-WP
HJ33D	42-7-B3-LF-L	WHA230-3.30HL	3220WBH-3.30HL	422B-330RSH-WP
HJ35D	<u>3/</u>	WHA230-3.50HL	3220WBH-3.50HL	422B-350RSH-WP
HJ38D	42-8-B3-LF-L	WHA230-3.80HL	3220WBH-3.80HL	422B-380RSH-WP
HJ43D	42-9-B3-LF-L	WHA230-4.30HL	3220WBH-4.30HL	422B-430RSH-WP
HJ48D	42-10-B3-LF-L	WHA230-4.80HL	3220WBH-4.80HL	422B-480RSH-WP
HK53D	42-11-B3-LF-L	WHA230-5.30EHL	3220WBH-5.30EHL	422B-530RSH-CWP
HK58D	42-12-B3-LF-L	WHA230-5.80EHL	3220WBH-5.80EHL	422B-580RSH-CWP
HK63D	42-13-B3-LF-L	WHA230-6.30EH	3220WBH-6.30EH	422B-630RSH-CWP
HK68D	42-14-B3-LF-L	WHA230-6.80EHL	3220WBH-6.80EHL	422B-680RSH-CWP
HK73D	42-15-B3-LF-L	WHA230-7.30EHL	3220WBH-7.30EHL	422B-730RSH-CWP
HK78D	42-16-B3-LF-L	WHA230-7.80EHL	3220WBH-7.80EHL	422B-780RSH-CWP
HK83D	42-17-B3-LF-L	WHA230-8.30EHL	3220WBH-8.30EHL	422B-830RSH-CWP
HK88D	42-18-B3-LF-L	WHA230-8.80EHL	3220WBH-8.80EHL	422B-880RSH-CWP

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.

3/ Consult manufacturer for part number.

Guidance on use of alternative parts with less hazardous or non-hazardous materials. This CID specification sheet provides for a number of alternative plating materials via the PIN. Users should select the PIN with the least hazardous material that meets the form, fit, and function requirements of their application.

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 activities:

Army – MI  
Air Force – 99

CIVIL AGENCY COORDINATING ACTIVITY:

GSA – FAS

Preparing activity:  
DLA – CC

Project 5998-2012-047

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>.