

[INCH-POUND]
A-A-59590/25B
25 May 2013
SUPERSEDING
A-A-59590/25A
20 April 2007

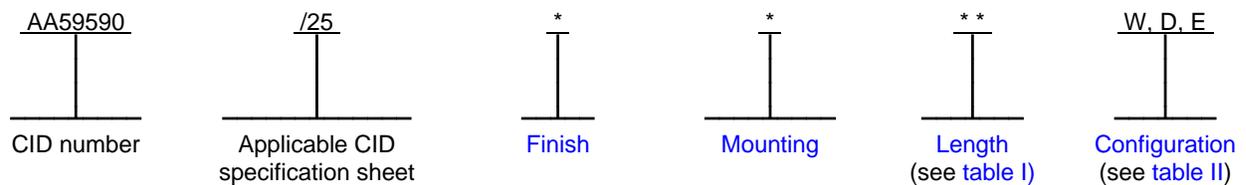
COMMERCIAL ITEM DESCRIPTION
SPECIFICATION SHEET

HOLDER, ELECTRICAL CARD, WEDGE RETAINERS, 3 PIECE, SCREW ACTUATED DRIVE,
.225 X .260 INCH BODY SIZE, WITH EJECTION ACTION AND VISUAL LOCK INDICATION

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: AA59590/25EJ58 is the PIN for an electroless nickel finished, 5.8 inches (147.3 mm) long card holder with both ejection action and visual lock indication. The card holder contains two counterbore holes for rivet mounting and may be shipped unassembled to allow for rivet installation.

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, 5](#), and [table I](#)) and meet the general requirements of [A-A-59590](#).

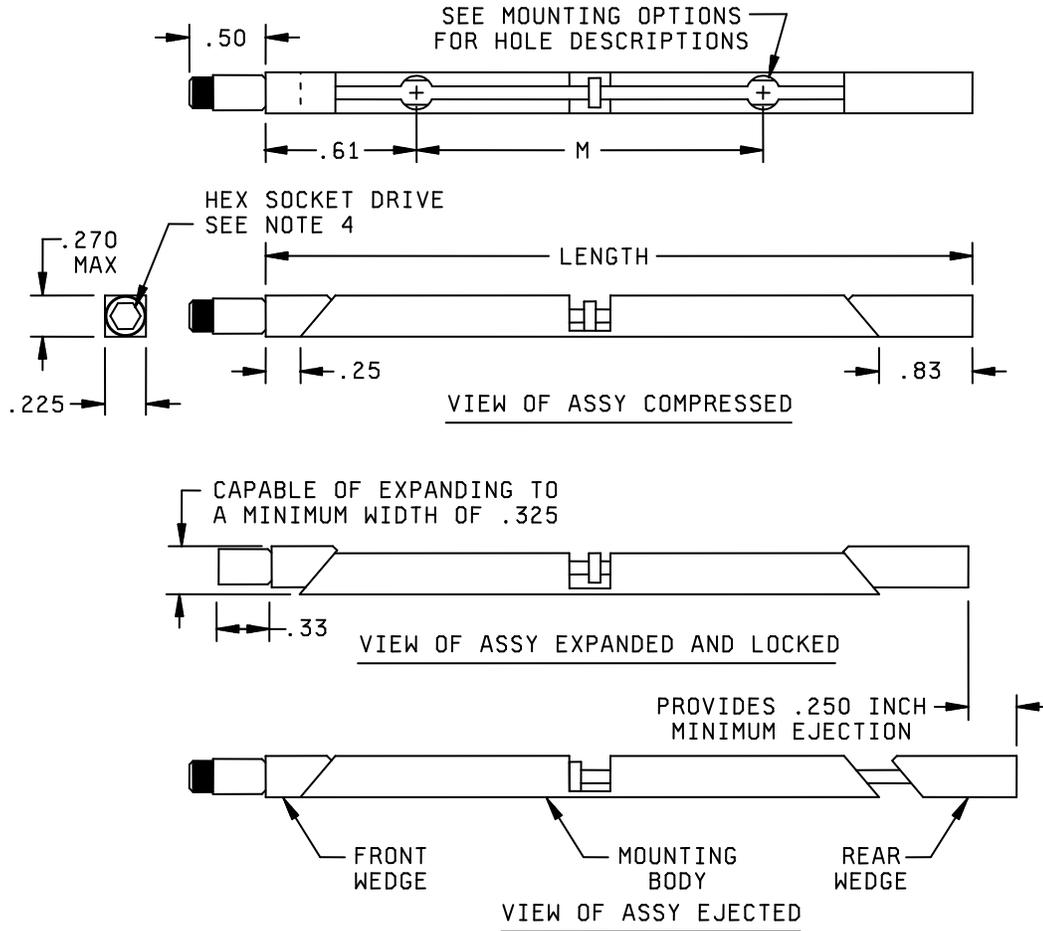
Material. Unless otherwise specified herein, the card holder materials shall be as specified in [A-A-59590](#).

Ejection action (see [figure 2](#)). Card holders shall have an ejection action feature that forces the circuit card assembly to disengage from its installed position. The ejection action shall allow for the initial ejection of the circuit card assembly from its installed position without damaging circuits, components, or the mating connector(s). The minimal amount of ejection distance shall be .25 inch (6.4 mm).

Visual lock indicator (see [figure 3](#)). Card holders shall have a visual indicator to show when the assembly is in its relaxed (unlocked) and expanded (locked) states. When the card holder is in the relaxed (unlocked) state, the actuating end of the 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.

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](#).



Inches	mm								
.225	5.72	.25	6.4	.270	6.86	.33	8.4	.61	15.5
		.250	6.35	.325	8.26	.50	12.7	.83	21.1

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
2. Unless otherwise specified, tolerances are ± 0.02 inch (0.51 mm) for two place decimals and ± 0.010 inch (0.25 mm) for three place decimals.
3. The tolerance for the mounting hole spacing is ± 0.005 inch (0.13 mm).
4. The across flats dimension for hex drive socket shall be .094 inch (2.39 mm) for mounting options "J", "N", "T", and "V". The across flats dimension for hex drive socket shall be a metric dimension of 2.5 mm (.098 inch) across flats for mounting option "G".

FIGURE 1. Relaxed and expanded dimensions.

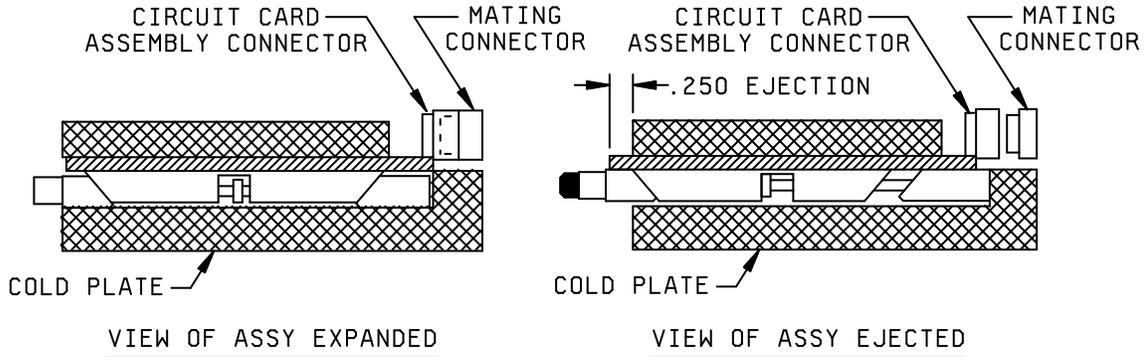


FIGURE 2. View of assembly installed and ejected.

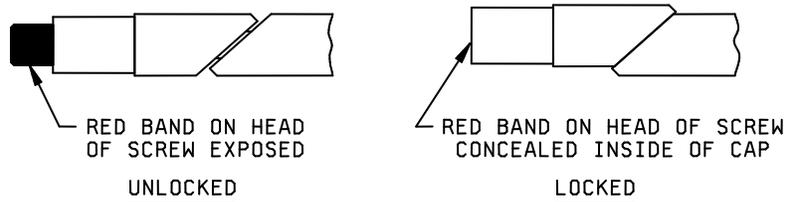


FIGURE 3. Visual lock indicator.

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 (0.9 N-m) for assemblies using options "D" or "E".

Cold plate slot width dimensions. The recommend cold plate slot width to accommodate the circuit card assembly with attached card holder is .300 inch (7.62 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 options. 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 .066/.073 inch (1.68/1.85 mm) diameter, countersunk 100 degrees by .140 inch (3.56 mm) diameter through holes with an access/clearance counterbore of .156 inch (3.96 mm) diameter by .200 inch (5.08 mm) deep.

Rivets. This card holder uses rivet style 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 lengths available for this CID specification sheet are listed in table I.

TABLE I. Assembly dimensions (see figure 1). ^{1/}

PIN length designator	Dimension "LENGTH" ± .02 (0.5 mm)	Dimension "M" ± .005 (0.13 mm)
28	2.8 (71 mm)	1.00 (25.4 mm)
32	3.2 (81 mm)	1.40 (35.6 mm)
38	3.8 (97 mm)	2.00 (50.8 mm)
48	4.8 (122 mm)	3.00 (76.2 mm)
64	6.4 (163 mm)	4.60 (116.8 mm)

^{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 [figures 1](#) and [2](#), and may include those on [figures 3](#) and [4](#). 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 options
	1 and 2	No added options
W	1 , 2 , and 3	Lockwasher and flat washer
E	1 , 2 , and 4	Screw self-locking element
D	1 , 2 , 3 , and 4	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 [table II](#), [classification](#) and [notes](#) section herein).

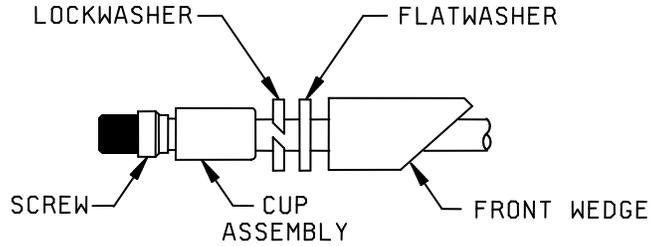


FIGURE 4. Lockwasher and flat washer details.

Screw self-locking element (see figure 5). The use of a screw 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 II, classification and notes section herein).

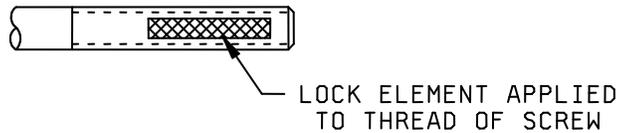


FIGURE 5. Screw self-locking element details.

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 table II, classification and notes section 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 <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 7328 Trade Street San Diego, CA 92121-3410	Telephone: (858) 740-2400 Toll Free: (800) 854-7086 Facsimile: (858) 740-2430 (URL): www.birtcherproducts.com
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 II 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 AA59590/25	Vendor similar designator or type part number 1/ 2/		
	CAGE 18915	CAGE 61081	CAGE 5BG68
BJ28	45-5073-2.80-B	VEA225-2.80H	3225VEBA-2.80H
BN28	45-5073-2.80-BA	VEA225-2.80	3225VEBA-2.80
BT28	45-5073-2.80-BT	VEA225-2.80T0	3225VEBA-2.80T0
BV28	45-5073-2.80-BS	VEA225-2.80T2	3225VEBA-2.80T2
BG28	45-5073-2.80-BM	MVEA225-2.80TM2.5	3225VEMBA-2.80TM2.5

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/25	Vendor similar designator or type part number 1/ 2/		
	CAGE 18915	CAGE 61081	CAGE 5BG68
BJ28E	45-5073-2.80-BL	VEA225-2.80HL	3225VEBA-2.80HL
BN28E	45-5073-2.80-BAL	VEA225-2.80L	3225VEBA-2.80L
BT28E	45-5073-2.80-BTL	VEA225-2.80T0L	3225VEBA-2.80T0L
BV28E	45-5073-2.80-BSL	VEA225-2.80T2L	3225VEBA-2.80T2L
BG28E	45-5073-2.80-BML	MVEA225-2.80TM2.5L	3225VEMBA-2.80TM2.5L
BJ28W	45-5074-2.80-B	WVEA225-2.80H	3225VEWBA-2.80H
BN28W	45-5074-2.80-BA	WVEA225-2.80	3225VEWBA-2.80
BT28W	45-5074-2.80-BT	WVEA225-2.80T0	3225VEWBA-2.80T0
BV28W	45-5074-2.80-BS	WVEA225-2.80T2	3225VEWBA-2.80T2
BG28W	45-5074-2.80-BM	MWVEA225-2.80TM2.5	3225VEWMBA-2.80TM2.5
BJ28D	45-5074-2.80-BL	WVEA225-2.80HL	3225VEWBA-2.80HL
BN28D	45-5074-2.80-BAL	WVEA225-2.80L	3225VEWBA-2.80L
BT28D	45-5074-2.80-BTL	WVEA225-2.80T0L	3225VEWBA-2.80T0L
BV28D	45-5074-2.80-BSL	WVEA225-2.80T2L	3225VEWBA-2.80T2L
BG28D	45-5074-2.80-BML	MWVEA225-2.80TM2.5L	3225VEWMBA-2.80TM2.5L
CJ28	45-5073-2.80	VE225-2.80H	3225VECG-2.80H
CN28	45-5073-2.80-A	VE225-2.80	3225VECG-2.80
CT28	45-5073-2.80-T	VE225-2.80T0	3225VECG-2.80T0
CV28	45-5073-2.80-S	VE225-2.80T2	3225VECG-2.80T2
CG28	45-5073-2.80-M	MVE225-2.80TM2.5	3225VEMCG-2.80TM2.5
CJ28E	45-5073-2.80-L	VE225-2.80HL	3225VECG-2.80HL
CN28E	45-5073-2.80-AL	VE225-2.80L	3225VECG-2.80L
CT28E	45-5073-2.80-TL	VE225-2.80T0L	3225VECG-2.80T0L
CV28E	45-5073-2.80-SL	VE225-2.80T2L	3225VECG-2.80T2L
CG28E	45-5073-2.80-ML	MVE225-2.80TM2.5L	3225VEMCG-2.80TM2.5L
CJ28W	45-5074-2.80	WVE225-2.80H	3225VEWCG-2.80H
CN28W	45-5074-2.80-A	WVE225-2.80	3225VEWCG-2.80
CT28W	45-5074-2.80-T	WVE225-2.80T0	3225VEWCG-2.80T0
CV28W	45-5074-2.80-S	WVE225-2.80T2	3225VEWCG-2.80T2
CG28W	45-5074-2.80-M	MWVE225-2.80TM2.5	3225VEMWCG-2.80TM2.5

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/25	Vendor similar designator or type part number 1/ 2/		
	CAGE 18915	CAGE 61081	CAGE 5BG68
CJ28D	45-5074-2.80-L	WVE225-2.80HL	3225VEWCG-2.80HL
CN28D	45-5074-2.08-AL	WVE225-2.80L	3225VEWCG-2.80L
CT28D	45-5074-2.80-TL	WVE225-2.80T0L	3225VEWCG-2.80T0L
CV28D	45-5074-2.80-SL	WVE225-2.80T2L	3225VEWCG-2.80T2L
CG28D	45-5074-2.80-ML	MWV225-2.80TM2.5L	3225VEMWCG-2.80TM2.5L
EJ28	45-5073-2.80-EN	VEEN225-2.80H	3225VEEN-2.80H
EN28	45-5073-2.80ENA	VEEN225-2.80	3225VEEN-2.80
ET28	45-5073-2.80ENT	VEEN225-2.80T0	3225VEEN-2.80T0
EV28	45-5073-2.80ENS	VEEN225-2.80T2	3225VEEN-2.80T2
EG28	45-5073-2.80ENM	MVEEN225-2.80TM2.5	3225VEMEN-2.80TM2.5
EJ28E	45-5073-2.80ENL	VEEN225-2.80HL	3225VEEN-2.80HL
EN28E	45-5073-280ENAL	VEEN225-2.80L	3225VEEN-2.80L
ET28E	45-5073-280ENTL	VEEN225-2.80T0L	3225VEEN-2.80T0L
EV28E	45-5073-280ENSL	VEEN225-2.80T2L	3225VEEN-2.80T2L
EG28E	45-5073-280ENML	MVEEN225-2.80TM2.5L	3225VEMEN-2.80TM2.5L
EJ28W	45-5074-2.80-EN	WVEEN225-2.80H	3225VEWEN-2.80H
EN28W	45-5074-2.80ENA	WVEEN225-2.80	3225VEWEN-2.80
ET28W	45-5074-2.80ENT	WVEEN225-2.80T0	3225VEWEN-2.80T0
EV28W	45-5074-2.80ENS	WVEEN225-2.80T2	3225VEWEN-2.80T2
EG28W	45-5074-2.80ENM	MWVEEN225-2.80TM2.5	3225VEWMEN-2.80TM2.5
EJ28D	45-5074-2.80ENL	WVEEN225-2.80HL	3225VEWEN-2.80HL
EN28D	45-5074-280ENAL	WVEEN225-2.80L	3225VEWEN-2.80L
ET28D	45-5074-280ENTL	WVEEN225-2.80T0L	3225VEWEN-2.80T0L
EV28D	45-5074-280ENSL	WVEEN225-2.80T2L	3225VEWEN-2.80T2L
EG28D	45-5074-280ENML	MWVEEN225-2.80TM2.5L	3225VEWMEN-2.80TM2.5L
HJ28	45-5073-2.80-B3	VEHA225-2.80H	3225VEBH-2.80H
HN28	45-5073-2.80B3A	VEHA225-2.80	3225VEBH-2.80
HT28	45-5073-2.80B3T	VEHA225-2.80T0	3225VEBH-2.80T0
HV28	45-5073-2.80B3S	VEHA225-2.80T2	3225VEBH-2.80T2
HG28	45-5073-2.80B3M	MVEHA225-2.80TM2.5	3225VEMBH-2.80TM2.5

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/25	Vendor similar designator or type part number 1/ 2/		
	CAGE 18915	CAGE 61081	CAGE 5BG68
HJ28E	45-5073-2.80B3L	VEHA225-2.80HL	3225VEBH-2.80HL
HN28E	45-5073-280B3AL	VEHA225-2.80L	3225VEBH-2.80L
HT28E	45-5073-280B3TL	VEHA225-2.80T0L	3225VEBH-2.80T0L
HV28E	45-5073-280B3SL	VEHA225-2.80T2L	3225VEBH-2.80T2L
HG28E	45-5073-280B3ML	MVEHA225-2.80TM2.5L	3225VEMBH-2.80TM2.5L
HJ28W	45-5074-2.80-B3	WVEHA225-2.80H	3225VEWBH-2.80H
HN28W	45-5074-2.80B3A	WVEHA225-2.80	3225VEWBH-2.80
HT28W	45-5074-2.80B3T	WVEHA225-2.80T0	3225VEWBH-2.80T0
HV28W	45-5074-2.80B3S	WVEHA225-2.80T2	3225VEWBH-2.80T2
HG28W	45-5074-2.80B3M	MWVEHA225-2.80TM2.5	3225VEMWBH-2.80TM2.5
HJ28D	45-5074-2.80B3L	WVEHA225-2.80HL	3225VEWBH-2.80HL
HN28D	45-5074-280B3AL	WVEHA225-2.80L	3225VEWBH-2.80L
HT28D	45-5074-280B3TL	WVEHA225-2.80T0L	3225VEWBH-2.80T0L
HV28D	45-5074-280B3SL	WVEHA225-2.80T2L	3225VEWBH-2.80T2L
HG28D	45-5074-280B3ML	MWVEHA225-2.80TM2.5L	3225VEMWBH-2.80TM2.5L
RJ28	45-5073-2.80-CC	VER225-2.80H	3225VECC-2.80H
RN28	45-5073-2.80CCA	VER225-2.80	3225VECC-2.80
RT28	45-5073-2.80CCT	VER225-2.80T0	3225VECC-2.80T0
RV28	45-5073-2.80CCS	VER225-2.80T2	3225VECC-2.80T2
RG28	45-5073-2.80CCM	MVER225-2.80TM2.5	3225VEMCC-2.80TM2.5
RJ28E	45-5073-2.80CCL	VER225-2.80HL	3225VECC-2.80HL
RN28E	45-5073-280CCAL	VER225-2.80L	3225VECC-2.80L
RT28E	45-5073-280CCTL	VER225-2.80T0L	3225VECC-2.80T0L
RV28E	45-5073-280CCSL	VER225-2.80T2L	3225VECC-2.80T2L
RG28E	45-5073-280CCML	MVER225-2.80TM2.5L	3225VEMCC-2.80TM2.5L
RJ28W	45-5074-2.80-CC	WVER225-2.80H	3225VEWCC-2.80H
RN28W	45-5074-2.80CCA	WVER225-2.80	3225VEWCC-2.80
RT28W	45-5074-2.80CCT	WVER225-2.80T0	3225VEWCC-2.80T0
RV28W	45-5074-2.80CCS	WVER225-2.80T2	3225VEWCC-2.80T2
RG28W	45-5074-2.80CCM	MWVER225-2.80TM2.5	3225VEMWCC-2.80TM2.5

See footnotes at end of table.

TABLE III. Commercial part number supersession data – Continued.

PIN designator AA59590/25	Vendor similar designator or type part number <u>1/</u> <u>2/</u>		
	CAGE 18915	CAGE 61081	CAGE 5BG68
RJ28D	45-5074-2.80B3L	WVER225-2.80HL	3225VEWCC-2.80HL
RN28D	45-5074-280B3AL	WVER225-2.80L	3225VEWCC-2.80L
RT28D	45-5074-280B3TL	WVER225-2.80T0L	3225VEWCC-2.80T0L
RV28D	45-5074-280B3SL	WVER225-2.80T2L	3225VEWCC-2.80T2L
RG28D	45-5074-280B3ML	MWVER225-2.80TM2.5L	3225VEMWCC-2.80TM2.5L

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 AA59590/25	Vendor similar designator or type part number <u>1/</u> <u>2/</u>		
	CAGE 18915	CAGE 61081	CAGE 5BG68
EJ28	45-5073-2.80-EN	VEEN225-2.80H	3225VEEN-2.80H
EJ32	45-5073-3.20-EN	VEEN225-3.20H	3225VEEN-3.20H
EJ38	45-5073-3.80-EN	VEEN225-3.80H	3225VEEN-3.80H
EJ48	45-5073-4.80-EN	VEEN225-4.80H	3225VEEN-4.80H
EJ64	45-5073-6.40-EN	VEEN225-6.40H	3225VEEN-6.40H

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.

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 activity:
Air Force – 99

CIVIL AGENCY COORDINATING ACTIVITY:

GSA – FAS

Preparing activity:
DLA – CC

Project 5998-2012-025

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>.