

[INCH-POUND]
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SUPERSEDING
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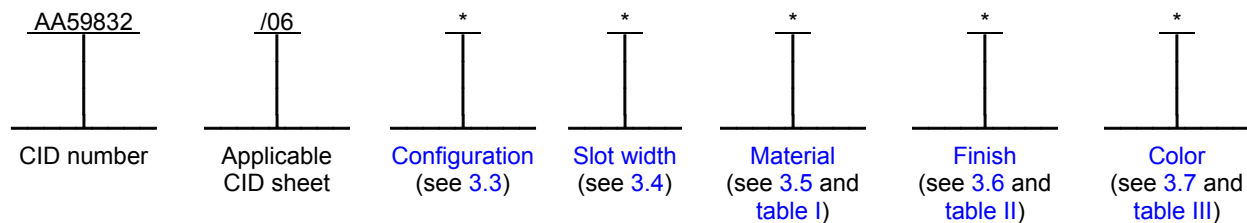
COMMERCIAL ITEM DESCRIPTION

EXTRACTOR, ELECTRICAL CARD, METAL, GENERAL REQUIREMENTS FOR

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

1. **SCOPE.** This commercial item description (CID) covers the general requirements for metal inserter-ejectors (hereafter referred to as extractors) that are mounted to circuit card assemblies (CCA) and are intended to be used to insert and initiate the removal of circuit card assemblies from their installed positions. Extractors covered by this CID are intended to overcome insertion and extraction forces of the highest possible limits. Requirements for specific extractors are covered in the individual CID specification sheet. Extractors covered by this CID are intended for commercial/industrial applications.

2. **CLASSIFICATION/PART IDENTIFICATION NUMBER (PIN).** This CID uses a classification system which is included in the PIN as shown in the following example (see 7.1).



3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Extractor interface and physical dimensions supplied to this CID shall be as specified in the applicable CID specification sheet.

3.2 CID specification sheet. The family of extractors for use on circuit card assemblies shall be in accordance with the requirements specified herein and the applicable CID specification sheet. In the event of conflict between this general CID and the applicable CID specification sheet, the latter shall govern.

3.3 Configuration. The configuration of the extractor shall be as specified in the applicable CID specification sheet. The configuration designator from the applicable CID specification sheet shall be included in the PIN.

3.4 Slot width. The extractor slot width to accommodate the printed board thickness of the circuit card assembly shall be as specified in the applicable CID specification sheet. The slot width designator from the applicable CID specification sheet shall be included in the PIN.

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data that may improve this document should be sent to: DLA Land and Maritime, ATTN: VAC, P.O. Box 3990, Columbus OH 43218-3990, or email 5998.Documents@dla.mil. Since contact information can change you may want to verify the currency of the address information using the ASSIST Online database at <https://assist.daps.dla.mil>.

A-A-59832A

3.5 Material. The extractor shall be fabricated from one of the materials listed below. The materials designator shall be as specified in table I or on the applicable CID specification sheet. The material designator from table I or the applicable CID specification sheet shall be included in the PIN.

3.5.1 Aluminum alloy 5052-H32. Aluminum alloy 5052 shall be in accordance with [ASTM B209](#), [ASTM B211](#), or equivalent. Unless otherwise specified, the temper of aluminum alloy 5052 shall be H32 or equivalent.

3.5.2 Aluminum alloy 6061-T6. Aluminum alloy 6061 shall be in accordance with [ASTM B209](#), [ASTM B211](#), [ASTM B221](#), or equivalent. Unless otherwise specified, the temper of aluminum alloy 6061 shall be T6 or equivalent.

3.5.3 Aluminum alloy 6063-T6. Aluminum alloy 6063 shall be in accordance with [ASTM B221](#), or equivalent. Unless otherwise specified, the temper of aluminum alloy 6063 shall be T6 or equivalent.

3.5.4 Corrosion resistant steel. Corrosion resistant steel shall be in accordance with [ASTM A582/A582M](#), [ASTM A666](#), or equivalent.

TABLE I. Card holder finishes for aluminum parts and PIN designators.

PIN designator	Material
1	Aluminum alloy 6061, temper T6, in accordance with ASTM B209 , ASTM B211 , ASTM B221 or equivalent.
2	Aluminum alloy 5052, temper H32, in accordance with ASTM B209 , ASTM B211 , or equivalent.
3	Aluminum alloy 6063, temper T6, in accordance with ASTM B221 or equivalent.
7	Stainless steel, type 301, 302, or 304 in accordance with ASTM A582/A582M , ASTM A666 , or equivalent.

3.6 Finish. The finish options shall be as specified in [table II](#). The applicable finish designator shall be included in the PIN.

3.6.1 Stainless steel parts. Stainless steel extractors shall be subjected to passivation treatment in accordance with [SAE AMS 2700](#), [SAE AMS-QQ-P-35](#), or equivalent. Stainless steel extractors shall include the designator "P" in the PIN.

3.6.2 Aluminum parts. Unless otherwise specified, aluminum parts can be finished as specified in [3.6.3](#), [3.6.4](#), or [3.6.5](#). The finish designators shall be as specified in [table II](#) and on the applicable CID specification sheet.

3.6.3 Anodize. Anodized coatings are intended to provide surface corrosion resistance and have good dielectric properties. Two types of anodized finishes are available for extractors fabricated of aluminum, thin anodize, and thick (or hard) anodize. A thin anodized coating applied to aluminum extractors provides good surface corrosion protection and medium abrasion resistance. A hard anodized coating applied to aluminum extractors provides excellent surface corrosion and abrasion resistance under severe service conditions.

3.6.3.1 Thin anodize (conventional). Thin (or conventional) anodize finish shall be in accordance with [MIL-A-8625](#), type II, class 1 (for clear anodize), or class 2 (for dyed colors), or equivalent. Thin anodized finish extractors shall include a finish designator "A" in the PIN.

3.6.3.2 Thick (hard) anodize. Thick (or hard) anodize coating shall be in accordance with [MIL-A-8625](#), type III, class 1 or 2, or equivalent. Thick anodized coating extractors shall include a finish designator "H" in the PIN.

A-A-59832A

3.6.4 Chemical film. Chemical film finishes are primarily used for corrosion resistance where lower electrical resistance is required. Two types of chemical film finishes are available for extractors fabricated of aluminum. A low electrical resistance chemical film finish, class 3, applied to aluminum extractors provides good surface corrosion protection and medium abrasion resistance. A thicker, less conductive chemical film finish, class 1A, applied to aluminum extractors provides better surface corrosion and abrasion resistance under severe service conditions than class 3 chemical film finish.

3.6.4.1 Chemical film (thick). Chemical film finish shall be in accordance with [MIL-DTL-5541](#), type II, class 1A or equivalent. Clear chemical film finish extractors shall include a finish designator "C" in the PIN.

3.6.4.2 Chemical film, low resistance (thin). Low resistance clear chemical film finish shall be in accordance with [MIL-DTL-5541](#), type II, class 3 or equivalent. Low resistance clear chemical film finish extractors shall include a finish designator "L" in the PIN.

3.6.5 No finish (unfinished) parts. Extractors with no finish applied shall include a finish designator "U" in the PIN.

TABLE II. Extractor finishes and PIN designators.

Finish designator	Finish	Reference document (or equivalent)	Paragraph
P	Passivation treatment	SAE AMS-QQ-P-35	3.6.1
A H	Anodize		
	Conventional anodic coating	MIL-A-8625 , type II, class 1 or 2	3.6.3.1
	Hard anodic coating	MIL-A-8625 , type III, class 2	3.6.3.2
C L	Chemical film		
	Maximum corrosion protection	MIL-DTL-5541 , type II, class 1A	3.6.4.1
	Low resistance	MIL-DTL-5541 , type II, class 3	3.6.4.2
U	No finish		3.6.5

3.7 Color. The color of extractor shall be specified in the PIN according to the designations of table III:

TABLE III. Colors.

Designator	Color	Designator	Color
B	Black	R	Red
C ^{1/}	Clear or not dyed	S	Silver
D	Green (dark)	T	Green (light)
E	Gray	U	Blue
F	Orange	V	Violet (purple)
G	Gold	W	Brown
P	Copper	Y	Yellow

^{1/} Clear finished parts will be the color of the base metal.

3.8 Mounting pin. Unless otherwise specified, all extractors shall be supplied with one corrosion resistant steel roll pin for mounting the extractor to the circuit card assembly. Extractor configurations requiring more than one roll pin shall include the correct number of pins needed for mounting purposes. The roll pin may be either rolled spring style in accordance with [AIA/NAS NASM 171401 THRU 171900](#) or [AIA/NAS NASM 16562](#) or spiral style in accordance with [AIA/NAS NASM 51923](#). Diameter and length of the roll pin shall be compatible with the extractor design.

A-A-59832A

3.9 Marking. Card holders supplied to this CID can be marked with the manufacturer's standard commercial PIN when applicable. The PIN marked on the unit pack shall be the CID PIN.

3.9.1 Sensitive electronic device (SED) symbol. Extractors requiring to be marked with a SED symbol shall use either the basic or simplified electrostatic sensitive device symbol from [JEDEC EIA-471](#) (see figure 1). Monochromatic reproduction in any color that contrasts with the color of the extractor handle may be used.

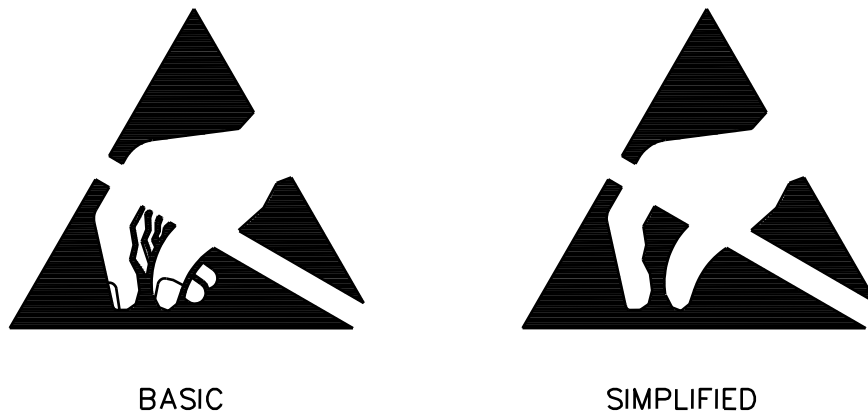


FIGURE 1. Sensitive electronic device symbols.

3.10 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.11 Workmanship. Extractors shall be processed in such a manner as to be uniform in quality and shall be free from other defects that will affect life, serviceability, or appearance.

4. **REGULATORY REQUIREMENTS**. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with 23.403 of the Federal Acquisition Regulation (FAR).

5. PRODUCT CONFORMANCE PROVISIONS.

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, quality assurances practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5.2 Market acceptability. The company producing the item must have been producing a product meeting the requirements of this CID for at least 6 months.

6. **PACKAGING**. Preservation, packing, and marking shall be as specified in the contract or order.

7. NOTES

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these extractors to DLA Land and Maritime under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

A-A-59832A

7.3 Source of documents.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-DTL-5541	–	Chemical Conversion Coatings On Aluminum And Aluminum Alloys.
MIL-A-8625	–	Anodic Coatings for Aluminum and Aluminum Alloys.

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

FEDERAL REGULATIONS

FAR	–	Federal Acquisition Regulations (FAR).
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(Copies of these documents are available online at <http://www.acqnet.gov/comp/far/index.html> or from the U.S. Government Printing Office, 732 North Capital Street, NW, Washington D.C. 20401.)

Other Publications

AIA/NAS – AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA INCORPORATED

AIA/NAS NASM 16562	–	Pin, Spring–Tubular, Slotted.
AIA/NAS NASM 51923	–	Pin, Spring–Tubular, Coiled, Standard Duty.
AIA/NAS NASM 171401 THRU 171900	–	Pin – Spring, Corrosion Resistant Steel.

(Application for copies should be addressed to the Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928 or at URL: <http://www.aia-aerospace.org>).

ASTM INTERNATIONAL (ASTM)

ASTM A582/A582M	–	Standard Specification for Free-Machining Stainless Steel Bars.
ASTM A666	–	Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
ASTM B209	–	Standard Specification for Aluminum and Aluminum Sheet and Plate.
ASTM B211	–	Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire.
ASTM B221	–	Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

(Application for copies should be addressed to the ASTM International, 100 Barr Harbor Drive, P. O. Box C700, West Conshohocken, PA 19428-2959 or at URL: <http://www.astm.org/>).

SAE INTERNATIONAL (SAE)

SAE AMS-QQ-P-35	–	Passivation Treatments for Corrosion-Resistant Steel.
SAE AMS 2700	–	Passivation of Corrosion-Resistant Steels.

(Application for copies should be addressed to the SAE World Headquarters, 400 Commonwealth Drive, Warrendale, PA 15096-0001 or at URL: <http://www.sae.org/>).

JEDEC

JEDEC EIA-471	–	Symbol and Label for Electrostatic Sensitive Devices.
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(Application for copies should be addressed to JEDEC – Solid State Technology Association, 3103 North 10th Street, Suite 247, Arlington, VA 22201 or at URL: <http://www.jedec.org>).

(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

A-A-59832A

7.4 Ordering data. The contract or order should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Product conformance provisions.
- c. Packaging requirements.

7.5 Government users. To acquire information on obtaining these extractors from the Government inventory system, contact DLA Land and Maritime, ATTN: FMT, P. O. Box 3990, Columbus, OH 43218-3990.

7.6 Environmentally preferable material. Environmentally preferable materials should be used to the maximum extent possible to meet the requirements of this specification. As of the dating of this document, the U.S. Environmental Protection Agency (EPA) is focusing efforts on reducing 31 priority chemicals. The list of chemicals and additional information is available on their website <http://www.epa.gov/osw/hazard/wastemin/priority.htm>. Included in the list of 31 priority chemicals are cadmium, lead, and mercury. Use of these materials should be minimized or eliminated unless needed to meet the requirements specified herein (see Section 3).

7.6.1 Guidance on use of alternative parts with less hazardous or non-hazardous materials. This specification 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.

7.7 Assistance. Questions or comments pertaining to this document should be addressed to DLA Land and Maritime, ATTN: VAC, P. O. Box 3990, Columbus, OH 43218-3990; telephone (614) 692-0526; DSN 850-0526; facsimile (614) 693-1642; or electronic mail address 5998.Documents@dla.mil. This document is available for downloading at World Wide Web URL <http://www.dscc.dla.mil>.

7.8 Changes from previous issue. The margins of this CID specification are marked with bars 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: 5998-2010-054

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/>.