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MILITARY STANDARD

**SERVICING TOOLS FOR ELECTRIC
CONTACTS AND CONNECTIONS,
SELECTION AND USE OF**



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MIL-STD-1646B

DEPARTMENT OF DEFENSE

Washington, DC 20301

SERVICING TOOLS FOR ELECTRIC CONTACTS
AND CONNECTIONS, SELECTION AND USE OF

MIL-STD-1646

1. This Military Standard is approved by all Departments and Agencies of the Department of Defense.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Air Engineering Center, ATTN: Code 9313, Lakehurst, NJ 08733, by using the self-addressed standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FOREWORD

This standard provides selected electrical contact crimping tools, turret heads, positioners, die sets, wire wrap tools, installing tools, removal tools, and grommet sealing plugs which are mandatory for use with all military electrical connectors and connections.

The selection guidance contained in this standard is to assist in the selection of the proper servicing tools.

The criteria for inclusion of servicing tools in this standard are as follows:

- a. The servicing tools shall be suitable for the applications indicated.
- b. The servicing tools shall be covered by Government specifications.
- c. The servicing tools shall be available for procurement.

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1. SCOPE

1.1 Scope. This standard establishes requirements for selection of electrical contact crimping tools, turret heads, positioners, die sets, wire wrap tools, installing tools, removal tools, and grommet sealing plugs, shown in detail in sections 100 through 600, for use with military electrical connectors and connections. Included are the following:

- a. Selected servicing tools chosen by the Departments and Agencies of the Department of Defense for use with military electrical connectors and connections.
- b. Guides for the choice and applications of servicing tools for use with military electrical connectors and connections.

Complete detailed requirements for servicing tools listed in this standard are covered in the applicable specification sheets or MS standards (see 4.2).

1.2 Purpose of standard. The purpose of this standard is to promote the use of standard servicing tools. The standard servicing tools are arranged in a form for quick reference and selection; e.g., electric contacts as related to applicable connectors, crimping tools and positioners. The applicable servicing tool specifications should be used for specific design details.

1.3 Background. This document is intended to fill the long felt need for documentation of the interrelationship among electrical connectors, connector contacts, servicing tools, and grommet sealing plugs, for use by connector manufacturers, equipment manufacturers, and the ultimate user, the Military. This need has increased with the recent advances in standardization of servicing tools and elimination of many of the older tools in the supply system. The first of such documentation was Survey AIR-53351/X-24-1 Crimping Tools for electrical contacts, Installing and Removal Tools for electrical contacts, and grommet sealing plugs for unwired contact cavities, issued by the Naval Air Systems Command in 1972. Upon agreement among the three Military services, the data contained in the survey has been expanded and updated, and is being issued in the form of this standard.

2. REFERENCED DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards and handbooks. Unless otherwise specified, the following specifications, standards and handbooks of the issue listed in the current Department of Defense Index of Specifications and Standards (DoDISS) and the supplement thereto (if applicable), form a part of this standard to the extent specified herein.

SPECIFICATIONS

MILITARY

MIL-C-5015	Connectors, Electrical, Circular Threaded, AN Type, General Specification for
MIL-C-21097	Connectors, Electrical, Printed Wiring Board, General Purpose, General Specification for
MIL-C-21097/16	Connectors, Electrical, Printed Wiring Board Contact, Crimp, Removable, Type CR
MIL-C-21097/17	Connectors, Electrical, Printed Wiring Board Contact, Solder, Removable, Type CR
MIL-C-22520	Crimping Tools, Terminal Hand or Power Actuated, Wire Termination, and Tool Kits, General Specification for
MIL-C-22520/1	Crimping Tools, Terminal, Hand, Wire Termination for Wire Barrel Sizes 12 Through 20
MIL-C-22520/2	Crimping Tools, Terminal, Hand, Wire Termination for Wire Barrel Sizes 20 Through 28
MIL-C-22520/4	Crimping Tools, Contact, Electric, Hand for Shielded Outer Contacts
MIL-C-22520/5	Crimping Tools, Terminal, Hand, Wire Termination, Large for Coaxial, Shielded Contacts and Ferrules, Terminal Lugs, Splices and End Caps

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-22520/7	Crimping Tools, Terminal, Hand, Wire Termination for Wire Barrel Sizes 16, 20 and 22
MIL-C-22520/10	Crimping Tools, Terminal, Hand, Wire Termination, Small for Coaxial, Shielded Contacts, Ferrules, Terminal Lugs, Splices, and End Caps
MIL-C-22520/17	Crimping Tools, Terminal, Hand, Wire Termination for Crimp Type Removable Contacts, Electric Connectors
MIL-C-22520/19	Crimping Tools, Terminal, Hand, Wire Termination for Size 16 Shielded Contacts (Outer Contact)
MIL-C-22520/20	Crimping Tools, Terminal, Hand, Wire Termination for Size 16 Shielded Contacts (Shield Crimp Sleeve)
MIL-C-22520/21	Crimping Tools, Terminal, Hand, Wire Termination for Size 12 Shielded Contacts (Outer Contact)
MIL-C-22520/22	Crimping Tools, Terminal, Hand, Wire Termination for Size 12 Shielded Contacts (Shield Crimp Sleeve)
MIL-C-22520/23	Crimping Tools, Terminal, Hand or Power Actuated, Wire Termination, Pneumatic Tool for Wire Barrel Sizes 0000 Through 8
MIL-C-22520/31	Crimping Tools, Contact, Electric, Hand, for Shielded, Size 12 Outer Contacts
MIL-C-22520/34	Crimping Tools, Terminal, Hand, Wire Terminal, for Crimp Type Removable Contacts, for MIL-C-28840 Connectors
MIL-C-22992	Connector, Plugs, and Receptacles, Electrical, Waterproof, Quick Disconnect, Heavy Duty Type, General Specification for

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SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-24308	Connectors, Electric, Rectangular, Miniature Polarized Shell, Rack and Panel, General Specification for
MIL-C-26482	Connectors, Electrical, (Circular, Miniature, Quick Disconnect, Environmental Resisting), General Specification for
MIL-C-26500	Connector, General Purpose, Electrical, Miniature, Circular, Environmental Resisting, General Specification for
MIL-C-26518	Connector, Electrical, Miniature, Rack and Panel, Environment Resisting, 200 Degrees C, Ambient Temperature (Inactive for New Design (use MIL-C-83733))
MIL-C-28731	Connectors, Electrical, Rectangular, Removable Contact, Formed Blade, Fork Type (for Rack and Panel and other applications), General Specification for
MIL-C-28731/20	Connector, Electrical, Contact, Fork Type, Crimp Removable (8.5 Amperes)
MIL-C-28731/23	Connector, Electrical, Contact, Fork Type, Removable, Double Wire Crimp
MIL-C-28731/35	Connector, Electrical, Contact, Fork Type, Crimp Removable (5.0 Amp)
MIL-C-28748	Connector, Electrical, Rectangular, Rack and Panel, Solder Type and Crimp Type Contacts, General Specification for
MIL-C-28754	Connectors, Electrical, Module Interface and Component Parts, General Specification for
MIL-C-28754/34	Connectors, Electrical, Module Interface and Component Parts (Connector, Type III, Female Contact and Insulator Bushing Set, Removable Wire Wrappost Terminal)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-28754/35	Connectors, Electrical, Module Interface and Component Parts (Connector, Type III, Male Contact and Insulator Bushing Set, Removable Wire Wrappost Terminal)
MIL-C-28754/36	Connectors, Electrical, Module Interface and Component Parts (Connector, Type III, Female Contact and Grounding Bushing Set, Removable Wire Wrappost Terminal)
MIL-C-28754/37	Connectors, Electrical, Module Interface and Component Parts (Connector, Type III, Female Contact and Polarizing Bushing Set, Removable Wire Wrappost Terminal)
MIL-C-28754/38	Connectors, Electrical, Module Interface and Component Parts (Connector, Type III, Wrappost Contact and Grounding Bushing Set, Removable Wire Wrappost Terminal)
MIL-C-28804	Connectors, Electric, Rectangular, High Density, Polarized Center Jackscrew, General Specification for
MIL-C-28804/9	Connectors, Electric, Rectangular, High Density, Polarized Center Jackscrew, Pin Contact, Size 22, Crimp Removable
MIL-C-28804/10	Connectors, Electric, Rectangular, High Density, Polarized Center Jackscrew, Socket Contact, Size 22, Crimp Removable
MIL-C-28840	Connectors, Electrical, Circular, Threaded, High Density, High Shock Shipboard, Class D
MIL-C-38999	Connectors, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, and Breech Coupling), Environment Resistant, Removable Crimp and Hermetic Solder Contacts, General Specification for

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39012	Connectors, Coaxial, Radio Frequency, General Specification for
MIL-C-39012/1	Connectors, Coaxial, Radio Frequency (Series N (Cabled) - Plug, Pin Contact, Class 2)
MIL-C-39012/2	Connectors, Coaxial, Radio Frequency (Series N (Cabled) - Plugs, and Flange Mounted Receptacles, Socket Contact, Class 2)
MIL-C-39012/3	Connectors, Coaxial, Radio Frequency (Series N (Cabled) - Receptacles, Jamnut Mounted, Socket Contact, Class 2)
MIL-C-39012/5	Connectors, Coaxial, Radio Frequency (Series N (Cabled) - Plug, Right Angle, Pin Contact, Class 2)
MIL-C-39012/16	Connectors, Coaxial, Radio Frequency (Series BNC (Cabled) - Plug, Pin Contact, Class 2)
MIL-C-39012/17	Connectors, Coaxial, Radio Frequency (Series BNC (Cabled) - Plug, Socket Contact, Class 2)
MIL-C-39012/18	Connectors, Coaxial, Radio Frequency (Series BNC (Cabled) - Receptacles, Socket Contact, Flange Mounted, Class 2)
MIL-C-39012/19	Connectors, Coaxial, Radio Frequency (Series BNC (Cabled) - Receptacles, Socket Contact, Jamnut Mounted, Class 2)
MIL-C-39012/20	Connectors, Coaxial, Radio Frequency (Series BNC (Cabled) - Plug, Pin Contact, Right Angle, Class 2)
MIL-C-39012/26	Connectors, Coaxial, Radio Frequency (Series TNC (Cabled) - Plug, Pin Contact, Right Angle, Class 2)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39012/27	Connectors, Coaxial, Radio Frequency (Series TNC (Cabled) - Plug, Socket Contact, Class 2)
MIL-C-39012/28	Connectors, Coaxial, Radio Frequency (Series TNC (Cabled) - Receptacle, Socket Contact, Jamnut Mounted, Class 2)
MIL-C-39012/29	Connectors, Coaxial, Radio Frequency (Series TNC (Cabled) - Receptacle, Socket Contact, Flange Mounted, Class 2)
MIL-C-39012/30	Connectors, Coaxial, Radio Frequency (Series TNC (Cabled) - Plug, Pin Contact, Right Angle, Class 2)
MIL-C-39012/35	Connectors, Coaxial, Radio Frequency (Series SC (Cabled) - Plug, Pin Contact, Class 2)
MIL-C-39012/36	Connectors, Coaxial, Radio Frequency (Series SC (Cabled) - Plug, Socket Contact, Class 2)
MIL-C-39012/38	Connectors, Coaxial, Radio Frequency (Series SC (Cabled) - Receptacle, Socket Contact, Flange Mounted, Rear Mounted, Class 2)
MIL-C-39012/39	Connectors, Coaxial, Radio Frequency (Series SC (Cabled) - Plug, Pin Contact, Right Angle, Class 2)
MIL-C-39012/40	Connectors, Coaxial, Radio Frequency (Series SC (Cabled) - Receptacle, Socket Contact, Jamnut, Rear Mounted, Class 2)
MIL-C-39012/55	Connectors, Coaxial, Radio Frequency (Series SMA (Cabled) - Plug, Pin Contact, Class 2)
MIL-C-39012/56	Connectors, Coaxial, Radio Frequency (Series SMA (Cabled) - Plug, Pin Contact, Right Angle, Class 2)
MIL-C-39012/57	Connectors, Coaxial, Radio Frequency (Series SMA (Cabled) - Plug, Socket Contact, Class 2)

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SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39012/58	Connectors, Coaxial, Radio Frequency (Series SMA (Cabled) - Receptacle, Socket Contact, Flange Mounted, Class 2)
MIL-C-39029	Contacts, Electrical Connector, General Specification for
MIL-C-39029/1	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-T-81714 Terminal Junction Systems)
MIL-C-39029/2	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-81659, Series 1 Connectors)
MIL-C-39029/3	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-81659, Series 1 Connectors)
MIL-C-39029/4	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-26482 Series 2, MIL-C-81703 Series 3, MIL-C-83733 and MIL-C-83723 Series 3 Connectors)
MIL-C-39029/5	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-26482 Series 2, MIL-C-81703 Series 3, MIL-C-83733 and MIL-C-83723 Series 3 Connectors)
MIL-C-39029/6	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-81511 Series 1 and 2 Connectors)
MIL-C-39029/7	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-26482 Series 2 and MIL-C-81703 Series 3 Connectors)
MIL-C-39029/8	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-26482 Series 2 and MIL-C-81703 Series 3 Connectors)
MIL-C-39029/9	Contacts, Electrical Connector, Pin, Crimp Removable, Thermocouple (for MIL-C-26482 Series 2, MIL-C-81703 Series 3, MIL-C-83723 Series 3, and MIL-C-83733 Connectors)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39029/10	Contacts, Electrical Connector, Socket, Crimp Removable, Thermocouple (for MIL-C-26482 Series 2, MIL-C-81703 Series 3, MIL-C-83723 Series 3, and MIL-C-83733 Connectors)
MIL-C-39029/11	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-81659 Series 2 Connectors)
MIL-C-39029/12	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-81659 Series 2 Connectors)
MIL-C-39029/13	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-81511 Series 1 Connectors)
MIL-C-39029/14	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-81511 Series 2 Connectors)
MIL-C-39029/16	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-81511 Series 4 Connectors)
MIL-C-39029/17	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-81511 Series 3 Connectors)
MIL-C-39029/18	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-81511 Series 3 and 4 Connectors)
MIL-C-39029/19	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-81511 Series 3 and 4 Connectors)
MIL-C-39029/20	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-81511 Series 3 Connectors)
MIL-C-39029/21	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-81511 Series 4 Connectors)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39029/22	Contacts, Electrical Connector, Socket, Crimp Removable (for Common Terminal System CTS and MIL-C-81511 Series 3 and 4 Class L Connectors)
MIL-C-39029/23	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-26482 Series 1 Connectors)
MIL-C-39029/24	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-26482 Series 1 Connectors)
MIL-C-39029/25	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-26482 Series 1 Connectors)
MIL-C-39029/26	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-26482 Series 1 Connectors)
MIL-C-39029/27	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, Size 12 (for MIL-C-38999 Series II Connectors)
MIL-C-39029/28	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded, Size 12 (for MIL-C-38999 Series I and II Connectors)
MIL-C-39029/29	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-5015 Series MS3450 and MIL-C-83723 Series II Connectors)
MIL-C-39029/30	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-5015 Series MS3450 and MIL-C-83723 Series II Connectors)
MIL-C-39029/31	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-26482 Series 1 and MIL-C-26500 Connectors)
MIL-C-39029/32	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-26482 Series 1 and MIL-C-26500 Connectors)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39029/33	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-81511 Series 1 Connectors)
MIL-C-39029/34	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-28748/3 and MIL-C-28478/13 Connectors)
MIL-C-39029/35	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-28748/4 Connectors)
MIL-C-39029/36	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-28748/9 Connectors)
MIL-C-39029/37	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-28748/10 Connectors)
MIL-C-39029/44	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-5015 Series MS3400 Connectors)
MIL-C-39029/45	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-5015 Series MS3400 Connectors)
MIL-C-39029/46	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-81511 Series 2 Connectors)
MIL-C-39029/47	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-81511 Series 1 and 2 Connectors)
MIL-C-39029/48	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-22992 Class L Connectors)
MIL-C-39029/49	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-22992 Class L Connectors)
MIL-C-39029/50	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-83733 Connectors)
MIL-C-39029/51	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-83733 Connectors)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39029/54	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-26500 Connectors)
MIL-C-39029/55	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-26500 Connectors)
MIL-C-39029/56	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-38999 Series I Connectors)
MIL-C-39029/57	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-24308, MIL-C-55302/68, /71, /72, /75, MIL-C-38999 Series II and MIL-C-83733 Connectors)
MIL-C-39029/58	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-24308, MIL-C-55302/69, MIL-C-38999 Series I and II, and MIL-C-83733 Connectors)
MIL-C-39029/59	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-38999 Series I Connectors)
MIL-C-39029/60	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-38999 Series I Connectors)
MIL-C-39029/63	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-24308 Connectors)
MIL-C-39029/64	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-24308 Connectors)
MIL-C-39029/69	Contacts, Electrical Connector, Socket, Crimp Removable (for MIL-C-85028/2 Connectors)
MIL-C-39029/70	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-85028/1 Connectors)
MIL-C-39029/71	Contacts, Electrical Connector, Pin, Removable, Solderless Wrappost Termination (for MIL-C-38999 Series II, MIL-C-24308, MIL-C-83733 and MIL-C-55302/69 Connectors)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39029/72	Contacts, Electrical Connector, Socket, Removable, Solderless Wrappost Termination (for MIL-C-38999 Series II, MIL-C-24308 and MIL-C-55302/68, /71, and /75 Connectors)
MIL-C-39029/73	Contacts, Electrical Connector, Socket, Solder, Removable, Shielded (for MIL-C-83723 Series 3 Connectors)
MIL-C-39029/74	Contacts, Electrical Connector, Pin, Solder, Removable, Shielded (for MIL-C-83723 Series 3 Connectors)
MIL-C-39029/75	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, Size 12 (for MIL-C-38999 Series I Connectors)
MIL-C-39029/76	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded, Size 16 (for MIL-C-38999 Series I and II Connectors)
MIL-C-39029/77	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, Size 16 (for MIL-C-38999 Series I Connectors)
MIL-C-39029/78	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded, Size 16 (for MIL-C-38999 Series II Connectors)
MIL-C-39029/79	Contacts, Electrical Connector, Pin, Crimp Removable, Shielded (for MIL-C-28748/9 Connectors)
MIL-C-39029/80	Contacts, Electrical Connector, Socket, Crimp Removable, Shielded (for MIL-C-28748/10 Connectors)
MIL-C-39029/83	Contacts, Electrical Connector, Pin, Crimp Removable (for MIL-C-28840 Connectors)
MIL-C-39029/84	Contact, Electrical Connector, Socket, Crimp Removable (for MIL-C-28840 Connectors)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-39029/85	Contact, Electrical Connector, Pin, Crimp Removable, Thermocouple (for MIL-C-5015, MS3450 Series and MIL-C-83723 Series 2 Connectors)
MIL-C-39029/86	Contact, Electrical Connector, Socket, Crimp Removable, Thermocouple (for MIL-C-5015, MS3450 Series and MIL-C-83723 Series 1i Connectors)
MIL-C-39029/87	Contact, Electrical Connector, Pin, Crimp Removable, Thermocouple (for MIL-C-38999 Series 1, 1i, 1ii, and 1v Connectors)
MIL-C-39029/88	Contact, Electrical Connector, Socket, Crimp Removable, Thermocouple (for MIL-C-38999 Series 1, 1ii and 1v Connectors)
MIL-C-39029/89	Contact, Electrical Connector, Socket, Crimp Removable, Thermocouple (for MIL-C-38999 Series 1i Connectors)
MIL-C-39029/90	Contact, Electrical Connector, Concentric Twinax, Pin, Size 8
MIL-C-39029/91	Contact, Electrical Connector, Concentric Twinax, Socket, Size 8
MIL-C-55302	Connectors, Printed Circuit Subassembly and Accessories, General Specification for
MIL-C-55302/32	Connectors, Printed Circuit Subassembly and Accessories: Contacts, Solder Eyelet and Wire Wrap Removable Types
MIL-C-55302/84	Connectors, Printed Circuit Subassembly and Accessories: Contacts - Crimp, Dip Solder Tail, Solder Turret and Wire Wrap
MIL-C-55302/97	Connector, Printed Circuit Subassembly and Accessories: Contact-Fork Type, Crimp Removable for Wire (Stranded)

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-C-81511	Connector, Electrical, Circular, High Density, Quick Disconnect, Environment Resisting; and Accessories, General Specification for
MIL-C-81511/15	Connector, Electrical, Circular, High Density, Quick Disconnect, Environment Resisting; and Accessories: Plug, Sealing Contact (Series 1 or 2)
MIL-C-81582	Connectors, Electrical, Bayonet Coupling, Environment Resisting, Umbilical, General Specification for
MIL-C-81659	Connector, Electrical, Rectangular, Environment Resistant, Crimp Contacts, General Specification for
MIL-C-81703	Connector, Electric, Circular, Miniature, Rack and Panel or Push-Pull Coupling, Environment Resisting
MIL-C-81714	Terminal Junction Systems, General Specification for
MIL-C-83723	Connectors, Electrical (Circular, Environment Resisting), Receptacles and Plugs, General Specification for
MIL-C-83733	Connector, Electrical, Miniature, Rectangular Type, Rack to Panel, Environmental Resisting, 200°C Total Continuous Operating Temperature, General Specification for
MIL-C-85028	Connector, Electrical, Rectangular, Individual Contact Sealing, Polarized Center Jackscrew, General Specification for
MIL-C-85028/4	Connectors, Electric, Rectangular, Individual Contact Sealing, Polarized Center Jackscrew, Sealing Plug, Size 16, Crimp Removable Contacts

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SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-I-81969	Installing and Removal Tools, Connector Electrical Contacts, General Specification for
MIL-I-81969/1	Installing and Removal Tools, Connector Electrical Contact, Type III, Class 1, Composition C
MIL-I-81969/2	Installing and Removal Tools, Connector Electrical Contact, Type I, Class 1, Composition C
MIL-I-81969/3	Installing and Removal Tools, Connector Electrical Contact, Type II, Class 1, Composition C
MIL-I-81969/4	Installing and Removal Tools, Connector Electrical Contact (Fork Type, Wrappost/Crimp Removable), Type II, Class 1, Composition C
MIL-I-81969/5	Installing and Removal Tools, Connector Electrical Contact (Fork Type, Crimp Removable), Type I, Class 1, Composition A
MIL-I-81969/6	Installing and Removal Tools, Connector Electrical Contact (Type CR Connector), Type II, Class 1, Composition A
MIL-I-81969/7	Installing and Removal Tools, Connector Electrical Contact (Type D Connector), Type III, Classes 1 and 2, Composition A
MIL-I-81969/8	Installing and Removal Tools, Connector Electrical Contact, Types I and II, Class 2, Composition A
MIL-I-81969/9	Installing and Removal Tools, Connector Electrical Contact, Type II, Class 1, Composition A
MIL-I-81969/10	Installing and Removal Tools, Connector Electrical Contact, Types I and II, Class 2, Composition B

SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-I-81969/11	Installing and Removal Tools, Connector Electrical Contacts (Type CR), Type II, Class 1, Composition C
MIL-I-81969/12	Installing and Removal Tools, Connector Electrical Contact, Type III, Class 2, Composition A
MIL-I-81969/13	Installing and Removal Tools, Connector Electrical Contact (Type CR), Type I, Class 1, Composition A
MIL-I-81969/14	Installing and Removal Tools, Connector Electrical Contact, Type III, Class 2, Composition B
MIL-I-81969/15	Installing and Removal Tools, Connector Electrical Contact, Type II, Class 2, Composition A
MIL-I-81969/16	Installing and Removal Tools, Connector Electrical Contact, Type III, Class 1, Composition B
MIL-I-81969/17	Installing and Removal Tools, Connector Electrical Contact, Type I, Class 1, Composition C
MIL-I-81969/18	Installing and Removal Tools, Connector Electrical Contact, Type I, Class 1, Composition C
MIL-I-81969/19	Installing and Removal Tools, Connector Electrical Contact, Type II, Class 1, Composition C
MIL-I-81969/20	Installing and Removal Tools, Connector Electrical Contact, Type II, Class 1, Composition A

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SPECIFICATIONS (Continued)

MILITARY (Continued)

MIL-I-81969/21	Installing and Removal Tools, Connector Electrical Contacts (Crimp Removable), Type II, Class 1, Composition A
MIL-I-81969/22	Installing and Removal Tools, Connector Electrical Contacts (Crimp Removable), Type II, Class 1, Composition A
MIL-I-81969/23	Installing and Removal Tools, Connector Electrical Contacts (Crimp Removable), Type I, Class 1, Composition A
MIL-I-81969/27	Installing and Removal Tools, Connector Electrical Contacts, Type II, Class 1, Composition A
MIL-I-81969/29	Installing and Removal Tools, Connector Electrical Contacts, Type II, Class 1, Composition B
MIL-I-81969/30	Installing and Removal Tools, Connector Electrical Contacts, Type II, Class 2, Composition C
MIL-I-81969/31	Installing and Removal Tools, Connector Electrical Contact, Type III, Class 1, Composition A
MIL-I-81969/33	Installing and Removal Tools, Connector Electrical Contact, Type I, Class 1, Composition A (for use with MIL-C-28840 Connectors)
MIL-T-83508	Tools, Solderless Wrap, Hand or Power Actuated, Wire Termination, General Specification for

STANDARDS

MILITARY

MS3187	Plug, End Seal, for MIL-C-26482, MIL-C-5015, MIL-C-81703 and MIL-C-83723 Electrical Connectors
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STANDARDS (Continued)

MILITARY (Continued)

MS3348	Contact Bushing, Electric, Wire Barrel
MS14056	Contacts, Electric Connector, Shielded Cable Applications, Size 8
MS25251	Plug, End Seal, Electric Connector
MS27186	Plug, End Seal, Electric Connector, Sizes 16, 20 and 50 Coaxial
MS27488	Plug, Sealing, Electric Connector

(Copies of specifications, standards, drawings and publications required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue in the current DoDISS and the supplement thereto, if applicable.

NATIONAL AEROSPACE STANDARD

NAS1668	Plug, Grommet Sealing, Electrical Connector
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(Copies of NAS publications may be obtained from the Aerospace Industries Association of America, Inc., 1725 DeSales Street, N.W. Washington, DC 20036.)

3. DEFINITIONS

3.1 A list of terms used in this standard which are commonly used in electrical connector engineering practice and generally accepted by the electrical and electronic industries are as follows:

- a. Adapter. An intermediate device to provide for attaching special accessories or to provide special mounting means.
- b. Ambient temperature. The temperature of the environment, usually air, surrounding a connector.
- c. Back-mounted. A connector mounted from the inside of a panel or box with its mounting flange inside the equipment.
- d. Barrel.
 - 1. Conductor barrel. The section of the terminal, splice or contact with accommodates the stripped conductor.
 - 2. Insulation barrel. The section of the terminal, splice or contact that accommodates the conductor insulation.
- e. Barrel chamfer. Bevel at the end of the conductor barrel for easier entry of the conductor.
- f. Basis metal. Metal from which the connector components are made and or which one or more metals or coatings may be deposited.
- g. Bayonet coupling, rotary. A quick coupling device for mating connectors utilizing pins on a connector and ramps on the mating connector. Mating and unmating is accomplished by rotating the coupling ring.
- h. Belled mouth (bellmouth). The flared or wide entrance of a terminal, splice or contact barrel to permit easier insertion of the conductor.
- i. Bifurcated contact. Describes lengthwise slotting of a flat spring contact as used in a printed circuit edge connector.

3. DEFINITIONS (Continued)

- j. Bin. Basic identification number.
- k. Body, connector. The main portion of a connector to which contacts and other components are attached. This term is not used with connectors incorporating nonintegral shells in their construction.
- l. Boot. A form placed around the wire terminations of a multiple contact connector as a protective housing or as a container for potting compound.
- m. Braid. Flexible conductor made of a woven or braided assembly of fine wires.
- n. Busing. The joining of two or more circuits.
- o. Butting dies. Crimping dies so designed that the next and indenter touch at the end of the crimping cycle. (Also called bottoming dies.)
- p. Cable clamp. A mechanical clamp attached to the cable side of the connector to support the cable or wire bundle, provide strain relief, and absorb vibration and shock otherwise transmitted by the cable to the contact/wire connection.
- q. Cable sealing clamp. A device consisting of a gland nut and sealing member designed to seal around a single jacket cable.
- r. Cable shielding clamp. A device consisting of a sealing member and cable support designed to terminate the screen (shield) of an electrical cable.
- s. Circumferential crimp. The type of crimp where the crimping dies completely surround a barrel resulting in symmetrical indentations in the barrel.
- t. Closed entry. A contact or contact cavity design in the insert or body of the connector which limits the size or position of the mating contact or printed circuit board to a predetermined dimension.

3. DEFINITIONS (Continued)

- u. Coaxial contact. A contact having two conducting surfaces, a center contact and a coaxially placed sleeve.
- v. Color coding. A system of identification of terminals and related devices.
- w. Conductor stop. A device on a terminal, splice, contact or tool used to prevent excessive extension of the conductor barrel.
- x. Connector, electrical. A device, either a plug or a receptacle, used to terminate or connect the conductors of individual wires or in cables and which provides a means to continue the conductors to a mating connector or printed circuit board.
- y. Connector set, electrical. Two or more separate connectors, plug connector and receptacle connector, designed to be mated together. The set may include mixed connectors mated together, such as one connector plug and one dummy connector receptacle, connector receptacle and one dummy electrical plug.
- z. Contact. The conductive element in a connector which makes actual contact for the purpose of transferring electrical energy.
- aa. Contact area. The area in contact between two conductors, two contacts, or a conductor and a contact permitting the flow of electricity.
- ab. Contact arrangement. The number, spacing and arrangement of contacts in a connector.
- ac. Contact engaging and separating force. Force needed to either engage or separate mating contacts.
- ad. Contact float. The overall side play and/or angular displacement of contacts within the insert cavity.

3. DEFINITIONS (Continued)

- ae. Contact resistance. Electrical resistance of a pair of engaged contacts. Resistance may be measured in ohms or millivolt drop at a specified current over the engaged contacts.
- af. Contact retainer. A device either on the contact or in the insert to retain the contact in an insert or body.
- ag. Contact retention. The axial load in either direction which a contact can withstand without being dislodged from its normal position within an insert or body.
- ah. Contact size. An assigned number denoting the size of the contact engaging end.
- ai. Contact wipe. The distance of travel (electrical engagement) made by one contact with another during its engagement or separation or during mating or unmating of the connector halves.
- aj. Coupling ring. That portion of a plug which aids in the mating or unmating of a plug and receptacle and holds the plug to the receptacle.
- ak. Cover, electrical connector. An item which is specifically designed to cover the mating end of a connector for mechanical and/or environmental protection.
- al. Creep distance. The shortest distance on the surface of an insulator separating two electrically conductive surfaces.
- am. Crimp. The physical compression (deformation) of a contact barrel around a conductor in order to make an electrical connection.
- an. Crimping. A pressure method of mechanically securing a terminal, splice or contact to a conductor.
- ao. Crimping dies. Portion of the crimping tool that shapes the crimp.
- ap. Crimping tool. Mechanism used for crimping.

3. DEFINITIONS (Continued)

- aq. Cutout, connector. The hole, usually round or rectangular, cut in a metal panel for mounting a connector. May include holes for mounting screws or bolts.
- ar. Depth of crimp. The distance the indenter penetrates into the barrel.
- as. Dielectric. A material having electrical insulating properties.
- at. Dummy connector assembly, electrical. Two or more electrical dummy connectors having a common mounting or mounted on each other, each one capable of being independently replaced. Excludes items which are furnished as mated pairs or sets.
- au. Dummy connector, receptacle. A connector receptacle which does not have provisions for attaching conductors. It is generally used for storage of a cable assembly connector plug.
- av. Dust cover. (See cover, electrical connector.)
- aw. Environmentally sealed. A device that is provided with gaskets, seals, grommets, potting or other means to keep out moisture, dirt, air or dust which might reduce its performance. Does not include nonphysical environments such as RF and radiation.
- ax. Extraction tool. A device used for removing removable contacts from a connector. A device used for removing taper pins from taper pin receptacles.
- ay. Ferrule. A short tube used to make connections to shielded or coaxial cables. Also used in connectors to reduce transmission of torque to grommet.
- az. Flange, connector. A projection extending from or around the periphery of a connector with provisions to permit mounting the connector to a panel.

3. DEFINITIONS (Continued)

- ba. Front mounted. A connector mounted on the outside of a panel or box with its mounting flange outside the equipment.
- bb. Full cycling control. Controls placed on the crimping cycle of crimping tools forcing the tool to be closed to its fullest extent completing the crimping cycle before the tool can be opened.
- bc. Gang disconnect. A connector that permits the rapid and simultaneous connection and disconnection of two or more electrical circuits.
- bd. Grid spaced. When contacts in a multiple contact connector are spaced in a geometric pattern.
- be. Grommet, connector. An elastomeric seal used on the cable side of a connector to seal the connector against moisture, dirt and air.
- bf. Guide pin. A pin or rod extending beyond the mating faces of a connector designed to guide the closing or mating of the connector to ensure proper engagement of contacts.
- bg. Head assembly. A positioner designed to attach to a crimping tool in place of a turret head.
- bh. Hermaphroditic connector. A connector design which utilizes pin and socket contacts in a balanced arrangement such that both mating connectors are identical. The contacts may also be hermaphroditic, and may be arranged as male and female contacts as for pins and sockets. Hermaphroditic contacts may also be used in a manner such that one half of each contact mating surface protrudes beyond the connector interface and both mating connectors are identical.
- bi. Hermaphroditic contact. A contact design which is neither pin or socket and which mates with other contact of the same design.

3. DEFINITIONS (Continued)

- bj. Housing, connector, electrical. Connector less insert, but with insert-retaining and positioning hardware required by standard construction.
- bk. Indenter. That part of a crimping die, usually the moving part, which indents or compresses the contact barrel.
- bl. Insert, electrical connector. An insulating element with or without contact(s), designed to position and support contacts in a connector.
- bm. Inspection gage. It shall conform to the gaging limits specified on the applicable tool specification sheet.
- bn. Inspection hole. A hole placed at the bottom end of a contact wire barrel to permit visual inspection to see that the conductor has been inserted to the proper depth in the barrel prior to crimping.
- bo. Installing tool. A device used to install contacts into a connector. A device is used to install taper pins into taper pin receptacles.
- bp. Insulation support. The portion of a barrel similar to an insulation grip except that it is not compressed around the conductor insulation.
- bq. Interface. The two surfaces on the contact side of mating connectors or plug-in component (e.g., relay) and receptacle, which face each other when mated.
- br. Interfacial seal. A sealing of mated connectors over the whole area of the interface to provide sealing around each contact.
- bs. Jacket. The outermost layer of insulating material of a cable or wire.
- bt. JackscREW (screwlock). A screw attached to one half of a two piece multiple contact connector used to draw and hold both halves together and to separate them.

3. DEFINITIONS (Continued)

- bu. Key. A short pin or other projection which slides in a mating slot, hole, groove or keyway to guide two parts being assembled. Generally used in shell-enclosed connectors to obtain polarization.
- bv. Keyway. A slot or groove in which a key slides.
- bw. Locator. Device for positioning terminals, splices, or contacts into crimping dies, positioner, or turret heads.
- bx. Locking spring. (See contact retainer.)
- by. Mate. The joining of two connectors.
- bz. Mold, potting, electrical connector. An item, solid or split, designed to be used as a hollow form into which potting compound is injected and allowed to cure or set to seal the back of an electrical connector. The potting may eliminate the need for a back shell of the connector. The form may or may not be removable after potting.
- ca. Nest. The portion of a crimping die which supports the barrel during crimping.
- cb. Nick (notch). A cut or notch in conductor strands or insulation.
- cc. Operating temperature. The maximum internal temperature resistant capabilities of a connector in continuous service.
- cd. Panel. The side or front of a piece of equipment, usually metal, on which connectors are mounted.
- ce. Pigtail. A short wire extending from an electric or electronic device to serve as a jumper or ground connection.
- cf. Pin contact. A contact having an engagement end that enters the socket contact.

3. DEFINITIONS (Continued)

- cg. Plating. The overlaying of a thin coating of metal on metallic components to improve conductivity, provide for easy soldering or prevent rusting or corrosion.
- ch. Plug connector. An electrical fitting with pin, socket, or pin and socket contacts, constructed to be affixed to the end of a cable, conduit, coaxial line, cord or wire for convenience in joining with another electrical connector(s), and not designed to be mounted on a bulkhead, chassis or panel.
- ci. Plug, end seal. Plug used to seal an open cavity in an electrical connector.
- cj. Polarize. The arrangement of mating connectors such that the connector can be mated in only one way.
- ck. Polarizing pin, key or keyway. A device incorporated in a connector to accomplish polarization.
- cl. Positioner. A device that is attached to a crimping tool and locates the contact in the correct location.
- cm. Post insulate. To insulate a connection after assembly.
- cn. Potting. The permanent sealing of the cable end of a connector with a compound or material to exclude moisture and/or to provide a strain relief.
- co. Potting form. (Not preferred - see mold, potting, electrical connector.)
- cp. Power contact. Type of contact used in multi-contact connectors to support the flow of rated current.
- cq. Pre-insulate. The insulation of a connector prior to assembly of the contact or terminal on the conductor.
- cr. Pre-tinned. Solder applied to either or both the contact and conductor prior to soldering.

3. DEFINITIONS (Continued)

- cs. Pull-out force. Force necessary to separate a conductor from a contact or terminal, or a contact from a connector, by exerting a tensile pull.
- ct. Quick disconnect. A type of connector or splice which permits relatively rapid locking and unlocking of mating parts.
- cu. Rack. A type of structure used to house electronic components which permits convenient removal of portions of equipment.
- cv. Radio frequency contact (RF contact). An impedance matched shielded contact.
- cw. Ram. The moving portion in the head of a crimping tool.
- cx. Range, wire. The sizes of conductors accommodated by a particular barrel. Also the diameters of wires accommodated by a sealing grommet.
- cy. Ratchet control. A device to ensure the full crimping cycle of a crimping tool.
- cz. Receptacle, connector. An electrical fitting with contacts constructed to be electrically connected to a cable, coaxial line, cord, or wire to join with another electrical connector(s), and is designed to be mounted on a bulkhead, wall, chassis, or panel.
- da. Removal tool. A device used to remove a contact from a connector. A device used to remove a taper pin from a taper pin receptacle.
- db. Scoop-proof. Scoop-proof means that because of the connector long shell design, it is impossible for the mating plug connector to inadvertently be cocked into the mating receptacle and damage the pins or electrically short the contacts.
- dc. Screwlock. (See jackscrew.)

3. DEFINITIONS (Continued)

- dd. Seamless terminal or splice. Terminal or splice conductor barrel made without an open seam.
- de. Serrations. Deformation of the inside surface of a conductor barrel to provide better gripping of the conductor or on the outside of the connector body to provide better gripping of the connector.
- df. Service life. A period of time which a device is expected to perform satisfactorily.
- dg. Service rating. The maximum voltage or current which a connector is designed to carry continuously.
- dh. Shell, electrical connector. The outside case of a connector into which the dielectric material and contacts are assembled.
- di. Shield, electrical connector. An item especially designed to be placed around that portion of a connector which contains the facilities for attaching wires or cables. It is used for shielding against electrical interference or mechanical injury and usually has provisions for passage of the wire or cable.
- dj. Shielded contact. A contact which carries alternating current and is shielded from unwanted signals (RFI and EMI). Generally these contacts are not impedance matched.
- dk. Shroud, insulation. (See insulation support.)
- dl. Slotted tongue. A slotted tongue for sliding onto the screw or stud so that neither screw nor unit needs removing.
- dm. Socket contact. A contact having an engagement end that will accept entry of a pin contact.
- dn. Solder cup. The end of a terminal or contact in which the conductor is inserted prior to being soldered.

3. DEFINITIONS (Continued)

- do. Solder eye. A solder type contact provided with a hole at its end through which a wire can be inserted prior to being soldered.
- dp. Solderless connection. The joining of two metals by pressure means without the use of solder, braze or any method requiring heat.
- dq. Solderless wrap. A technique of connecting stripped solid wire to a terminal post containing a series of sharp edges by winding the wire around the terminal.
- dr. Spade tongue terminal. Slotted tongue terminal designed to slip around a screw or stud without removing the nut.
- ds. Splice. Device used to join two or more conductors to each other.
- dt. Stop plate (see locator). A device attached to a crimping tool to properly locate a terminal, splice or contact in the tool prior to crimping.
- du. Strain relief clamp. (See cable clamp.)
- dv. Strip. To remove insulation from a conductor.
- dw. Threaded coupling. A means of coupling mating connectors by engaging threads in a coupling ring with threads on a receptacle shell.
- dx. Turret head. A device that is attached to a crimping tool which contains positioners.
- dy. Unbilical connector. A connector used to connect cables to a rocket or missile prior to launching and which is unmated from the missile at the time of launching.
- dz. Wiping action (see contact wipe). Action of two electrical contacts which come in contact by sliding against each other.

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3. DEFINITIONS (Continued)

- ea. Wire wrap tool. A device which mechanically turns a wire around a termination of a contact, forming a gas tight electrical connection equal to a solder termination or a crimp termination.
- eb. Work curve. A graph which plots the pull out force, indent force and relative conductivity of a crimp joint as a function of various depths of crimping.
- ec. Working voltage (see service rating). Maximum voltage at which a connector is rated to operate.

4. GENERAL REQUIREMENTS

4.1 Choice of servicing tools. By use of the tables in this standard, it should first be determined which contacts are used in the connectors under consideration. The applicable servicing tools to be used for these contacts should then be selected from the appropriate table.

4.1.1 Acquisition information. After a preliminary selection of the desired servicing tools has been made, reference should be made to the applicable specification and qualified products list. Acquisition documents for the servicing tools should reference the applicable specification sheet or MS standard, and the complete part number, size and title.

4.2 Conflict of requirements. After selection of a particular servicing tool from this document, reference should be made to the applicable specification sheet or MS standard for any technical conflicts. In the event of a conflict between the technical requirements described in this standard and those of the applicable specification sheet or MS standard, one of the latter shall govern.

5. DETAIL REQUIREMENTS

5.1 Detail requirements. The detailed requirements for the selection of servicing tools for electric contacts and connections are given in the applicable section of this standard.

Custodians:

Army - CR
Navy - AS
Air Force - 85

Preparing activity:

Navy - AS
(Project No. 5120-B011)

Review activities:

Army - MI, AR, AV
Navy - SH, EC, OS
Air Force - 12, 17, 99
DLA - ES

User activities:

Army - ME, AT
Navy - MC
Air Force - 19

SECTION 100

CONTACTS FOR ELECTRIC CONNECTORS AND CONNECTIONS

<u>Section</u>		<u>Page</u>
101	Contacts used in each connector type	101.1
110	National stock numbers (NSN) for contacts	110.1

SECTION 10:

TABLE 101-1. Contacts used in each connector type.

Connector types			Contact types									
General specification	Series	Front release	Rear release	MS standard or /sheet	Pin(P) or socket(S) hermaphroditic(H)	Thermocouple	Power	Solderless wrap-post termination	Shielded	Coaxial	Radio frequency	Superseded MS standard or /sheet
MIL-C-5015	---	---	X	MIL-C-39029/85	P	X	---	---	---	---	---	---
	---	---	X	MIL-C-39029/86	S	X	---	---	---	---	---	MS3162
	---	---	X	MIL-C-39029/29 1/	P	---	X	---	---	---	---	MS3163
	---	---	X	MIL-C-39029/30 1/	S	---	X	---	---	---	---	MS90453
	---	X	---	MIL-C-39029/44 1/	P	---	X	---	---	---	---	MS90454
MIL-C-21097	---	---	---	MIL-C-39029/45	S	---	---	---	---	---	---	---
	---	---	X	MIL-C-21097/16	S	---	X	---	---	---	---	---
MIL-C-22992	---	---	X	MIL-C-21097/17	S	---	X	---	---	---	---	MS90559
	---	---	X	MIL-C-39029/48 1/	P	---	X	---	---	---	---	MS90560
MIL-C-24308	---	---	---	MIL-C-39029/49 1/	S	---	---	---	---	---	---	---
	---	---	---	MIL-C-39029/76	P	---	---	---	X	---	---	---
	---	---	X	MIL-C-39029/63	S	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/64	P	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/57	S	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/58	P	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/71	P	---	---	X	---	---	---	---
	---	---	X	MIL-C-39029/72	S	---	---	X	---	---	---	---
MIL-C-26482	1	X	---	MIL-C-39029/31	P	---	X	---	---	---	---	MS3192
	1	X	---	MIL-C-39029/32	S	---	X	---	---	---	---	MS3193
	2	---	X	MIL-C-39029/4	P	---	X	---	X	---	---	---
	1	---	---	MIL-C-39029/23	P	---	---	---	X	---	---	---
	1	X	---	MIL-C-39029/24	S	---	---	---	X	---	---	---
	1	X	---	MIL-C-39029/25	P	---	---	---	X	---	---	---
	1	X	---	MIL-C-39029/26	S	---	---	---	X	---	---	---
	1	X	---	MIL-C-39029/5	S	---	X	---	---	---	---	---
	2	---	---	MIL-C-39029/7	P	---	---	---	X	---	---	---
	2	---	---	MIL-C-39029/8	S	---	---	---	X	---	---	---
	2	---	X	MIL-C-39029/9	P	X	---	---	X	---	---	---
	2	---	X	MIL-C-39029/10	S	X	---	---	X	---	---	---
	2	---	X	MIL-C-39029/73	S	---	---	---	---	---	---	---
	2	---	X	MIL-C-39029/74	P	---	---	---	X	---	---	---

See footnotes at end of table.

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TABLE 101-1. Contacts used in each connector type - Continued.

TABLE 101-1. Contacts used in each connector type - Continued.												
Connector types				Contact types								
General specification	Series	Front release	Rear release	MS standard or /sheet	Pin(P) or socket(S) hermaphrodite(H)	Thermocouple	Power	Solderless wrap-post termination	Shielded	Coaxial	Radio frequency	Superseded MS standard or /sheet
MIL-C-26500	---	X	---	MIL-C-39029/31	P	---	X	---	---	---	---	MS24254
	---	X	---	MIL-C-39029/32	S	---	X	---	---	---	---	MS24255
	---	X	---	MIL-C-39029/54	P	---	---	---	X	---	---	MS27184
	---	X	---	MIL-C-39029/55	S	---	---	---	X	---	---	MS27185
MIL-C-26518	---	X	---	MIL-C-39029/31	P	---	X	---	---	---	---	MS24254
	---	X	---	MIL-C-39029/32	S	---	X	---	---	---	---	MS24255
	---	X	---	MIL-C-39029/54	P	---	---	---	X	---	---	MS27184
	---	X	---	MIL-C-39029/55	S	---	---	---	X	---	---	MS27185
MIL-C-28731	---	---	X	MIL-C-28731/20	H	---	X	---	---	---	---	---
	---	---	X	MIL-C-28731/23	H	---	X	---	---	---	---	---
	---	---	X	MIL-C-28731/35	H	---	X	---	---	---	---	---
	---	---	X	MIL-C-28731/36	---	---	---	---	---	---	---	---
MIL-C-28748	---	X	---	MIL-C-39029/34	P	---	---	X	---	---	---	MS17807
	---	X	---	MIL-C-39029/36	P	---	X	---	---	---	---	MS17808
	---	X	---	MIL-C-39029/37	S	---	X	---	X	---	---	---
	---	X	---	MIL-C-39029/79	P	---	---	---	X	---	---	---
	---	X	---	MIL-C-39029/80	S	---	---	---	X	---	---	---
	---	X	---	MIL-C-39029/35	S	---	X	---	---	---	---	---
MIL-C-28754	---	X	---	MIL-C-28754/2	P	---	X	---	---	---	---	---
	---	X	---	MIL-C-28754/3	P	---	---	X	---	---	---	---
	---	X	---	MIL-C-28754/5	P	---	X	---	---	---	---	---
	---	X	---	MIL-C-28754/15	P	---	X	---	---	---	---	---
	---	X	---	MIL-C-28754/29	P	---	X	---	---	---	---	---
	---	X	---	MIL-C-28754/34	S	---	---	X	---	---	---	---
	---	X	---	MIL-C-28754/35	P	---	---	X	---	---	---	---
	---	X	---	MIL-C-28754/36	S	---	---	X	---	---	---	---
	---	X	---	MIL-C-28754/37	S	---	---	X	---	---	---	---
	---	X	---	MIL-C-28754/38	P	---	---	X	---	---	---	---
MIL-C-28804	---	---	X	MIL-C-28804/9	P	---	X	---	---	---	---	---
	---	---	X	MIL-C-28804/10	S	---	X	---	---	---	---	---
MIL-C-28840	---	---	X	MIL-C-39029/83	P	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/84	S	---	X	---	---	---	---	---

TABLE 101-1. Contacts used in each connector type - Continued.

Connector types			Contact types							Ratio frequency	Superneaded MS standard or /sheet				
General specification	Series	Front release	Rear release	MS standard or /sheet	Pin(P) or socket(S) hermaphroditic(H)	Thermocouple	Power	Solderless wrap-post termination	Shielded			Coaxial			
MIL-C-38999	II	---	X	MIL-C-39029/27	S	---	---	---	X	---	---	---	---	---	---
	I,II,III,IV	---	X	MIL-C-39029/28	P	---	---	---	X	---	---	---	---	---	MS27490
	I,III,IV	---	X	MIL-C-39029/56	S	---	---	X	---	---	---	---	---	---	MS27492
	II	---	X	MIL-C-39029/57	S	---	---	X	---	---	---	---	---	---	MS27493
	I,II,III,IV	---	X	MIL-C-39029/58	P	---	---	---	---	---	---	---	---	---	---
	I,II,III,IV	---	X	MIL-C-39029/87	P	X	---	---	---	---	---	---	---	---	---
	I,II,III,IV	---	X	MIL-C-39029/88	S	X	---	---	---	---	---	---	---	---	---
	I,III,IV	---	X	MIL-C-39029/89	S	X	---	---	---	---	---	---	---	---	---
	II	---	X	MIL-C-39029/59	S	---	---	---	---	X	---	---	---	---	MS27535
	I,III,IV	---	X	MIL-C-39029/60	P	---	---	---	X	X	---	---	---	---	MS27536
	I,III,IV	---	X	MIL-C-39029/71	P	---	---	---	---	---	---	---	---	---	---
	II	---	X	MIL-C-39029/72	S	---	---	---	---	---	---	---	---	---	---
	I,II,III,IV	---	X	MIL-C-39029/75	S	---	---	---	---	X	---	---	---	---	---
	I,II,III,IV	---	X	MIL-C-39029/76	P	---	---	---	---	X	---	---	---	---	---
	I,III,IV	---	X	MIL-C-39029/77	S	---	---	---	---	X	---	---	---	---	---
II	---	X	MIL-C-39029/78	S	---	---	---	---	X	---	---	---	---	---	
III	---	X	MIL-C-39012/90	P	---	---	---	---	---	X	---	---	---	---	
III	---	X	MIL-C-39012/91	S	---	---	---	---	---	X	---	---	---	---	
MIL-C-39012	---	---	---	MIL-C-39012/1	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/2	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/3	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/5	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/16	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/17	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/18	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/19	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/20	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/26	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/27	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/28	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/29	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/30	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/35	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/36	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/38	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/39	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/40	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/55	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/56	P	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/57	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/58	S	---	---	---	---	---	---	---	---	X	---
	---	---	---	MIL-C-39012/59	S	---	---	---	---	---	---	---	---	X	---

TABLE 101-1. Contacts used in each connector type - Continued.

Connector types				Contact types							Superseded MS standard or /sheet	
General specification	Series	Front release	Rear release	MS standard or /sheet	Pin(P) or socket(S) hermaph- roditic(H)	Thermocouple	Power	Solderless wrap-post termination	Shielded	Coaxial		Radio frequency
MIL-C-55302	---	---	X	MIL-C-39029/71	P	---	---	X	---	---	---	---
	---	---	X	MIL-C-39029/72	S	---	---	X	---	---	---	---
	---	---	X	MIL-C-55302/32	H	---	---	X	---	---	---	---
	---	---	X	MIL-C-55302/84	H	---	X	---	---	---	---	---
	---	---	X	MIL-C-55302/97	H	---	---	X	---	---	---	---
MIL-C-81511	---	X	---	MS18136 2/	S	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/57	S	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/58	P	---	---	X	---	---	---	---
	---	X	---	MS18136 2/	P	---	---	X	---	---	---	---
	1 6 2	X	---	MIL-C-39029/6	P	---	---	---	X	---	---	---
MIL-C-81582	1	X	---	MIL-C-39029/13	S	---	---	---	X	---	---	---
	1	X	---	MIL-C-39029/14	S	---	---	---	X	---	---	---
	2	X	---	MIL-C-39029/16	S	---	X	---	---	---	---	---
	4	---	X	MIL-C-39029/17	S	---	X	---	---	---	---	---
	3	---	X	MIL-C-39029/18	P	---	X	---	---	---	---	---
	3 6 4	---	X	MIL-C-39029/19	P	---	---	---	X	---	---	---
	3 6 4	---	X	MIL-C-39029/20	S	---	---	---	X	---	---	---
	3	---	X	MIL-C-39029/21	S	---	---	---	X	---	---	---
	4	---	X	MIL-C-39029/22	S	---	---	X	---	---	---	---
	3 6 4 (Class I)	---	---	MIL-C-39029/33	S	---	---	---	---	---	---	---
	1	X	---	MIL-C-39029/46	S	---	---	X	---	---	---	---
	2	X	---	MIL-C-39029/47	P	---	---	X	---	---	---	---
	1 6 2	X	---	MIL-C-39029/31	P	---	---	X	---	---	---	---
MIL-C-81659	---	X	---	MIL-C-39029/32	S	---	X	---	---	---	---	---
	---	X	---	MIL-C-39029/2	P	---	---	---	---	---	---	---
	1	X	---	MIL-C-39029/3	S	---	X	---	---	---	---	---
	1	X	---	MIL-C-39029/11	P	---	X	---	---	---	---	---
	2	---	X	MIL-C-39029/12	S	---	X	---	---	---	---	---

TABLE 101-1. Contacts used in each connector type - Continued.

Connector types			Contact types									
General specification	Series	Front release	Rear release	MS standard or /sheet	Pin(P) or socket(S) hermaphroditic(I)	Thermocouple	Power	Solderless wrap-post termination	Shielded	Coaxial	Radio frequency	Superseded MS standard or /sheet
MIL-C-81703	3	---	X	MIL-C-39029/4	P	---	X	---	---	---	---	---
	3	---	X	MIL-C-39029/5	S	---	X	---	X	---	---	---
	3	---	X	MIL-C-39029/7	P	---	---	---	X	---	---	---
	3	---	X	MIL-C-39029/8	S	---	---	---	---	---	---	---
	3	---	X	MIL-C-39029/9	P	X	---	---	---	---	---	---
	3	---	X	MIL-C-39029/10	P	X	---	---	---	---	---	---
	(Class N)	---	---	MIL-C-39029/22	S	---	X	---	---	---	---	---
	2	X	---	MIL-C-39029/31	P	---	X	---	---	---	---	MS1192
	2	X	---	MIL-C-39029/32	S	---	X	---	---	---	---	MS1193
	---	---	X	MIL-C-39029/1	P	---	X	---	---	---	---	---
MIL-C-83723	2	---	X	MIL-C-39029/85	P	X	---	---	---	---	---	---
	3	---	X	MIL-C-39029/4	P	---	---	---	---	---	---	---
	3	---	X	MIL-C-39029/5	S	---	X	---	---	---	---	---
	---	---	---	MIL-C-39029/7	P	---	---	---	---	---	---	---
	---	---	---	MIL-C-39029/8	S	---	---	---	X	---	---	---
	3	---	X	MIL-C-39029/9	P	X	---	---	---	---	---	---
	3	---	X	MIL-C-39029/10	S	X	---	---	---	---	---	---
	2	---	X	MIL-C-39029/29	P	---	---	---	---	---	---	---
	2	---	X	MIL-C-39029/30	S	---	---	---	---	---	---	---
	2	---	X	MIL-C-39029/73	S	---	X	---	X	---	---	---
	3	---	X	MIL-C-39029/74	P	---	---	---	X	---	---	---
	3	---	---	MIL-C-39029/86	S	X	---	---	---	---	---	---
	---	---	X	MIL-C-39029/4	P	---	---	---	---	---	---	---
MIL-C-83733	---	---	X	MIL-C-39029/5	S	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/9	P	X	---	---	---	---	---	---
	---	---	X	MIL-C-39029/10	S	---	---	---	---	---	---	---
	---	---	X	MIL-C-39029/50	P	---	---	---	X	---	---	---
	---	---	X	MIL-C-39029/51	S	---	---	---	X	---	---	---
	---	---	X	MIL-C-39029/57	S	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/58	P	---	X	---	---	---	---	---
	---	---	X	MIL-C-39029/71	P	---	---	X	---	---	---	---
	---	---	---	MIL-C-39029/72	S	---	---	X	---	---	---	---
	---	---	X	MIL-C-39029/73	S	---	---	---	---	---	---	---
	---	---	X	MIL-C-39029/74	P	---	---	---	X	---	---	---
	---	---	---	MIL-C-39029/69	S	---	X	---	---	---	---	---
	---	---	---	MIL-C-39029/70	P	---	X	---	---	---	---	---
MIL-C-85028	---	---	---	---	---	---	---	---	---	---	---	---

1/ Use bushing MS3348 where applicable.

2/ Use with sleeve MS18135

SECTION 110

TABLE 110-1. National stock numbers (NSN) for contacts.

BIN code	Current part number	Superseded part number	National stock number
100	M39029/1-100	M39029/1-16-22	---
101	M39029/1-101	M39029/1-16-20	---
102	M39029/1-102	M39029/1-14-16	---
103	M39029/1-103	M39029/1-12-12	---
104	M39029/2-104	M39029/2-22-22	---
105	M39029/2-105	M39029/2-20-20	---
106	M39029/2-106	M39029/2-16-16	---
107	M39029/3-107	M39029/3-22-22	---
108	M39029/3-108	M39029/3-20-20	---
109	M39029/3-109	M39029/3-16-16	---
110	M39029/4-110	M39029/4-20-20	---
		M83723-33B20	---
111	M39029/4-111	M39029/4-16-16	---
		M83723-33B-16	---
112	M39029/4-112	M39029/4-16-20	---
113	M39029/4-113	M39029/4-12-12	---
		M83723-33B12	---
114	M39029/4-114	M39029/4-12-16	---
115	M39029/5-115	M39029/5-20-20	---
		M83723-34B20	---
116	M39029/5-116	M39029/5-16-16	---
		M83723-34B16	---
117	M39029/5-117	M39029/5-16-20	---
118	M39029/5-118	M39029/5-12-12	---
		M83723-34B-12	---
119	M39029/5-119	M39029/5-12-16	---
120	M39029/6-120	M39029/6-01	---
121	M39029/6-121	M39029/6-02	---
122	M39029/6-122	M39029/6-03	---
123	M39029/6-123	M39029/6-04	---
124	M39029/6-124	M39029/6-05	---
125	M39029/6-125	M39029/6-06	---
126	M39029/7-126	M39029/7-001	---
127	M39029/7-127	M39029/7-002	---
128	M39029/7-128	M39029/7-003	---
129	M39029/8-129	M39029/8-001	---
130	M39029/8-130	M39029/8-002	---
131	M39029/8-131	M39029/8-003	---
132	M39029/9-132	M39029/9-20-20-C1	---
133	M39029/9-133	M39029/9-20-20-C2	---
134	M39029/9-134	M39029/9-20-20-C3	---
135	M39029/9-135	M39029/9-20-20-C4	---

TABLE 110-1. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
136	M39029/9-136	M39029/9-20-20-C5	---
138	M39029/10-138	M39029/10-20-20-C1	---
139	M39029/10-139	M39029/10-20-20-C2	---
140	M39029/10-140	M39029/10-20-20-C3	---
		M39029/10-20-20-C3	---
141	M39029/10-141	M39029/10-20-20-C4	---
		M39029/10-20-20-C4	---
142	M39029/10-142	M39029/10-20-20-C5	---
		M39029/10-20-20-C5	---
144	M39029/11-144	M39029/11-22-22	---
145	M39029/11-145	M39029/11-20-20	---
146	M39029/11-146	M39029/11-16-16	---
147	M39029/11-147	M39029/11-12-12	---
148	M39029/12-148	M39029/12-22-22	---
149	M39029/12-149	M39029/12-20-20	---
150	M39029/12-150	M39029/12-16-16	---
151	M39029/12-151	M39029/12-12-12	---
152	M39029/13-152	M39029/13-01	---
153	M39029/13-153	M39029/13-02	---
154	M39029/13-154	M39029/13-03	---
155	M39029/13-155	M39029/13-04	---
156	M39029/13-156	M39029/13-05	---
157	M39029/13-157	M39029/13-06	---
158	M39029/14-158	M39029/14-01	---
159	M39029/14-159	M39029/14-02	---
160	M39029/14-160	M39029/14-03	---
161	M39029/14-161	M39029/14-04	---
162	M39029/14-162	M39029/14-05	---
163	M39029/14-163	M39029/14-06	---
166	M39029/16-166	M39029/16-23-28	---
167	M39029/16-167	M39029/16-23-22	---
168	M39029/16-168	M39029/16-20-20	---
169	M39029/16-169	M39029/16-16-16	---
170	M39029/16-170	M39029/16-12-12	---
171	M39029/17-171	M39029/17-23-28	---
172	M39029/17-172	M39029/17-23-22	---
173	M39029/17-173	M39029/17-20-20	---
174	M39029/17-174	M39029/17-16-16	---
175	M39029/17-175	M39029/17-12-12	---
176	M39029/18-176	M39029/18-23-28	---
177	M39029/18-177	M39029/18-23-22	---
178	M39029/18-178	M39029/18-20-20	---
179	M39029/18-179	M39029/18-16-16	---
180	M39029/18-180	M39029/18-12-12	---

TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
181	M39029/19-181	M39029/19-01	---
182	M39029/19-182	M39029/19-02	---
183	M39029/19-183	M39029/19-03	---
184	M39029/20-184	M39029/20-01	---
185	M39029/20-185	M39029/20-02	---
186	M39029/20-186	M39029/20-03	---
187	M39029/21-187	M39029/21-01	---
188	M39029/21-188	M39029/21-02	---
189	M39029/21-189	M39029/21-03	---
190	M39029/22-190	M39029/22-22-28	---
		M39029/15-22-28	---
191	M39029/22-191	M39029/22-22-22	---
		M39029/15-22-22	---
192	M39029/22-192	M39029/22-20-20	---
193	M39029/22-193	M39029/22-16-16	---
194	M39029/23-194	M39029/23-01	---
195	M39029/23-195	M39029/23-02	---
196	M39029/23-196	M39029/23-02	---
197	M39029/23-197	M39029/23-04	---
198	M39029/23-198	M39029/23-05	---
199	M39029/24-199	M39029/24-01	---
200	M39029/24-200	M39029/24-02	---
201	M39029/24-201	M39029/24-03	---
202	M39029/24-202	M39029/24-04	---
203	M39029/24-203	M39029/24-05	---
204	M39029/25-204	M39029/25-01	---
205	M39029/25-205	M39029/25-02	---
206	M39029/25-206	M39029/25-03	---
207	M39029/26-207	M39029/26-01	---
208	M39029/26-208	M39029/26-02	---
209	M39029/26-209	M39029/26-03	---
210	M39029/27-210	M39029/27-12A	---
211	M39029/28-211	M39029/28-12A	---
212	M39029/29-212	M39029/29-16-16	---
		M83723-29T16	---
		M53162-16-16	---
213	M39029/29-213	M39029/29-12-12	---
		M83723-29T12	---
		M53162-12-12	---
214	M39029/29-214	M39029/29-8-8	---
		M83723-29T8	---
		M53162-8-8	---
215	M39029/29-215	M39029/29-4-4	---
		M83723-29T4	---
		MS3162-4-4	---

TABLE 110-1. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
216	M39029/29-216	M39029/29-0-0 M83723-29T0 M53162-0-0	--- --- ---
217	M39029/30-217	M39029/30-16S-16 M83723-30T16 M53163-16S-16	--- --- ---
218	M39029/30-218	M39029/30-16-16 M83723-30T16 M53163-16-16	--- --- ---
219	M39029/30-219	M39029/30-12-12 M83723-30T12 M53163-12-12	--- --- ---
220	M39029/30-220	M39029/30-8-8 M83723-30T8 M53163-8-8	--- --- ---
221	M39029/30-221	M39029/30-4-4 M83723-30T4 M53163-4-4	--- --- ---
222	M39029/30-222	M39029/30-0-0 M83723-30T0 M53163-0-0	--- --- ---
223	M39029/31-223	M53192-20-20A	---
224	M39029/31-224	M53192-20-20C4	---
225	M39029/31-225	M53192-20-20C1	---
226	M39029/31-226	M53192-20-20C2	---
227	M39029/31-227	M53192-20-20C3	---
228	M39029/31-228	M53192-16-16A	---
229	M39029/31-229	MS24254-16P	---
230	M39029/31-230	M53192-16-16C4	---
231	M39029/31-231	M53192-16-16C1	---
232	M39029/31-232	M53192-16-16C2	---
233	M39029/31-233	M53192-16-16C3	---
234	M39029/31-234	M53192-12-12A	---
235	M39029/31-235	MS24254-12P	---
236	M39029/31-236	MS3192-12-12C4	---
237	M39029/31-237	MS3192-12-12C1	---
238	M39029/31-238	MS3192-12-12C2	---
239	M39029/31-239	MS3192-12-12C3	---
240	M39029/31-240	MS3192-A20-20A	---
241	M39029/31-241	MS24254-20P	---
242	M39029/32-242	MS3193-20-20A	---
243	M39029/32-243	MS3193-20-20C4	---
244	M39029/32-244	MS3193-20-20C1	---
245	M39029/32-245	MS3193-20-20C2	---

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TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
246	M39029/32-246	MS3193-20-20C3	---
247	M39029/32-247	MS3193-16-16A	---
248	M39029/32-248	MS24255-16S	---
249	M39029/32-249	MS3193-16-16C4	---
250	M39029/32-250	MS3193-16-16C1	---
251	M39029/32-251	MS3193-16-16C2	---
252	M39029/32-252	MS3193-16-16C3	---
253	M39029/32-253	MS3193-12-12A	---
254	M39029/32-254	MS24255-12S	---
255	M39029/32-255	MS3193-12-12C4	---
256	M39029/32-256	MS3193-12-12C1	---
257	M39029/32-257	MS3193-12-12C2	---
258	M39029/32-258	MS3193-12-12C3	---
259	M39029/32-259	MS3193A20-20A	---
260	M39029/32-260	MS24255-20S	---
261	M39029/33-261	MS3343A23-28	---
262	M39029/33-262	MS3343B23-28	---
263	M39029/33-263	MS3343A23-22	---
264	M39029/33-264	MS3343B23-22	---
265	M39029/33-265	MS3343A20-20	---
266	M39029/33-266	MS3343B20-20	---
267	M39029/33-267	MS3343A16-16	---
268	M39029/33-268	MS3343B16-16	---
269	M39029/33-269	MS3343A12-12	---
270	M39029/33-270	MS3343B12-12	---
271	M39029/34-271	MS17803-20-20	---
272	M39029/34-272	MS17803-16-20	---
273	M39029/34-273	MS17803-16-16	---
274	M39029/35-274	MS17804-20-20	---
275	M39029/35-275	MS17804-16-20	---
276	M39029/35-276	MS17804-16-16	---
277	MS39029/36-277	MS17807-16-20	---
278	MS39029/36-278	MS17807-16-16	---
279	MS39029/37-279	MS17808-16-20	---
280	MS39029/37-280	MS17808-16-16	---
287	MS39029/44-287	MS90453-16-22	---
288	MS39029/44-288	MS90453-16-16	---
289	MS39029/44-289	MS90453-12-16	---
290	MS39029/44-290	MS90453-12-12	---
291	MS39029/44-291	MS90453-8-8	---
292	MS39029/44-292	MS90453-4-4	---
293	MS39029/44-293	MS90453-0-0	---
294	MS39029/45-294	MS90454-16-22	---
295	MS39029/45-295	MS90454-16-16	---

TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
296	MS39029/45-296	MS90454-12-16	---
297	MS39029/45-297	MS90454-12-12	---
298	MS39029/45-298	MS90454-8-8	---
299	MS39029/45-299	MS90454-4-4	---
300	MS39029/45-300	MS90454-0-0	---
301	M39029/46-301	MS90460A23-28	---
302	M39029/46-302	MS90460B23-28	---
303	M39029/46-303	MS90460A23-22	---
304	M39029/46-304	MS90460B23-22	---
305	M39029/46-305	MS90460A20-20	---
306	M39029/46-306	MS90460B20-20	---
307	M39029/46-307	MS90460A16-16	---
308	M39029/46-308	MS90460B16-16	---
309	M39029/46-309	MS90460-A12-12	---
310	M39029/46-310	MS90460B12-12	---
311	M39029/47-311	MS90461-A23-28	---
312	M39029/47-312	MS90461-B23-28	---
313	M39029/47-313	MS90461-A23-22	---
314	M39029/47-314	MS90461-B23-22	---
315	M39029/47-315	MS90461-A20-20	---
316	M39029/47-316	MS90461-B20-20	---
317	M39029/48-317	MS90559-11	---
318	M39029/48-318	MS90559-12	---
319	M39029/48-319	MS90559-14	---
320	M39029/48-320	MS90559-8	---
321	M39029/48-321	MS90559-9	---
322	M39029/48-322	MS90559-13	---
323	M39029/48-323	MS90559-5	---
324	M39029/48-324	MS90559-6	---
325	M39029/48-325	MS90559-3	---
326	M39029/48-326	MS90559-4	---
327	M39029/48-327	MS90559-1	---
328	M39029/48-328	MS90559-2	---
329	M39029/49-329	MS90560-7	---
330	M39029/49-330	MS90560-8	---
331	M39029/49-331	MS90560-5	---
332	M39029/49-332	MS90560-9	---
333	M39029/49-333	MS90560-3	---
334	M39029/49-334	MS90560-2	---
335	M39029/49-335	MS90560-1	---
336	M39029/47-336	MS90461-A16-16	---
337	M39029/47-337	MS90461-B16-16	---
338	M39029/47-338	MS90461-A12-12	---
339	M39029/47-339	MS90461-B12-12	---

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TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
340	M39029/50-340	N83733/13-12	---
341	M39029/51-341	N83733/14-12	---
342	M39029/54-342	MS27184-22P	---
343	M39029/54-343	MS27184-20P	---
344	M39029/55-344	MS27185-22S	---
345	M39029/55-345	MS27185-20S	---
348	M39029/56-348	MS27490-22D	---
349	M39029/56-349	MS27490-22M	---
350	M39029/56-350	MS27490-22	---
351	M39029/56-351	MS27490-20	---
352	M39029/56-352	MS27490-16	---
353	M39029/56-353	MS27490-12	---
354	M39029/57-354	MS27491-22D	---
355	M39029/57-355	MS27491-22M	---
356	M39029/57-356	MS27491-22	---
357	M39029/57-357	MS27491-20	---
358	M39029/57-358	MS27491-16	---
359	M39029/57-359	MS27491-12	---
360	M39029/58-360	MS27493-22D	---
361	M39029/58-361	MS27493-22M	---
362	M39029/58-362	MS27493-22	---
363	M39029/58-363	MS27493-20	---
364	M39029/58-364	MS27493-16	---
365	M39029/58-365	MS27493-12	---
366	M39029/59-366	MS27535	---
367	M39029/60-367	MS27536	---
368	M39029/63-368	M24308/10-1	---
369	M39029/64-369	M24308/11-1	---
384	M39029/69-384	M39029/69-1	---
385	M39029/69-385	M39029/69-2	---
386	M39029/69-386	M39029/69-3	---
387	M39029/70-387	M39029/70-1	---
388	M39029/70-388	M39029/70-2	---
389	M39029/70-389	M39029/70-3	---
390	M39029/71-390	M39029/71-1	---
391	M39029/71-391	M39029/71-2	---
392	M39029/71-392	M39029/71-3	---
393	M39029/72-393	M39029/72-1	---
394	M39029/72-394	M39029/72-2	---
395	M39029/72-395	M39029/72-3	---
396	M39029/73-396	M39029/73-12A	---
397	M39029/73-397	M39029/73-12B	---
398	M39029/73-398	M39029/73-12C	---
399	M39029/74-399	M39029/74-12A	---

TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
400	M39029/74-400	M39029/74-12B	---
401	M39029/74-401	M39029/74-12C	---
402	M39029/27-402	M39029/27-12B	---
403	M39029/27-403	M39029/27-12C	---
404	M39029/27-404	M39029/27-12D	---
405	M39029/27-405	M39029/27-12E	---
406	M39029/27-406	M39029/27-12F	---
407	M39029/27-407	M39029/27-12G	---
408	M39029/27-408	M39029/27-12H	---
409	M39029/28-409	M39029/28-12B	---
410	M39029/28-410	M39029/28-12C	---
411	M39029/28-411	M39029/28-12D	---
412	M39029/28-412	M39029/28-12E	---
413	M39029/28-413	M39029/28-12F	---
414	M39029/28-414	M39029/28-12G	---
415	M39029/28-415	M39029/28-12H	---
416	M39029/75-416	M39029/75-12A	---
417	M39029/75-417	M39029/75-12B	---
418	M39029/75-418	M39029/75-12C	---
419	M39029/75-419	M39029/75-12D	---
420	M39029/75-420	M39029/75-12E	---
421	M39029/75-421	M39029/75-12F	---
422	M39029/75-422	M39029/75-12G	---
423	M39029/75-423	M39029/75-12H	---
424	M39029/76-424	M39029/76-16A	---
425	M39029/76-425	M39029/76-16B	---
426	M39029/76-426	M39029/76-16C	---
427	M39029/76-427	M39029/76-16D	---
428	M39029/77-428	M39029/77-16A	---
429	M39029/77-429	M39029/77-16B	---
730	M39029/77-430	M39029/77-16C	---
431	M39029/77-431	M39029/77-16D	---
432	M39029/78-432	M39029/78-16A	---
433	M39029/78-433	M39029/78-16B	---
434	M39029/78-434	M39029/78-16C	---
435	M39029/78-435	M39029/78-16D	---
436	M39029/79-436	M39029/79-16A	---
437	M39029/79-437	M39029/79-16B	---
438	M39029/80-438	M39029/80-16A	---
439	M39029/80-439	M39029/80-16B	---
440	M39029/34-440	M39029/34-22-22	---
441	M39029/35-441	M39029/35-22-22	---
448	M39029/31-448	M39029/31-20-20	---
449	M39029/32-449	M39029/32-20-20	---

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TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
450	M39029/83-450	M39029/83-20-22	---
451	M39029/83-451	M39029/83-20-28	---
452	M39029/84-452	M39029/84-20-22	---
453	M39029/84-453	M39029/84-20-28	---
454	M39029/85-454	M39029/85-16-16-C1	---
455	M39029/85-455	M39029/85-16-16-C2	---
456	M39029/85-456	M39029/85-16-16-C3	---
457	M39029/85-457	M39029/85-16-16-C4	---
458	M39029/85-458	M39029/85-12-12-C1	---
459	M39029/85-459	M39029/85-12-12-C2	---
460	M39029/85-460	M39029/85-12-12-C3	---
461	M39029/85-461	M39029/85-12-12-C4	---
462	M39029/86-462	M39029/86-16-16-C1	---
463	M39029/86-463	M39029/86-16-16-C2	---
464	M39029/86-464	M39029/86-16-16-C3	---
465	M39029/86-465	M39029/86-16-16-C4	---
466	M39029/86-466	M39029/86-12-12-C1	---
467	M39029/86-467	M39029/86-12-12-C2	---
468	M39029/86-468	M39029/86-12-12-C3	---
469	M39029/86-469	M39029/86-12-12-C4	---
470	M39029/87-470	M39029/87-22-22-C1	---
471	M39029/87-471	M39029/87-22-22-C2	---
472	M39029/87-472	M39029/87-22-22-C3	---
473	M39029/87-473	M39029/87-22-22-C4	---
474	M39029/87-474	M39029/87-20-20-C1	---
475	M39029/87-475	M39029/87-20-20-C2	---
476	M39029/87-476	M39029/87-20-20-C3	---
477	M39029/87-477	M39029/87-20-20-C4	---
478	M39029/87-478	M39029/87-16-16-C1	---
479	M39029/87-479	M39029/87-16-16-C2	---
480	M39029/87-480	M39029/87-16-16-C3	---
481	M39029/87-481	M39029/87-16-16-C4	---
482	M39029/88-482	M39029/88-22-22-C1	---
483	M39029/88-483	M39029/88-22-22-C2	---
484	M39029/88-484	M39029/88-22-22-C3	---
485	M39029/88-485	M39029/88-22-22-C4	---
486	M39029/88-486	M39029/88-20-20-C1	---
487	M39029/88-487	M39029/88-20-20-C2	---
488	M39029/88-488	M39029/88-20-20-C3	---
489	M39029/88-489	M39029/88-20-20-C4	---
490	M39029/88-490	M39029/88-16-16-C1	---
491	M39029/88-491	M39029/88-16-16-C2	---
492	M39029/88-492	M39029/88-16-16-C3	---
493	M39029/88-493	M39029/88-16-16-C4	---

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TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
494	M39029/89-494	M39029/89-22-22-C1	---
495	M39029/89-495	M39029/89-22-22-C2	---
496	M39029/89-496	M39029/89-22-22-C3	---
497	M39029/89-497	M39029/89-22-22-C4	---
498	M39029/89-498	M39029/89-20-20-C1	---
499	M39029/89-499	M39029/89-20-20-C2	---
500	M39029/89-500	M39029/89-20-20-C3	---
501	M39029/89-501	M39029/89-20-20-C4	---
502	M39029/89-502	M39029/89-16-16-C1	---
503	M39029/89-503	M39029/89-16-16-C2	---
504	M39029/89-504	M39029/89-16-16-C3	---
505	M39029/89-505	M39029/89-16-16-C4	---
506	M39029/89-506	---	---
507	M39029/89-507	M39029/1-20-22D	---
508	M39029/83-508	---	---
509	M39029/84-509	---	---
528	M39029/58-528	---	---
529	M39029/90-529	---	---
530	M39029/91-530	---	---
---	MS3348-8-10	---	---
---	MS3348-4-6	---	---
---	MS3348-4-6L	---	---
---	MS3348-0-2	---	---
---	MS14056-1	---	---
---	MS14056-2	---	---
---	MS18134-20	---	5999-00-462-6876
---	MS18135-20	---	---
---	MS18136-20	---	5999-00-234-0858
---	MS18281	---	---
---	M21097/16-01	---	---
---	M21097/16-02	---	5999-00-458-9662
---	M21097/16-03	---	5999-00-486-5991
---	M21097/16-04	---	5999-00-361-8540
---	M21097/17-01	---	5999-00-135-4116
---	M21097/17-02	---	---
---	M28731/20-0001	---	---
---	M28731/20-0002	---	---
---	M28731/23-0001	---	---
---	M28731/35-0001	---	---
---	M28731/35-0002	---	---
---	M28754/34-01	---	---
---	M28754/34-02	---	---
---	M28754/34-03	---	---
---	M28754/34-04	---	---

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TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
---	M28754/34-05	---	---
---	M28754/34-06	---	---
---	M28754/35-01	---	---
---	M28754/35-02	---	---
---	M28754/35-03	---	---
---	M28754/35-04	---	---
---	M28754/35-05	---	---
---	M28754/35-06	---	---
---	M28754/36-01	---	---
---	M28754/36-02	---	---
---	M28754/36-03	---	---
---	M28754/36-04	---	---
---	M28754/36-05	---	---
---	M28754/36-06	---	---
---	M28754/37-01	---	---
---	M28754/37-02	---	---
---	M28754/37-03	---	---
---	M28754/37-04	---	---
---	M28754/37-05	---	---
---	M28754/37-06	---	---
---	M28754/37-07	---	---
---	M28754/37-08	---	---
---	M28754/37-09	---	---
---	M28754/37-10	---	---
---	M28754/37-11	---	---
---	M28754/37-12	---	---
---	M28754/37-13	---	---
---	M28754/37-14	---	---
---	M28754/37-15	---	---
---	M28754/37-16	---	---
---	M28754/37-17	---	---
---	M28754/37-18	---	---
---	M28754/37-19	---	---
---	M28754/37-20	---	---
---	M28754/37-21	---	---
---	M28754/37-22	---	---
---	M28754/37-23	---	---
---	M28754/37-24	---	---
---	M28754/37-25	---	---
---	M28754/37-26	---	---
---	M28754/37-27	---	---
---	M28754/37-28	---	---
---	M28754/37-29	---	---
---	M28754/37-30	---	---

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TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
---	M28754/37-31	---	---
---	M28754/37-32	---	---
---	M28754/37-33	---	---
---	M28754/37-34	---	---
---	M28754/37-35	---	---
---	M28754/37-36	---	---
---	M28754/37-37	---	---
---	M28754/37-38	---	---
---	M28754/37-39	---	---
---	M28754/37-40	---	---
---	M28754/37-41	---	---
---	M28754/37-42	---	---
---	M28754/37-43	---	---
---	M28754/37-44	---	---
---	M28754/37-45	---	---
---	M28754/37-46	---	---
---	M28754/37-47	---	---
---	M28754/37-48	---	---
---	M28754/37-49	---	---
---	M28754/37-50	---	---
---	M28754/37-51	---	---
---	M28754/37-52	---	---
---	M28754/37-53	---	---
---	M28754/37-54	---	---
---	M28754/37-55	---	---
---	M28754/37-56	---	---
---	M28754/37-57	---	---
---	M28754/37-58	---	---
---	M28754/37-59	---	---
---	M28754/37-60	---	---
---	M28754/37-61	---	---
---	M28754/37-62	---	---
---	M28754/37-63	---	---
---	M28754/37-64	---	---
---	M28754/37-65	---	---
---	M28754/37-66	---	---
---	M28754/37-67	---	---
---	M28754/37-68	---	---
---	M28754/37-69	---	---
---	M28754/37-70	---	---
---	M28754/37-71	---	---
---	M28754/37-72	---	---
---	M28754/37-73	---	---
---	M28754/37-74	---	---

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TABLE 110-I. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
---	M28754/37-75	---	---
---	M28754/37-76	---	---
---	M28754/37-77	---	---
---	M28754/37-78	---	---
---	M28754/37-79	---	---
---	M28754/37-80	---	---
---	M28754/37-81	---	---
---	M28754/37-82	---	---
---	M28754/37-83	---	---
---	M28754/37-84	---	---
---	M28754/37-85	---	---
---	M28754/37-86	---	---
---	M28754/37-87	---	---
---	M28754/37-88	---	---
---	M28754/37-89	---	---
---	M28754/37-90	---	---
---	M28754/37-91	---	---
---	M28754/37-92	---	---
---	M28754/37-93	---	---
---	M28754/37-94	---	---
---	M28754/37-95	---	---
---	M28754/37-96	---	---
---	M28754/37-97	---	---
---	M28754/37-98	---	---
---	M28754/37-99	---	---
---	M28754/37-100	---	---
---	M28754/37-101	---	---
---	M28754/37-102	---	---
---	M28754/37-103	---	---
---	M28754/37-104	---	---
---	M28754/37-105	---	---
---	M28754/37-106	---	---
---	M28754/37-107	---	---
---	M28754/37-108	---	---
---	M28754/38-01	---	---
---	M28754/38-02	---	---
---	M28754/38-03	---	---
---	M28754/38-04	---	---
---	M28754/38-05	---	---
---	M28754/38-06	---	---
---	M28804/9-1	---	---
---	M28804/10-1	---	---
---	M55302/32-01	---	---
---	M55302/32-02	---	---

TABLE 110-1. National stock numbers (NSN) for contacts - Continued.

BIN code	Current part number	Superseded part number	National stock number
---	M55302/32-03	---	---
---	M55302/32-04	---	---
---	M55302/32-05	---	---
---	M55302/32-06	---	---
---	M55302/32-07	---	---
---	M55302/84-01	---	---
---	M55302/84-02	---	---
---	M55302/84-05	---	---
---	M55302/97-01	---	---
---	M55302/97-02	---	---

SECTION 200

CRIMPING TOOLS FOR CONTACTS

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201	Crimping tool application	201.1
202	Crimping tools for power contacts	202.1
203	Crimping tools for shielded contacts	203.1
205	Crimping tools for radio-frequency connector contacts	205.1
210	National stock numbers (NSN) for crimping tools	210.1

SECTION 201

TABLE 201-I. Crimping tool application.

Connector types	Crimping tool types
MIL-C-5015	MIL-C-22520/1 MIL-C-22520/23
MIL-C-21097	In accordance with manufacturer's recommended tooling
MIL-C-22992	MIL-C-22520/23
MIL-C-24308	MIL-C-22520/2 MIL-C-22520/7
MIL-C-26482	MIL-C-22520/7
MIL-C-26500	MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/7
MIL-C-28731	MIL-C-22520/17
MIL-C-28748	MIL-C-22520/1 MIL-C-22520/2 Manufacturer's recommended tooling
MIL-C-28754	MIL-C-22520/2 Manufacturer's recommended tooling
MIL-C-28804	MIL-C-22520/2 MIL-C-22520/34
MIL-C-28840	MIL-C-22520/34
MIL-C-28999	MIL-C-22520/31 MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/5 MIL-C-22520/7
MIL-C-39012	MIL-C-22520/1 MIL-C-22520/5

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TABLE 201-I. Crimping tool application - Continued.

Connector types	Crimping tool types
MIL-C-55302	MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/17 MIL-C-22520/7
MIL-C-81511	MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/5 MIL-C-22520/7 MIL-C-22520/10 MIL-C-22520/19 MIL-C-22520/20 MIL-C-22520/21 MIL-C-22520/22
MIL-C-81582	MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/7
MIL-C-81659	MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/7
MIL-C-81703	MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/5 MIL-C-22520/7
MIL-T-81714	MIL-C-22520/1 MIL-C-22520/2
MIL-C-83723	MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/7 MIL-C-22520/23 MIL-C-22520/5
MIL-C-83733	MIL-C-22520/1 MIL-C-22520/2 MIL-C-22520/5 MIL-C-22520/7
MIL-C-85028	MIL-C-22520/1

SECTION 102

TABLE 202-1. Crimping tools for power contacts.

Part number	Contacts			Crimping tools					
	Bin code	Mating end size	Wire barrel size	Option 1			Option 2		
				Basic tool	Posit. lomer	Locator	Basic tool	Posit. lomer	Basic tool
M39029/1-100	100	16	22	M22520/2-01	M22520/2-11	---	---	---	---
M39029/1-101	101	16	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/1-102	102	14	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/1-103	103	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/1-507	507	---	---	M22520/2-01	M22520/2-32	---	---	---	---
M39029/2-104	104	22	22	M22520/2-01	M22520/2-11	---	---	---	---
M39029/2-105	105	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/2-106	106	16	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/3-107	107	22	22	M22520/2-01	M22520/2-11	---	---	---	---
M39029/3-108	108	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/3-109	109	16	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/4-110	110	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/4-112	112	16	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/4-111	111	16	16	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/4-114	114	12	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/4-113	113	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/5-115	115	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/5-117	117	16	16	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/5-116	116	16	16	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/5-119	119	12	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/5-118	118	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/9-132	132	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/9-133	133	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/9-134	134	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/9-135	135	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/10-136	136	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/10-138	138	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/10-139	139	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/10-140	140	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/10-141	141	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---
M39029/10-142	142	22	22	M22520/2-01	M22520/2-23	---	M22520/2-01	---	---
M39029/11-144	144	22	22	M22520/2-01	M22520/2-08	---	M22520/2-01	---	---
M39029/11-145	145	20	20	M22520/1-01	M22520/1-11	---	M22520/2-01	---	---
M39029/11-146	146	16	16	M22520/1-01	M22520/1-11	---	M22520/2-01	---	---
M39029/11-147	147	12	12	M22520/2-01	M22520/2-23	---	M22520/2-01	---	---
M39029/12-148	148	22	22	M22520/2-01	M22520/2-08	---	M22520/2-01	---	---
M39029/12-149	149	20	20	M22520/2-01	M22520/1-02	---	M22520/2-01	---	---
M39029/12-150	150	16	16	M22520/1-01	M22520/1-02	---	M22520/2-01	---	---

See footnote at end of table.

TABLE 202-1. Crimping tools for power contacts - Continued.

Contacts				Crimping tools				Option 1		Option 2		Option 3	
Part number	Bin code	Mating end size	Wire barrel size	Basic tool	Positioner	Locator	Basic tool	Positioner	Basic tool	Positioner	Basic tool	Positioner	
M39029/12-151	151	12	12	M22520/1-01	M22520/1-11	---	---	---	---	---	---	---	
M39029/16-166	166	23	28	M22520/2-01	M22520/2-13	---	---	---	---	---	---	---	
M39029/16-167	167	23	22	M22520/2-01	M22520/2-13	---	---	---	---	---	---	---	
M39029/16-168	168	20	20	M22520/2-01	M22520/2-14	---	M22520/7-01	M22520/7-02	M22520/7-01	M22520/7-02	---	---	
M39029/16-169	169	16	16	M22520/2-01	M22520/2-15	---	M22520/7-01	M22520/7-03	M22520/7-01	M22520/7-03	---	---	
M39029/16-170	170	12	12	M22520/1-01	M22520/1-09	---	---	---	---	---	---	---	
M39029/17-171	171	23	28	M22520/2-01	M22520/2-16	---	---	---	---	---	---	---	
M39029/17-172	172	23	22	M22520/2-01	M22520/2-16	---	---	---	---	---	---	---	
M39029/17-173	173	20	20	M22520/2-01	M22520/2-17	---	M22520/7-01	M22520/7-02	M22520/7-01	M22520/7-02	---	---	
M39029/17-174	174	16	16	M22520/1-01	M22520/1-10	---	---	---	---	---	---	---	
M39029/17-175	175	12	12	M22520/2-01	M22520/2-13	---	---	---	---	---	---	---	
M39029/18-176	176	23	28	M22520/2-01	M22520/2-13	---	---	---	---	---	---	---	
M39029/18-177	177	23	22	M22520/2-01	M22520/2-13	---	---	---	---	---	---	---	
M39029/18-178	178	20	20	M22520/2-01	M22520/2-14	---	---	---	---	---	---	---	
M39029/18-179	179	16	16	M22520/2-01	M22520/2-15	---	M22520/7-01	M22520/7-02	M22520/7-01	M22520/7-02	---	---	
M39029/18-180	180	12	12	M22520/1-01	M22520/1-09	---	---	---	---	---	---	---	
M39029/22-190	190	22	28	M22520/7-01	M22520/7-11	---	---	---	---	---	---	---	
M39029/22-191	191	22	22	M22520/7-01	M22520/7-11	---	---	---	---	---	---	---	
M39029/22-192	192	20	20	M22520/7-01	M22520/7-12	---	---	---	---	---	---	---	
M39029/22-193	193	16	16	M22520/7-01	M22520/7-13	---	---	---	---	---	---	---	
M39029/29-212	212	16	16	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/29-213	213	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/29-214	214	8	8	M22520/23-01	M22520/23-02	M22520/23-09	---	---	---	---	---	---	
M39029/29-215	215	4	4	M22520/23-01	M22520/23-04	M22520/23-11	---	---	---	---	---	---	
M39029/29-216	216	0	0	M22520/23-01	M22520/23-05	M22520/23-13	---	---	---	---	---	---	
M39029/30-217	217	16S	16	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/30-218	218	16	16	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/30-219	219	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/30-220	220	8	8	M22520/23-01	M22520/23-02	M22520/23-09	---	---	---	---	---	---	
M39029/30-221	221	4	4	M22520/23-01	M22520/23-04	M22520/23-11	---	---	---	---	---	---	
M39029/30-222	222	0	0	M22520/23-01	M22520/23-05	M22520/23-13	---	---	---	---	---	---	
M39029/31-240	240	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	
M39029/31-223	223	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	
M39029/31-224	224	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	
M39029/31-225	225	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	
M39029/31-226	226	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	
M39029/31-227	227	20	20	M22520/1-01	M22520/1-02	---	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	

See footnote at end of table.

TABLE 202-1. Crimping tools for power contacts - (continued).

Contacts			Crimping tools										
Part number	Bin code	Mating end size	Wire barrel size	Option 1			Locator	Option 2			Option 3		
				Basic tool	Positioner	Locator		Basic tool	Positioner	Basic tool	Positioner	Basic tool	Positioner
M39029/31-228	228	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-229	229	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-230	230	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-231	231	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-232	232	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-233	233	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-234	234	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-235	235	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-236	236	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-237	237	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-238	238	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-239	239	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-240	240	20	20	M22520/1-01	M22520/1-02	---	---	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	M22520/7-02	
M39029/31-241	241	20	20	M22520/1-01	M22520/1-02	---	---	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	M22520/7-02	
M39029/31-242	242	20	20	M22520/1-01	M22520/1-02	---	---	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	M22520/7-02	
M39029/31-243	243	20	20	M22520/1-01	M22520/1-02	---	---	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	M22520/7-02	
M39029/31-244	244	20	20	M22520/1-01	M22520/1-02	---	---	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	M22520/7-02	
M39029/31-245	245	20	20	M22520/1-01	M22520/1-02	---	---	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	M22520/7-02	
M39029/31-246	246	20	20	M22520/1-01	M22520/1-02	---	---	M22520/2-01	M22520/2-02	M22520/7-01	M22520/7-02	M22520/7-02	
M39029/31-247	247	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-248	248	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-249	249	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-250	250	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-251	251	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-252	252	16	16	M22520/1-01	M22520/1-02	---	---	M22520/7-01	M22520/7-03	---	---	---	
M39029/31-253	253	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-254	254	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-255	255	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-256	256	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-257	257	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-258	258	12	12	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-259	259	23	23	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-260	260	23	23	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-261	261	23	23	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	
M39029/31-262	262	23	23	M22520/1-01	M22520/1-02	---	---	---	---	---	---	---	

See footnote at end of table.

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TABLE 202-1. Crimping tools for power contacts - Continued.

Contacts				Crimping tools					
Part number	Bin code	Mating end size	Wire barrel size	Option 1			Option 2		
				Basic tool	Positioner	Locator	Basic tool	Positioner	Basic tool
M39029/33-263	263	23	22	M22520/2-01	M22520/2-03	---	---	---	---
M39029/33-264	264	23	22	M22520/2-01	M22520/2-03	---	---	---	---
M39029/33-265	265	20	20	M22520/1-01	M22520/1-08	---	---	---	---
M39029/33-266	266	20	20	M22520/1-01	M22520/1-08	---	M22520/7-01	M22520/7-09	---
M39029/33-267	267	16	16	M22520/1-01	M22520/1-08	---	M22520/7-01	M22520/7-10	---
M39029/33-268	268	16	16	M22520/1-01	M22520/1-08	---	M22520/7-01	M22520/7-10	---
M39029/33-269	269	12	12	M22520/1-01	M22520/1-08	---	---	---	---
M39029/33-270	270	12	12	M22520/1-01	M22520/1-08	---	---	---	---
M39029/34-271	271	20	20	M22520/1-01	M22520/1-03	---	---	---	---
M39029/34-272	272	16	20	M22520/1-01	M22520/1-03	---	---	---	---
M39029/34-273	273	16	16	M22520/1-01	M22520/1-03	---	---	---	---
M39029/34-440	440	22	22	M22520/2-01	---	---	---	---	---
M39029/35-441	441	22	22	M22520/2-01	---	---	---	---	---
M39029/35-274	274	20	20	M22520/1-01	M22520/1-03	---	---	---	---
M39029/35-275	275	16	20	M22520/1-01	M22520/1-03	---	---	---	---
M39029/35-276	276	16	16	M22520/1-01	M22520/1-03	---	---	---	---
M39029/36-277	277	16	20	M22520/1-01	M22520/1-03	---	---	---	---
M39029/36-278	278	16	16	M22520/1-01	M22520/1-03	---	---	---	---
M39029/37-279	279	16	20	M22520/1-01	M22520/1-03	---	---	---	---
M39029/37-280	280	16	16	M22520/1-01	M22520/1-03	---	---	---	---
M39029/44-287	287	16	22	M22520/1-01	M22520/1-02	---	---	---	---
M39029/44-288	288	16	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/44-289	289	12	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/44-290	290	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/44-291	291	8	8	M22520/23-01	M22520/23-02	M22520/23-09	---	---	---
M39029/44-292	292	4	4	M22520/23-01	M22520/23-04	M22520/23-11	---	---	---
M39029/44-293	293	0	0	M22520/23-01	M22520/23-05	M22520/23-13	---	---	---
M39029/45-294	294	16	22	M22520/1-01	M22520/1-02	---	---	---	---
M39029/45-295	295	16	16	M22520/1-01	M22520/1-02	---	---	---	---
M39029/45-296	296	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/45-297	297	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/45-298	298	8	8	M22520/23-01	M22520/23-02	M22520/23-09	---	---	---
M39029/45-299	299	4	4	M22520/23-01	M22520/23-04	M22520/23-11	---	---	---
M39029/46-300	300	0	0	M22520/23-01	M22520/23-05	M22520/23-13	---	---	---
M39029/46-301	301	23	28	M22520/2-01	M22520/2-03	---	---	---	---
M39029/46-302	302	23	28	M22520/2-01	M22520/2-03	---	---	---	---
M39029/46-303	303	23	22	M22520/2-01	M22520/2-03	---	---	---	---

See footnote at end of table.

TABLE 202-1. Crimping tools for power contacts - Continued.

Part number	Contacts			Crimping tools				Option 2		Option 1	
	Bin code	Mating end size	Wire barrel size	Option 1				Option 2		Option 1	
				Basic tool	Positioner	Locator	Basic tool	Positioner	Basic tool	Positioner	
M39029/46-304	304	23	22	M22520/2-01	M22520/2-03	---	---	---	---	---	---
M39029/46-305	305	20	20	M22520/1-01	M22520/1-08	---	---	M22520/7-01	M22520/7-09	---	---
M39029/46-306	306	20	20	M22520/1-01	M22520/1-08	---	---	M22520/7-01	M22520/7-09	---	---
M39029/46-307	307	16	16	M22520/1-01	M22520/1-08	---	---	M22520/7-01	M22520/7-10	---	---
M39029/46-308	308	16	16	M22520/1-01	M22520/1-08	---	---	M22520/7-01	M22520/7-10	---	---
M39029/46-309	309	12	12	M22520/1-01	M22520/1-08	---	---	---	---	---	---
M39029/46-310	310	12	12	M22520/1-01	M22520/1-08	---	---	---	---	---	---
M39029/47-311	311	23	28	M22520/2-01	M22520/2-03	---	---	---	---	---	---
M39029/47-312	312	23	28	M22520/2-01	M22520/2-03	---	---	---	---	---	---
M39029/47-313	313	23	22	M22520/2-01	M22520/2-03	---	---	---	---	---	---
M39029/47-314	314	23	22	M22520/2-01	M22520/2-03	---	---	---	---	---	---
M39029/47-315	315	20	20	M22520/1-01	M22520/1-08	---	---	---	---	---	---
M39029/47-316	316	20	20	M22520/1-01	M22520/1-08	---	---	M22520/7-01	M22520/7-09	---	---
M39029/47-317	317	16	16	M22520/1-01	M22520/1-08	---	---	M22520/7-01	M22520/7-10	---	---
M39029/47-318	318	16	16	M22520/1-01	M22520/1-08	---	---	M22520/7-01	M22520/7-10	---	---
M39029/47-319	319	12	12	M22520/1-01	M22520/1-08	---	---	M22520/7-01	M22520/7-10	---	---
M39029/47-320	320	12	12	M22520/1-01	M22520/1-08	---	---	---	---	---	---
M39029/48-327	327	0000	0000	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/48-328	328	0000	0000	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/48-325	325	00	00	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/48-326	326	00	00	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/48-323	323	0	1	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/48-324	324	0	1	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/48-320	320	4	4	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/48-321	321	4	4	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/48-317	321	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/48-318	318	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/48-318	318	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/48-322	322	4	4	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/48-319	319	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-335	335	0000	0000	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-334	334	0	0	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-333	333	0	1	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-331	331	4	4	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-14	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-12	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-10	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-16	---	---	---	---	---
M39029/49-329	329	6	6	M22520/23-01	---	M22520/23-15					

See footnote at end of table.

TABLE 202-1. Crimping tools for power contacts - Continued.

Contacts				Crimping tools					
Part number	Bin code	Mating end size	Wire barrel size	Option 1		Locator	Option 2		Option 3
				Basic tool	Positioner		Basic tool	Positioner	Basic tool
M39029/56-351	351	20	20	M22520/1-01	M22520/1-04	---	M22520/2-01	M22520/2-10	M22520/7-01
M39029/56-352	352	16	16	M22520/1-01	M22520/1-04	---	M22520/7-01	M22520/7-04	---
M39029/56-353	353	12	12	M22520/1-01	M22520/1-04	---	---	---	---
M39029/56-527	527	10	10	---	---	---	---	---	---
M39029/57-354	354	22	22	M22520/2-01	M22520/2-06	---	M22520/7-01	M22520/7-06	---
M39029/57-355	355	22	22	M22520/2-01	M22520/2-06	---	M22520/7-01	M22520/7-06	---
M39029/57-356	356	22	22	M22520/2-01	M22520/2-06	---	M22520/7-01	M22520/7-06	---
M39029/57-357	357	20	20	M22520/1-01	M22520/1-04	---	M22520/2-01	M22520/2-10	M22520/7-01
M39029/57-358	358	16	16	M22520/1-01	M22520/1-04	---	M22520/7-01	M22520/7-04	---
M39029/57-359	359	12	12	M22520/1-01	M22520/1-04	---	---	---	---
M39029/58-360	360	22	22	M22520/2-01	M22520/2-09	---	M22520/7-01	M22520/7-07	---
M39029/58-361	361	22	22	M22520/2-01	M22520/2-09	---	M22520/7-01	M22520/7-07	---
M39029/58-362	362	22	22	M22520/2-01	M22520/2-09	---	M22520/7-01	M22520/7-07	---
M39029/58-363	363	20	20	M22520/1-01	M22520/1-04	---	M22520/2-01	M22520/2-10	M22520/7-01
M39029/58-364	364	16	16	M22520/1-01	M22520/1-04	---	M22520/7-01	M22520/7-04	---
M39029/58-365	365	12	12	M22520/1-01	M22520/1-04	---	---	---	---
M39029/58-528	528	10	10	---	---	---	---	---	---
M39029/63-368	368	20	20	M22520/2-01	M22520/2-08	---	---	---	---
M39029/64-369	369	20	20	M22520/2-01	M22520/2-08	---	---	---	---
M39029/69-384	384	16	24	M22520/1-01	M22520/1-17	---	---	---	---
M39029/69-385	385	16	20	M22520/1-01	M22520/1-17	---	---	---	---
M39029/69-386	386	16	16	M22520/1-01	M22520/1-17	---	---	---	---
M39029/70-387	387	16	24	M22520/1-01	M22520/1-17	---	---	---	---
M39029/70-388	388	16	20	M22520/1-01	M22520/1-17	---	---	---	---
M39029/70-389	389	16	16	M22520/1-01	M22520/1-17	---	---	---	---
M39029/81-450	450	20	22	M22520/34-01	M22520/34-02	---	---	---	---
M39029/83-451	451	20	28	M22520/34-01	M22520/34-02	---	---	---	---
M39029/83-508	508	20	20	M22520/34-01	M22520/34-02	---	---	---	---
M39029/84-452	452	20	22	M22520/34-01	M22520/34-02	---	---	---	---
M39029/84-453	453	20	28	M22520/34-01	M22520/34-02	---	---	---	---
M39029/84-509	509	20	20	M22520/34-01	M22520/34-02	---	---	---	---
M39029/85-454	454	16	16	M22520/1-01	M22520/1-02	---	M22520/7-01	M22520/7-03	---
M39029/85-455	455	16	16	M22520/1-01	M22520/1-02	---	M22520/7-01	M22520/7-03	---
M39029/85-456	456	16	16	M22520/1-01	M22520/1-02	---	M22520/7-01	M22520/7-03	---
M39029/85-457	457	16	16	M22520/1-01	M22520/1-02	---	M22520/7-01	M22520/7-03	---
M39029/85-458	458	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/85-459	459	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/85-460	460	12	12	M22520/1-01	M22520/1-02	---	---	---	---
M39029/85-461	461	12	12	M22520/1-01	M22520/1-02	---	---	---	---

See footnote at end of table.

TABLE 202-1. Crimping tools for power contacts - Continued.

Part number	Pin code	Mating end size	Wire barrel size	Option 1			Option 2			Option 3	
				Contacts		Locator	Crimping tools 1/		Positioner	Basic tool	Positioner
				Rin	End size		Basic tool	Positioner			
M39029/86-462	462	16	16				M22520/1-01	M22520/1-02	M22520/7-01	M22520/7-03	---
M39029/86-463	463	16	16				M22520/1-01	M22520/1-02	M22520/7-01	M22520/7-03	---
M39029/86-464	464	16	16				M22520/1-01	M22520/1-02	M22520/7-01	M22520/7-03	---
M39029/86-465	465	16	16				M22520/1-01	M22520/1-02	M22520/7-01	M22520/7-03	---
M39029/86-466	466	12	12				M22520/1-01	M22520/1-02	---	---	---
M39029/86-467	467	12	12				M22520/1-01	M22520/1-02	---	---	---
M39029/86-468	468	12	12				M22520/1-01	M22520/1-02	---	---	---
M39029/86-469	469	12	12				M22520/1-01	M22520/1-02	---	---	---
M39029/87-470	470	22	22				M22520/2-01	M22520/2-09	M22520/7-01	M22520/7-07	---
M39029/87-471	471	22	22				M22520/2-01	M22520/2-09	M22520/7-01	M22520/7-07	---
M39029/87-472	472	22	22				M22520/2-01	M22520/2-09	M22520/7-01	M22520/7-07	---
M39029/87-473	473	22	22				M22520/2-01	M22520/2-10	M22520/7-01	M22520/7-07	---
M39029/87-474	474	20	20				M22520/2-01	M22520/2-10	M22520/7-01	M22520/7-07	---
M39029/87-475	475	20	20				M22520/2-01	M22520/2-10	M22520/7-01	M22520/7-07	---
M39029/87-476	476	20	20				M22520/2-01	M22520/2-10	M22520/7-01	M22520/7-07	---
M39029/87-477	477	20	20				M22520/2-01	M22520/2-10	M22520/7-01	M22520/7-07	---
M39029/87-478	478	16	16				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/87-479	479	16	16				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/87-480	480	16	16				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/87-481	481	16	16				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/88-482	482	22	22				M22520/2-01	M22520/2-07	M22520/7-01	M22520/7-05	---
M39029/88-483	483	22	22				M22520/2-01	M22520/2-07	M22520/7-01	M22520/7-05	---
M39029/88-484	484	22	22				M22520/2-01	M22520/2-07	M22520/7-01	M22520/7-05	---
M39029/88-485	485	22	22				M22520/2-01	M22520/2-07	M22520/7-01	M22520/7-05	---
M39029/88-486	486	20	20				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/88-487	487	20	20				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/88-488	488	20	20				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/88-489	489	20	20				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/88-490	490	16	16				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/88-491	491	16	16				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/88-492	492	16	16				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/88-493	493	16	16				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/89-494	494	22	22				M22520/2-01	M22520/2-06	M22520/7-01	M22520/7-06	---
M39029/89-495	495	22	22				M22520/2-01	M22520/2-06	M22520/7-01	M22520/7-06	---
M39029/89-496	496	22	22				M22520/2-01	M22520/2-06	M22520/7-01	M22520/7-06	---
M39029/89-497	497	22	22				M22520/2-01	M22520/2-06	M22520/7-01	M22520/7-06	---
M39029/89-498	498	20	20				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/89-499	499	20	20				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---
M39029/89-500	500	20	20				M22520/1-01	M22520/1-04	M22520/7-01	M22520/7-04	---

See footnote at end of table.

TABLE 202-1. Crimping tools for power contacts - Continued.

Contacts				Crimping tools $\sqrt{}$					
Part number	Bin code	Mating end size	Wire barrel size	Option 1		Option 2		Option 3	
				Basic tool	Positioner	Locator	Basic tool	Positioner	Basic tool
M39029/89-501	501	20	20	M22520/1-01	M22520/1-04	---	M22520/2-01	M22520/2-10	M22520/7-01
M39029/89-502	502	16	16	M22520/1-01	M22520/1-04	---	M22520/1-01	M22520/7-04	---
M39029/89-503	503	16	16	M22520/1-01	M22520/1-04	---	M22520/1-01	M22520/7-04	---
M39029/89-504	504	16	16	M22520/1-01	M22520/1-04	---	M22520/1-01	M22520/7-04	---
M39029/89-505	505	16	16	M22520/1-01	M22520/1-04	---	M22520/1-01	M22520/7-04	---
M28731/20-0001	---	---	---	M22520/17-01	---	---	---	---	---
M28731/35-0001	---	---	---	M22520/17-01	---	---	---	---	---
M28804/9-1	---	22	22	M22520/17-02	M22520/2-36	---	---	---	---
M28804/10-1	---	22	22	M22520/2-01	M22520/2-36	---	---	---	---
M55302/97-01	---	---	---	M22520/17-02	---	---	---	---	---

1/ Pneumatic actuated crimping tools may be used in place of the above listed hand operated tools as follows: Use MIL-C-22520/29-01 in place of M22520/1-01 and MIL-C-22520/28-01 in place of M22520/2-01.

SECTION 203

TABLE 203-1. Crimping tools for shielded contacts.

Contacts			Crimping tools 1/					
			Shield crimp sleeve			Outer contact		
Part number	Bin code	Conn cavity size	Inner contact		Option 1		Option 2	
			Basic tool	Positioner	Basic tool	Die	Basic tool	Positioner die
M39029/6-120	120	16	M22520/2-01	M22520/2-26	M22520/5-01	M22520/5-02	M22520/5-01	M22520/5-02
M39029/6-121	121	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/6-122	122	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/6-123	123	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/6-124	124	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/6-125	125	12	M22520/2-01	M22520/2-27	M22520/5-01	M22520/5-06	M22520/5-01	M22520/5-06
M39029/7-126	126	12	M22520/2-01	M22520/2-27	M22520/5-01	M22520/5-06	M22520/5-01	M22520/5-06
M39029/7-127	127	12	M22520/2-01	M22520/2-27	M22520/5-01	M22520/5-06	M22520/5-01	M22520/5-06
M39029/7-128	128	12	M22520/2-01	M22520/2-27	M22520/5-01	M22520/5-06	M22520/5-01	M22520/5-06
M39029/8-129	129	12	M22520/2-01	M22520/2-27	M22520/5-01	M22520/5-06	M22520/5-01	M22520/5-06
M39029/8-130	130	12	M22520/2-01	M22520/2-27	M22520/5-01	M22520/5-06	M22520/5-01	M22520/5-06
M39029/8-131	131	12	M22520/2-01	M22520/2-27	M22520/5-01	M22520/5-06	M22520/5-01	M22520/5-06
M39029/13-152	152	16	M22520/2-01	M22520/2-26	M22520/5-01	M22520/5-02	M22520/5-01	M22520/5-02
M39029/13-153	153	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/13-154	154	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/13-155	155	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/13-156	156	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/13-157	157	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/13-158	158	16	M22520/2-01	M22520/2-26	M22520/5-01	M22520/5-02	M22520/5-01	M22520/5-02
M39029/14-159	159	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/14-160	160	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/14-161	161	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/14-162	162	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/14-163	163	12	M22520/2-01	M22520/2-25	M22520/5-01	M22520/5-04	M22520/5-01	M22520/5-04
M39029/19-181	181	16	M22520/2-01	M22520/2-28	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02
M39029/19-182	182	12	M22520/2-01	M22520/2-29	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02
M39029/19-183	183	12	M22520/2-01	M22520/2-29	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02
M39029/20-184	184	16	M22520/2-01	M22520/2-28	M22520/2-01	M22520/2-03	M22520/2-01	M22520/2-03
M39029/20-185	185	12	M22520/2-01	M22520/2-29	M22520/2-01	M22520/2-03	M22520/2-01	M22520/2-03
M39029/20-186	186	12	M22520/2-01	M22520/2-29	M22520/2-01	M22520/2-03	M22520/2-01	M22520/2-03
M39029/21-187	187	16	M22520/2-01	M22520/2-28	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02
M39029/21-188	188	12	M22520/2-01	M22520/2-29	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02
M39029/21-189	189	12	M22520/2-01	M22520/2-29	M22520/2-01	M22520/2-02	M22520/2-01	M22520/2-02

See footnote at end of table.

TABLE 203-1. Crimping tools for shielded contacts - Continued.

Contacts			Crimping tools 1/					
Part number	Bin code	Conn cavity size	Inner contact		Shield crimp sleeve		Outer contact	
			Basic tool	Positioner	Option 1	Option 2	Option 1	Option 2
M39029/25-204	204	12	M22520/2-01	M22520/2-32	M22520/5-01	M22520/5-10	---	---
M39029/25-205	205	12	M22520/2-01	M22520/2-32	---	---	---	---
M39029/25-206	206	12	M22520/2-01	M22520/2-32	M22520/5-01	M22520/5-10	---	---
M39029/26-207	207	12	M22520/2-01	M22520/2-32	M22520/5-01	M22520/5-10	---	---
M39029/26-208	208	12	M22520/2-01	M22520/2-32	---	---	---	---
M39029/26-209	209	12	M22520/2-01	M22520/2-32	M22520/5-01	M22520/5-10	---	---
M39029/27-210	210	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/27-402	402	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/27-403	403	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/27-404	404	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/27-405	405	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/27-406	406	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/27-407	407	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-408	408	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-211	211	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-409	409	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-410	410	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-411	411	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-412	412	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-413	413	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-414	414	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/28-415	415	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/50-340	340	12	M22520/2-01	M22520/2-30	---	---	---	---
M39029/51-341	341	12	M22520/2-01	M22520/2-30	---	---	---	---
M39029/54-342	342	12	M22520/2-01	M22520/2-33	---	---	---	---
M39029/54-343	343	8	M22520/2-01	M22520/2-33	---	---	---	---
M39029/55-344	344	12	M22520/2-01	M22520/2-24	---	---	---	---
M39029/55-345	345	8	M22520/2-01	M22520/2-24	---	---	---	---
M39029/59-366	366	8	M22520/2-01	M22520/2-31	M22520/5-01	M22520/5-05	M22520/10-01	M22520/10-05
M39029/60-367	367	8	M22520/2-01	M22520/2-31	M22520/5-01	M22520/5-05	M22520/10-01	M22520/10-05
M39029/75-416	416	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/75-417	417	12	M22520/2-01	M22520/2-34	---	---	---	---
M39029/75-418	418	12	M22520/2-01	M22520/2-34	---	---	---	---

See footnote at end of table.

TABLE 203-1. Crimping tools for shielded contacts - Continued.

Contacts			Crimping tools 1/									
Part number	Bin code	Conn cavity size	Inner contact		Shield crimp sleeve				Outer contact			
			Basic tool	Positioner	Option 1		Option 2		Option 1		Option 2	
					Basic tool	Die	Basic tool	Die	Basic tool	Positioner die	Basic tool	Positioner die
M39029/75-419	419	12	M22520/2-01	M22520/2-34	---	---	---	---	M22520/31-01	M22520/31-02	---	---
M39029/75-420	420	12	M22520/2-01	M22520/2-34	---	---	---	---	M22520/31-01	M22520/31-02	---	---
M39029/75-421	421	12	M22520/2-01	M22520/2-34	---	---	---	---	M22520/31-01	M22520/31-02	---	---
M39029/75-422	422	12	M22520/2-01	M22520/2-34	---	---	---	---	M22520/31-01	M22520/31-02	---	---
M39029/75-423	423	12	M22520/2-01	M22520/2-34	---	---	---	---	M22520/31-01	M22520/31-02	---	---
M39029/75-424	424	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/76-425	425	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/76-426	426	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/76-427	427	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/77-428	428	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/77-429	429	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/77-430	430	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/77-431	431	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/78-432	432	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/78-433	433	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/78-434	434	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/78-435	435	16	M22520/2-01	M22520/2-35	---	---	---	---	M22520/4-01	M22520/4-02	---	---
M39029/79-436	436	16	---	---	---	---	---	---	---	---	---	---
M39029/79-437	437	16	---	---	---	---	---	---	---	---	---	---
M39029/80-438	438	16	---	---	---	---	---	---	---	---	---	---
M39029/80-439	439	16	---	---	---	---	---	---	---	---	---	---

1/ Pneumatic actuated crimping tools may be used in place of the listed hand operated tools as follows:
 Use MIL-C-22520/29-01 in place of M22520/1-01 and MIL-C-22520/28-01 in place of M22520/2-01.

SECTION 205

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
1-0016				35	A	73,83
1-0017				61		74
1-0018				61		75
1-0019						78
1-0021				61		65
1-0022				61		86
1-0023				35	A	6
1-0024				19	A	62
1-0027				35	A	2
1-0501	1-10	-13	1-50	61	A	75,86,127
1-0502	1-10	-13	1-51	61	A	74
1-0503	1-11	-13	1-52	19	B	60,128
2-0019				35	A	73,83
2-0020				61		74
2-0021				61		75
2-0022						78
2-0024				61		65
2-0025				61		86
2-0026				35	A	6,62
2-0039				61		77
2-0040				35	A	2
2-0027				35	A	73,83
2-0028				61		74
2-0029				61		75
2-0030				61		77
2-0034				61		86
2-0041				61		65
2-0042				35	A	6,62
2-0043				35	A	2
2-0501	2-10	-13	2-50	61	A	75,86,127
2-0502	2-10	-13	2-51	61	A	74
2-0503	2-11	-13	2-52	19	B	60,128
2-0511	2-10	-13	2-50	61	A	75,86,127
2-0512	2-10	-13	2-51	61	A	74
2-0513	2-11	-13	2-52	19	B	60,128

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
3-0013				35	A	73,83
3-0014				61		74
3-0015				61		75
3-0016						78
3-0018				61		65
3-0019				61		86
3-0020				35	A	6,62
3-0021				61		77
3-0023				35	A	2
3-0501	3-10	-14	3-50	61	A	75,86,127
3-0502	3-10	-14	3-51	61	A	74
3-0503	3-11	-14	3-52	19	B	60,128
5-0004				61		74
5-0005				61		75
5-0013				35	A	2
5-0014				35		6,62
5-0015				61		65
5-0016				35	A	73,83
5-0017				61		77
5-0018				61		86
5-0501	5-10	-13	5-50	61	A	75,86,127
5-0502	5-10	-13	5-51	61	A	74
5-0503	5-11	-13	5-52	19	B	60,128
6-0027				35	A	73,112
6-0028				61		74,65
6-0029				61		75
6-0030				61		86
6-0031				35	A	6
6-0032				61		92
7-0011				61		74,75
7-0012				61		75
7-0013				61		86
7-0014				35	A	73,112
7-0015				35	A	6
7-0016				61		92

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
8-0010				61		74,65
8-0011				61		75
8-0012				61		86
8-0013				35	A	73,112
8-0014				61		92
10-0006				61		74,65
10-0007				61		75
10-0008				61		86
10-0009				61		92
11-0012				35	A	73,112
11-0013				61		65,74
11-0014				61		75
11-0015				61		86
11-0016				35	A	6
11-0017				61		92
16-0013				19	B	28,111
16-0014				19	B	84,60
16-0015				19	A	29,30,97
16-0016				41	B	54
16-0017				19	A	90
16-0020				19	A	119
16-0501	16-12	-12	16-50	41	B	54
16-0502	16-11	-12	16-50	41	B	95
16-0503	16-10	-12	16-51	19	B	60,128
17-0013				19	B	28,111
17-0014				19	B	60,84
17-0015				19	A	29,30,97
17-0016				41	B	54
17-0017				19	A	90
17-0020				19	A	110
17-0022				35	B	113,119
17-0501	17-12	-12	17-50	41	B	54
17-0502	17-11	-12	17-50	41	B	95
17-0503	17-10	-12	17-51	19	B	60,128

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
18-0013				19	B	28,111
18-0014				19	B	84,060
18-0015				19	A	29,30,97
18-0016				41	B	054
18-0017				19	A	90
18-0020				19	A	110
18-0221				35	B	113,119
18-0501	18-12	-12	18-50	41	B	54
18-0502	18-11	-12	18-50	41	B	95
18-0503	18-10	-12	18-51	19	B	60,126
19-0006				19	B	28,111
19-0007				19	B	84,60,128
19-0010				19	A	110
19-0011				19	A	97,29,30,90
19-0501	19-12	-12	19-50	41	B	54
19-0502	19-11	-12	19-50	41	B	95
19-0503	19-10	-12	19-51	19	B	60,128
20-0006				19	B	28,111
20-0007				19	A	84,60,128
20-0010				19	A	110
20-0011				19	A	29,30,90,97
20-0501	20-12	-12	20-50	41	B	54
20-0502	20-11	-12	20-50	41	B	95
20-0503	20-10	-12	20-51	19	B	60,128
26-0010				19	B	28,111
26-0011				19	B	84,60,128
26-0012				19	A	29,30,97
26-0013				41	B	54
26-0014				19	A	90
26-0021				19	A	110
26-0022				35	B	113,119
26-0023				41	B	95
26-0501	26-12	-12	26-50	41	B	54
26-0502	26-11	-12	26-50	41	B	95
26-0503	26-10	-12	26-51	19	B	60,128

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
27-0010				19	B	28,111
27-0011				19	B	84,60,128
27-0012				19	A	29,30,97
27-0013				41	B	54
27-0014				19	A	90
27-0021				19	A	110
27-0022				35	B	113,119
27-0023				41	B	95
27-0501	27-12	-12	27-50	41	B	54
27-0502	27-11	-12	27-50	41	B	95
27-0503	27-10	-12	27-51	19	B	60,128
28-0010				19	B	28,111
28-0011				19	B	84,60,128
28-0012				19	A	29,30,97
28-0013				41	B	54
28-0014				19	A	90
28-0021				19	A	110
28-0022				35	B	113,119
28-0023				41	B	95
28-0501	28-12	-12	28-50	41	B	54
28-0502	28-11	-12	28-50	41	B	95
28-0503	28-10	-12	28-51	19	B	60,128
29-0010				19	B	28,111
29-0011				19	B	60,84,128
29-0012				19	A	29,30,97
29-0013				41	B	54
29-0014				19	A	90
29-0021				19	A	110
29-0022				35	B	113,119
29-0501	29-12	-12	29-50	41	B	54
29-0502	29-11	-12	29-50	41	B	95
29-0503	29-10	-12	29-51	19	B	60,128
30-0010				19	B	28,111
30-0011				19	B	60,84,128
30-0012				19	A	29,30,97

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
30-0013				41	B	54
30-0014				19	A	90
30-0021				19	A	110
30-0022				35	B	113,119
30-0501	30-12	-12	30-50	41	B	54
30-0502	30-11	-12	30-50	41	B	95
30-0503	30-10	-12	30-51	19	B	60,128
35-0010				35	A	73,112
35-0011				61		65,74
35-0012				61		75,86
35-0013				61		6,62
35-0014				61		92
35-0501	35-10	-14	35-50	61	A	75,86,127
35-0503	35-11	-14	35-51	19	B	60,128
36-0007				61		65,74
36-0008				61		75,86
36-0009				35	A	73,112
36-0010				61		6,62
36-0027				61		92
36-0501	36-10	-14	36-50	61	A	75,86,127
36-0503	36-11	-14	36-51	19	B	60,128
38-0006				61		65,74
38-0007				61		75,86
38-0008				35	A	73,112
38-0018				61		92
38-0501	38-10	-14	38-50	61	A	75,86,127
38-0503	38-11	-14	38-51	19	B	60,128
39-0004				61		65,74
39-0005				61		75,86
39-0009				61		92
39-0501	39-10	-13	39-50	61	A	75,86,127
39-0503	39-11	-13	39-51	19	B	60,128

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
40-0014 40-0015 40-0016 40-0017 40-0018 40-0021 40-0022 40-0501 40-0503	40-10 40-11	-14 -14	40-50 40-51	35 61 19	A A B	73,112 65,74 75,86 77 78 6,62 92 75,86,127 60,128
55-3025 55-4025 55-3026 55-4026 55-3027 55-4027 55-3028 55-4028 55-3502 55-4502	55-10 55-10	-15 -15	55-50 55-50	33 33 35 41 19 19 19	B B B B B B B	93,169 113,119,172,173 54,157 28,111,155,170 155,170 60,128 60,128
56-3025 56-4025 56-3026 56-4026 56-3027 56-4027 56-3028 56-4028 56-3029 56-3502 56-4502	None	--	56-50 56-50	33 33 35 35 41 41 19 19 19 19 19	B B B B B B B B B B B	93,169 113,119,172,173 54,157 60,84,158,167 60,128 60,128
57-3025 57-4025 57-3026 57-4026 57-3027				33 33 35 35 41	B B B B B	93,169 119,173 113,172 54,157

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
57-4027				41	B	
57-3028				19	B	60,84
57-4028				19	B	158,167
57-3029				19	B	28,111
57-4029				19	B	155,170
57-3502	57-10	-15	57-50	19	B	60,128
57-4502	57-10	-15	57-50	19	B	60,128
58-3025				33	B	93,169
58-4025				33	B	
58-3026				35	B	173
58-4026				35	B	113,172
58-3027				41	B	54
58-4027				41	B	157
58-3028				19	B	60,84,158,167
58-4028				19	B	
58-3029				19	B	28,111,155,170
58-4029				19	B	
58-4502	58-10	-15	58-50	19	B	60,128
59-3025				33	B	93,169
59-4025				33	B	
59-3026				35	B	119,113
59-4026				35	B	172,173
59-3027				41	B	54,157
59-4027				41	B	
59-3028				19	B	60,84,158,167
59-4028				19	B	
59-3029				19	B	28,111,155,170
59-4029				19	B	
59-3502	59-10	-15	59-50	19	B	60,128
59-4502	59-10	-15	59-50	19	B	60,128
64-0010				61		74,163
64-0011				61		75,164
64-0012				61		86
64-0013				61		112,171
64-0014				61		73,162

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
64-0015 64-0016				61 61		6 65,159
65-0010 65-0011 65-0012 65-0013 65-0014				19 19 19 41 19	B B A B A	28,111,155,170 60,84,158,167 29,30,97,110 54,157 90
66-0010 66-0011 66-0012 66-0013 66-0014				19 19 19 41 19	B B A B A	28,111,155,170 60,84,158,167 29,30,97,110 54,157 90
67-0011 67-0012				33 35	B B	93,169 94,113,119, 172,173
68-0011 68-0012				33 35	B B	93,169 94,113,119, 172,173
69-0011 69-0012				33 35	B B	93,169 94,113,119, 172,173
70-0011 70-0012				33 35	B B	93,169 94,113,119, 172,173
73-0011 73-0012				33 35	B B	93,169 94,113,119, 172,173
74-0011 74-0012 74-0013				33 35 41	B B B	93,169 94,113,119, 172,173 95

See footnote at end of table.

TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp 1/ inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
75-0011 75-0012 75-0013				33 35 41	B B B	93,169 94,113,119, 172,173 95
76-0011 76-0012 76-0013				33 35 41	B B B	93,169 94,113,119, 172,173 95
84-0013 84-0014 84-0015 84-0016 84-0017 84-0018 84-0019				35 35 61 61 61 61 61	A A 	112,171 162,173 74,163 75,164 86 6 65,159
85-0013 85-0014 85-0015 85-0016 85-0017 85-0018 85-0019				35 35 61 61 61 61 61	A A 	112,171 162,173 74,163 75,164 86 6 65,159
86-0013 86-0014 86-0015 86-0016 86-0017 86-0018 86-0019				35 35 61 61 61 61 61	A A 	112,171 162,173 74,163 75,164 86 6 65,159
88-0010 88-0011 88-0012				19 19 19	B B A	28,111,155,170 60,84,158,167 29,30,97,110

See footnote at end of table.

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TABLE 205-I. Crimping tools for MIL-C-39012 radio-frequency connector contacts - Continued.

MIL-C-39012 connector part no. M39012/	To crimp <u>1</u> / inner contact part no. M39012/	Use M22520/1	To crimp outer ferrule part no. M39012/	Use		Cables accommodated (ref) MIL-C-17/
				die part no. M22520/5-	die closure	
88-0013				41	B	54,157
88-0014				19	A	90
89-0010				19	B	28,111,155,170
89-0011				19	B	60,84,158,167
89-0012				19	A	29,30,97,110
89-0013				41	B	54,157
89-0014				19	A	90

1/ Contacts listed in this section are procurable only as part of associated connectors.

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SECTION 210

TABLE 210-I. National stock numbers (NSN) for crimping tools.

Crimping tool part number	National stock number (NSN)
MS3150-0	
MS3150-4	
MS3150-8	5120-00-113-3317
---	5120-00-293-2311
M22520/1-01	5120-00-165-3912
M22520/1-02	5120-00-016-6382
M22520/1-03	5120-01-016-6554
M22520/1-04	5120-00-016-7582
M22520/1-05	5120-00-165-3911
M22520/1-06	5120-00-016-7647
M22520/1-07	5120-00-016-7651
M22520/1-08	5120-00-016-7654
M22520/1-09	5120-00-132-5039
M22520/1-10	5120-00-132-5095
M22520/1-11	5120-01-127-5231
M22520/1-12	5120-01-036-9220
M22520/1-13	5120-01-036-9221
M22520/1-14	5120-01-036-9222
M22520/1-15	5120-01-036-9223
M22520/1-16	5120-01-075-8138
M22520/2-01	5120-00-165-3910
M22520/2-02	5120-00-165-3913
M22520/2-03	5120-00-016-7657
M22520/2-04	5120-00-017-3640
M22520/2-05	5120-00-017-3742
M22520/2-06	5120-00-017-3809
M22520/2-07	5120-00-017-3827
M22520/2-08	5120-00-017-3921
M22520/2-09	5120-00-017-3927
M22520/2-10	5120-00-017-3932
M22520/2-11	5120-00-017-3934
M22520/2-12	5120-00-017-3935
M22520/2-13	5120-00-132-6939
M22520/2-14	5120-00-132-6962
M22520/2-15	5120-00-132-6978
M22520/2-16	5120-00-132-7868
M22520/2-17	5120-00-132-7893
M22520/2-18	5120-00-132-7894
M22520/2-19	
M22520/2-20	5120-00-132-9004
M22520/2-21	5120-00-133-0029
M22520/2-22	5120-01-106-3737
M22520/2-23	5120-01-117-3905
M22520/2-24	5120-00-348-7531
M22520/2-25	5120-00-132-6932

TABLE 210-I. National stock numbers (NSN) for crimping tools - Continued.

Crimping tool part number	National stock number (NSN)
M22520/2-26	5120-00-133-3263
M22520/2-27	---
M22520/2-28	5120-00-124-3678
M22520/2-29	5120-00-124-3682
M22520/2-30	5120-01-117-3905
M22520/2-31	---
M22520/2-32	---
M22520/2-33	---
M22520/2-34	---
M22520/2-35	---
M22520/4-01	5120-00-017-4017
M22520/4-02	5120-00-017-4142
M22520/5-01	5120-00-132-6913
M22520/5-03	5120-00-133-0534
M22520/5-04	5120-00-133-0537
M22520/5-05	5120-00-133-0577
M22520/2-01 & 2-02	5120-00-495-9237
M22520/2-01 & 2-08	5120-00-042-7076
M22520/5-06	5120-00-133-0579
M22520/5-07	5120-00-133-0580
M22520/5-08	5120-00-133-0581
---	5120-00-133-0582
M22520/5-10	5120-00-133-0583
M22520/5-11	5120-00-133-0584
M22520/5-13	5120-00-133-0585
M22520/5-15	5120-00-133-0586
M22520/5-17	5120-00-133-0597
M22520/5-19	5120-00-116-3159
M22520/5-21	5120-00-116-3284
M22520/5-23	5120-00-133-0618
M22520/5-25	5120-00-133-0622
M22520/5-27	5120-00-133-0640
M22520/5-29	5120-00-116-3285
M22520/5-31	5120-00-133-0642
M22520/5-33	5120-00-116-3158
M22520/5-35	5120-00-116-3156
M22520/5-37	5120-00-116-3136
M22520/5-39	5120-00-116-3134
M22520/5-41	5120-00-116-3135
M22520/5-43	5120-00-116-3106
M22520/5-45	5120-00-116-3088
M22520/5-47	5120-00-133-0643
M22520/5-49	5120-00-133-0644
M22520/5-51	5120-00-116-3040

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TABLE 210-1. National stock numbers (NSN) for crimping tools - Continued.

Crimping tool part number	National stock number (NSN)
M22520/5-53	5120-00-116-3160
M22520/5-55	5120-00-133-0653
M22520/5-57	5120-00-133-0676
M22520/5-59	5120-00-133-0683
M22520/5-61	5120-00-116-3004
M22520/5-63	5120-00-133-0533
M22520/5-100	5120-00-126-0860
M22520/5-101	5120-01-081-4213
M22520/5-102	5120-01-081-4212
M22520/5-103	5120-01-082-8985
M22520/5-01 & 5-03	5120-00-045-6870
M22520/5-01 & 5-11	5120-00-987-6210
M22520/5-01 & 5-17	5120-00-177-6964
M22520/5-01 & 5-31	5120-01-022-4969
M22520/5-01 & 5-35	5120-00-089-3160
M22520/5-01 & 5-41	5120-00-915-1934
M22520/5-01 & 5-43	5120-00-062-0887
M22520/5-01 & 5-47	5120-01-038-8192
M22520/5-01 & 5-51	5120-01-038-8193
M22520/5-01 & 5-53	5120-00-941-0678
M22520/5-01 & 5-61	5120-00-459-4502
M22520/5-01 & 5-100	5120-00-596-9313
M22520/5-01, 5-05, 5-39 & 5-43	5120-00-885-7705
M22520/5-01, 5-07, 5-41 & 5-43	5120-00-885-7706
M22520/5-01, 5-09 & 5-11	5120-00-781-8322
M22520/5-01, 5-19, 5-35 & 5-43	5120-00-132-1234
M22520/5-01, 5-33, 5-37 & 5-19	5120-00-223-3754
M22520/5-01, 5-37 & 5-23	5120-00-776-1844
M22520/5-01, 5-37, 5-39 & 5-41	5120-00-654-9842
M22520/7-01	5120-00-133-1747
M22520/7-02	5120-00-133-1769
M22520/7-03	5120-00-133-1770
M22520/7-04	5120-00-133-1772
M22520/7-05	5120-00-133-1778
M22520/7-06	5120-00-133-1781
M22520/7-07	5120-00-133-1782
M22520/7-08	5120-00-133-1785
M22520/7-09	5120-00-133-1790
M22520/7-10	5120-00-133-1792
M22520/7-11	5120-01-122-1201
M22520/7-12	5120-01-112-2923
M22520/7-13	5120-01-110-4472
M22520/10-01	5120-00-117-4830
M22520/10-02	5120-00-116-3275

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TABLE 210-I. National stock numbers (NSN) for crimping tools - Continued.

Crimping tool part number	National stock number (NSN)
M22520/10-03	5120-00-116-3283
M22520/10-04	5120-00-116-3003
M22520/10-05	5120-00-116-3276
M22520/10-06	5120-00-117-4807
M22520/10-07	5120-00-116-3278
M22520/10-01 & 10-05	5120-00-689-6369
M22520/10-01 & 10-07	5120-00-075-0210
M22520/17-01	5120-00-118-7079
M22520/17-02	5120-01-083-9848
M22520/19-01	5120-00-124-3490
M22520/19-02	5120-00-124-3351
M22520/19-03	5120-00-124-3341
M22520/19-04	5120-00-124-3337
M22520/20-01	5120-00-124-3469
M22520/20-02	5120-00-124-3147
M22520/20-03	5120-00-124-3142
M22520/21-01	5120-00-124-3484
M22520/21-02	5120-00-124-3381
M22520/21-03	5120-00-124-3384
M22520/21-04	5120-00-124-3422
M22520/22-01	5120-00-124-3487
M22520/22-02	5120-00-124-3454
M22520/22-03	5120-00-124-3458
M22520/23-01	5120-00-932-1518
M22520/23-02	5120-01-117-3889
M22520/23-03	---
M22520/23-04	5130-00-973-7317
M22520/23-05	5130-00-808-6385
M22520/23-06	---
M22520/23-07	---
M22520/23-09	5120-01-117-3890
M22520/23-10	---
M22520/23-11	5130-00-116-2902
M22520/23-12	---
M22520/23-13	5130-00-116-2901
M22520/23-14	---
M22520/23-15	---
M22520/23-16	---
M22520/31-01	---
M22520/31-02	---
M22520/34-	---

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SECTION 300

TOOLS FOR WIRE WRAPPING CONTACTS

(Details of this section will be added later.)

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SECTION 400

INSTALLING TOOLS FOR CONTACTS

<u>Section</u>		<u>Page</u>
401	Installing tool application	401.1
402	Installing tools for power contacts	402.1
403	Installing tools for shielded contacts	403.1
410	National stock numbers (NSN) for installing tools	410.1

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SECTION 401

TABLE 401-I. Installing tool application.

Connector types	Installing tool types	Superseded installing tools
MIL-C-5015	MIL-I-81969/14 MIL-I-81969/14 MIL-I-81969/17	MS3447 MS27534 MS90455
MIL-C-22992	None required	---
MIL-C-24308	MIL-I-81969/1 MIL-I-81969/8 MIL-I-81969/14 MIL-I-81969/14	MIL-C-24308/18 MS27495 MS18278 MS27534
MIL-C-26482	MIL-I-81969/14 MIL-I-81969/14 MIL-I-81969/17	MS3447 MS27534 MS24256
MIL-C-26500	MIL-I-81969/17	MS24256
MIL-C-28731	MIL-I-81969/5 MIL-I-81969/13	MIL-C-55302/105 MIL-C-28731/21
MIL-C-28748	MIL-I-81969/18	MS17805
MIL-C-28754	MIL-I-81969/31	MS18137
MIL-C-28804	MIL-I-81969/1	MIL-C-24308/18
MIL-C-28840	MIL-I-81969/33	---
MIL-C-38999	MIL-I-81969/8 MIL-I-81969/14	MS27495 MS27534
MIL-C-55302	MIL-I-81969/5 MIL-I-81969/8 MIL-I-81969/10 MIL-I-81969/12 MIL-I-81969/14 MIL-I-81969/31	MIL-C-55302/105 MIL-C-55302/79 MIL-C-55302/86 MIL-C-55302/65 & 66 MS27534 MS18137
MIL-C-81511	MIL-I-81969/2 MIL-I-81969/16	MS3323 MS3160

TABLE 401-I. Installing tool application - Continued.

Connector types	Installing tool types	Superseded installing tools
MIL-C-81659	MIL-I-81969/1 MIL-I-81969/14 MIL-I-81969/17	MS3156 MS3447 MS90455
MIL-C-81703	MIL-I-81969/14 MIL-I-81969/16 MIL-I-81969/17	MS3447 MS3160 MS24256
MIL-C-81714	MIL-I-81969/14 MIL-I-81969/14	MS3447 MIL-C-83723/31
MIL-C-83723	MIL-I-81969/14	MIL-C-83723/31
MIL-C-83733	MIL-I-81969/8 MIL-I-81969/14 MIL-I-81969/14	MS27495 MS27534 MIL-C-83723/31
MIL-C-85028	MIL-I-81969/21 MIL-I-81969/23	--- ---

SECTION 402

TABLE 402-1. Installing tools for power contacts.

Contacts			Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2
M39029/1-100	100	16	22	M81969/14-02	MS3447-20
M39029/1-101	101	16	20	M81969/14-02	MS3447-20
M39029/1-102	102	14	16	M81969/14-03	MS3447-16
M39029/1-103	103	12	12	M81969/14-04	MS3447-12
M39029/1-107	507	20	220	M81969/14-01	---
M39029/2-104	104	22	22	---	---
M39029/2-105	105	20	20	---	---
M39029/2-106	106	16	16	M81969/17-01	M90455-16
M39029/3-107	107	22	22	---	---
M39029/3-108	108	20	20	---	---
M39029/3-109	109	16	16	M81969/17-01	M90455-16
M39029/4-110	110	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/4-112	112	16	20	M81969/14-02	MS3447-16, MS27534-16
M39029/4-111	111	16	16	M81969/14-03	MS3447-16, MS27534-16
M39029/4-114	114	12	12	M81969/14-03	MS3447-12, MS27534-12
M39029/4-113	113	12	12	M81969/14-04	MS3447-20, MS27534-20
M39029/5-115	115	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/5-117	117	16	16	M81969/14-02	MS3447-16, MS27534-16
M39029/5-116	116	16	16	M81969/14-03	MS3447-16, MS27534-16
M39029/5-119	119	12	12	M81969/14-04	MS3447-12, MS27534-12
M39029/5-118	118	12	12	M81969/14-02	MS3447-20, MS27534-20
M39029/9-132	132	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/9-133	133	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/9-134	134	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/9-135	135	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/9-136	136	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/10-138	138	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/10-139	139	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/10-140	140	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/10-141	141	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/10-142	142	20	20	M81969/14-02	MS3447-20, MS27534-20
M39029/11-144	144	22	22	M81969/1-01	MS3156-22
M39029/11-145	145	20	20	M81969/1-02	MS3156-20
M39029/11-146	146	16	16	M81969/1-03	MS3156-16
M39029/11-147	147	12	12	---	---
M39029/12-148	148	22	22	M81969/1-01	MS3156-22
					M24308/18-2
					M24308/18-3

TABLE 402-I. Installing tools for power contacts - Continued.

Contacts				Installing tools			
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools	
M39029/12-149	149	20	20	M81969/1-02	---	MS3156-20	M24308/18-2
M39029/12-150	150	16	16	M81969/1-03	---	MS3156-16	M24308/18-3
M39029/12-151	151	12	12	---	---	---	---
M39029/16-166	166	23	28	M81969/16-04	---	MS3160-22	---
M39029/16-167	167	23	22	M81969/16-04	---	MS3160-22	---
M39029/16-168	168	20	20	M81969/16-01	---	MS3160-20	---
M39029/16-169	169	16	16	M81969/16-02	---	MS3160-16	---
M39029/16-170	170	12	12	M81969/16-03	---	MS3160-12	---
M39029/17-171	171	23	28	M81969/16-04	---	MS3160-22	---
M39029/17-172	172	23	22	M81969/16-04	---	MS3160-22	---
M39029/17-173	173	20	20	M81969/16-01	---	MS3160-20	---
M39029/17-174	174	16	16	M81969/16-02	---	MS3160-16	---
M39029/17-175	175	12	12	M81969/16-03	---	MS3160-12	---
M39029/18-176	176	23	28	M81969/16-04	---	MS3160-22	---
M39029/18-177	177	23	22	M81969/16-04	---	MS3160-22	---
M39029/18-178	178	20	20	M81969/16-01	---	MS3160-20	---
M39029/18-179	179	16	16	M81969/16-02	---	MS3160-16	---
M39029/18-180	180	12	12	M81969/16-03	---	MS3160-12	---
M39029/22-190	190	22	28	M81969/16-04	---	MS3160-22	---
M39029/22-191	191	22	22	M81969/16-04	---	MS3160-22	---
M39029/22-192	192	20	20	M81969/16-01	---	MS3160-20	---
M39029/22-193	193	16	16	M81969/16-02	---	MS3160-16	---
M39029/29-212	212	16	16	M81869/14-03	---	M83723/31-16	MS27534-16
M39029/29-213	213	12	12	M81869/14-03	---	M83723/31-12	MS27534-12
M39029/29-214	214	8	8	---	---	---	---
M39029/29-215	215	4	4	---	---	---	---
M39029/29-216	216	0	0	---	---	---	---
M39029/30-217	217	16S	16	M81969/14-03	---	M83723/31-16	MS27534-16
M39029/30-218	218	16	16	M81969/14-03	---	M83723/31-16	MS27534-16
M39029/30-219	219	12	12	M81969/14-04	---	M83723/31-12	MS27534-12
M39029/30-220	220	8	8	---	---	---	---
M39029/30-221	221	4	4	---	---	---	---
M39029/30-222	222	0	0	---	---	---	---
M39029/31-240	240	20	20	M81969/17-09	---	MS24256A20	MS3447-20
M39029/31-223	223	20	20	M81969/17-03	M81969/14-02	MS24256A20	MS3447-20
M39029/31-224	224	20	20	M81969/17-03	M81969/14-02	MS24256A20	MS3447-20

TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
K39029/31-225	225	20	20	M81969/17-03	M81969/14-02	MS24256A20
K39029/31-226	226	20	20	M81969/17-03	M81969/14-02	MS24256A20
K39029/31-227	227	20	20	M81969/17-03	M81969/14-02	MS24256A20
K39029/31-228	228	16	16	M81969/17-04	M81969/14-03	MS24256A16
K39029/31-230	230	16	16	M81969/17-04	M81969/14-03	MS24256A16
K39029/31-231	231	16	16	M81969/17-04	M81969/14-03	MS24256A16
K39029/31-232	232	16	16	M81969/17-04	M81969/14-03	MS24256A16
K39029/31-233	233	16	16	M81969/17-04	M81969/14-03	MS24256A16
K39029/31-234	234	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-236	236	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-237	237	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-238	238	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-239	239	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-241	241	20	20	M81969/17-09	---	MS24256B20
K39029/31-242	242	16	16	M81969/17-04	M81969/14-03	MS24256A16
K39029/31-243	243	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-244	244	20	20	M81969/17-09	---	MS24256B20
K39029/31-245	245	20	20	M81969/17-09	---	MS24256B20
K39029/31-246	246	20	20	M81969/17-09	---	MS24256B20
K39029/31-247	247	20	20	M81969/17-09	---	MS24256B20
K39029/31-248	248	20	20	M81969/17-09	---	MS24256B20
K39029/31-249	249	20	20	M81969/17-09	---	MS24256B20
K39029/31-250	250	20	20	M81969/17-09	---	MS24256B20
K39029/31-251	251	16	16	M81969/17-04	M81969/14-03	MS24256A16
K39029/31-252	252	16	16	M81969/17-04	M81969/14-03	MS24256A16
K39029/31-253	253	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-254	254	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-255	255	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-256	256	12	12	M81969/17-05	M81969/14-04	MS24256A12
K39029/31-257	257	12	12	M81969/17-05	M81969/14-04	MS24256A12

TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools			
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools	
KD9029/32-258	258	12	12	H81969/17-05	H81969/14-04	MS24256A12	MS3447-12
KD9029/33-261	261	23	28	H81969/2-01	---	MS3323-22	---
KD9029/33-262	262	23	28	H81969/2-01	---	MS3323-22	---
KD9029/33-263	263	23	22	H81969/2-01	---	MS3323-22	---
KD9029/33-264	264	23	22	H81969/2-01	---	MS3323-22	---
KD9029/33-265	265	20	20	H81969/2-02	---	MS3373-20	---
KD9029/33-266	266	20	20	H81969/2-02	---	MS3323-20	---
KD9029/33-267	267	16	16	H81969/2-03	---	MS3323-16	---
KD9029/33-268	268	16	16	H81969/2-04	---	MS3323-16	---
KD9029/33-269	269	12	12	H81969/2-04	---	MS3323-12	---
KD9029/33-270	270	12	12	H81969/2-04	---	MS3323-12	---
KD9029/34-271	271	20	20	H81969/18-01	---	MS17805	---
KD9029/34-272	272	16	20	H81969/18-01	---	MS17805	---
KD9029/34-273	273	16	16	H81969/18-02	---	MS17805	---
KD9029/34-440	440	22	22	H81969/18-02	---	---	---
KD9029/35-441	441	22	22	H81969/18-02	---	---	---
KD9029/35-274	274	20	20	H81969/18-01	---	MS17805	---
KD9029/35-275	275	16	20	H81969/18-01	---	MS17805	---
KD9029/35-276	276	16	16	H81969/18-01	---	MS17805	---
KD9029/35-277	277	16	20	H81969/18-01	---	MS17805	---
KD9029/36-278	278	16	16	H81969/18-01	---	MS17805	---
KD9029/37-279	279	16	20	H81969/18-01	---	MS17805	---
KD9029/37-280	280	16	16	H81969/17-01	H81969/14-03	MS90455-16	MS27534-16
KD9029/44-287	287	16	22	H81969/17-01	H81969/14-03	MS90455-16	MS27534-16
KD9029/44-288	288	16	16	H81969/17-01	H81969/14-03	MS90455-16	MS27534-16
KD9029/44-289	289	12	16	H81969/17-02	H81969/14-02	MS90455-12	MS27534-12
KD9029/44-290	290	12	12	H81969/17-02	---	MS90455-8	---
KD9029/44-291	291	8	8	H81969/17-06	---	MS90455-4	---
KD9029/44-292	292	4	4	H81969/17-07	---	MS90455-0	---
KD9029/44-293	293	0	0	H81969/17-08	---	MS90455-16	MS27534-16
KD9029/45-294	294	16	22	H81969/17-01	H81969/14-03	MS90455-16	MS27534-16
KD9029/45-295	295	16	16	H81969/17-01	H81969/14-03	MS90455-16	MS27534-16
KD9029/45-296	296	12	16	H81969/17-01	---	MS90455-12	---
KD9029/45-297	297	12	12	H81969/17-02	---	MS90455-8	---
KD9029/45-298	298	8	8	H81969/17-06	---	MS90455-4	---
KD9029/45-299	299	4	4	H81969/17-07	---	MS90455-0	---

TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
M39029/45-300	300	0	0	M81969/17-08	---	MS90455-0
M39029/46-301	301	23	28	M81969/2-01	---	MS3323-22
M39029/46-302	302	23	28	M81969/2-01	---	MS3323-22
M39029/46-303	303	23	22	M81969/2-01	---	MS3323-22
M39029/46-304	304	23	22	M81969/2-01	---	MS3323-22
M39029/46-305	305	20	20	M81969/2-02	---	MS3323-20
M39029/46-306	306	20	20	M81969/2-02	---	MS3323-20
M39029/46-307	307	16	16	M81969/2-03	---	MS3323-16
M39029/46-308	308	16	16	M81969/2-03	---	MS3323-16
M39029/46-309	309	12	12	M81969/2-04	---	MS3323-12
M39029/46-310	310	12	12	M81969/2-04	---	MS3323-12
M39029/47-311	311	23	28	M81969/2-01	---	MS3323-22
M39029/47-312	312	23	28	M81969/2-01	---	MS3323-22
M39029/47-313	313	23	22	M81969/2-01	---	MS3323-22
M39029/47-314	314	23	22	M81969/2-01	---	MS3323-22
M39029/47-315	315	20	20	M81969/2-02	---	MS3323-20
M39029/47-316	316	20	20	M81969/2-02	---	MS3323-20
M39029/47-317	317	16	16	M81969/2-03	---	MS3323-16
M39029/47-318	318	16	16	M81969/2-03	---	MS3323-16
M39029/47-319	319	12	12	M81969/2-04	---	MS3323-12
M39029/47-320	320	12	12	M81969/2-04	---	MS3323-12
M39029/48-321	321	0000	0000	---	---	---
M39029/48-322	322	0000	0000	---	---	---
M39029/48-323	323	00	00	---	---	---
M39029/48-324	324	0	1	---	---	---
M39029/48-325	325	4	4	---	---	---
M39029/48-326	326	4	4	---	---	---
M39029/48-327	327	6	6	---	---	---
M39029/48-328	328	6	6	---	---	---
M39029/48-329	329	6	6	---	---	---
M39029/48-330	330	6	6	---	---	---
M39029/48-331	331	6	6	---	---	---
M39029/48-332	332	6	6	---	---	---
M39029/48-333	333	6	6	---	---	---
M39029/48-334	334	0000	0000	---	---	---
M39029/49-335	335	00	00	---	---	---
M39029/49-336	336	0	00	---	---	---
M39029/49-337	337	0	1	---	---	---

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TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
M39029/49-331	331	4	4	---	---	---
M39029/49-329	329	6	6	---	---	---
M39029/49-330	330	6C	6	---	---	---
M39029/49-332	332	4C	4	---	---	---
M39029/56-348	348	22	22D	M81969/14-01	M81969/8-01	MS29334-22D
M39029/56-349	349	22	22M	M81969/8-03	M81969/8-01	MS27534-22D
M39029/56-350	350	22	22	M81969/14-02	---	MS27495A22
M39029/56-351	351	20	20	M81969/8-07	M81969/8-05	MS27534-20
M39029/56-352	352	16	16	M81969/14-04	M81969/14-03	MS27495-16
M39029/56-353	353	12	12	M81969/8-09	M81969/14-04	MS27534-16
M39029/56-357	527	10	10	M81969/8	M81969/14-05	MS27495-12
M39029/57-354	354	22	22D	M81969/14-01	M81969/18-01	---
M39029/57-355	355	22	22M	M81969/14-01	M81969/8-01	MS27534-22D
M39029/57-356	356	22	22	M81969/8-03	---	MS27495-22M
M39029/57-358	357	20	20	M81969/8-05	---	MS27495-22
M39029/57-359	358	16	16	M81969/8-07	M81969/14-02	MS27534-20
M39029/57-359	359	12	12	M81969/8-09	M81969/14-03	MS27534-16
M39029/58-360	360	22	22D	M81969/14-01	M81969/14-04	MS27534-12
M39029/58-361	361	22	22M	M81969/8-01	M81969/8-01	MS27495A22M
M39029/58-362	362	22	22	M81969/8-03	---	MS27495-22
M39029/58-363	363	20	20	M81969/8-05	M81969/14-02	MS27534-20
M39029/58-364	364	16	16	M81969/8-07	M81969/14-03	MS27534-16
M39029/58-365	365	12	12	M81969/8-09	M81969/14-04	MS27534-12
M39029/58-528	528	10	10	M81969/14-02	M81969/8	MS27495A22M
M39029/63-368	368	20	20	M81969/14-02	M81969/14-04	MS27534-22D
M39029/64-369	369	20	20	M81969/14-02	M81969/1-02	MS27495-22M
M39029/69-384	384	16	24	M81969/23-02	M81969/1-02	MS27495-22
M39029/69-385	385	16	20	M81969/23-02	---	MS27495-22
M39029/69-386	386	16	16	M81969/23-02	---	MS27534-20
M39029/70-387	387	16	24	M81969/23-01	---	MS27534-16
M39029/70-388	388	16	20	M81969/23-01	---	MS27534-12
M39029/70-389	389	16	16	M81969/23-01	---	---
M39029/71-390	390	22	---	M81969/14-01	M81969/8-01	M24308/18-2
M39029/71-391	391	22	---	M81969/14-01	M81969/8-01	M24308/18-2
M39029/71-392	392	22	---	M81969/14-01	---	---
M39029/72-393	393	22	---	M81969/14-01	M81969/8-01	---

TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
M39029/72-394	394	22	--	M81969/14-01	M81969/8-01	---
M39029/72-395	395	22	--	M81969/14-01	M81969/8-01	---
M39029/83-450	450	20	22	M81969/33-01	---	---
M39029/83-451	451	20	28	M81969/33-01	---	---
M39029/83-508	508	20	20	M81969/33-01	---	---
M39029/84-452	452	20	22	M81969/33-01	---	---
M39029/84-453	453	20	28	M81969/33-01	---	---
M39029/84-509	509	20	20	M81969/33-01	---	---
M39029/85-454	454	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/85-455	455	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/85-456	456	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/85-457	457	16	16	M81969/8-09	M81969/14-04	MS27495A12
M39029/85-458	458	12	12	M81969/8-09	M81969/14-04	MS27495A12
M39029/85-459	459	12	12	M81969/8-09	M81969/14-04	MS27495A12
M39029/85-460	460	12	12	M81969/8-09	M81969/14-04	MS27495A12
M39029/85-461	461	12	12	M81969/8-07	M81969/14-03	MS27495A16
M39029/86-462	462	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/86-463	463	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/86-464	464	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/86-465	465	16	16	M81969/8-09	M81969/14-04	MS27495A12
M39029/86-466	466	12	12	M81969/8-09	M81969/14-04	MS27495A12
M39029/86-467	467	12	12	M81969/8-09	M81969/14-04	MS27495A12
M39029/86-468	468	12	12	M81969/8-09	M81969/14-04	MS27495A12
M39029/86-469	469	12	12	M81969/8-09	M81969/14-04	MS27495A12
M39029/87-470	470	22	22D	M81969/14-01	M81969/8-01	MS27495A12
M39029/87-471	471	22	22D	M81969/14-01	M81969/8-01	MS27495A12
M39029/87-472	472	22	22D	M81969/14-01	M81969/8-01	MS27495A12
M39029/87-473	473	22	22D	M81969/14-01	M81969/8-01	MS27495A12
M39029/87-474	474	20	20	M81969/8-05	M81969/14-02	MS27495A20
M39029/87-475	475	20	20	M81969/8-05	M81969/14-02	MS27495A20
M39029/87-476	476	20	20	M81969/8-05	M81969/14-02	MS27495A20
M39029/87-477	477	20	20	M81969/8-07	M81969/14-03	MS27495A16
M39029/87-478	478	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/87-479	479	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/87-480	480	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/87-481	481	16	16	M81969/8-07	M81969/14-03	MS27495A16

TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
M39029/88-482	482	22	22D	M81969/14-01	M81969/8-01	MS27534-22D
M39029/88-483	483	22	22D	M81969/14-01	M81969/8-01	MS27495A22M
M39029/88-484	484	22	22D	M81969/14-01	M81969/8-01	MS27495A22M
M39029/88-485	485	22	22D	M81969/14-01	M81969/8-01	MS27495A22M
M39029/88-486	486	20	20	M81969/8-05	M81969/14-02	MS27534-20
M39029/88-487	487	20	20	M81969/8-05	M81969/14-02	MS27534-20
M39029/88-488	488	20	20	M81969/8-05	M81969/14-02	MS27534-20
M39029/88-489	489	20	20	M81969/8-05	M81969/14-02	MS27534-20
M39029/88-490	490	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/88-491	491	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/88-492	492	16	16	M81969/8-07	M81969/14-03	MS27495A16
M39029/88-493	493	16	16	M81969/8-07	M81969/14-03	MS27495A16
MS18134-20	---	20	20	M81969/31-01 + -02	---	---
MS18136-20	---	20	20	M81969/31-01 + -02	---	---
M28731/20-0001	---	---	---	M81969/13-01	---	MS18137-20-1 & -2
M28731/20-0002	---	---	---	M81969/13-01	---	MS18137-20-1 & -2
M28731/23-0001	---	---	---	M81969/13-01	---	MIL-C-28731/21
M28731/35-0001	---	---	---	M81969/13-01	---	MIL-C-28731/21
M28731/35-0002	---	---	---	M81969/13-01	---	MIL-C-28731/21
M28754/2-01	---	---	---	M81969/05-01	---	---
M28754/2-02	---	---	---	M81969/05-01	---	---
M28754/3-01	---	---	---	---	---	MIL-C-28731/36
M28754/3-02	---	---	---	---	---	---
M28754/3-03	---	---	---	---	---	---
M28754/3-04	---	---	---	---	---	---
M28754/3-05	---	---	---	---	---	---
M28754/3-06	---	---	---	---	---	---
M28754/3-07	---	---	---	---	---	---
M28754/3-08	---	---	---	---	---	---
M28754/3-09	---	---	---	---	---	---
M28754/3-10	---	---	---	---	---	---
M28754/3-11	---	---	---	---	---	---
M28754/3-12	---	---	---	---	---	---
M28754/3-13	---	---	---	---	---	---
M28754/3-14	---	---	---	---	---	---
M28754/3-15	---	---	---	---	---	---

These contacts shall be installed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
M28754/3-16	---	---	---			
M28754/3-17	---	---	---			
M28754/3-18	---	---	---			
M28754/3-19	---	---	---			
M28754/3-20	---	---	---			
M28754/3-21	---	---	---			
M28754/3-22	---	---	---			
M28754/3-23	---	---	---			
M28754/3-24	---	---	---			
M28754/3-25	---	---	---			
M28754/3-26	---	---	---			
M28754/3-27	---	---	---			
M28754/3-28	---	---	---			
M28754/3-29	---	---	---			
M28754/5-01	---	---	---			
M28754/5-02	---	---	---			
M28754/5-03	---	---	---			
M28754/15-02	---	---	---			
M28754/29-01	---	---	---			
M28754/29-02	---	---	---			
M28754/29-03	---	---	---			
M28754/29-04	---	---	---			
M28754/34-01	---	---	---			
M28754/34-02	---	---	---			
M28754/34-03	---	---	---			
M28754/34-04	---	---	---			
M28754/34-05	---	---	---			
M28754/34-06	---	---	---			
M28754/35-01	N/A	N/A	N/A			
M28754/35-02	N/A	N/A	N/A			
M28754/35-03	N/A	N/A	N/A			
M28754/35-04	N/A	N/A	N/A			
M28754/35-05	N/A	N/A	N/A			
M28754/35-06	N/A	N/A	N/A			
M28754/36-01	N/A	N/A	N/A			
M28754/36-02	N/A	N/A	N/A			

These contacts shall be installed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

TABLE 402-I. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
M28754/36-03	N/A	N/A	N/A			
M28754/36-04	N/A	N/A	N/A			
M28754/36-05	N/A	N/A	N/A			
M28754/36-06	N/A	N/A	N/A			
M28754/37-01	N/A	N/A	N/A			
M28754/37-02	N/A	N/A	N/A			
M28754/37-03	N/A	N/A	N/A			
M28754/37-04	N/A	N/A	N/A			
M28754/37-05	N/A	N/A	N/A			
M28754/37-06	N/A	N/A	N/A			
M28754/37-07	N/A	N/A	N/A			
M28754/37-08	N/A	N/A	N/A			
M28754/37-09	N/A	N/A	N/A			
M28754/37-10	N/A	N/A	N/A			
M28754/37-11	N/A	N/A	N/A			
M28754/37-12	N/A	N/A	N/A			
M28754/37-13	N/A	N/A	N/A			
M28754/37-14	N/A	N/A	N/A			
M28754/37-15	N/A	N/A	N/A			
M28754/37-16	N/A	N/A	N/A			
M28754/37-17	N/A	N/A	N/A			
M28754/37-18	N/A	N/A	N/A			
M28754/37-19	N/A	N/A	N/A			
M28754/37-20	N/A	N/A	N/A			
M28754/37-21	N/A	N/A	N/A			
M28754/37-22	N/A	N/A	N/A			
M28754/37-23	N/A	N/A	N/A			
M28754/37-24	N/A	N/A	N/A			
M28754/37-25	N/A	N/A	N/A			
M28754/37-26	N/A	N/A	N/A			
M28754/37-27	N/A	N/A	N/A			
M28754/37-28	N/A	N/A	N/A			
M28754/37-29	N/A	N/A	N/A			
M28754/37-30	N/A	N/A	N/A			
M28754/37-31	N/A	N/A	N/A			
M28754/37-32	N/A	N/A	N/A			

These contacts shall be installed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

TABLE 402-I. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
M28754/37-33	N/A	N/A	N/A			
M28754/37-34	N/A	N/A	N/A			
M28754/37-35	N/A	N/A	N/A			
M28754/37-36	N/A	N/A	N/A			
M28754/37-37	N/A	N/A	N/A			
M28754/37-38	N/A	N/A	N/A			
M28754/37-39	N/A	N/A	N/A			
M28754/37-40	N/A	N/A	N/A			
M28754/37-41	N/A	N/A	N/A			
M28754/37-42	N/A	N/A	N/A			
M28754/37-43	N/A	N/A	N/A			
M28754/37-44	N/A	N/A	N/A			
M28754/37-45	N/A	N/A	N/A			
M28754/37-46	N/A	N/A	N/A			
M28754/37-47	N/A	N/A	N/A			
M28754/37-48	N/A	N/A	N/A			
M28754/37-49	N/A	N/A	N/A			
M28754/37-50	N/A	N/A	N/A			
M28754/37-51	N/A	N/A	N/A			
M28754/37-52	N/A	N/A	N/A			
M28754/37-53	N/A	N/A	N/A			
M28754/37-54	N/A	N/A	N/A			
M28754/37-55	N/A	N/A	N/A			
M28754/37-56	N/A	N/A	N/A			
M28754/37-57	N/A	N/A	N/A			
M28754/37-58	N/A	N/A	N/A			
M28754/37-59	N/A	N/A	N/A			
M28754/37-60	N/A	N/A	N/A			
M28754/37-61	N/A	N/A	N/A			
M28754/37-62	N/A	N/A	N/A			
M28754/37-63	N/A	N/A	N/A			
M28754/37-64	N/A	N/A	N/A			
M28754/37-65	N/A	N/A	N/A			
M28754/37-66	N/A	N/A	N/A			
M28754/37-67	N/A	N/A	N/A			
M28754/37-68	N/A	N/A	N/A			

These contacts shall be installed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

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TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded installing tools
M28754/37-69	N/A	N/A	N/A			
M28754/37-70	N/A	N/A	N/A			
M28754/37-71	N/A	N/A	N/A			
M28754/37-72	N/A	N/A	N/A			
M28754/37-73	N/A	N/A	N/A			
M28754/37-74	N/A	N/A	N/A			
M28754/37-75	N/A	N/A	N/A			
M28754/37-76	N/A	N/A	N/A			
M28754/37-77	N/A	N/A	N/A			
M28754/37-78	N/A	N/A	N/A			
M28754/37-79	N/A	N/A	N/A			
M28754/37-80	N/A	N/A	N/A			
M28754/37-81	N/A	N/A	N/A			
M28754/37-82	N/A	N/A	N/A			
M28754/37-83	N/A	N/A	N/A			
M28754/37-84	N/A	N/A	N/A			
M28754/37-85	N/A	N/A	N/A			
M28754/37-86	N/A	N/A	N/A			
M28754/37-87	N/A	N/A	N/A			
M28754/37-88	N/A	N/A	N/A			
M28754/37-89	N/A	N/A	N/A			
M28754/37-90	N/A	N/A	N/A			
M28754/37-91	N/A	N/A	N/A			
M28754/37-92	N/A	N/A	N/A			
M28754/37-93	N/A	N/A	N/A			
M28754/37-94	N/A	N/A	N/A			
M28754/37-95	N/A	N/A	N/A			
M28754/37-96	N/A	N/A	N/A			
M28754/37-97	N/A	N/A	N/A			
M28754/37-98	N/A	N/A	N/A			
M28754/37-99	N/A	N/A	N/A			
M28754/37-100	N/A	N/A	N/A			
M28754/37-101	N/A	N/A	N/A			
M28754/37-102	N/A	N/A	N/A			
M28754/37-103	N/A	N/A	N/A			
M28754/37-104	N/A	N/A	N/A			

These contacts shall be installed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

TABLE 402-1. Installing tools for power contacts - Continued.

Contacts				Installing tools		
Part number	Bin code	Mating end size	Vice barrel size	Option 1	Option 2	Superseded installing tools
M28754/37-105	N/A	N/A	N/A			These contacts shall be installed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.
M28754/37-106	N/A	N/A	N/A			
M28754/37-107	N/A	N/A	N/A			
M28754/37-108	N/A	N/A	N/A			
M28754/38-01	N/A	N/A	N/A			
M28754/38-02	N/A	N/A	N/A			
M28754/38-03	N/A	N/A	N/A			
M28754/38-04	N/A	N/A	N/A			
M28754/38-05	N/A	N/A	N/A			
M28754/38-06	N/A	N/A	N/A			
M28804/9-1	---	22	22	M81969/1-04	---	
M28804/10-1	---	22	22	M81969/1-04	---	
M55302/84-01	---	---	---	M81969/10-01	---	
M55302/84-02	---	---	---	M81969/10-01	---	
M55302/97-01	---	---	---	M81969/5-01	---	
M55302/97-02	---	---	---	M81969/5-01	---	
						M24308/18-1
						M24308/18-1
						M55302/86-01
						M55302/86-01
						M55302/105-01
						M55302/105-01

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TABLE 403-1. Installing tools for shielded contacts.

Contacts			Installing tools			
Part number	Bin code	Conn cavity size	Option 1	Option 2	Option 3	Superseded installing tools
KJ9029/6-120	120	16	M81969/2-03	---	---	MS3323-16
KJ9029/6-120	121	12	M81969/2-04	---	---	MS3323-12
KJ9029/6-122	122	12	M81969/2-04	---	---	MS3323-12
KJ9029/6-123	123	12	M81969/2-04	---	---	MS3323-12
KJ9029/6-124	124	12	M81969/2-04	---	---	MS3323-12
KJ9029/7-126	126	12	M81969/14-04	---	---	MS27534-12
KJ9029/7-127	127	12	M81969/14-04	---	---	MS27534-12
KJ9029/7-128	128	12	M81969/14-04	---	---	MS27534-12
KJ9029/8-129	129	12	M81969/14-04	---	---	MS27534-12
KJ9029/8-130	130	12	M81969/14-04	---	---	MS27534-12
KJ9029/8-131	131	12	M81969/14-04	---	---	MS27534-12
KJ9029/13-152	152	16	M81969/2-03	---	---	MS3323-16
KJ9029/13-153	153	12	M81969/2-04	---	---	MS3323-12
KJ9029/13-154	154	12	M81969/2-04	---	---	MS3323-12
KJ9029/13-155	155	12	M81969/2-04	---	---	MS3323-12
KJ9029/13-156	156	12	M81969/2-04	---	---	MS3323-12
KJ9029/13-157	157	12	M81969/2-04	---	---	MS3323-12
KJ9029/14-158	158	16	M81969/2-03	---	---	MS3323-16
KJ9029/14-159	159	12	M81969/2-04	---	---	MS3323-12
KJ9029/14-160	160	12	M81969/2-04	---	---	MS3323-12
KJ9029/14-161	161	12	M81969/2-04	---	---	MS3323-12
KJ9029/14-162	162	12	M81969/2-04	---	---	MS3323-12
KJ9029/14-163	163	12	M81969/2-04	---	---	MS3323-12
KJ9029/19-181	181	16	M81969/16-02	M81969/16-02	---	MS3160-16
KJ9029/19-182	182	12	M81969/16-03	M81969/16-03	---	MS3160-12
KJ9029/19-183	183	12	M81969/16-03	M81969/16-03	---	MS3160-12
KJ9029/20-184	184	16	M81969/16-02	M81969/16-02	---	MS3160-16
KJ9029/20-185	185	12	M81969/16-03	M81969/16-03	---	MS3160-12
KJ9029/20-186	186	12	M81969/16-03	M81969/16-03	---	MS3160-12
KJ9029/21-187	187	16	M81969/16-02	M81969/16-02	---	MS3160-16
KJ9029/21-188	188	12	M81969/16-03	M81969/16-03	---	MS3160-12
KJ9029/21-189	189	12	M81969/16-03	M81969/16-03	---	MS3160-12
KJ9029/23-194	194	8	---	---	---	---
KJ9029/23-195	195	8	---	---	---	---
KJ9029/23-196	196	8	---	---	---	---
KJ9029/23-197	197	8	---	---	---	---
KJ9029/23-198	198	8	---	---	---	---

TABLE 403-1. Installing tools for shielded contacts - Continued.

Contacts			Installing tools			
Part number	Bin code	Conn cavity size	Option 1	Option 2	Option 3	Superseded installing tools
M39029/24-199	199	8	---	---	---	---
M39029/24-200	200	8	---	---	---	---
M39029/24-201	201	8	---	---	---	---
M39029/24-202	202	8	---	---	---	---
M39029/24-203	203	8	---	---	---	---
M39029/24-204	204	12	M81969/17-05	---	---	---
M39029/25-205	205	12	M81969/17-05	---	---	---
M39029/25-206	206	12	M81969/17-05	---	---	---
M39029/26-207	207	12	M81969/17-05	---	---	---
M39029/26-208	208	12	M81969/17-05	---	---	---
M39029/26-209	209	12	M81969/8-09	M81969/14-04	---	---
M39029/27-210	210	12	M81969/8-09	M81969/14-04	---	---
M39029/27-402	402	12	M81969/8-09	M81969/14-04	---	---
M39029/27-403	403	12	M81969/8-09	M81969/14-04	---	---
M39029/27-404	404	12	M81969/8-09	M81969/14-04	---	---
M39029/27-405	405	12	M81969/8-09	M81969/14-04	---	---
M39029/27-406	406	12	M81969/8-09	M81969/14-04	---	---
M39029/27-407	407	12	M81969/8-09	M81969/14-04	---	---
M39029/27-408	408	12	M81969/8-09	M81969/14-04	---	---
M39029/28-211	211	12	M81969/8-09	M81969/14-04	---	---
M39029/28-409	409	12	M81969/8-09	M81969/14-04	---	---
M39029/28-410	410	12	M81969/8-09	M81969/14-04	---	---
M39029/28-411	411	12	M81969/8-09	M81969/14-04	---	---
M39029/28-412	412	12	M81969/8-09	M81969/14-04	---	---
M39029/28-413	413	12	M81969/8-09	M81969/14-04	---	---
M39029/28-414	414	12	M81969/8-09	M81969/14-04	---	---
M39029/28-415	415	12	M81969/8-09	M81969/14-04	---	---
M39029/50-340	340	12	M81969/14-04	---	---	---
M39029/51-341	341	12	M81969/14-04	---	---	---
M39029/54-342	342	12	M81969/17-05	---	---	---
M39029/54-343	343	8	M81969/17-05	---	---	---
M39029/55-344	344	12	M81969/17-05	---	---	---
M39029/55-345	345	8	None Required	---	---	---
M39029/59-366	366	8	None Required	---	---	---
M39029/60-367	367	8	M81969/14-04	---	---	---
M39029/73-396	396	12	M81969/14-04	---	---	---
M39029/73-397	397	12	M81969/14-04	---	---	---

TABLE 403-1. Installing tools for shielded contacts - Continued.

Contacts			Installing tools			
Part number	Bin code	Conn cavity size	Option 1	Option 2	Option 3	Superseded installing tools
M39029/73-398	398	12	M81969/14-04	---	---	---
M39029/74-399	399	12	M81969/14-04	---	---	---
M39029/74-400	400	12	M81969/14-04	---	---	---
M39029/74-401	401	12	M81969/14-04	---	---	---
M39029/75-416	416	12	M81969/8-09	M81969/14-04	---	---
M39029/75-417	417	12	M81969/8-09	M81969/14-04	---	---
M39029/75-418	418	12	M81969/8-09	M81969/14-04	---	---
M39029/75-419	419	12	M81969/8-09	M81969/14-04	---	---
M39029/75-420	420	12	M81969/8-09	M81969/14-04	---	---
M39029/75-421	421	12	M81969/8-09	M81969/14-04	---	---
M39029/75-422	422	12	M81969/8-09	M81969/14-04	---	---
M39029/75-423	423	12	M81969/8-09	M81969/14-04	---	---
M39029/76-424	424	16	M81969/8-07	M81965/14-03	---	---
M39029/76-425	425	16	M81969/8-07	M81965/14-03	---	---
M39029/76-426	426	16	M81969/8-07	M81965/14-03	---	---
M39029/76-427	427	16	M81969/8-07	M81965/14-03	---	---
M39029/77-428	428	16	M81969/8-07	M81965/14-03	---	---
M39029/77-429	429	16	M81969/8-07	M81965/14-03	---	---
M39029/77-430	430	16	M81969/8-07	M81965/14-03	---	---
M39029/77-431	431	16	M81969/8-07	M81965/14-03	---	---
M39029/78-432	432	16	M81969/8-07	M81965/14-03	---	---
M39029/78-433	433	16	M81969/8-07	M81965/14-03	---	---
M39029/78-434	434	16	M81969/8-07	M81965/14-03	---	---
M39029/78-435	435	16	M81969/8-07	M81965/14-03	---	---
M39029/79-436	436	16	M81969/17-04	---	---	---
M39029/79-437	437	16	M81969/17-04	---	---	---
M39029/80-438	438	16	M81969/17-04	---	---	---
M39029/80-439	439	16	M81969/17-04	---	---	---
M39029/90-529	529	8	M81969/14-06	---	---	---
M39029/91-530	530	8	M81969/14-06	---	---	---

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TABLE 410-I. National stock numbers (NSN) for installing tools.

Installing tool part number	National stock number (NSN)
M81969/1-01	5120-00-132-5791
M81969/1-02	5120-00-132-5739
M81969/1-03	5120-01-111-1125
M81969/1-04	5120-00-036-6929
M81969/2-01	5120-00-177-7028
M81969/2-02	5120-00-005-8054
M81969/2-03	5120-00-007-5752
M81969/2-04	5120-00-133-0031
M81969/5-01	5120-01-078-1919
M81969/7-01	5120-00-775-6559
M81969/8-01	5120-00-251-9503
M81969/8-03	5120-00-137-9140
M81969/8-05	5120-00-177-6967
M81969/8-07	5120-00-018-0529
M81969/8-09	5120-00-018-0531
M81969/10-01	5120-00-133-0032
M81969/12-01	5120-01-078-1917
M81969/12-02	---
M81969/13-01	5120-00-094-3510
M81969/14-01	5120-00-018-0575
M81969/14-02	5120-00-915-4587
M81969/14-03	5120-00-915-4588
M81969/14-04	5120-00-157-3138
M81969/16-01	5120-00-132-6328
M81969/16-02	5120-00-132-5218
M81969/16-03	5120-00-132-5451
M81969/16-04	5120-00-132-5808
M81969/17-01	5120-01-042-0997
M81969/17-02	5120-00-132-2051
M81969/17-03	5120-00-074-4598
M81969/17-04	5120-00-079-4599
M81969/17-05	5120-00-079-4600
M81969/17-06	5120-00-132-1960
M81969/17-07	5120-00-132-1961
M81969/17-08	5120-00-132-1979
M81969/17-09	5120-00-079-4598
M81969/18-01	5120-00-930-7504
M81969/18-02	---
M81969/21-01	---
M81969/23-01	---
M81969/23-02	---

TABLE 410-1. National stock numbers (NSN) for
installing tools - Continued.

Installing tool part number	National stock number (NSN)
M81969/31-01	5120-00-865-3252
M81969/31-02	5120-00-869-6986
M81969/31-03	5120-00-869-6984
M81969/31-04	5120-00-869-6987
M81969/31-05	---
M81969/31-06	---
M81969/31-07	---
M81969/31-08	---
M81969/31-09	---
M81969/31-10	---
M81969/33-01	---
M81969/34-01	---

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SECTION 500

REMOVAL TOOLS FOR CONTACTS

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501	Removal tool application	501.1
502	Removal tools for power contacts	502.1
503	Removal tools for shielded contacts	503.1
510	National stock numbers (NSN) for removal tools	510.1

SECTION 501

TABLE 501-I. Removal tool application.

Connector types	Removal tool types	Superseded removal tools
MIL-C-5015	MIL-I-81969/29 MIL-I-81969/14 MIL-I-81969/14 MIL-I-81969/19	MS3165 MS3447 MS27534 MS90456
MIL-C-21097	MIL-I-81969/6	MIL-C-21097/18
MIL-C-22992	MIL-I-81969/27	MS90562
MIL-C-24308	MIL-I-81969/14 MIL-I-81969/14 MIL-I-81969/8 MIL-I-81969/1	MS18278 MS27534 MS27495 MIL-C-24308/18
MIL-C-26482	MIL-I-81969/14 MIL-I-81969/30 MIL-I-81969/19	MS3447, MS27534 MS3448 MS24256
MIL-C-26500	MIL-I-81969/19	MS24256
MIL-C-28731	MIL-I-81969/11	MIL-C-28731/22
MIL-C-28748	MIL-I-81969/20	MS17806
MIL-C-28754	MIL-I-81969/31	MS18137
MIL-C-28804	MIL-I-81969/1	MIL-C-24308/18
MIL-C-28840	MIL-I-81969/34	---
MIL-C-38999	MIL-I-81969/8 MIL-I-81969/14	MS27495 MS27534
MIL-C-55302	MIL-I-81969/4 MIL-I-81969/8 MIL-I-81969/9 MIL-I-81969/10 MIL-I-81969/12 MIL-I-81969/14 MIL-I-81969/31	MIL-C-55302/106 MIL-C-55302/79 MIL-C-55302/28 MIL-C-55302/86 MIL-C-55302/65 & 66 MS27534 MS18137

TABLE 501-I. Removal tool application - Continued.

Connector types	Removal tool types	Superseded removal tools
MIL-C-81511	MIL-I-81969/30 MIL-I-81969/16 MIL-I-81969/3 MIL-I-81969/3	MS3159 MS3160 MS3342 MS3344
MIL-C-81659	MIL-I-81969/1 MIL-I-81969/28 MIL-I-81969/19	MS3156 MS3178 MS90456
MIL-C-81703	MIL-I-81969/14 MIL-I-81969/30 MIL-I-81969/19	MS3447 MS3448 MS24256
MIL-C-81714	MIL-I-81969/14 MIL-I-81969/14	MS3447 MIL-C-83723/31
MIL-C-83723	MIL-I-81969/14 MIL-I-81969/29	MIL-C-83723/31 MIL-C-83723/32
MIL-C-83733	MIL-I-81969/8 MIL-I-81969/14 MIL-I-81969/14	MS27495 MS27534 MIL-C-83723/31
MIL-C-85028	MIL-I-81969/21 MIL-I-81969/22	--- ---

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TABLE 502-1. Removal tools for power contracts.

Contacts			Removal tools			Removal tools		
Part number	Bin code	Mating end size	Wire barrel size	Wired contacts		Superseded removal tools	Unwired contacts	
				Option 1	Option 2		Removal tool	Superseded removal tool
M39029/1-100	100	16	22	M81969/14-02	---	MS3447-20	---	---
M39029/1-101	101	16	20	M81969/14-02	---	MS3447-20	---	---
M39029/1-102	102	14	16	M81969/14-03	---	MS3447-16	---	---
M39029/1-103	103	12	12	M81969/14-04	---	MS3447-12	---	---
M39029/1-507	507	20	22D	M81969/14-01	---	MS27534R2D	---	---
M39029/2-104	104	22	22	---	---	---	---	---
M39029/2-105	105	20	20	---	---	---	---	---
M39029/2-106	106	16	16	M81969/19-01	---	MS90456-16	---	---
M39029/3-107	107	22	22	---	---	---	---	---
M39029/3-108	108	20	20	---	---	---	---	---
M39029/3-109	109	16	16	M81969/19-01	---	MS90456-16	---	---
M39029/4-110	110	20	20	M81969/14-02	---	MS3447-20	MS27534R20	M81969/30-05
M39029/4-111	111	16	16	M81969/14-03	---	MS3447-16	MS27534R16	M81969/30-06
M39029/4-112	112	16	16	M81969/14-03	---	MS3447-16	MS27534R16	M81969/30-06
M39029/4-113	113	12	12	M81969/14-04	---	MS3447-12	MS27534R12	M81969/30-07
M39029/5-115	115	20	20	M81969/14-04	---	MS3447-20	MS27534R20	M81969/30-07
M39029/5-116	116	16	16	M81969/14-03	---	MS3447-16	MS27534R16	M81969/30-05
M39029/5-117	117	16	16	M81969/14-03	---	MS3447-16	MS27534R16	M81969/30-06
M39029/5-118	118	12	12	M81969/14-04	---	MS3447-12	MS27534R12	M81969/30-06
M39029/5-119	119	12	12	M81969/14-04	---	MS3447-12	MS27534R12	M81969/30-07
M39029/5-120	120	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/9-131	131	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/9-132	132	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/9-133	133	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/9-134	134	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/9-135	135	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/9-136	136	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/10-138	138	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/10-139	139	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/10-140	140	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/10-141	141	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/10-142	142	20	20	M81969/14-02	---	MS3447-20	---	M81969/30-05
M39029/10-144	144	22	22	M81969/1-01	---	MS3156-22	---	M81969/30-05
M39029/11-145	145	20	20	M81969/1-02	---	MS3156-20	---	---
M39029/11-146	146	16	16	M81969/1-03	---	MS3156-16	---	---
M39029/11-147	147	12	12	M81969/28-02	---	MS3178-002	---	---
M39029/12-148	148	22	22	M81969/1-01	---	MS3156-22	---	---

TABLE 502-1. Removal tools for power contacts - Continued.

Contacts			Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded removal tools
M39029/12-149	149	20	20	M81969/1-02	---	MS3156-20
M39029/12-150	150	16	16	M81969/1-03	---	MS3156-16
M39029/12-151	151	12	12	M81969/28-02	---	MS3178-022
M39029/16-166	166	23	28	M81969/16-04	---	MS3160-22
M39029/16-167	167	23	22	M81969/16-04	---	MS3160-22
M39029/16-168	168	20	20	M81969/16-01	---	MS3160-20
M39029/16-169	169	16	16	M81969/16-02	---	MS3160-16
M39029/16-170	170	12	12	M81969/16-03	---	MS3160-12
M39029/17-171	171	23	28	M81969/16-04	---	MS3160-22
M39029/17-172	172	23	22	M81969/16-01	---	MS3160-20
M39029/17-173	173	20	20	M81969/16-02	---	MS3160-16
M39029/17-174	174	16	16	M81969/16-03	---	MS3160-12
M39029/17-175	175	12	12	M81969/16-04	---	MS3160-22
M39029/18-176	176	23	28	M81969/16-04	---	MS3160-22
M39029/18-177	177	23	22	M81969/16-01	---	MS3160-20
M39029/18-178	178	20	20	M81969/16-02	---	MS3160-16
M39029/18-179	179	16	16	M81969/16-03	---	MS3160-12
M39029/18-180	180	12	12	M81969/14-03	---	H83723/31-16
M39029/29-212	212	16	16	M81969/14-04	---	H83723/31-12
M39029/29-213	213	12	12	M81969/29-02	---	H83723/32-08
M39029/29-214	214	8	8	M81969/29-03	---	H83723/32-04
M39029/29-215	215	4	4	M81969/29-04	---	H83723/32-00
M39029/29-216	216	0	0	M81969/29-03	---	H83723/31-16
M39029/30-217	217	16S	16	M81969/14-03	---	H83723/31-16
M39029/30-218	218	16	16	M81969/14-04	---	H83723/31-12
M39029/30-219	219	12	12	M81969/29-02	---	H83723/32-08
M39029/30-220	220	8	8	M81969/29-03	---	H83723/32-04
M39029/30-221	221	4	4	M81969/29-04	---	H83723/32-00
M39029/30-222	222	0	0	M81969/19-07	---	MS24256R20
M39029/31-223	223	20	20	M81969/19-07	---	MS24256R20
M39029/31-224	224	20	20	M81969/19-07	---	MS24256R20
M39029/31-225	225	20	20	M81969/19-07	---	MS24256R20
M39029/31-226	226	20	20	M81969/19-07	---	MS24256R20
M39029/31-227	227	20	20	M81969/19-07	---	MS24256R16
M39029/31-228	228	16	16	M81969/19-08	---	MS24256R16
				Unwired contacts		
				Removal tool	Superseded removal tool	
				M81969/30-01	MS3159-22	---
				M81969/30-02	MS3159-22	---
				M81969/30-03	MS3159-20	---
				M81969/30-04	MS3159-16	---
				M81969/30-01	MS3159-22	---
				M81969/30-02	MS3159-22	---
				M81969/30-03	MS3159-16	---
				M81969/30-04	MS3159-12	---
				M81969/30-01	MS3159-22	---
				M81969/30-02	MS3159-20	---
				M81969/30-03	MS3159-16	---
				M81969/30-04	MS3159-12	---

TABLE 502-1. Removal tools for power contacts - Continued.

Part number	Contacts			Removal tools			
	Bin code	Mating end size	Wire barrel size	Wired contacts		Unwired contacts	
				Option 1	Option 2	Superseded removal tools	Superseded removal tool
M39029/31-229	229	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-230	230	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-231	231	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-232	232	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-233	233	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-234	234	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-235	235	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-236	236	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-237	237	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-238	238	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-239	239	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-241	241	20	20	M81969/19-07	---	MS24256R20	---
M39029/31-242	242	20	20	M81969/19-07	---	MS24256R20	---
M39029/31-243	243	20	20	M81969/19-07	---	MS24256R20	---
M39029/31-244	244	20	20	M81969/19-07	---	MS24256R20	---
M39029/31-245	245	20	20	M81969/19-07	---	MS24256R20	---
M39029/31-246	246	20	20	M81969/19-07	---	MS24256R20	---
M39029/31-247	247	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-248	248	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-249	249	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-250	250	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-251	251	16	16	M81969/19-08	---	MS24256R16	---
M39029/31-252	252	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-253	253	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-254	254	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-255	255	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-256	256	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-257	257	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-258	258	12	12	M81969/19-09	---	MS24256R12	---
M39029/31-260	260	20	20	M81969/19-07	---	MS24256R20	---
M39029/31-261	261	23	23	M81969/19-01	---	MS3344-23	---
M39029/31-262	262	23	23	M81969/19-01	---	MS3344-23	---
M39029/31-263	263	23	23	M81969/19-01	---	MS3344-23	---

TABLE 502-1. Removal tools for power contacts - continued.

Contacts				Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded removal tools	Unwired contacts Removal tool Superseded removal tool
M39029/13-264	264	23	22	M81969/3-01	---	MS3344-23	---
M39029/13-265	265	20	20	M81969/3-02	---	MS3344-20	---
M39029/13-266	266	20	20	M81969/3-02	---	MS3344-20	---
M39029/13-267	267	16	16	M81969/3-03	---	MS3344-16	---
M39029/13-268	268	16	16	M81969/3-03	---	MS3344-16	---
M39029/13-269	269	12	12	M81969/3-04	---	MS3344-12	---
M39029/13-270	270	12	12	M81969/3-04	---	MS3344-12	---
M39029/34-271	271	20	20	M81969/20-01	---	MS17806	---
M39029/34-272	272	16	16	M81969/20-01	---	MS17806	---
M39029/34-273	273	16	16	M81969/20-01	---	MS17806	---
M39029/34-440	440	22	22	M81969/20-02	---	---	---
M39029/35-441	441	22	22	M81969/20-02	---	---	---
M39029/35-274	274	20	20	M81969/20-01	---	MS17806	---
M39029/35-275	275	16	16	M81969/20-01	---	MS17806	---
M39029/35-276	276	16	16	M81969/20-01	---	MS17806	---
M39029/36-277	277	16	20	M81969/20-01	---	MS17806	---
M39029/36-278	278	16	16	M81969/20-01	---	MS17806	---
M39029/37-279	279	16	20	M81969/20-01	---	MS17806	---
M39029/37-280	280	16	16	M81969/20-01	---	MS17806	---
M39029/44-287	287	16	22	M81969/19-01	---	MS90456-16	---
M39029/44-288	288	16	16	M81969/19-01	---	MS90456-16	---
M39029/44-289	289	12	16	M81969/19-02	---	MS90456-12	---
M39029/44-290	290	12	12	M81969/19-02	---	MS90456-12	---
M39029/44-291	291	8	8	M81969/19-03	---	MS90456-8	---
M39029/44-292	292	4	4	M81969/19-04	---	MS90456-4	---
M39029/44-293	293	0	0	M81969/19-05	---	MS90456-0	---
M39029/45-294	294	16	22	M81969/19-01	---	MS90456-16	---
M39029/45-295	295	16	16	M81969/19-01	---	MS90456-16	---
M39029/45-296	296	12	16	M81969/19-02	---	MS90456-12	---
M39029/45-297	297	12	12	M81969/19-02	---	MS90456-12	---
M39029/45-298	298	8	8	M81969/19-03	---	MS90456-8	---
M39029/45-299	299	4	4	M81969/19-04	---	MS90456-4	---
M39029/45-300	300	0	0	M81969/19-05	---	MS90456-0	---
M39029/46-301	301	23	28	M81969/3-01	---	MS3344-23	---
M39029/46-302	302	23	28	M81969/3-01	---	MS3344-23	---
M39029/46-303	303	23	22	M81969/3-01	---	MS3344-23	---

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TABLE 502-1. Removal tools for power contacts - Continued.

Contacts			Removal tools			
Part number	Pin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded removal tools
H39029/46-104	304	23	22	H81969/3-01	---	MS3344-23
H39029/46-105	305	20	20	H81969/3-02	---	MS3344-20
H39029/46-106	306	20	20	H81969/3-02	---	MS3344-20
H39029/46-107	307	16	16	H81969/3-03	---	MS3344-16
H39029/46-108	308	16	16	H81969/3-03	---	MS3344-16
H39029/46-109	309	12	12	H81969/3-04	---	MS3344-12
H39029/46-110	310	12	12	H81969/3-04	---	MS3344-12
H39029/47-111	311	23	28	H81969/3-05	---	MS3342-23
H39029/47-112	312	23	28	H81969/3-05	---	MS3342-23
H39029/47-113	313	23	22	H81969/3-05	---	MS3342-23
H39029/47-114	314	23	22	H81969/3-05	---	MS3342-23
H39029/47-115	315	20	20	H81969/3-06	---	MS3342-20
H39029/47-116	316	20	20	H81969/3-06	---	MS3342-20
H39029/47-117	317	16	16	H81969/3-07	---	MS3342-16
H39029/47-118	318	16	16	H81969/3-07	---	MS3342-16
H39029/47-119	319	12	12	H81969/3-08	---	MS3342-12
H39029/48-117	317	6	6	H81969/27-06	---	MS90562-6
H39029/48-118	318	6	6	H81969/27-06	---	MS90562-6
H39029/48-119	319	6	6	H81969/27-06	---	MS90562-6
H39029/48-120	320	4	4	H81969/27-05	---	MS90562-5
H39029/48-121	321	4	4	H81969/27-05	---	MS90562-5
H39029/48-122	322	4	4	H81969/27-05	---	MS90562-5
H39029/48-123	323	0	1	H81969/27-03	---	MS90562-3
H39029/48-124	324	0	1	H81969/27-03	---	MS90562-3
H39029/48-125	325	00	00	H81969/27-02	---	MS90562-2
H39029/48-126	326	00	00	H81969/27-02	---	MS90562-2
H39029/48-127	327	0000	0000	H81969/27-01	---	MS90562-1
H39029/48-128	328	0000	0000	H81969/27-01	---	MS90562-1
H39029/49-129	329	6	6	H81969/27-06	---	MS90562-6
H39029/49-130	330	6	6	H81969/27-06	---	MS90562-6
H39029/49-131	331	4	4	H81969/27-05	---	MS90562-5
H39029/49-132	332	4	4	H81969/27-05	---	MS90562-5
H39029/49-133	333	0	1	H81969/27-03	---	MS90562-3
H39029/49-134	334	00	00	H81969/27-02	---	MS90562-2
H39029/49-135	335	0000	0000	H81969/27-01	---	MS90562-1

TABLE 502-1. Removal tools for power contacts - continued.

Contacts				Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Wired contacts		Unwired contacts	
				Option 1	Option 2	Superseded removal tools	Removal tool
M39029/56-348	348	22	22	M81969/14-01	M81969/8-02	MS2749SR22M	---
M39029/56-349	349	22	22	M81969/8-02	M81969/14-01	MS2749SR22M	---
M39029/56-350	350	22	22	M81969/8-04	---	MS2749SR22	---
M39029/56-351	351	20	20	M81969/8-06	M81969/14-02	MS27534-20	---
M39029/56-352	352	16	16	M81969/8-08	M81969/14-03	MS27534-16	---
M39029/56-353	353	12	12	M81969/8-10	M81969/14-04	MS27534-12	---
M39029/56-527	527	10	10	M81969/14-05	---	---	---
M39029/57-354	354	22	22D	M81969/14-01	M81969/8-02	MS2749SR22M	---
M39029/57-355	355	22	22M	M81969/8-02	M81969/14-01	MS27534-22D	---
M39029/57-356	356	22	22	M81969/8-04	---	MS2749SR22	---
M39029/57-357	357	20	20	M81969/8-06	M81969/14-02	MS27534-20	---
M39029/57-358	358	16	16	M81969/8-08	M81969/14-03	MS27534-16	---
M39029/57-359	359	12	12	M81969/8-10	M81969/14-04	MS2749SR12	---
M39029/57-359	359	12	12	M81969/14-01	M81969/8-02	MS27534-22D	---
M39029/58-360	360	22	22	M81969/14-01	M81969/14-01	MS2749SR22M	---
M39029/58-361	361	22	22	M81969/8-02	---	MS27534-22D	---
M39029/58-362	362	22	22	M81969/8-04	---	MS2749SR22	---
M39029/58-363	363	20	20	M81969/8-06	M81969/14-02	MS27534-20	---
M39029/58-364	364	16	16	M81969/8-08	M81969/14-03	MS27534-16	---
M39029/58-365	365	12	12	M81969/8-10	M81969/14-04	MS2749SR16	---
M39029/58-528	528	10	10	M81969/14-05	---	MS2749SR12	---
M39029/63-368	368	20	20	M81969/14-02	M81969/1-02	M24308/18-2	---
M39029/64-369	369	20	20	M81969/22-01	MS18278-1	M24308/18-2	---
M39029/69-384	384	16	24	M81969/22-01	---	---	---
M39029/69-385	385	16	20	M81969/22-01	---	---	---
M39029/69-386	386	16	16	M81969/22-01	---	---	---
M39029/70-387	387	16	24	M81969/22-01	---	---	---
M39029/70-388	388	16	20	M81969/22-01	---	---	---
M39029/70-389	389	16	16	M81969/14-01	---	---	---
M39029/71-390	390	22	22	M81969/14-01	M81969/8-02	MS2749SR22M	---
M39029/71-391	391	22	22	M81969/14-01	M81969/8-02	MS27534-22D	---
M39029/71-392	392	22	22	M81969/14-01	M81969/8-02	MS2749SR22M	---
M39029/72-393	393	22	22	M81969/14-01	M81969/8-02	MS27534-22D	---
M39029/72-394	394	22	22	M81969/14-01	M81969/8-02	MS2749SR22M	---
M39029/72-395	395	22	22	M81969/14-01	M81969/8-02	MS27534-22D	---
M39029/72-395	450	20	22	M81969/34-01	---	---	---
M39029/83-451	451	20	28	M81969/34-01	---	---	---

TABLE 502-1. Removal tools for power contacts - Continued.

Contacts			Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Wired contacts		Unwired contacts
				Option 1	Option 2	Superseded removal tools
M39029/83-508	508	20	20	M81969/34-01	---	---
M39029/84-452	452	20	22	M81969/34-01	---	---
M39029/84-453	453	20	28	M81969/34-01	---	---
M39029/84-509	509	20	20	M81969/34-01	---	---
M39029/85-454	454	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/85-455	455	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/85-456	456	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/85-457	457	16	16	M81969/8-10	M81969/14-04	MS27534-12
M39029/85-458	458	12	12	M81969/8-10	M81969/14-04	MS27534-12
M39029/85-459	459	12	12	M81969/8-10	M81969/14-04	MS27534-12
M39029/85-460	460	12	12	M81969/8-10	M81969/14-04	MS27534-12
M39029/85-461	461	12	12	M81969/8-10	M81969/14-03	MS27534-16
M39029/86-462	462	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/86-463	463	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/86-464	464	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/86-465	465	16	16	M81969/8-10	M81969/14-04	MS27534-12
M39029/86-466	466	12	12	M81969/8-10	M81969/14-04	MS27534-12
M39029/86-467	467	12	12	M81969/8-10	M81969/14-04	MS27534-12
M39029/86-468	468	12	12	M81969/8-10	M81969/14-04	MS27534-12
M39029/86-469	469	12	12	M81969/8-10	M81969/14-04	MS27534-12
M39029/87-470	470	22	22D	M81969/14-01	---	---
M39029/87-471	471	22	22D	M81969/14-01	---	---
M39029/87-472	472	22	22D	M81969/14-01	---	---
M39029/87-473	473	22	22D	M81969/14-01	---	---
M39029/87-474	474	20	20	M81969/8-06	M81969/14-02	MS27534-20
M39029/87-475	475	20	20	M81969/8-06	M81969/14-02	MS27534-20
M39029/87-476	476	20	20	M81969/8-06	M81969/14-02	MS27534-20
M39029/87-477	477	20	20	M81969/8-06	M81969/14-02	MS27534-20
M39029/87-478	478	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/87-479	479	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/87-480	480	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/87-481	481	16	16	M81969/8-08	M81969/14-03	MS27534-16
M39029/88-482	482	22	22D	M81969/14-01	M81969/18-02	MS27534-22D
M39029/88-483	483	22	22D	M81969/14-01	M81969/18-02	MS27534-22D
M39029/88-484	484	22	22D	M81969/14-01	M81969/18-02	MS27534-22D
M39029/88-485	485	22	22D	M81969/14-01	M81969/18-02	MS27534-22D

TABLE 502-I. Removal tools for power contacts - Continued.

Contacts				Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Wired contacts		Unwired contacts	
				Option 1	Option 2	Superseded removal tools	Removal tool
M39029/88-486	486	20	20	M81969/8-06	M81969/14-02	MS27495R20	MS27534-20
M39029/88-487	487	20	20	M81969/8-06	M81969/14-02	MS27495R20	MS27534-20
M39029/88-488	488	20	20	M81969/8-06	M81969/14-02	MS27495R20	MS27534-20
M39029/88-489	489	20	20	M81969/8-06	M81969/14-02	MS27495R20	MS27534-20
M39029/88-490	490	16	16	M81969/8-08	M81969/14-03	MS27495R16	MS27534-16
M39029/88-491	491	16	16	M81969/8-08	M81969/14-03	MS27495R16	MS27534-16
M39029/88-492	492	16	16	M81969/8-08	M81969/14-03	MS27495R16	MS27534-16
M39029/88-493	493	16	16	M81969/8-08	M81969/14-03	MS27495R16	MS27534-16
M39029/88-494	494	22	22D	M81969/14-01	M81969/8-02	MS27534-22D	MS27495R22M
M39029/88-495	495	22	22D	M81969/14-01	M81969/8-02	MS27534-22D	MS27495R22M
M39029/88-496	496	22	22D	M81969/14-01	M81969/8-02	MS27534-22D	MS27495R22M
M39029/88-497	497	22	22D	M81969/14-01	M81969/8-02	MS27534-22D	MS27495R22M
M39029/88-498	498	20	20	M81969/8-06	M81969/14-02	MS27495R20	MS27534-20
M39029/88-499	499	20	20	M81969/8-06	M81969/14-02	MS27495R20	MS27534-20
M39029/88-500	500	20	20	M81969/8-06	M81969/14-02	MS27495R20	MS27534-20
M39029/88-501	501	20	20	M81969/8-06	M81969/14-02	MS27495R20	MS27534-20
M39029/88-502	502	16	16	M81969/8-08	M81969/14-03	MS27495R16	MS27534-16
M39029/88-503	503	16	16	M81969/8-08	M81969/14-03	MS27495R16	MS27534-16
M39029/88-504	504	16	16	M81969/8-08	M81969/14-03	MS27495R16	MS27534-16
M39029/88-505	505	16	16	M81969/8-08	M81969/14-03	MS27495R16	MS27534-16
M21097/16-01	---	---	---	M81969/6-01	---	M21097/18-01	---
M21097/16-02	---	---	---	M81969/6-01	---	M21097/18-01	---
M21097/16-03	---	---	---	M81969/6-01	---	M21097/18-01	---
M21097/16-04	---	---	---	M81969/6-01	---	M21097/18-01	---
M28731/20-0001	---	---	---	M81969/11-01	---	M28731/22-01	---
M28731/20-0002	---	---	---	M81969/11-01	---	M28731/22-01	---
M28731/23-0001	---	---	---	M81969/11-01	---	M28731/22-01	---
M28731/35-0001	---	---	---	M81969/4-02	---	---	---
M28731/35-0002	---	---	---	M81969/4-02	---	---	---
M28754/2-01	N/A	N/A	N/A	---	---	---	---
M28754/2-02	N/A	N/A	N/A	---	---	---	---
M28754/3-01	N/A	N/A	N/A	---	---	---	---
M28754/3-02	N/A	N/A	N/A	---	---	---	---
M28754/3-03	N/A	N/A	N/A	---	---	---	---
M28754/3-04	N/A	N/A	N/A	---	---	---	---

These contacts shall be removed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

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TABLE 502-1. Removal tools for power contacts - Continued.

Contacts				Removal tools				
Part number	Bin code	Mating end size	Wire barrel size	Wired contacts		Unwired contacts		
				Option 1	Option 2	Superseded removal tools	Removal tool	Superseded removal tool
M28754/3-05	N/A	N/A	N/A					
M28754/3-06	N/A	N/A	N/A					
M28754/3-07	N/A	N/A	N/A					
M28754/3-08	N/A	N/A	N/A					
M28754/3-09	N/A	N/A	N/A					
M28754/3-10	N/A	N/A	N/A					
M28754/3-11	N/A	N/A	N/A					
M28754/3-12	N/A	N/A	N/A					
M28754/3-13	N/A	N/A	N/A					
M28754/3-14	N/A	N/A	N/A					
M28754/3-15	N/A	N/A	N/A					
M28754/3-16	N/A	N/A	N/A					
M28754/3-17	N/A	N/A	N/A					
M28754/3-18	N/A	N/A	N/A					
M28754/3-19	N/A	N/A	N/A					
M28754/3-20	N/A	N/A	N/A					
M28754/3-21	N/A	N/A	N/A					
M28754/3-22	N/A	N/A	N/A					
M28754/3-23	N/A	N/A	N/A					
M28754/3-24	N/A	N/A	N/A					
M28754/3-25	N/A	N/A	N/A					
M28754/3-26	N/A	N/A	N/A					
M28754/3-27	N/A	N/A	N/A					
M28731/20-0001	---	---	---	M81969/11-01	---	M28731/22-01	---	---
M28731/20-0002	---	---	---	M81969/11-01	---	M28731/22-01	---	---
M28754/3-28	N/A	N/A	N/A					
M28754/3-29	N/A	N/A	N/A					
M28754/5-01	N/A	N/A	N/A					
M28754/5-02	N/A	N/A	N/A					
M28754/5-03	N/A	N/A	N/A					
M28754/15-02	N/A	N/A	N/A					
M28754/29-01	N/A	N/A	N/A					
M28754/29-02	N/A	N/A	N/A					
M28754/29-03	N/A	N/A	N/A					
M28754/29-04	N/A	N/A	N/A					
M28754/34-01	N/A	N/A	N/A					

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TABLE 502-1. Removal tools for power contacts - Continued.

Contacts				Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Wired contacts		Unwired contacts	
				Option 1	Option 2	Superseded removal tools	Superseded removal tool
M28754/34-02	N/A	N/A	N/A				
M28754/34-03	N/A	N/A	N/A				
M28754/34-04	N/A	N/A	N/A				
M28754/34-05	N/A	N/A	N/A				
M28754/34-06	N/A	N/A	N/A				
M28754/35-01	N/A	N/A	N/A				
M28754/35-02	N/A	N/A	N/A				
M28754/35-03	N/A	N/A	N/A				
M28754/35-04	N/A	N/A	N/A				
M28754/35-05	N/A	N/A	N/A				
M28754/35-06	N/A	N/A	N/A				
M28754/36-01	N/A	N/A	N/A				
M28754/36-02	N/A	N/A	N/A				
M28754/36-03	N/A	N/A	N/A				
M28754/36-04	N/A	N/A	N/A				
M28754/36-05	N/A	N/A	N/A				
M28754/36-06	N/A	N/A	N/A				
M28754/37-01	N/A	N/A	N/A				
M28754/37-02	N/A	N/A	N/A				
M28754/37-03	N/A	N/A	N/A				
M28754/37-04	N/A	N/A	N/A				
M28754/37-05	N/A	N/A	N/A				
M28754/37-06	N/A	N/A	N/A				
M28754/37-07	N/A	N/A	N/A				
M28754/37-08	N/A	N/A	N/A				
M28754/37-09	N/A	N/A	N/A				
M28754/37-10	N/A	N/A	N/A				
M28754/37-11	N/A	N/A	N/A				
M28754/37-12	N/A	N/A	N/A				
M28754/37-13	N/A	N/A	N/A				
M28754/37-14	N/A	N/A	N/A				
M28754/37-15	N/A	N/A	N/A				
M28754/37-16	N/A	N/A	N/A				
M28754/37-17	N/A	N/A	N/A				
M28754/37-18	N/A	N/A	N/A				
M28754/37-19	N/A	N/A	N/A				

These contacts shall be removed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

TABLE 502-1. Removal tools for power contacts - Continued.

Contacts				Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded removal tools	Unwired contacts Removal tool Superseded removal tool
M28754/37-20	N/A	N/A	N/A				
M28754/37-21	N/A	N/A	N/A				
M28754/37-22	N/A	N/A	N/A				
M28754/37-23	N/A	N/A	N/A				
M28754/37-24	N/A	N/A	N/A				
M28754/37-25	N/A	N/A	N/A				
M28754/37-26	N/A	N/A	N/A				
M28754/37-27	N/A	N/A	N/A				
M28754/37-28	N/A	N/A	N/A				
M28754/37-29	N/A	N/A	N/A				
M28754/37-30	N/A	N/A	N/A				
M28754/37-31	N/A	N/A	N/A				
M28754/37-32	N/A	N/A	N/A				
M28754/37-33	N/A	N/A	N/A				
M28754/37-34	N/A	N/A	N/A				
M28754/37-35	N/A	N/A	N/A				
M28754/37-36	N/A	N/A	N/A				
M28754/37-37	N/A	N/A	N/A				
M18754/37-38	N/A	N/A	N/A				
M28754/37-39	N/A	N/A	N/A				
M28754/37-40	N/A	N/A	N/A				
M28754/37-41	N/A	N/A	N/A				
M28754/37-42	N/A	N/A	N/A				
M28754/37-43	N/A	N/A	N/A				
M28754/37-44	N/A	N/A	N/A				
M28754/37-45	N/A	N/A	N/A				
M28754/37-46	N/A	N/A	N/A				
M28754/37-47	N/A	N/A	N/A				
M28754/37-48	N/A	N/A	N/A				
M28754/37-49	N/A	N/A	N/A				
M28754/37-50	N/A	N/A	N/A				
M28754/37-51	N/A	N/A	N/A				
M28754/37-52	N/A	N/A	N/A				
M28754/37-53	N/A	N/A	N/A				
M28754/37-54	N/A	N/A	N/A				
M28754/37-55	N/A	N/A	N/A				

These contacts shall be removed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

TABLE 502-I. Removal tools for power contacts - (Continued).

Contacts				Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Option 1	Option 2	Superseded removal tools	Unwired contacts Removal tool Superseded removal tool
M28754/37-56	N/A	N/A	N/A				
M28754/37-57	N/A	N/A	N/A				
M28754/37-58	N/A	N/A	N/A				
M28754/37-59	N/A	N/A	N/A				
M28754/37-60	N/A	N/A	N/A				
M28754/37-61	N/A	N/A	N/A				
M28754/37-62	N/A	N/A	N/A				
M28754/37-63	N/A	N/A	N/A				
M28754/37-64	N/A	N/A	N/A				
M28754/37-65	N/A	N/A	N/A				
M28754/37-66	N/A	N/A	N/A				
M28754/37-67	N/A	N/A	N/A				
M28754/37-68	N/A	N/A	N/A				
M28755/37-69	N/A	N/A	N/A				
M28754/37-70	N/A	N/A	N/A				
M28754/37-71	N/A	N/A	N/A				
M28754/37-72	N/A	N/A	N/A				
M28754/37-73	N/A	N/A	N/A				
M28754/37-74	N/A	N/A	N/A				
M28754/37-75	N/A	N/A	N/A				
M28754/37-76	N/A	N/A	N/A				
M28754/37-77	N/A	N/A	N/A				
M28754/37-78	N/A	N/A	N/A				
M28754/37-79	N/A	N/A	N/A				
M28754/37-80	N/A	N/A	N/A				
M28754/37-81	N/A	N/A	N/A				
M28754/37-82	N/A	N/A	N/A				
M28754/37-83	N/A	N/A	N/A				
M28754/37-84	N/A	N/A	N/A				
M28754/37-85	N/A	N/A	N/A				
M28754/37-86	N/A	N/A	N/A				
M28754/37-87	N/A	N/A	N/A				
M28754/37-88	N/A	N/A	N/A				
M28754/37-89	N/A	N/A	N/A				
M28754/37-90	N/A	N/A	N/A				
M28754/37-91	N/A	N/A	N/A				

These contacts shall be removed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

TABLE 502-1. Removal tools for power contacts - Continued.

Contacts				Removal tools			
Part number	Bin code	Mating end size	Wire barrel size	Wired contacts		Unwired contacts	
				Option 1	Option 2	Superseded removal tools	Removal tool
M28754/37-92	N/A	N/A	N/A				
M28754/37-93	N/A	N/A	N/A				
M28754/37-94	N/A	N/A	N/A				
M28754/37-95	N/A	N/A	N/A				
M28754/37-96	N/A	N/A	N/A				
M28754/37-97	N/A	N/A	N/A				
M28754/37-98	N/A	N/A	N/A				
M28754/37-99	N/A	N/A	N/A				
M28754/37-100	N/A	N/A	N/A				
M28754/37-101	N/A	N/A	N/A				
M28754/37-102	N/A	N/A	N/A				
M28754/37-103	N/A	N/A	N/A				
M28754/37-104	N/A	N/A	N/A				
M28754/37-105	N/A	N/A	N/A				
M28754/37-106	N/A	N/A	N/A				
M28754/37-107	N/A	N/A	N/A				
M28754/37-108	N/A	N/A	N/A				
M28754/38-01	N/A	N/A	N/A				
M28754/38-02	N/A	N/A	N/A				
M28754/38-03	N/A	N/A	N/A				
M28754/38-04	N/A	N/A	N/A				
M28754/38-05	N/A	N/A	N/A				
M28754/38-06	N/A	N/A	N/A				
M28804/9-1	---	22	22	M81969/1-04	---	M24308/18-1	---
M5302/84-01	---	22	22	M81969/1-04	---	M24308/18-1	---
M5302/84-02	---	---	---	M81969/10-01	---	M5302/86-02	---
M5302/97-01	---	---	---	M81969/10-02	---	M5302/86-02	---
				M81969/4-01	---	M5302/106-01	---

These contacts shall be removed with the tools recommended by the qualified contact producer, and in accordance with the contact producer's recommendations.

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TABLE 503-1. Removal tools for shielded contacts.

Contacts		Wired contacts			Removal tools			Unwired contacts	
Part number	Bin code	Conn cavity size	Option 1	Option 2	Option 3	Superseded removal tools	Removal tools	Removal tools	Superseded removal tool
M39029/6-120	120	16	M81969/3-07	---	---	MS3342-16	---	---	---
M39029/6-121	121	12	M81969/3-08	---	---	MS3342-12	---	---	---
M39029/6-122	122	12	M81969/3-08	---	---	MS3342-12	---	---	---
M39029/6-123	123	12	M81969/3-08	---	---	MS3342-12	---	---	---
M39029/6-124	124	12	M81969/3-08	---	---	MS3342-12	---	---	---
M39029/6-125	125	12	M81969/3-08	---	---	MS3342-12	---	---	---
M39029/6-126	126	12	M81969/14-04	---	---	MS3447-12	MS27524-12	M81969/30-07	MS3448-001C
M39029/7-127	127	12	M81969/14-04	---	---	MS3447-12	MS27524-12	M81969/30-07	MS3448-001C
M39029/7-128	128	12	M81969/14-04	---	---	MS3447-12	MS27524-12	M81969/30-07	MS3448-001C
M39029/8-129	129	12	M81969/14-04	---	---	MS3447-12	MS27524-12	M81969/30-07	MS3448-001C
M39029/8-130	130	12	M81969/14-04	---	---	MS3447-12	MS27524-12	M81969/30-07	MS3448-001C
M39029/8-131	131	12	M81969/14-04	---	---	MS3447-12	MS27524-12	M81969/30-07	MS3448-001C
M39029/13-152	152	16	M81969/3-03	---	---	MS3344-16	---	---	---
M39029/13-153	153	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/13-154	154	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/13-155	155	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/13-156	156	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/13-157	157	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/14-158	158	16	M81969/3-03	---	---	MS3344-16	---	---	---
M39029/14-159	159	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/14-160	160	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/14-161	161	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/14-162	162	12	M81969/3-04	---	---	MS3344-12	---	---	---
M39029/14-163	163	12	M81969/16-02	---	---	MS3160-16	---	M81969/30-03	MS3159-16
M39029/19-181	181	12	M81969/16-03	---	---	MS3160-12	---	M81969/30-04	MS3159-12
M39029/19-182	182	12	M81969/16-03	---	---	MS3160-12	---	M81969/30-04	MS3159-12
M39029/19-183	183	12	M81969/16-03	---	---	MS3160-16	---	M81969/30-04	MS3159-16
M39029/20-184	184	16	M81969/16-02	---	---	MS3160-12	---	M81969/30-04	MS3159-12
M39029/20-185	185	12	M81969/16-03	---	---	MS3160-12	---	M81969/30-04	MS3159-12
M39029/20-186	186	12	M81969/16-03	---	---	MS3160-16	---	M81969/30-04	MS3159-16
M39029/21-187	187	16	M81969/16-02	---	---	MS3160-12	---	M81969/30-04	MS3159-12
M39029/21-188	188	12	M81969/16-03	---	---	MS3160-12	---	M81969/30-04	MS3159-12
M39029/21-189	189	12	M81969/16-03	---	---	MS3160-16	---	M81969/30-04	MS3159-16
M39029/23-194	194	8	---	---	---	---	---	---	---
M39029/23-195	195	8	---	---	---	---	---	---	---
M39029/23-196	196	8	---	---	---	---	---	---	---

TABLE 503-I. Removal tools for shielded contacts - Continued.

[illegible]

TABLE 503-1. Removal tools for shielded contacts - Continued.

Contacts			Removal tools			
Part number	Bin code	Conn cavity size	Wired contacts		Unwired contacts	
			Option 1	Option 2	Option 3	Superseded removal tools
M39029/60-367	367	8	11-10134 (Bendix)	78-10-08 (Balmir)	78-10-08 (Balmir)	MS3447-12
M39029/71-196	396	12	M81969/14-04	---	---	MS3447-12
M39029/71-397	397	12	M81969/14-04	---	---	MS3447-12
M39029/71-398	398	12	M81969/14-04	---	---	MS3447-12
M39029/74-399	399	12	M81969/14-04	---	---	MS3447-12
M39029/74-400	400	12	M81969/14-04	---	---	MS3447-12
M39029/74-401	401	12	M81969/14-04	---	---	MS3447-12
M39029/74-416	416	12	M81969/14-04	---	---	MS3447-12
M39029/74-417	417	12	M81969/14-04	---	---	MS3447-12
M39029/74-418	418	12	M81969/14-04	---	---	MS3447-12
M39029/74-419	419	12	M81969/14-04	---	---	MS3447-12
M39029/74-420	420	12	M81969/14-04	---	---	MS3447-12
M39029/74-421	421	12	M81969/14-04	---	---	MS3447-12
M39029/74-422	422	12	M81969/14-04	---	---	MS3447-12
M39029/74-423	423	12	M81969/14-04	---	---	MS3447-12
M39029/74-424	424	16	M81969/14-04	---	---	MS3447-12
M39029/74-425	425	16	M81969/14-04	---	---	MS3447-12
M39029/74-426	426	16	M81969/14-04	---	---	MS3447-12
M39029/74-427	427	16	M81969/14-04	---	---	MS3447-12
M39029/74-428	428	16	M81969/14-04	---	---	MS3447-12
M39029/77-429	429	16	M81969/14-04	---	---	MS3447-12
M39029/77-430	430	16	M81969/14-04	---	---	MS3447-12
M39029/77-431	431	16	M81969/14-04	---	---	MS3447-12
M39029/78-432	432	16	M81969/14-04	---	---	MS3447-12
M39029/78-433	433	16	M81969/14-04	---	---	MS3447-12
M39029/78-434	434	16	M81969/14-04	---	---	MS3447-12
M39029/78-435	435	16	M81969/14-04	---	---	MS3447-12
M39029/79-436	436	16	M81969/14-04	---	---	MS3447-12
M39029/79-437	437	16	M81969/14-04	---	---	MS3447-12
M39029/80-438	438	16	M81969/14-04	---	---	MS3447-12
M39029/80-439	439	16	M81969/14-04	---	---	MS3447-12
M39029/90-529	529	8	M81969/14-06	---	---	MS3447-12
M39029/91-530	530	8	M81969/14-06	---	---	MS3447-12

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TABLE 510-I. National stock numbers (NSN) for removal tools.

Removal tool part number	National stock number (NSN)
M81969/1-01	5120-00-132-5791
M81969/1-02	5120-00-132-5739
M81969/1-03	5120-01-111-1125
M81969/1-04	5120-01-036-6929
M81969/3-01	5120-00-177-7029
M81969/3-02	5120-00-133-0096
M81969/3-03	5120-00-171-2084
M81969/3-04	5120-00-133-0155
M81969/3-05	5120-00-177-7095
M81969/3-06	5120-00-133-0149
M81969/3-07	5120-00-006-4536
M81969/3-08	5120-00-133-0147
M81969/4-01	5120-01-078-1920
M81969/4-02	5120-01-085-1591
M81969/6-01	5120-00-158-9720
M81969/7-01	5120-00-775-6559
M81969/8-02	5120-00-146-6558
M81969/8-04	5120-00-146-6557
M81969/8-06	5120-00-177-6966
M81969/8-07	5120-00-018-0529
M81969/8-08	5120-00-409-5206
M81969/8-09	5120-00-108-0531
M81969/8-10	5120-00-103-9708
M81969/9-01	5120-00-113-4213
M81969/10-02	5120-00-113-0169
M81969/11-01	---
M81969/12-01	5120-01-078-1917
M81969/12-02	---
M81969/14-01	5120-00-018-0575
M81969/14-02	5120-00-915-4587
M81969/14-03	5120-00-915-4588
M81969/14-04	5120-00-157-3138
M81969/15-01	---
M81969/15-02	---
M81969/15-03	---
M81969/16-01	5120-00-132-6328
M81969/16-02	5120-00-132-5218
M81969/16-03	5120-00-132-5451
M81969/16-04	5120-00-132-5808
M81969/19-01	5120-00-133-0097
M81969/19-02	5120-00-133-0098
M81969/19-03	5120-00-133-0168

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TABLE 510-I. National stock numbers (NSN) for removal tools - Continued.

Removal tool part number	National stock number (NSN)
M81969/19-04	5120-00-133-0099
M81969/19-05	5120-00-133-0138
M81969/19-06	---
M81969/19-07	5120-00-079-4601
M81969/19-08	5120-00-079-4602
M81969/19-09	5120-00-079-9461
M81969/19-10	5120-00-406-6545
M81969/19-11	5120-00-406-6546
M81969/20-01	5120-00-930-7503
M81969/20-02	---
M81969/21-01	---
M81969/22-01	---
M81969/27-01	---
M81969/27-02	---
M81969/27-03	5120-01-106-7785
M81969/27-04	---
M81969/27-05	---
M81969/27-06	---
M81969/28-01	---
M81969/28-02	---
M81969/29-01	---
M81969/29-02	5120-00-133-0144
M81969/29-03	5120-00-133-0158
M81969/29-04	5120-00-133-0167
M81969/30-01	5120-00-133-0351
M81969/30-02	5120-00-133-0366
M81969/30-03	5120-00-133-0367
M81969/30-04	5120-00-133-0374
M81969/30-05	5120-00-148-9843
M81969/30-06	5120-00-148-9844
M81969/30-07	5120-00-148-9845
M81969/31-01	5120-00-865-3252
M81969/31-02	5120-00-869-6986
M81969/31-03	5120-00-869-6984
M81969/31-04	5120-00-869-6987
M81969/31-05	---
M81969/31-06	---
M81969/31-07	---
M81969/31-08	---
M81969/31-09	---
M81969/31-10	---
M81969/34-01	---

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SECTION 600

GROMMET SEALING PLUGS

(Details of this section will be added later.)

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(See Instructions - Reverse Side)

1 DOCUMENT NUMBER MIL-STD-1646B		2 DOCUMENT TITLE Servicing tools for Electric Contacts and Connections.	
3a NAME OF SUBMITTING ORGANIZATION		4 TYPE OF ORGANIZATION (Mark one) <input type="checkbox"/> VENDOR <input type="checkbox"/> USER <input type="checkbox"/> MANUFACTURER <input type="checkbox"/> OTHER (Specify) _____	
b ADDRESS (Street, City, State, ZIP Code)			
5 PROBLEM AREAS			
a Paragraph Number and Wording			
b Recommended Wording			
c Reason/Rationale for Recommendation			
6 REMARKS			
7a NAME OF SUBMITTER (Last, First, MI) - Optional		b WORK TELEPHONE NUMBER (Include Area Code) - Optional	
c MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		8 DATE OF SUBMISSION (YYMMDD)	

(TO DETACH THIS FORM, CUT ALONG THIS LINE.)

DD FORM 1426
82 MAR

PREVIOUS EDITION IS OBSOLETE