

Tooling

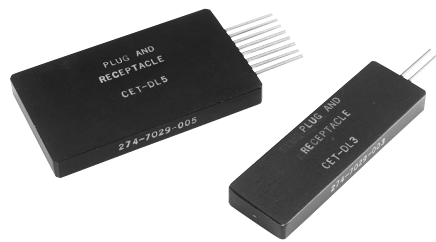
A key feature of the Cannon DL connector series is easy contact termination, both in the field and in high-volume production. An ergonomically designed hand crimp tool is available for the low volume (loose contact) applications and will accommodate two different crimp contact sizes. To reduce overall costs, the crimp jaws are replaceable.

Automatic crimp and strip/crimp machines are available for high volume applications requiring a large number of crimps (50,000 crimps per year or more). These machines are leased to customers to eliminate the need for heavy investment. They also improve productivity for large pin count applications.

DL Crimp contacts are designed to be hand installed into the connector, no tooling is needed for the insertion process. Extraction tools are available for the removal of Crimp contacts for easy repair even in field applications. Extraction tools are also available for the Buss contacts, as well as the factory installed Square Post contacts.



Extraction Tool — Buss Contacts



Extraction Tool for Buss Contact

| Description | Part Number |
|-------------|--------------|
| CET-DL3 | 274-7029-003 |
| CET-DL4 | 274-7029-004 |
| CET-DL4 | 274-7029-004 |
| CET-DL5 | 274-7029-005 |
| CET-DL6 | 274-7029-006 |
| CET-DL6 | 274-7029-006 |

Buss Contact

| Description | Part Number |
|-------------|--------------|
| 1 Pair | 030-7380-001 |
| 2 Pair | 030-7380-002 |
| 3 Pair | 030-7380-003 |
| 4 Pair | 030-7380-004 |
| 5 Pair | 030-7380-005 |
| 6 Pair | 030-7380-006 |

Hand Crimp Tool



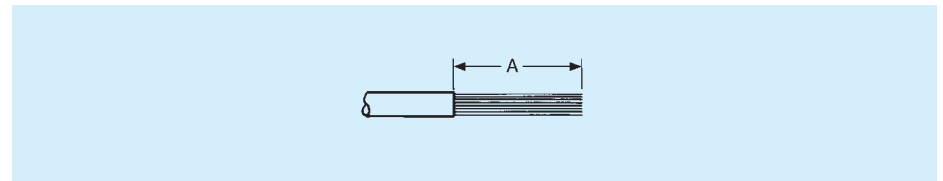
Hand Crimp Tool with Replaceable Jaw Set

| Hand Tool | Description | Part Number |
|-----------|--------------|-------------|
| 1 | CHTDLT 28-32 | 112108-0002 |
| 2 | CHTDLT 20-26 | 112108-0001 |
| 3 | CHTDLT 18-20 | 112108-0000 |

Crimp Tensile Strength

Crimp tensile strength is a measure of how hard a wire can be pulled without breaking or separating from the contact. This is the best way to verify that the wire is properly terminated to the contact. Periodic crimp tensile measurements are recommended to insure the integrity of the crimp. The table below contains the appropriate values for DL crimp contacts.

Wire Trim Dimension



| Wire Size (AWG) | 32 | 30 | 28 | 26 | 24 | 22 | 20 | 18 |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tensile Min. (lbs) | 1 | 1.5 | 3 | 7 | 10 | 15 | 19 | 30 |
| Wire Trim Dimension "A" | 3,30 (.130) | 3,30 (.130) | 3,30 (.130) | 3,30 (.130) | 3,30 (.130) | 3,30 (.130) | 4,06 (.160) | 4,06 (.160) |
| Insulation Dia. Max. | 1,35 (.053) | 1,35 (.053) | 1,35 (.053) | 1,65 (.065) | 1,65 (.065) | 1,88 (.074) | 1,88 (.074) | 1,88 (.074) |

Extraction Tool — Crimp, Square Post, PC/RC Contacts

CET-DL10



CET-ECP



CET-ECP-1



| Description | Part Number | Contact Type | PC Tail Extension |
|-------------|--------------|--------------|-------------------|
| CET-DL10 | 274-7029-007 | Crimp | — |
| CET-ECP | 274-7045-000 | Wrap Post | 15,37 (.605) |
| CET-ECP-1 | 274-7045-001 | Square Post | 7,11 (.280) |

Assembly Instructions for Crimp Contacts

Contact Insertion:

All crimp contacts are inserted by hand. No tooling is required for either the plug or receptacle.

Caution: Do not force contacts into contact cavities. If contact encounters excessive resistance during installation remove and re-insert using a slight up and down motion. This will assure positive cavity alignment. *Do not* install contact if plug is in the *closed* or actuated position.

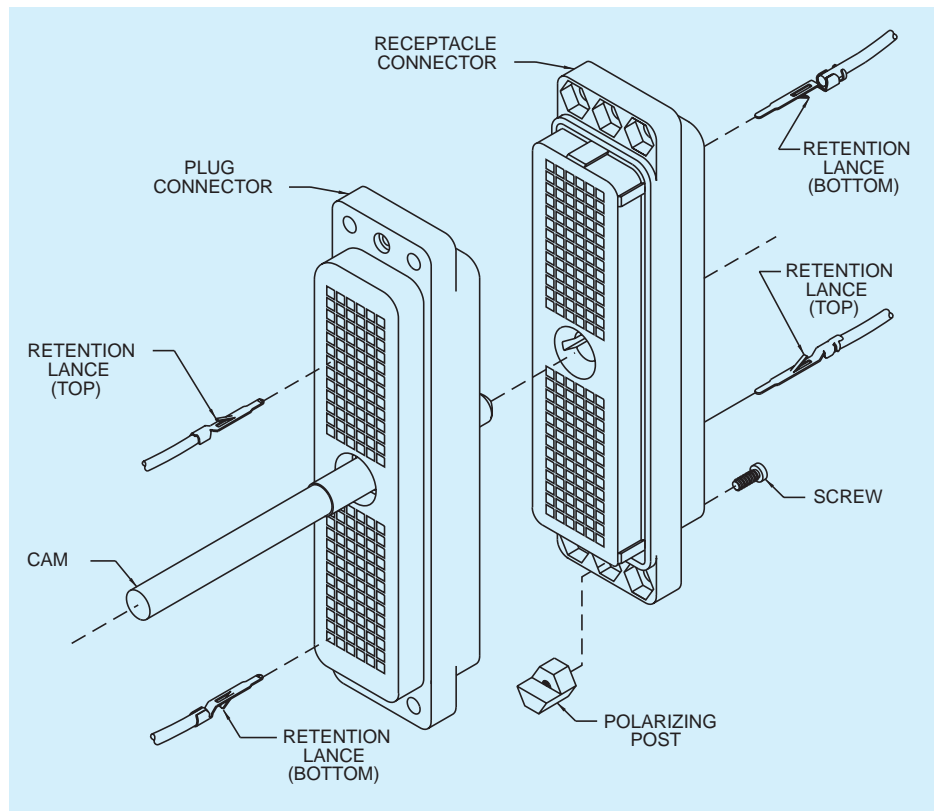
Plug:

Step 1. Prior to inserting contacts, turn the shaft counter-clockwise to its maximum *open* position.

Step 2. With the retention lance positioned *away* from the shaft, insert contacts from the rear of the plug.

Receptacle:

Step 1. With the retention lance positioned *toward* the shaft hole, insert contacts from the rear of the receptacle.

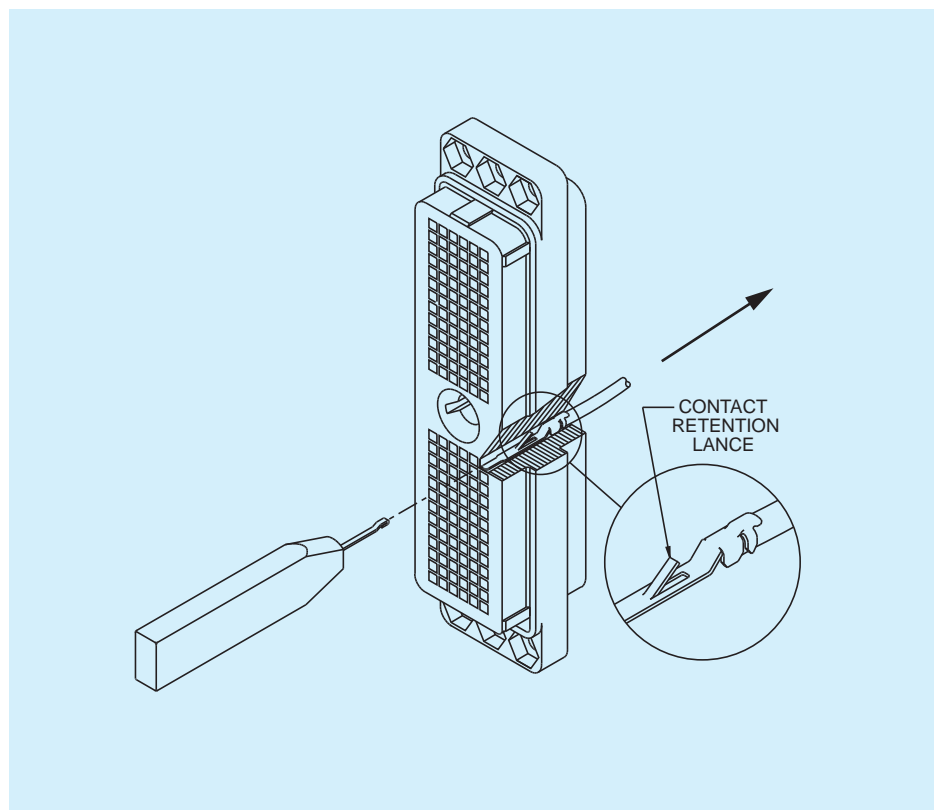


Contact Removal for Crimp Contacts

Tool: CET-DL10



Release retention lance by inserting tip of extraction tool into cavity until it bottoms on insulator shoulder. Gently pull wire in direction of arrow, see illustration, to remove contact from insulator.



Assembly Instructions for Buss Contacts

Contact Insertion:

All buss contacts are inserted by hand. No tooling is required for either the plug or receptacle.

Caution: Do not force contacts into contact cavities. If contact encounters excessive resistance during installation remove and re-insert using a slight up and down motion. This will assure positive cavity alignment. *Do not* install contact if plug is in the *closed* or actuated position.

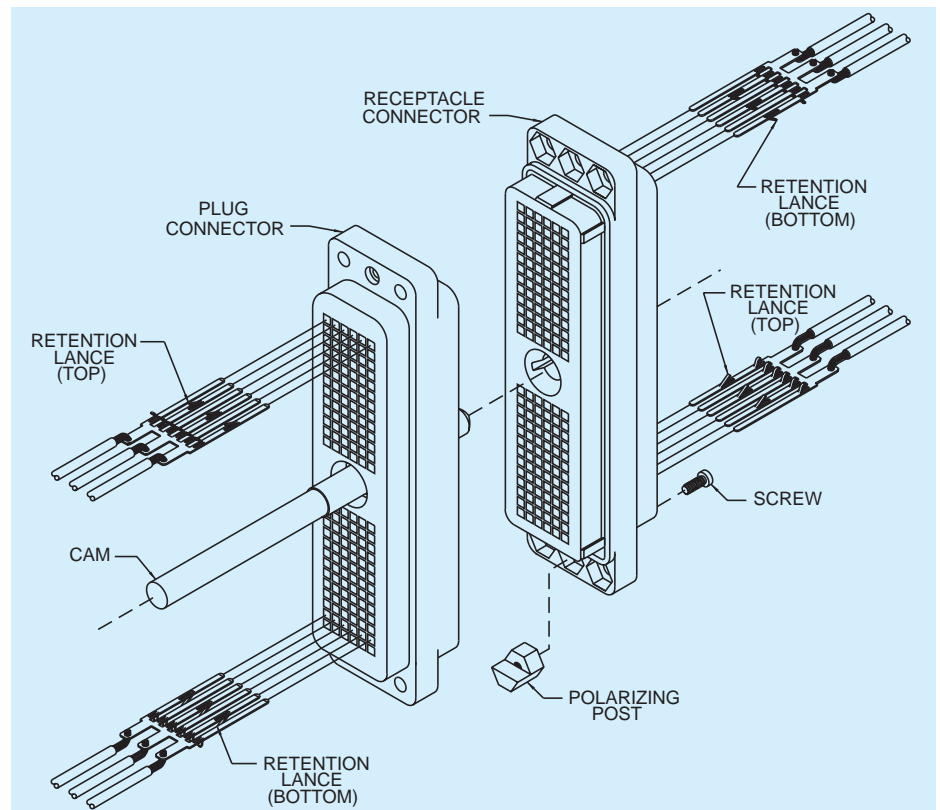
Plug:

Step 1. Prior to inserting contacts, turn the shaft counter-clockwise to its maximum *open* position.

Step 2. With the retention lance positioned *away* from the shaft, insert contacts from the rear of the plug.

Receptacle:

Step 1. With the retention lance positioned *toward* the shaft hole, insert contacts from the rear of the receptacle.

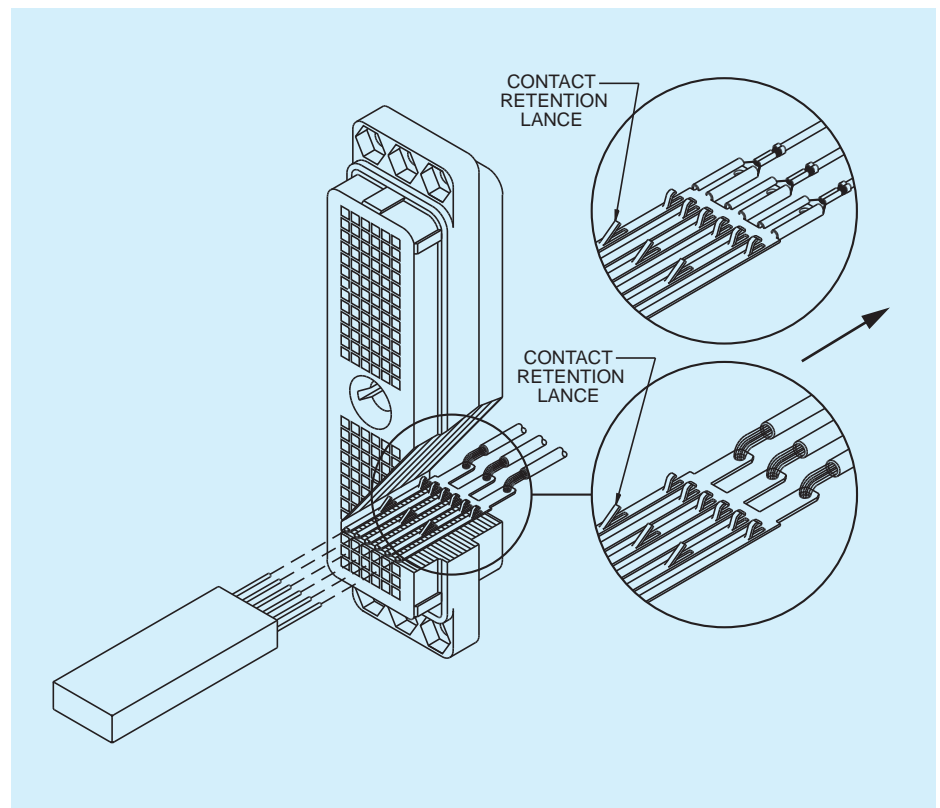


Contact Removal for Buss Contacts

Tool: CET-DL3/4/5/6



Release retention lance by inserting tip of extraction tool into cavity until it bottoms on insulator shoulder. Gently remove buss contact in direction of arrow, see illustration, to remove contact from insulator.



Assembly Instructions for Square Post Contacts

Contact Insertion:

Square Post Contacts are factory installed but can be removed and replaced if damaged in service.

Step 1. Prior to inserting contacts, actuating handle must be in the maximum *open* position. Actuating handle will be facing toward connector front face, see Figure 1.

Step 2. Contacts are inserted from the insulator front face by hand and are seated and clicked in the cavity by pulling on the terminal post with flat nose pliers, see Figure 2.

Figure 1

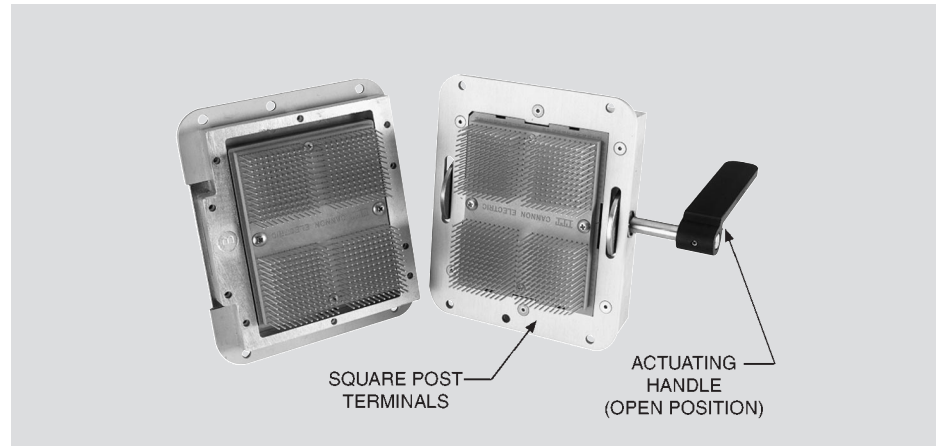
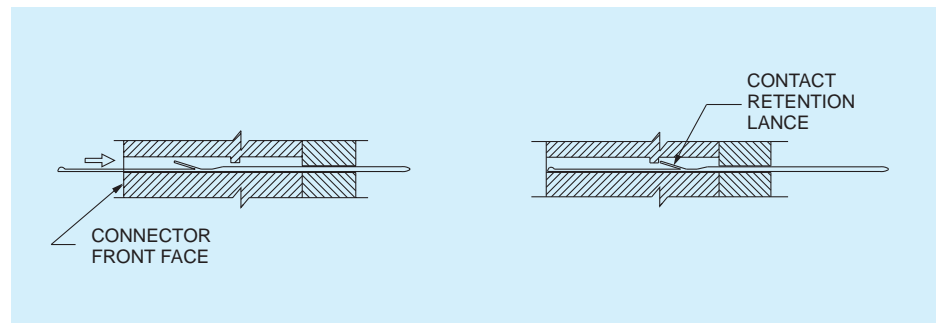


Figure 2

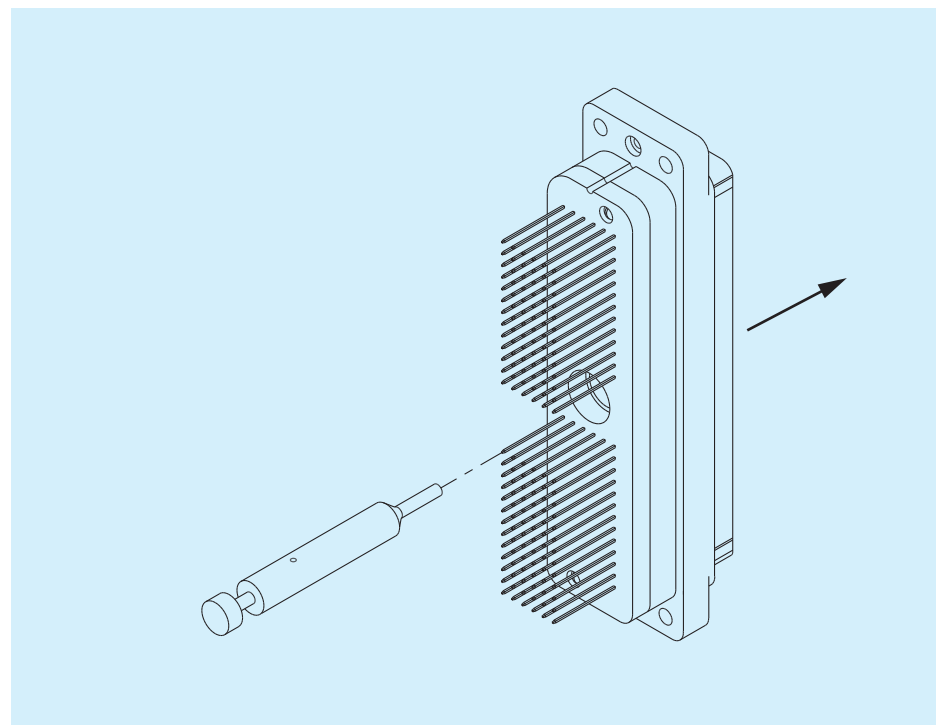
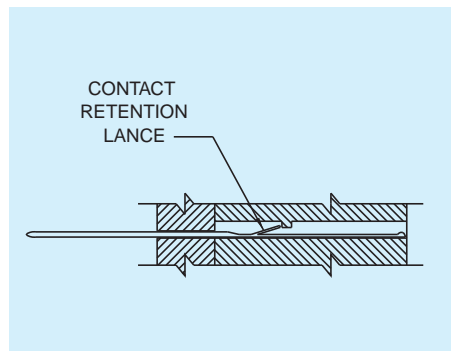


Contact Removal for Square Post Contacts

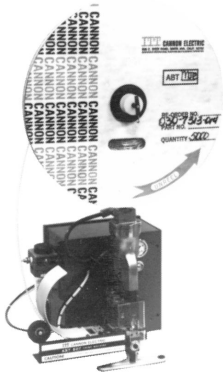
Tool: CET-ECP and CET-ECP-1



Place tool over square post terminal and impact tool. Apply sufficient force to collapse retention lance and push contact out of insulator. This process destroys the retention lance.



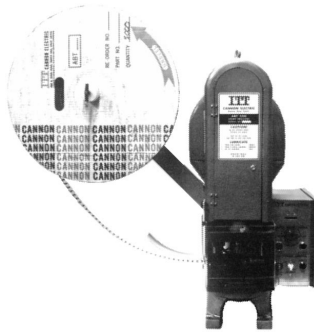
Lease Automatic Tooling — North America*

ABT-607 Pneumatic Crimper

The ABT-607 is a pneumatic powered and controlled machine. It is designed for customers with moderate volume. This machine is designed to semi-automatically crimp stamped and formed contacts onto pre-stripped stranded or single conductor electrical wire. This machine will accommodate size 34 thru 12 AWG wire and is actuated by the use of a foot pedal.

Machine Crimp Rate:
800 per hour

Power Requirements:
Pneumatic = 100 psi, 2 cu. ft. per min.

ABT-500 UCCD

The ABT-500 Universal Cannon Crimp Die, is a flywheel driven, electronically controlled machine that is designed to semi-automatically crimp stamped and formed contacts on stranded or single conductor, pre-stripped wire. This machine will accommodate size 34 thru 12 AWG wire. The primary application of this machine is for terminating discrete, pre-stripped, wire. The machine is actuated by the use of a foot pedal.

Machine Crimp Rate:
1300 per hour

Power Requirements:
Electrical = 115 VAC, 60 Hz, 20A

ABT-620 UCCS

The ABT-620 Universal Cannon Crimper/Stripper is a pneumatic powered, microprocessor controlled machine. It is designed to semi-automatically strip insulation from stranded or single conductor electrical wire and attach a stamped and formed contact by crimping. The machine will accommodate 34 thru 12 AWG wire. Primary application of the machine is the termination of jacketed cable where the individual leads cannot be stripped by fully automated equipment. The ABT-620 UCCS operates automatically upon insertion of a wire or it can be switched over to foot pedal operation as desired.

Machine Strip/Crimp Rate:
1200+ per hour

Power Requirements:
Electrical = 115 VAC, 60 Hz, 20A
Pneumatic = 80 psi, 3 cu. ft. per min.

*For other geographical regions, contact Cannon for details.