CONNECTING BLOCKS 66-TYPE

TOOLS, TERMINATING, ADAPTERS, AND MAINTENANCE

1. GENERAL

1.01 Reissued to add information on 183B2 adapter and B bridging clip.

2. TOOLS

714B Tool

2.01 The 714B tool (Fig. 1) is used to make terminations on 66-type connecting blocks.

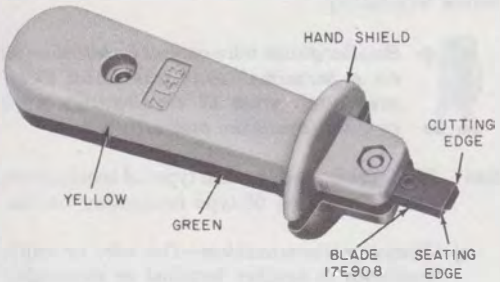


Fig. 1—714B Tool

2.02 The tool consists of a reversible steel blade attached by a single screw to a plastic handle. One end of the blade is used for seating and cutting conductors while the other end is used for seating only.

2.03 The plastic handle incorporates a hand shield, and one half of the handle is yellow to aid in readily identifying the cutting side of the blade.

2.04 To reverse blades of the 714B tool, perform the following steps.

(1) Loosen single screw.

(2) Slide blade out of handle approximately 1/2 inch.

(3) Reverse blade.

(4) Slide blade back into handle.

(5) Tighten screw.

2.05 To replace blade, perform the following steps.

(1) Remove single screw.

(2) Replace old blade with new. Place blade so that cutting edge will be on yellow side of handle. This is done for ease in identification of cutting side of tool.

(3) Tighten screw.

Always carry the 714B tool with the cutting edge protected or turned into handle.

724A Tool

2.06 The 724A tool (Fig. 2) is used to remove conductors from the terminals of 66-type connecting blocks. The tool consists of a 2-pronged fork with an insulated handle. The fork is sized to fit around the beams of the terminal and underneath the seated conductor. Use of the 724A tool reduces the possibility of disturbing or degrading adjacent wire connections during removal of wire.

2.07 Place the 724A tool fingers astride the terminal and under the wire. Grasp the tool and pull the wire from the terminal in a direction perpendicular to the face of the block.

Note: Do not use adjacent terminals as leverage points.

2.08 Remove small pieces of insulation remaining around the terminals with an insulated tool.

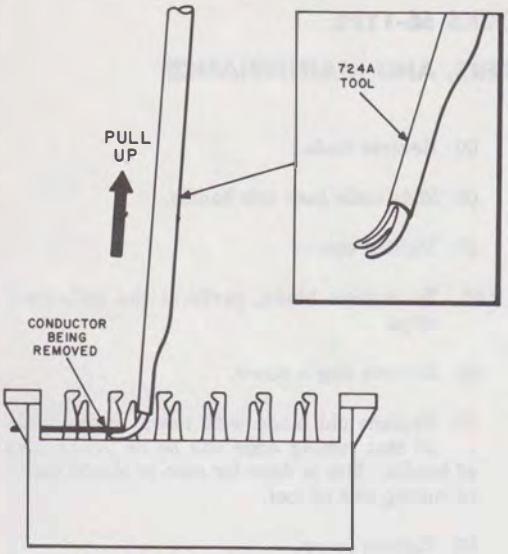


Fig. 2—Removing Conductor With 724A Tool

2.09 To reterminate a wire which has been removed for testing or rearrangement (ended terminations only), perform the following steps.

(1) Cut off old contact portion.

(2) Place wire in hook of terminal, using long-nose pliers if necessary.

(3) Seat and cut with 714B tool.

3. TERMINATION

3.01 All terminations on 66-type connecting blocks should be made with a 714B tool.

3.02 The 66-type connecting blocks will accept 20- to 26-gauge conductors; ***however, do not use any 26-gauge wire since minimum movement of conductor will easily subject this gauge of wire to breakage.***

The following unskinned 20- to 24-gauge conductors may be terminated on 66-type blocks:

- B service wire*
- D, F, and G cross-connecting wire
- D inside wiring cable
- D station wire
- E inside wiring cable
- SK station wire*

*Do not use 714B tool to cut these conductors. See 3.06.

Note: Terminate only one conductor per individual terminal.

3.03 Wire other than that listed, including 18- and 19-gauge, and JKT (obsolete) station wire, may be terminated on 66-type connector blocks, but must be skinned and cleaned (if enameled) before terminating.

Smaller gauge wire cannot be terminated on a terminal that has been used previously with 18- or 19-gauge wire or JKT (obsolete) station wire.

3.04 The following two general types of terminations can be made on 66-type connecting blocks.

(a) ***Looping Termination***—The wire or cable continues to another terminal or connecting block.

(b) ***Ended Termination***—The wire or cable does not continue to another terminal or connecting block.

Note: The terminating sequence for station wire and cable should follow normal color code sequence.

3.05 To make a looping termination on a 66-type connecting block (Fig. 3 and 4), perform the following steps.

(1) Select wire to be terminated.

(2) Work wire into fanning strip.

(3) Place wire in hook of terminal, using fingers or long-nose pliers.

(4) Place seating end (cutting end of blade turned into handle) of 714B tool over terminal (Fig. 3).

(5) Press tool toward block until wire is fully seated.

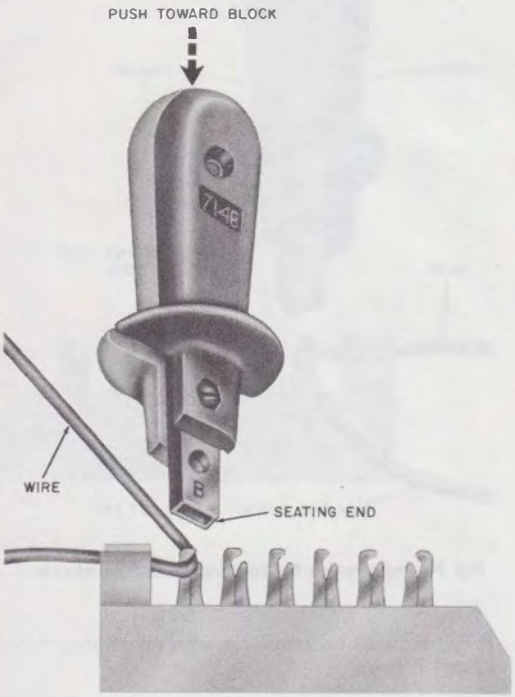


Fig. 3—Preparation for Looping Termination

When seating conductor, push the tool straight over the terminal. Avoid bending or twisting the terminal.

3.06 To make an ended termination with SK station wire or B service wire, observe the following procedure.

(1) Perform Steps 1, 2, and 3 of 3.05.

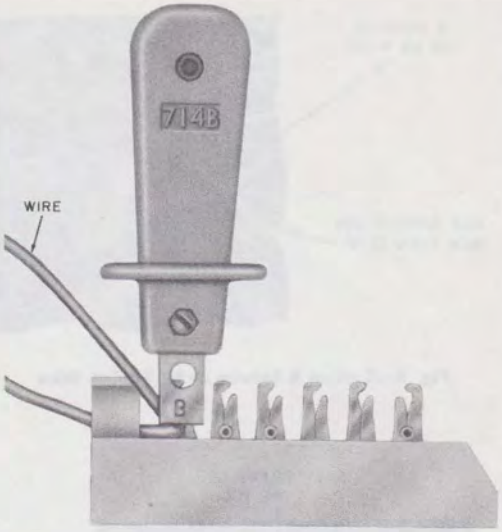


Fig. 4—Looping Termination Completed

(2) Cut the wire with diagonal pliers, allowing for approximately 1/16 inch of wire too protrude through terminal (Fig. 5).

Caution: Be careful not to disturb or short out adjacent terminals when using diagonal pliers to cut off wire ends.

(3) Place seating end of 714B tool over terminal (Fig. 6).

(4) Press tool toward block until wire is fully seated.

Note: JKT (obsolete) and SK station wire, and B service wires have steel cores which will damage cutting edge of the 714B tool.

3.07 To make an ended termination (Fig. 7 and 8) using the 714B tool, observe the following procedure.

(1) Perform Steps 1, 2, and 3 of 3.05.

(2) Place cutting end of 714B tool over terminal. Be sure cutting edge of blade is positioned over scrap end of wire.

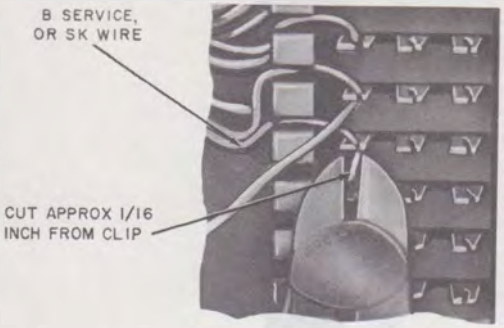


Fig. 5—Cutting B Service or SK Station Wire

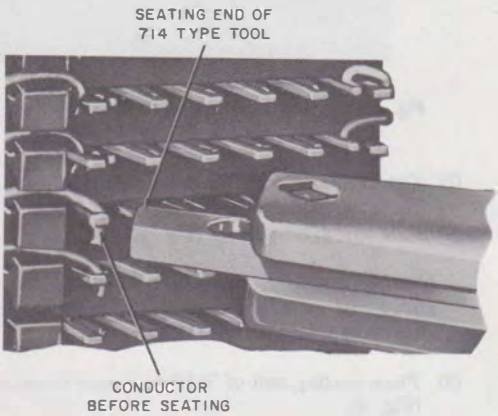


Fig. 6—Seating B Service or SK Station Wire

(3) Force 714B tool toward block until wire has been severed against face of block.

4. ADAPTERS

161A Adapter

4.01 The 161A adapter (Fig. 9) permits terminating a spade-tipped lead to a terminal of the 66-type connecting blocks. The adapter consists of a formed tin-plated stainless steel detail which grips the terminal and the spade tip. No special tools are required to install or remove the adapter.

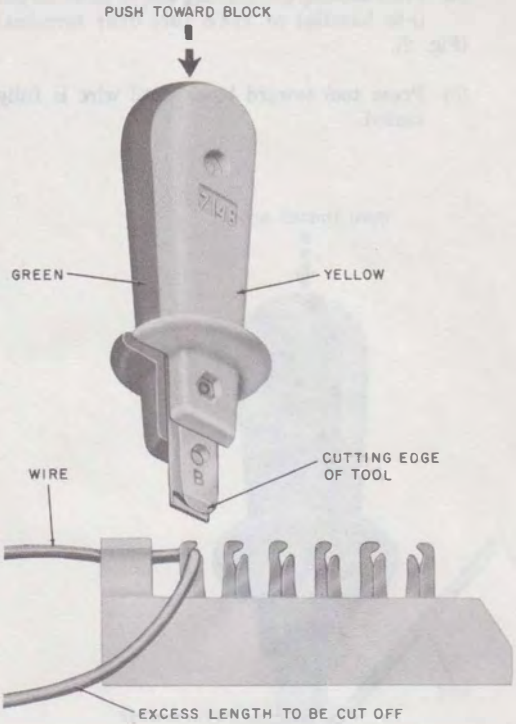


Fig. 7—Preparation for Making Ended Termination

It can be used on terminals with or without wires seated in them.

The larger opening of the adapter grips the terminal and the smaller opening grips the spade tip.

4.02 Position the adapter over the terminal and press it onto the terminal as far as possible. Insert the spade tip and seat it firmly in the adapter. Fig. 10 shows the adapter and spade tip installed.

Due to limited space between terminals in 66-type connecting blocks, care must be exercised in placement of the adapters.

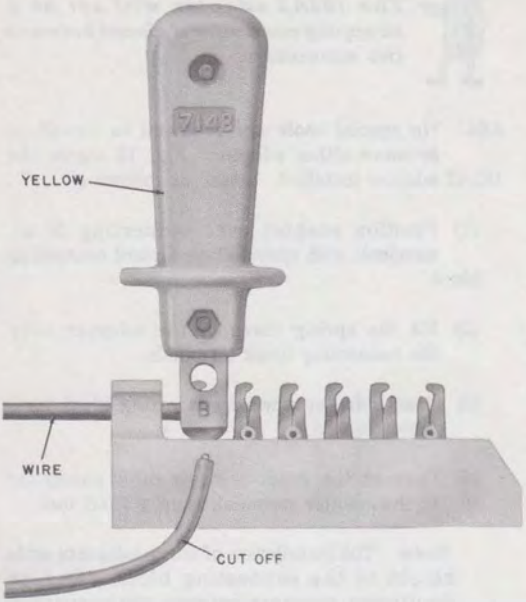


Fig. 8—Ended Termination Completed

4.03 When 161A adapters are used on adjacent connectors, the adapters should be oriented so that possible shorting between connectors is avoided. Fig. 10 shows proper and improper orientation of the adapters. On the 66B connecting blocks with 3-terminal connectors, adapters should not be installed adjacent to each other on the middle two terminals due to the possibility of shorting the two individual 3-terminal sections of the row.

Note: Spade-tipped mounting cords must be fastened in or near the block to prevent movement of spade-tipped leads. Use appropriate fastening device, ie, clamp, clasp, tape, or tie to existing cables with twine.

183-Type Adapters

4.04 The 183A2 adapter (Fig. 11) and 183B2 adapter (Fig. 13) provide additional multipling capacity for horizontal and vertical terminals, respectively, on 66-type connecting blocks. If more than five adapters per block are needed, consider using additional blocks.

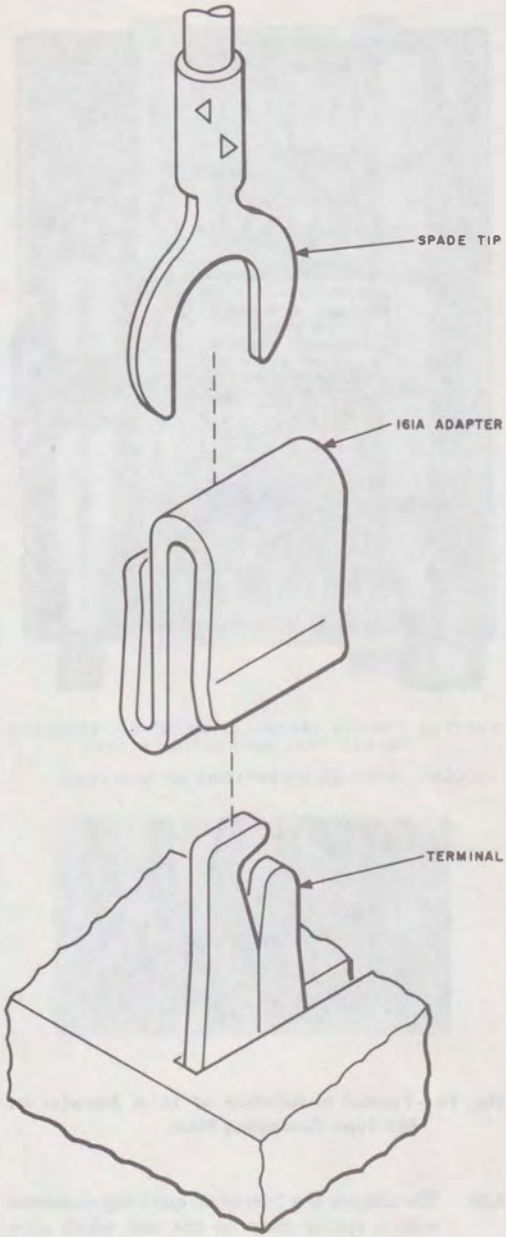
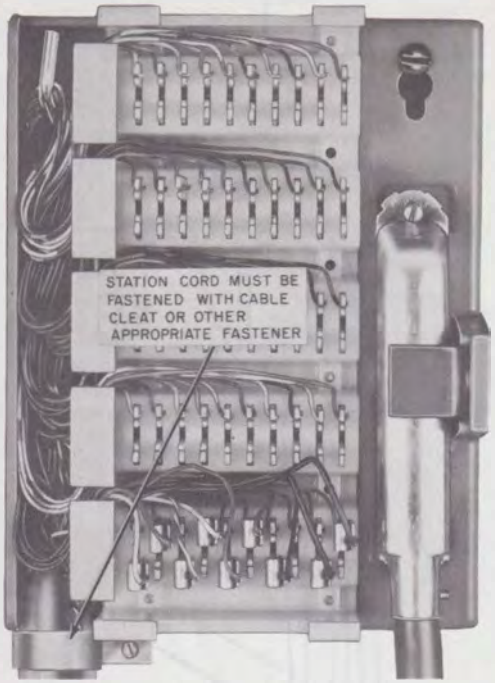


Fig. 9—161A Adapter, Installation Detail



(ABOVE) TYPICAL INSTALLATION OF 161A ADAPTERS ON 66E TYPE CONNECTING BLOCK.

(BELOW) IMPROPER ORIENTATION OF ADAPTERS

Fig. 10—Typical Installation of 161A Adapter on 66E-Type Connecting Block

4.05 The adapter is a 2-terminal quick-clip connector with a spring clasp on one side which slips over two adjacent terminals of a 66-type connecting block. A plastic block is fitted around the middle to limit the distance a conductor can travel when connected.

The 183A2 adapter will act as a strapping connector if placed between two connectors.

4.06 No special tools are required to install or remove either adapter. Fig. 12 shows the 183A2 adapter installed. Install as follows:

(1) Position adapter over connecting block terminals with spring clasp toward connecting block.

(2) Fit the spring clasp of the adapter over the connecting block terminals.

(3) Press adapter toward connecting block until firmly seated.

(4) Connect the inside wire or cable conductor to the adapter terminal using a 714B tool.

Note: The installation of these adapters adds height to the connecting block. Due to insufficient clearance between the connecting block and the housing cover, the adapter cannot be used on the following connecting blocks:

- 66B-type, when mounted in a 115-type apparatus box
- 66A2-25, 66A2-50, 66C2-16, and 66C2-32.

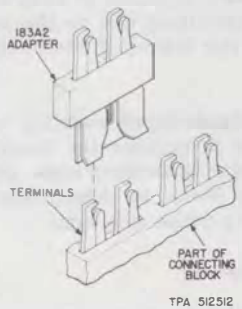


Fig. 11—183A2 Adapter, Installation Detail

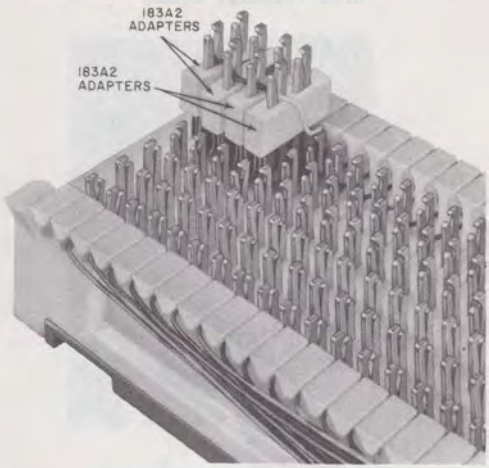


Fig. 12—Typical Installation of 183A2 Adapters on 66B-Type Connecting Block

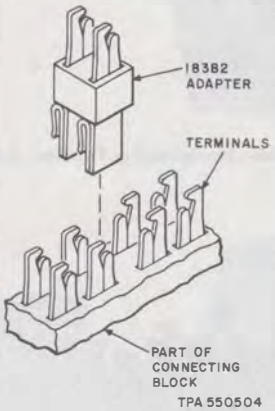


Fig. 13—183B2 Adapter, Installation Detail

5. B BRIDGING CLIP

5.01 The B bridging clip (Fig. 14) is a stainless steel spring clip used to electrically interconnect two adjacent terminals in the same row of 66-type connecting blocks, thereby increasing the multipling capacity of the block.

5.02 No special tools are required to install or remove the clip.

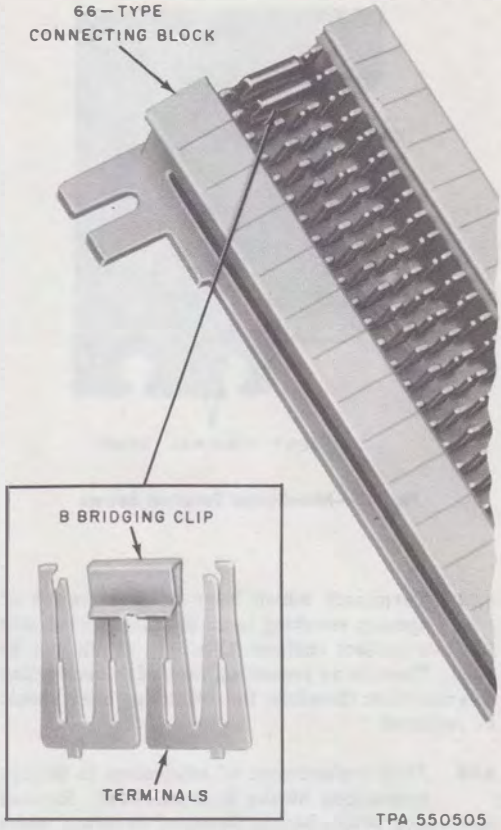


Fig. 14—B Bridging Clip, Installation Detail

6. MAINTENANCE

6.01 Terminal beams should not be bent, misaligned or obviously deformed.

6.02 Terminals which have been bent or misaligned, as shown in Fig. 15, may be corrected by using long-nose pliers (Fig. 16). The bent beam should be moved until it is aligned with its mate or with other terminals of the same row. Care should be taken not to move beams or terminals

in a direction which would spring or open the contact surfaces between the two beams.

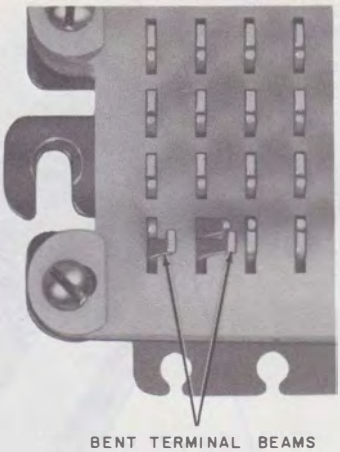


Fig. 15—Misaligned Terminal Beams

6.03 Terminals which have been damaged or sprung, resulting in an obvious gap between the two contact surfaces (Fig. 17), should not be used. There is no prescribed method for correcting this condition; therefore, the connecting block should be replaced.

6.04 Field replacement of connectors in 66-type connecting blocks is impractical. Replace connecting blocks having damaged terminals which cannot be repaired.

> *Note:* In some cases it may be desirable to use a ◗183-type◖ adapter instead of replacing the connecting block.

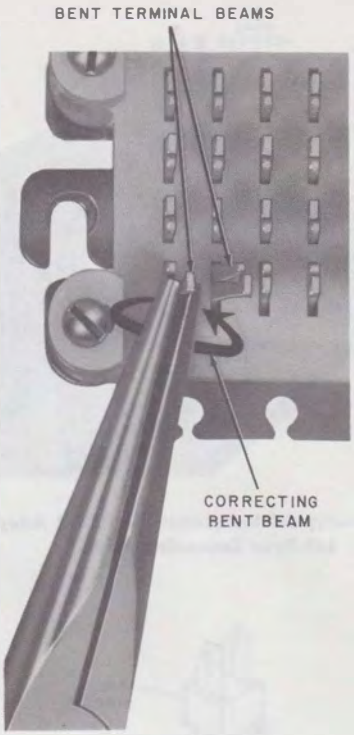


Fig. 16—Straightening Terminal Beam

Fig. 17—Gap Spread Distorted