

## CONVENTIONAL DISTRIBUTING FRAMES

### WARNING MARKERS AND GUARDS

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<b>5. GUARDS, INSULATORS, AND INDICATORS</b> . . . . .	3	<b>2.01</b> If evidence is found or there is suspicion of abnormally high voltage conditions or contact between foreign potentials and central office main frame terminations, the following precautions shall be observed.
<b>A. Special Service Lines</b> . . . . .	3	(a) Supervisor and test center are notified.
<b>B. Frames Equipped With C50, 1177, 1268 or Similar Protector Mountings</b> . . . . .	3	(b) Other employees who may have occasion to work on the frame are notified.
<b>C. Frames Equipped With 300-Type Connectors or Replaced 121-Type Protector</b> . . . . .	4	(c) All contact with associated frame terminations is avoided until authorized by the test center.
<b>D. Frames Equipped With 444-Type Jacks (301-Type Connector)</b> . . . . .	4	(d) If the test center requests that heat coils or protector blocks be inspected, linemans rubber gloves are worn and tools used as follows.
<b>E. Frames Equipped With 302-, 303-, and 305-Type Connectors</b> . . . . .	4	(1) On 300-type connectors, the KS-16567 tool is used to remove or replace the protector units.
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(2) On 302-, 303, and 305-type protectors, the molded handle of the protector unit is used for removal.

(3) On other than 300-type connectors, the replaced 121-type protector, 302-, 303-, or 305-type connectors, the KS-2827 heat coil pliers are used to remove and replace heat coils, and B long-nose pliers are used to remove and replace protector blocks.

**Note:** Insulating gloves shall be mechanically inspected immediately before they are used, in accordance with Section 075-141-501.

### 3. REMOVING AND REPLACING HEAT COILS, CARBON BLOCKS, AND PROTECTOR UNITS

3.01 The methods for removing and replacing heat coils, carbon blocks, or protector units are covered in Section 201-205-302.

### 4. WARNING MARKERS

4.01 Where abnormally high voltages are employed (such as breakdown tests), pairs subjected to high voltages shall be isolated from central office equipment and warning markers installed.

4.02 **A-Type Frame:** An A-type frame is one in which the outside plant pairs are terminated directly on terminal strips and heat coil and carbon block protection is provided on the equipment side of the frame. The cross-connection on the outside plant terminal strip is lifted and AT-6798 (red) insulators are placed over the lugs. Then a linen tag (Fig. 1) such as form E-1162 bearing the notation BREAKDOWN TEST is attached to the lugs to warn personnel that a breakdown test is in progress.

#### A. B-Type Frames Equipped With C50, 1177, 1268, or Similar Protectors

4.03 The heat coils and carbon blocks are removed and a B warning marker is installed as shown in Fig. 2. The wire terminations are inspected and, if a bare conductor rests on a lug, an AT-6798 (7-type) terminal punching insulator is placed over the lug.

4.04 If the high voltage is applied at a point other than the central office, the maintenance personnel stationed at the cable form should observe

for a breakdown. The maintenance personnel should watch the form, and in the event that smoke or a spark is observed, the B warning markers should be removed immediately. This will short-circuit and ground the pair, thereby indicating to the maintenance personnel applying the test that the fault has broken down and that further application of the test voltage is unnecessary. The marker should not be replaced nor the pair restored to normal until notified by the test desk or cable locating bureau according to local instructions.

**Caution: While the test voltage is being applied and when removing the B warning marker, contact with protectors or cabling must be avoided.**

#### B. B-Type Frames Equipped With 444-Type Jacks (301-Type Connector)

4.05 A P-11B721 fire block is installed over the terminal lugs, and then a 16A guard is placed in the jack of the cable pair to be tested as shown in Fig. 3. The 16A guard opens the contacts in the 444-type jack. The P-11B721 fire block prevents spreading of fire in the event arcing occurs. The block consists of an oval-shaped, semirigid, molded nylon tube approximately 2-1/2 inches long. A slot is provided along one edge to permit sliding the block over the lugs and bared conductors.

4.06 If the high voltage is applied at a point other than the central office, the maintenance personnel stationed at the cable form should observe for a breakdown. The maintenance personnel should watch the form, and in the event that smoke or a spark is observed, the person applying the voltage should be notified immediately.

**Caution: The 16A guard must not be removed.**

4.07 The guard should not be removed until notified by the test desk or cable locating bureau according to local instructions.

**Caution: While the test voltage is being applied, contact with the protectors or cabling must be avoided.**

4.08 If no evidence of breakdown is noted, the 16A guard should not be removed until notified by the test desk or cable locating bureau according to local instructions. If a fire block was

installed at the time the 16A guard was placed on the pair, it should be removed when the guard is removed.

### C. B-Type Frames Equipped With 300-Type Connectors

**4.09** A C warning marker should be installed on the pair as shown in Fig. 4. The C warning marker should not be removed or the pair restored to normal until notified by the test desk or cable locating bureau according to local instructions.

### D. Protector Frames Equipped With 302-, 303-, or 305-Type Connector

**4.10** The protector unit should be removed from its socket, and an E warning marker inserted in place of the protector as shown in Fig. 5. The marker is red plastic with white lettering and is equipped with prongs for socket mounting.

**4.11** The E warning sign (AT-8325) (Fig. 6) comes with cords for mounting which may be tied around the wiring horns, cross arm supports, cable stubs, ground bars, or through fanning strip holes whichever is most readily accessible.

**4.12** On 302A1- or 302B1-type connectors an E warning sign should be mounted from two wiring horns at the rear of the modular protector frame so that the sign covers the back of the 302-type connector.

**4.13** On the 303-type connectors, two E warning signs should be mounted, one on the left side and one on the right side as shown in Fig. 7A and 7B.

**4.14** On the 305-type connectors, an E warning sign should be mounted on the leading edge of the connector so that it is visible from the aisle.

**4.15** Warning markers and signs, blocks, caps, and tags should not be removed or jumpers restored until notified by the test desk or cable locating bureau according to local instructions.

## 5. GUARDS, INSULATORS, AND INDICATORS

**5.01** On main distributing frames, guards, insulators, and indicators are used to prevent service interruptions, equipment damage, and personal injury.

### A. Special Service Lines

**5.02** Special service lines should be designated on the vertical and horizontal side of the frame between the fanning strip and terminals by means of the KS-6660 or the KS-16847 L1 indicators (Fig. 8 and 9). Solder terminal punchings should be protected with the AT-6798 type 4 or 5 insulators and when there is a wire build-up, protection is obtained with the AT-6798 type 8 or 9 terminal punching insulators. Wire wrapped terminal punchings should be protected with the KS-16604 L1, L2, or L3 insulators available in 1/2-inch, 5/8-inch, and 7/8-inch lengths respectively.

### B. Frames Equipped With C50, 1177, 1268, or Similar Protector Mountings

**5.03** The KS-14539 L5 or L6 (MD) guard (Fig. 10) should be placed to enclose the front portion of the heat coil and protector block springs. These guards are held in place by ridges on the inner surface which engage the heat coil springs. In addition to identifying important circuits, the color will serve as a marker to warn against accidental contact with the circuit involved and against removal of the heat coils and protector blocks during maintenance operations. The KS-14539 L10 and L11 guard (which supersedes the KS-14539 L5 and L6) completely encloses the circuit on C-type protectors. This guard may be used with a cable tie to prevent accidental removal of the guard. When the KS-14539 plastic guard is used on a designated cable pair of a C-type protector, the cable number designation plate, form E5293, is removed from the heat coil spring and attached to the guard.

#### KS-14539 L10 and L11 Guard (Fig. 11)

**5.04** The KS-14539 L10 and L11 guard is a red, flame retardant plastic wrap-around guard with a beaded cable tie, designed to insulate, protect, and designate SSP and SSM circuit pairs on C50 and C52 protectors. The KS-14539 L10 is the guard which is used *only* when *SSP* is required; the KS-14539 L11 is the *guard and cable tie* which is used when *SSM* is required (Fig. 12).

**5.05** The KS-14539 guard is used in place of two KS-14539 L6 guards (MD) and four terminal punching insulators to designate and insulate a circuit pair on the C50-type protector. The physical

design of the L10 allows a dislodged heat coil to fall directly to the floor level, thus preventing an accumulation of dislodged heat coils and possible short circuit.

**5.06** The KS-14539 L10 and L11 guard is installed as shown in Fig. 12. When *SSM* is required, the L11 is installed by threading the beaded cable tie through the keyhole slot on one end of the guard, around the fanning strip, and through the keyhole slot on the opposite end. The tie is then drawn tight, locked in place and cut, leaving the end of the cable tie approximately one inch long.

**C. Frames Equipped With 300-Type Connectors or Replaced 121-Type Protector**

**KS-21369 L1 Guard and KS-20986 Cable Tie (Fig. 13)**

**5.07** The KS-21369 L1 guard is a red, flame retardant plastic wrap around guard designed to insulate, protect, and designate SSP and SSM circuit pairs on the 300-type connectors. The KS-21369 L1 guard is used when *SSP* is required; when *SSM* is required, a KS-20986 cable tie is used to secure the guard to the fanning strip on the 300-type connector. The KS-21369 L1 guard replaces the KS-16576 L5 and L6 designation plates which are rated MD.

**5.08** The KS-21369 L1 guard is installed as shown in Fig. 14. The hook on the end of the left arm is attached to the rear of the left edge of the 300-type connector, covering the test points of the special circuit with the cap on the left arm. The guard is then wrapped around the front of the panel, over both protector units, and the right arm is snapped into place on the ribs of the right edge of the connector, thereby enclosing the wire-wrap terminals.

**5.09** When *SSM* is required, the KS-21369 L1 guard can be secured to the fanning strip of the 300-type connector by threading a KS-20986 self-locking, nonreleasing cable tie through the hole in the end of the right arm of the guard and through the fanning strip slot. The KS-20986 L4 can be used on the latest design of the 300-type connector, which is equipped with a fanning strip as an integral part of the connector. For the older version of the 300-type connector which requires a fanning strip added to the vertical, a longer cable tie, such as the KS-20986 L3 is required.

**5.10** The KS-16604 L1 terminal punching insulators (red), as shown in Fig. 15, and the KS-6660 or KS-16847 L1 indicator (red) are used to protect special service lines on 300-type connectors (Fig. 16), and where double wrapped (back tapped) cross connections are connected to the terminals.

**5.11** The older (MD) KS-16576 L5 designation plate is for use on the cross-connection side of the connector where a single cross-connection is connected to the terminals (Fig. 16). If the connector has aluminum fingers, the designation plate should be slipped on with movement toward the front. On connectors with molded fingers, the designation plate should be slipped on with movement toward the rear. The (MD) KS-16576 L6 designation plate is for use on the test terminal side of the connector.

**5.12** P-16E564 red caps are used with the protector units to indicate a special line and to forestall accidental opening of the line.

**D. Frames Equipped With 444-Type Jacks (301-Type Connector)**

**5.13** In addition to the KS-6660 or KS-16847 L1 indicators and AT-6798 (4- and 5-type) punching insulators, special circuits should be further protected by using a KS-20353 L1 guard which replaces the 12A and 12B guard. The KS-20353 L1 guard consists of a molded red thermoplastic material having a cavity on one side and a rectangular hole through the other side. Fig. 17 shows the KS-20353 L1 guard, indicator, and insulators mounted on a 444-type jack.

**E. Frames Equipped With 302-, 303-, and 305-Type Connectors**

**5.14** On 302-, 303-, and 305-type connectors, each jack associated with a special service line is designated by inserting a KS-14174 L7 designation pin (red) into the hole provided for this purpose and using a protector unit with a red case (Fig. 18). The local office should specify whether to use the designation pin on the 305-type connector, since they are difficult to see due to the orientation of the 305-type connector mounted on the main distribution frame. The red cased protector units are coded as follows:

- 3B3A, 4A3C and 5A3D for use on 302A1- and 302B1-type connectors having gold plated terminals used with modular protector

frames, and 305-type connectors used with LPCDF's or tall conventional main distributing frames.

- 3B7A, 4A7C, and 5A7D for use on 302A2-, 302B2- and 303-type connectors used with conventional main distributing frames or double sided protector frames.

**Note:** The protector units designed for the 302-type connectors installed on modular protector frames have gold plated prongs and should be used only on 302-type connectors with gold plated sockets. Protector units with gold plated prongs should also be used on the 305-type connectors. The protector units designed for 302- and 303-type connectors mounted on conventional double-sided protector frames or main distributing frames have solder plated prongs and may be used on 302- or 303-type connectors equipped with solder plated sockets.

- 5.15 The KS-16604 L2 terminal punching insulators are used on the 305-type connector (Fig. 19) where circuits are assigned to *Special Services*.

#### 20A Circuit Guard (Fig. 20)

5.16 The 20A circuit guard is a cross-shaped metal strip used to prevent accidental removal of protector units from the 302-, and 303-, type connectors associated with circuits requiring *SSM*. It could also be used on the 305-type connector; however, it may be impractical to mount the 20A circuit guard on the 305-type connector because of its orientation on the frame vertical. The guard is designed with three holes, spaced for use with the 3B, 4A and 5A protectors. After determining the proper hole, the excess material, if any, is snipped off at the notched edges adjacent to the hole. Progressive steps for the installation of the guard is shown in Fig. 20. Insert the factory-provided self-tapping screw into the selected hole and then bend the strip to a 90° angle close to the head of the screw. Place the bent end of the guard into the protector location and insert the screw into the designation pin hole located between two contact holes in the connector panel. After the guard is screwed to the connector panel, the protector is inserted into position and covers the screw head. The three tabs on the locking end of the guard are bent over and around the edges of the "T"

shaped pull handle of the protector, thus locking the protector in place.

- 5.17 On 303-type connectors, the wire wrap cross connect terminals on the front of the connector associated with special service lines shall be protected with KS-21168 L1 terminal punching insulators (Fig. 21) and KS-6660 or KS-16487 L1 indicators shall be used on the respective pairs.

#### KS-19478 L1 Guard for Test Terminal Field

- 5.18 In order to prevent interference with special circuits, the KS-19478 L1 guard (Fig. 22) is used to cover the test terminals on the test terminal field of 302-, 303-, and 305- type connectors. Figure 23 shows the KS-19478 L1 guard installed on the 305-type connector.

#### F. Shields and Guards

##### Shields for Horizontal Terminal Strips

- 5.19 The 37-type terminal shields (Fig. 24) may be used in cases where a number of special circuits appear on adjacent rows of terminals on one or more horizontally mounted terminal strips. These shields do not relieve the requirement for individual terminal protection provided by 4- or 8- and 5- or 9-type insulators. The 37-type terminal shields may also be used on horizontally mounted terminal strips where experience has indicated that a high incidence of trouble has resulted from solder and wire clippings. The shield code numbers include the associated hinges. Additional wire hinges per P-467763 may be obtained when required. The 37-type shields (Fig. 24) may be installed by springing the wire hinges sufficiently to grip the base of the terminal strip at the proper holes. The shields designed for the particular terminal strips are listed in Table A.

##### Terminal Strip Guards

- 5.20 The KS-20132 type guard (Fig. 25) is a clear plastic protective device for use on the bottom (cable side) of terminal strips on distributing frames of miscellaneous switching systems. The guard covers the edge of the molded clamping strip and is held in position with cable ties. A similar guard, KS-20108, is used on the 336-type terminal strip and is shown in Fig. 26 through 29. The KS-20108 guard has two curved tabs which mount into slots on the terminal strip barrier guard and

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is also held in position with cable ties. Both type guards protect the solderless wire-wrap terminals on the cable side from damage while running or removing cross-connections. They also eliminate the possibility of injury to personnel during heavy maintenance activities. Each guard is furnished with two plastic cable ties which are used to secure the guard to the base of the terminal strip. Additional cable ties may be obtained as either Panduit Corp. part no. PAN-TY® PLT 1M or Thomas E. Betts Co. part No. TY-RAP® TY-23M.

**5.21** The KS-20107 type guard (Fig. 26 through 29) is a clear plastic protective device for use on the top (cross-connect side) of the 336-type terminal strips. The guard is furnished with two KS-20309 L1 wire hinges which are fastened to the terminal strip barrier guard with screws provided. Additional wire hinges per KS-20309-L1 may be obtained when required. The guard protects the solderless wire-wrap terminals on the cross-connect side of the terminal strip on distributing frames of miscellaneous switching systems. Individual terminal protection can be provided by the KS-16604 L1 or L2 terminal punching insulator. (See Fig. 15 for typical application.) Table B lists the respective terminal strip application.

### KS-19918 L1 Guard

**5.22** The KS-19918 L1 guard is furnished as a protective device for fastening to the ends of horizontally mounted solderless wrap-type terminal strips, as shown in Fig. 30, on central office distributing frames of miscellaneous switching systems. This guard is particularly useful on terminal strips that are in end positions or on those that project beyond adjacent terminal strips. The guard covers the protruding corners and edges of the molded barrier clamping strips and protects the solderless wrap terminals on the cable side from damage while running or removing cross-connections.

**Note:** This guard shall not be used on the 150-type terminal strips where the 405A plug

might be used since it would prevent proper operation of the plug.

### Mounting KS-19918 L1 Guard

**5.23** The guard consists of a molded polyvinyl-chloride strip with retaining tabs to serve as guides while cementing to the end of the terminal strip. The guard is furnished in one length and the straight end may be cut with tin snips to fit any existing size of distributing frame terminal strip. The cement, Metalset A4 Epoxy Resin Metallic, is a 2-component type. The cement is used by squeezing equal amounts from each tube side by side on a piece of paper. The cement is mixed together thoroughly until streaks disappear. ***This mixture must be used within 15 minutes.*** The mixture is applied to the end of the terminal strip. Sufficient quantity should be applied to fill all crevices and to provide a flat mounting surface. The guard should be pressed into the cement until the tabs overhang the end of the strip sufficiently to support the guard and to cure in this position without clamping. After the cement has hardened about 8 hours, the tab portion of the guard not resting on the terminal strip should be cut off with tin snips. When using the cement, physical contact should be avoided and reasonable ventilation maintained.

### 1- and 2-Type Insulators

**5.24** On main distributing frames equipped with the 7-type fuse protector (Fig. 31), the special circuits may be identified at the fuse by the 1- and 2-type binding post insulators. The 1-type insulator is used over the binding posts equipped with hexagonal nuts measuring 3/8-inch across the flats and also the 7T fuse. The 2-type insulator is used over binding posts having nuts measuring 7/16-inch across the flats and also the 7A fuse. If BD-type cable terminals are used, the 3-type insulator is used over the screw-type binding posts.

TABLE A

TERMINAL STRIP SHIELDS

SHIELD CODE NO.	FITS TERMINAL STRIPS
37A	38 and 39
37B	40 and 121
37C	41, 178A, and 178D
37D	48, 50, 178B, 178C, and 178E
37E	51
37F	37, 91, and 93
37G	35, 36, and 92
37H	183A and 183B
37J	150A, 150B, and 150H
37K	183E
37L	183J, 183K, 183P, 183AA, 183AB, 183AF, and 183AG
37M	178AA
37N	150AD
37P	183G and 183W

TABLE B

TERMINAL STRIP GUARDS

KS-20132 LIST NO.	USED ON TERMINAL STRIPS
1	150AD
2	150AE, 150AF, and 150AG
3	150AJ, 150AK, and 150AL
4	150AN, 150AP, 150AR, 150AS, 150AT, 150AU, 150AW, 150AY, and 150BB
5	150BC, 150BD, and 150BE
6	150BG, 150BH, and 150BJ
7	150BL and 150BM
8	183R
9	183S and 183AC
10	183T and 198G
11	183U and 198F
12	183W
13	183Y, 183AD, 198J, and 198L
14	183AA and 183AF
15	183AB and 198H
16	183AE
17	183AG and 198K
18	268A
19	268B
20	268C
21	268D
22	268E
KS-20107	
4	336A, 336B, and 336G Cross-connection side
5	336E, 336F, 336H, and 336J Cross-connection side
6	336K Cross-connection side
KS-20108	
4	336A, 336B, and 336G Cable side
5	336E, 336F, 336H, and 336J Cable side
6	336K Cable side

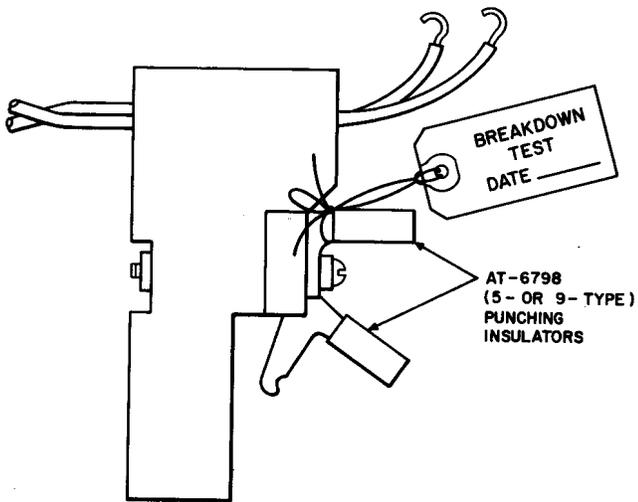


Fig. 1—Tagging Terminals and Using Insulators

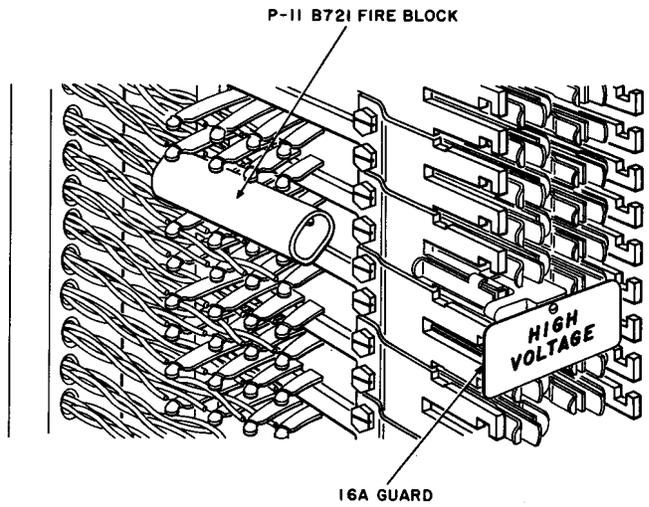


Fig. 3—Protecting B-Type Frames with 444-Type Jacks (301-Type Connector)

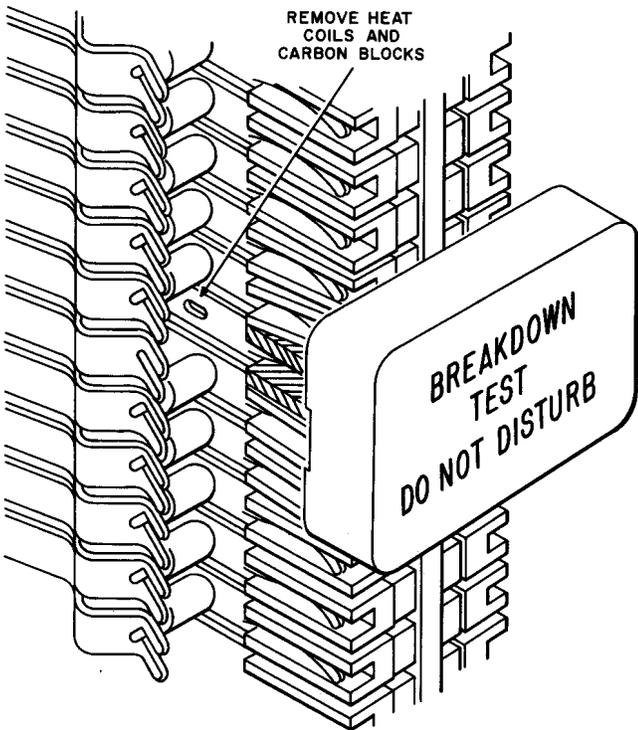


Fig. 2—B Warning Marker

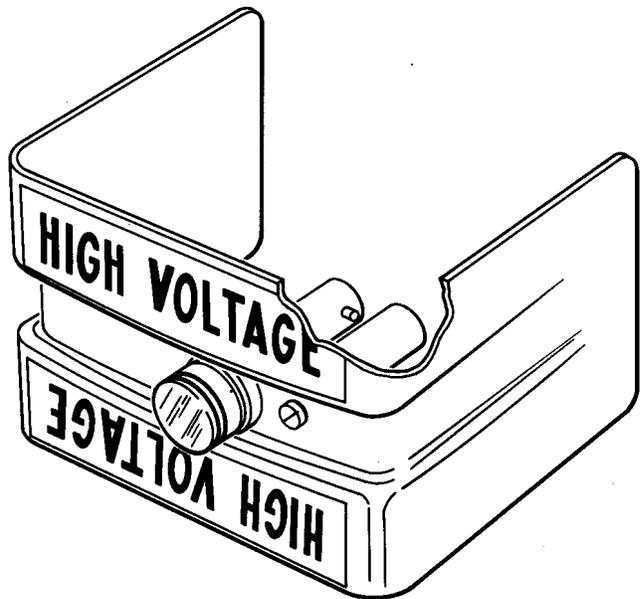


Fig. 4—C Warning Marker

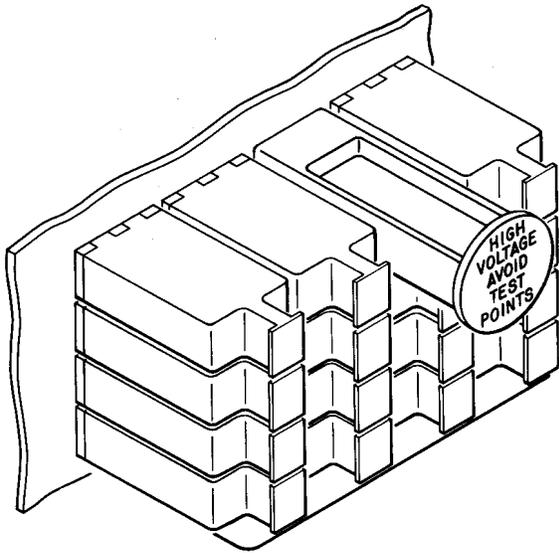


Fig. 5—E Warning Marker Installed on 302-Type Connector (Installed Similarly on 303- and 305-Type Connector)

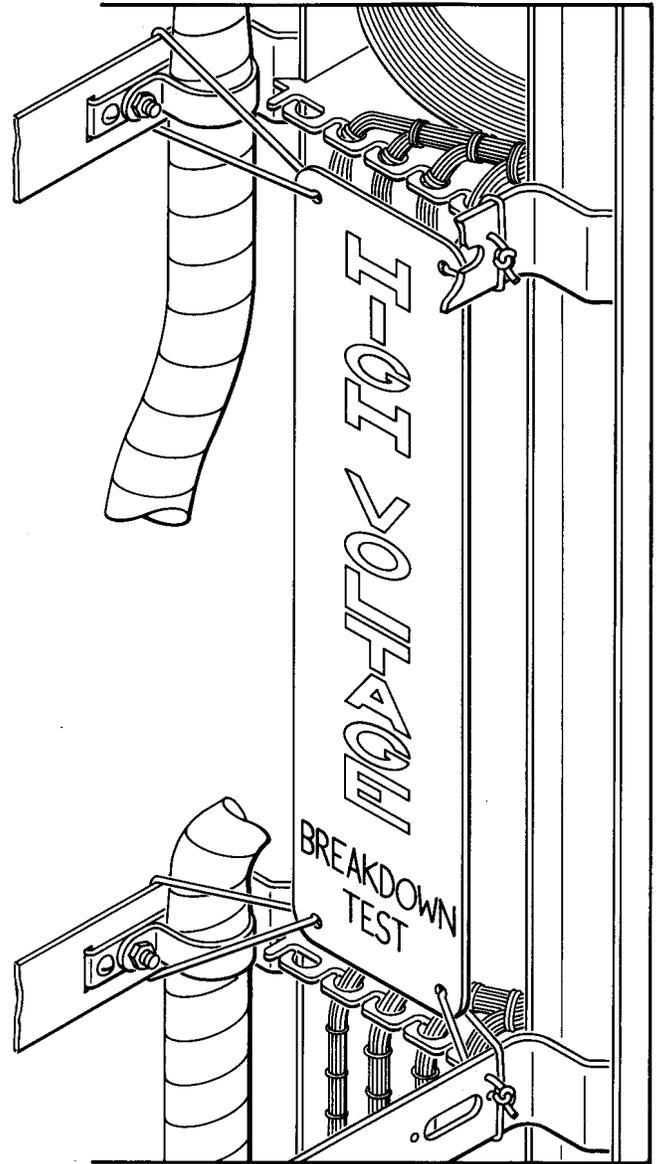
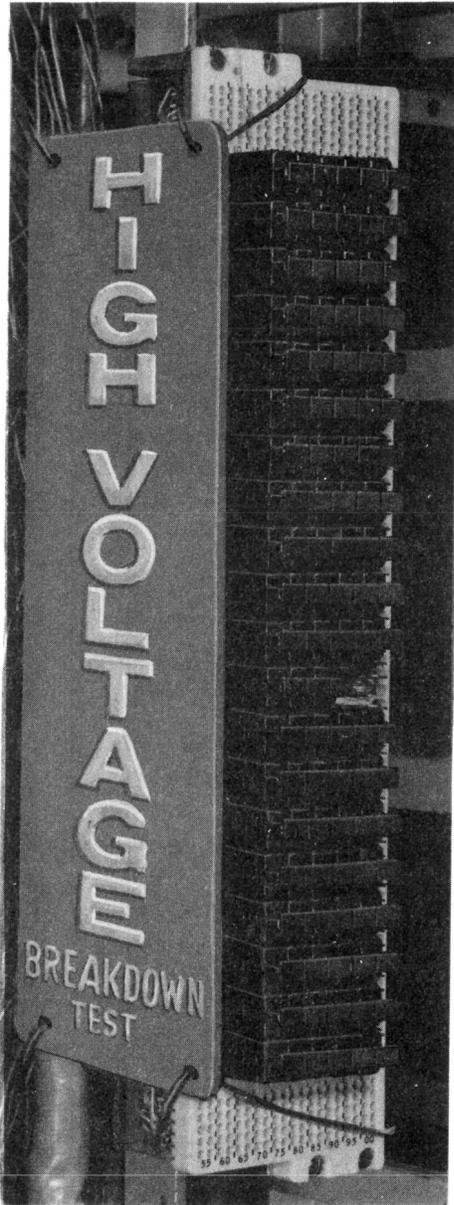
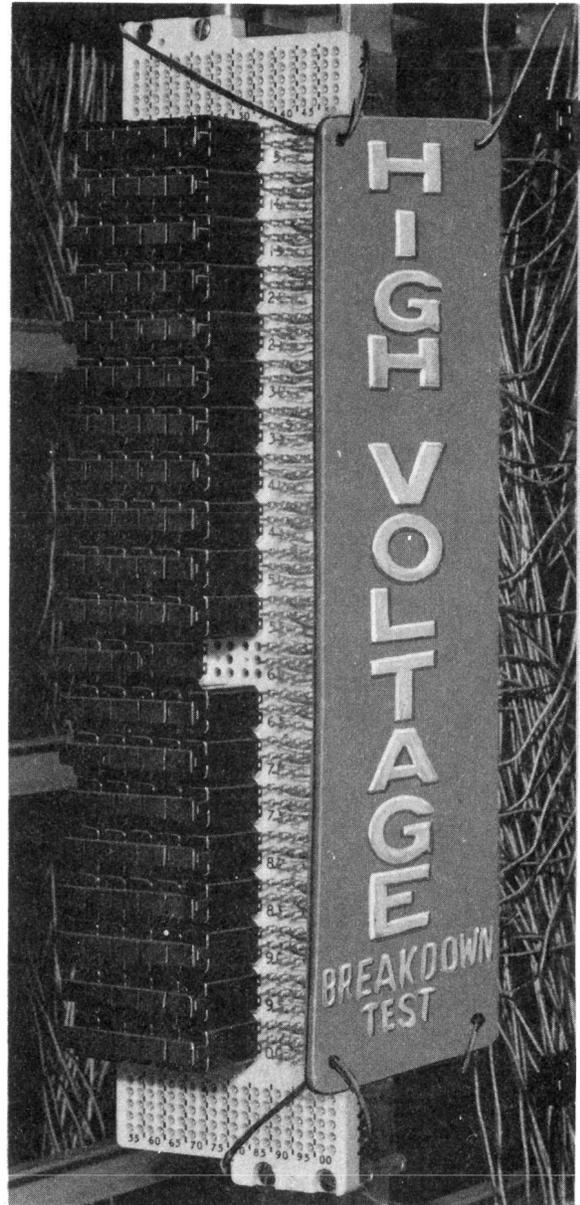


Fig. 6—E Warning Sign Installed on Backside of 302-Type Connector (303-Type Connector Similar)



A



B

Fig. 7—E Warning Signs Installed on 303-Type Connectors

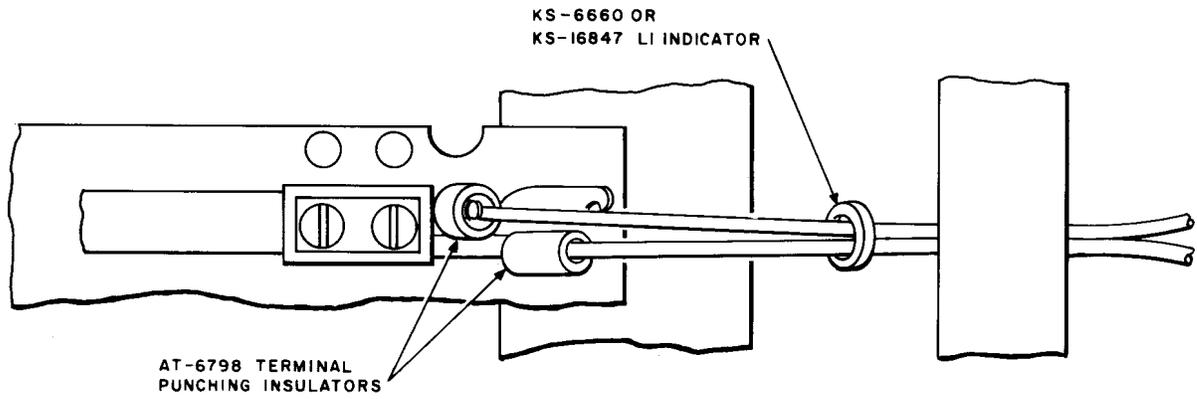


Fig. 8—Indicator and Terminal Punching Insulators on Protector Mounting

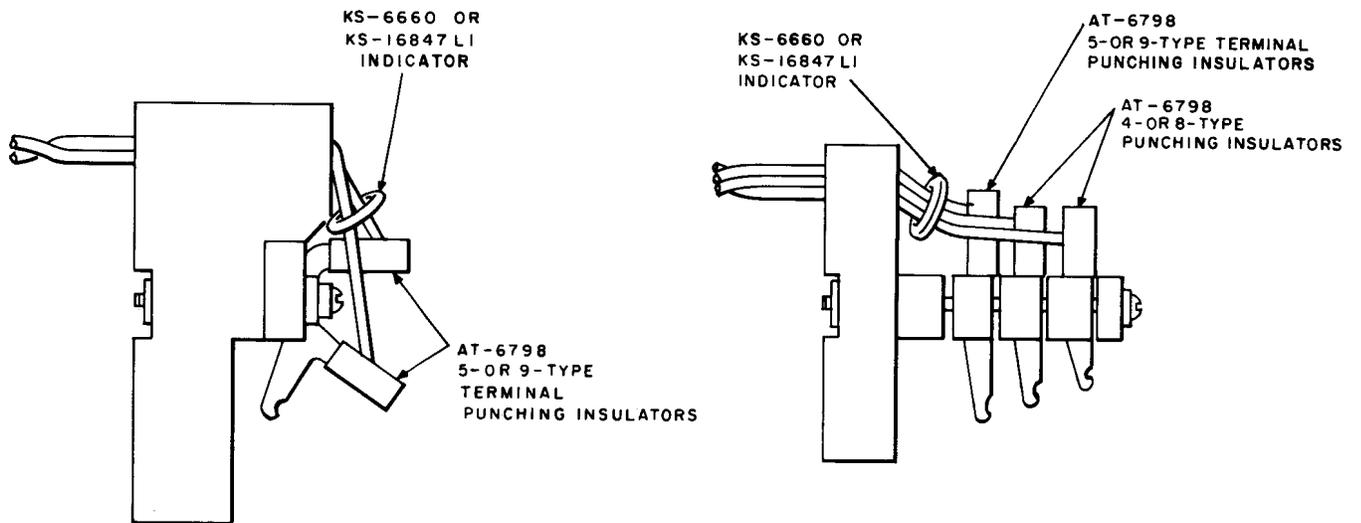
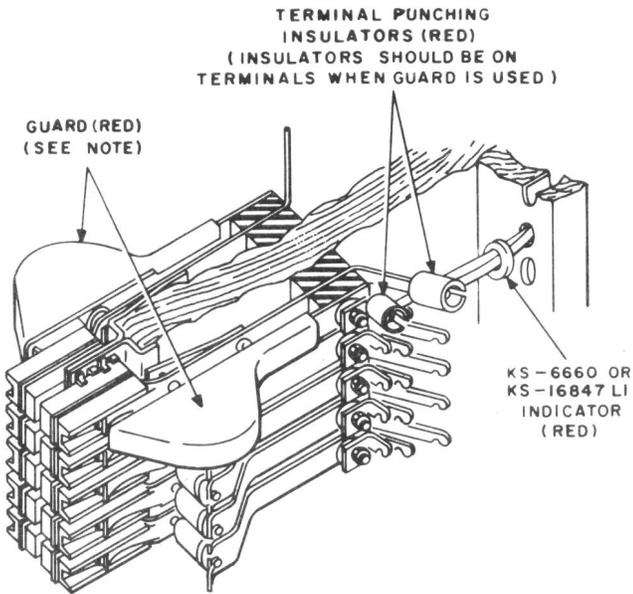


Fig. 9—Indicator and Terminal Punching Insulators on Terminal Strip

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NOTE:

KS-14539 GUARD LIST NO.	PROTECTOR TYPE
5. (SUPERSEDES L1)	1177
6. (SUPERSEDES L2)	C TYPE AFTER 1946
7. (SUPERSEDES L3)	1268, 1269
8. (SUPERSEDES L4)	C TYPE PRIOR TO 1946
9.	E
10. (SUPERSEDES L6)	C TYPE AFTER 1946
11. L10 GUARD USED WITH CABLE TIE (FIG. 12).	

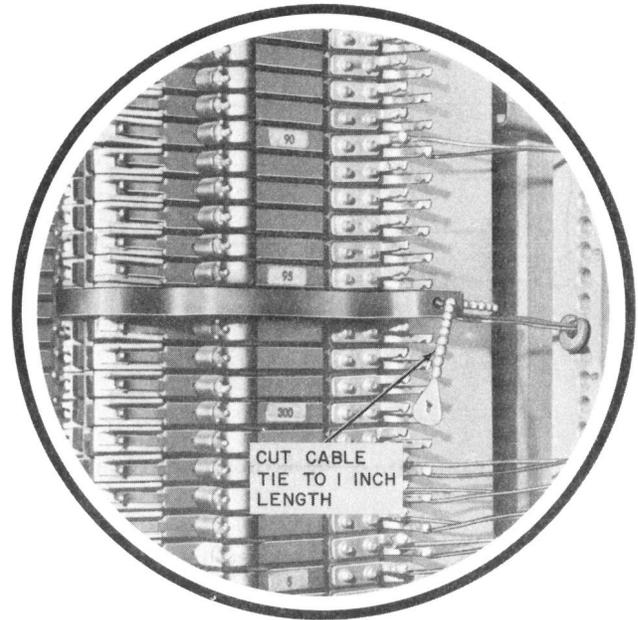


Fig. 12—KS-14539 L11 Guard Installed on C50-Type Protector

Fig. 10—KS-14539-L6 Guard (MD) on Protector Mounting

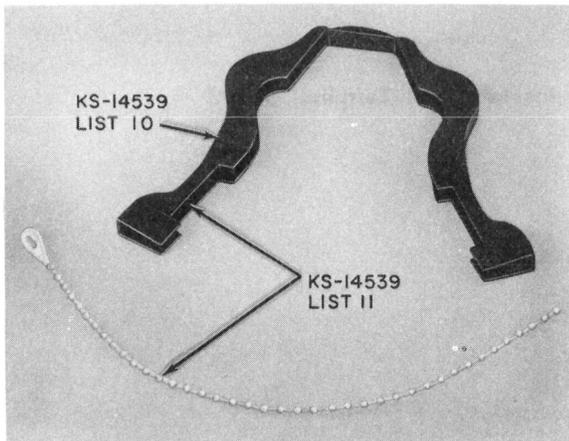


Fig. 11—KS-14539 L10 and L11 Guard

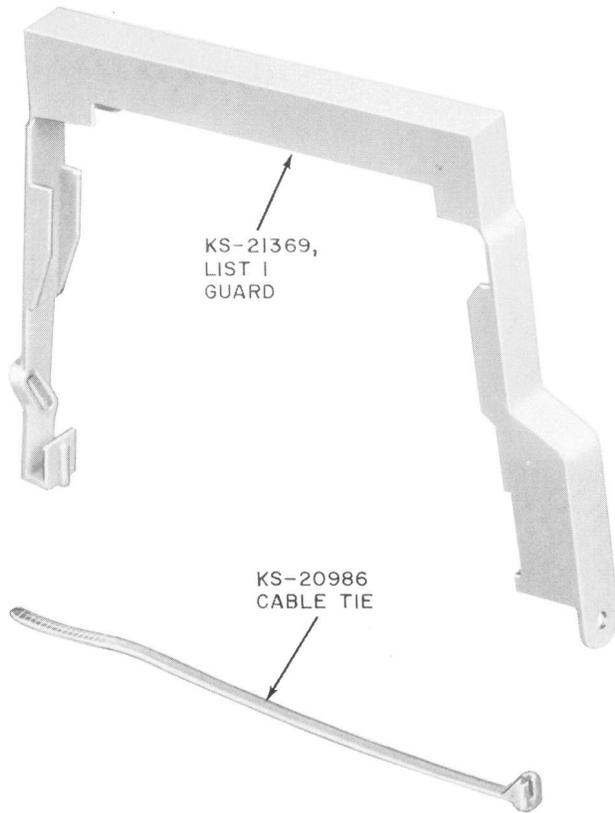
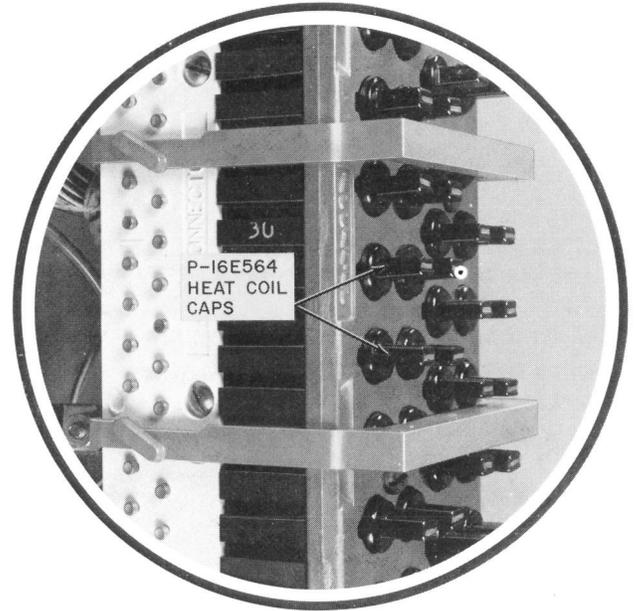
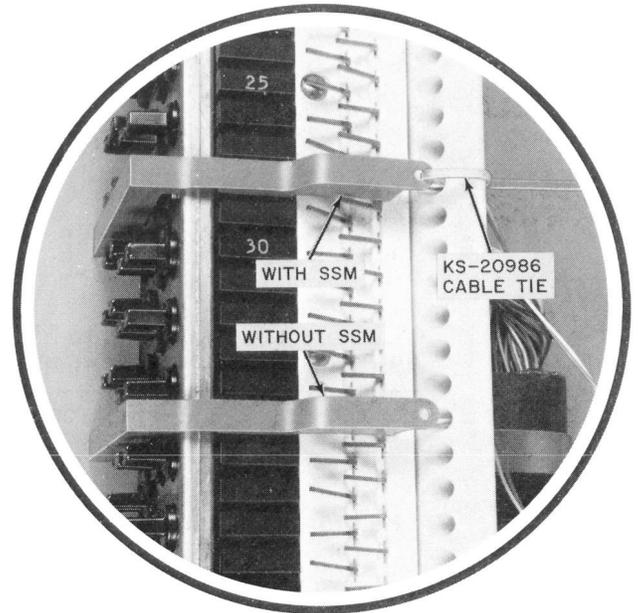


Fig. 13—KS-21369 L1 Guard and KS-20986 Cable Tie



LEFT SIDE



RIGHT SIDE

Fig. 14—KS-21369 L1 Guard Installed With and Without SSM

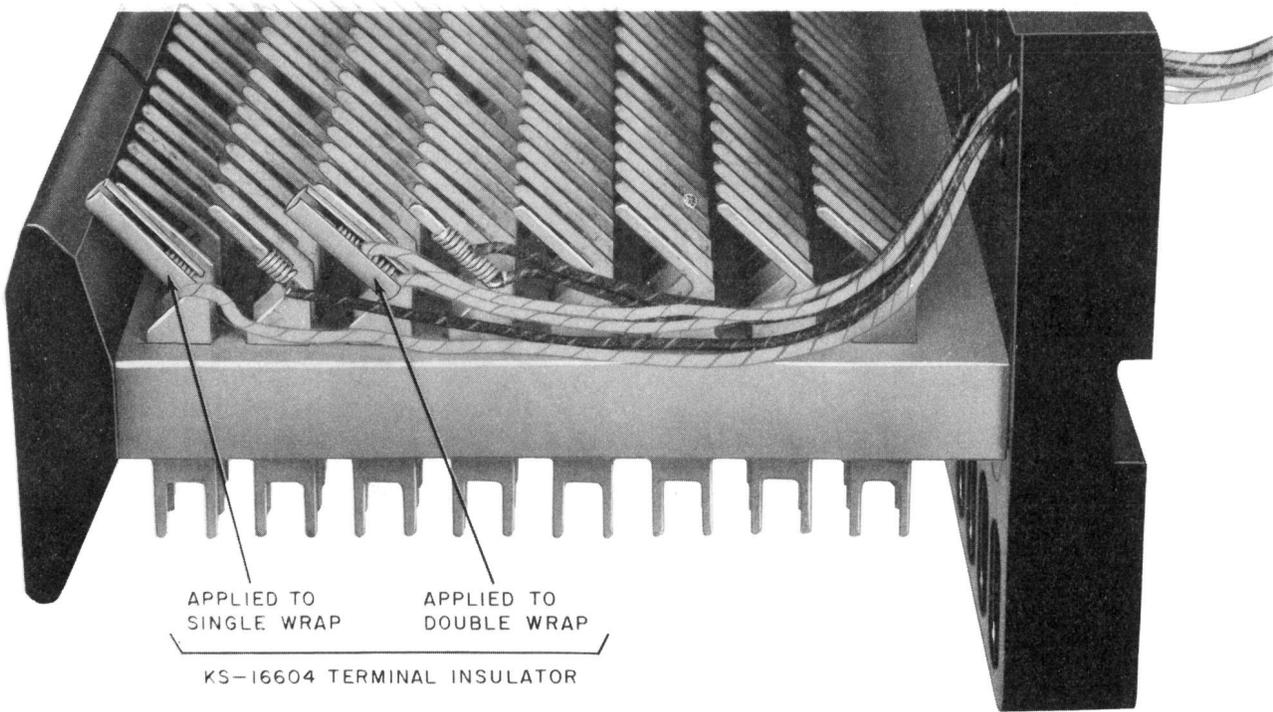


Fig. 15—Protection of Special Lines—Typical 336-Type Connector

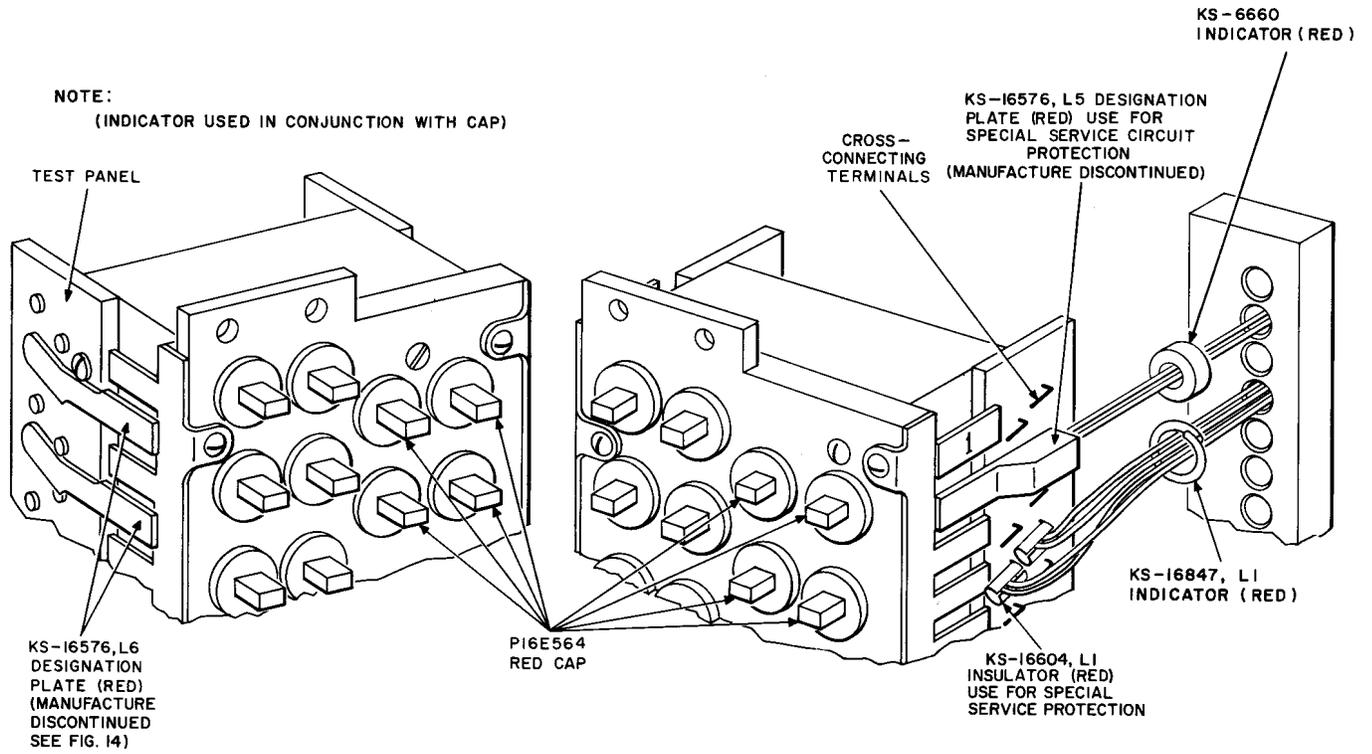


Fig. 16—Protection of Special Service Lines—Typical 300-Type Connector or Replaced 121-Type Protector

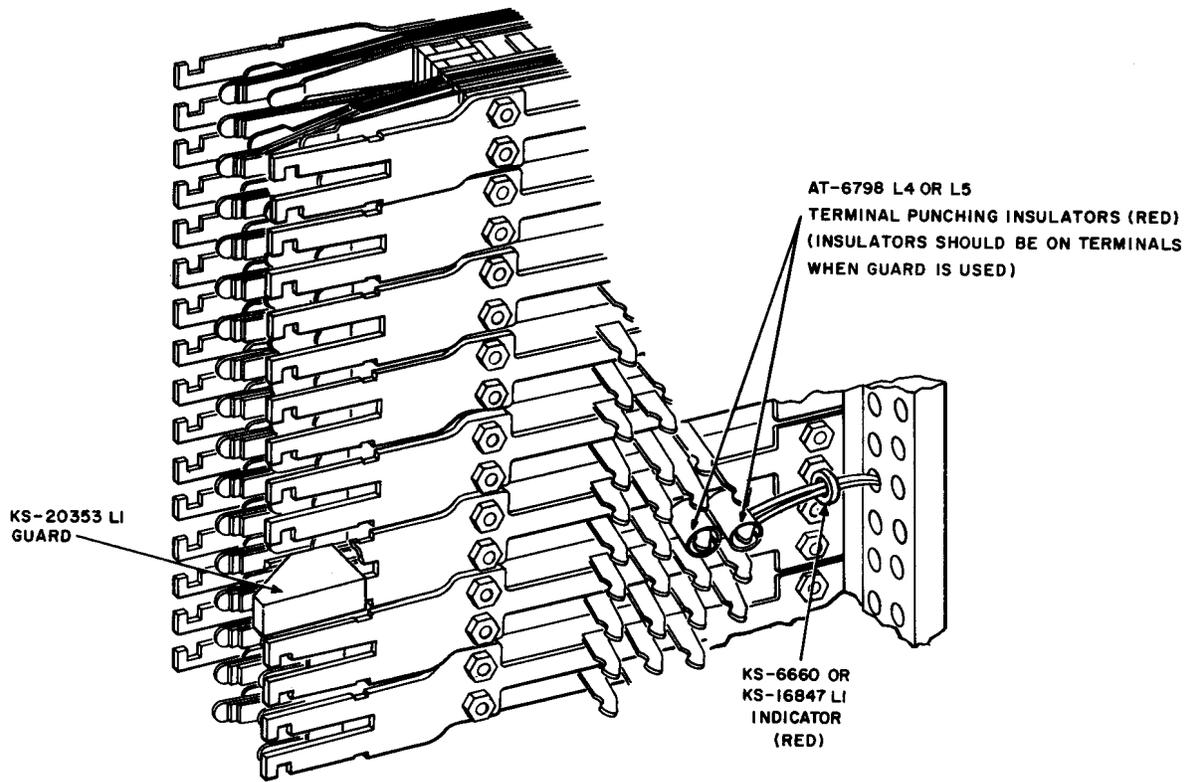
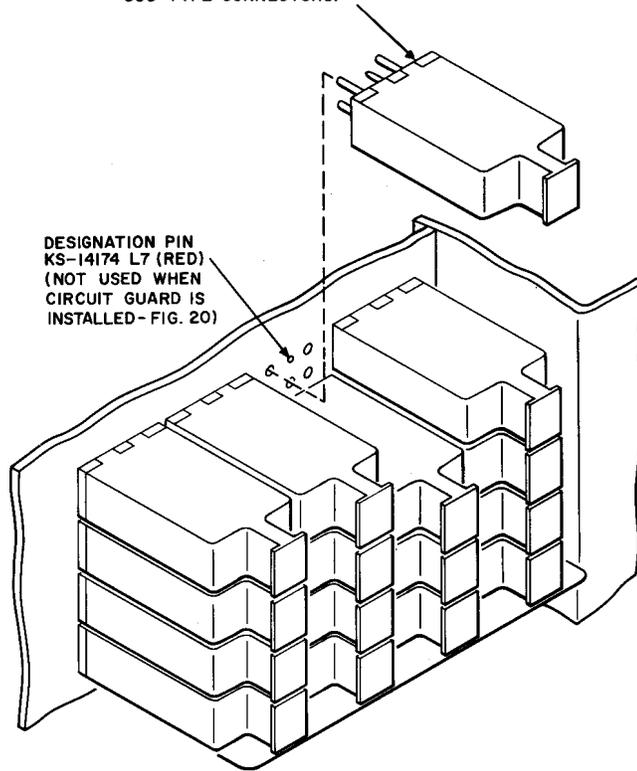
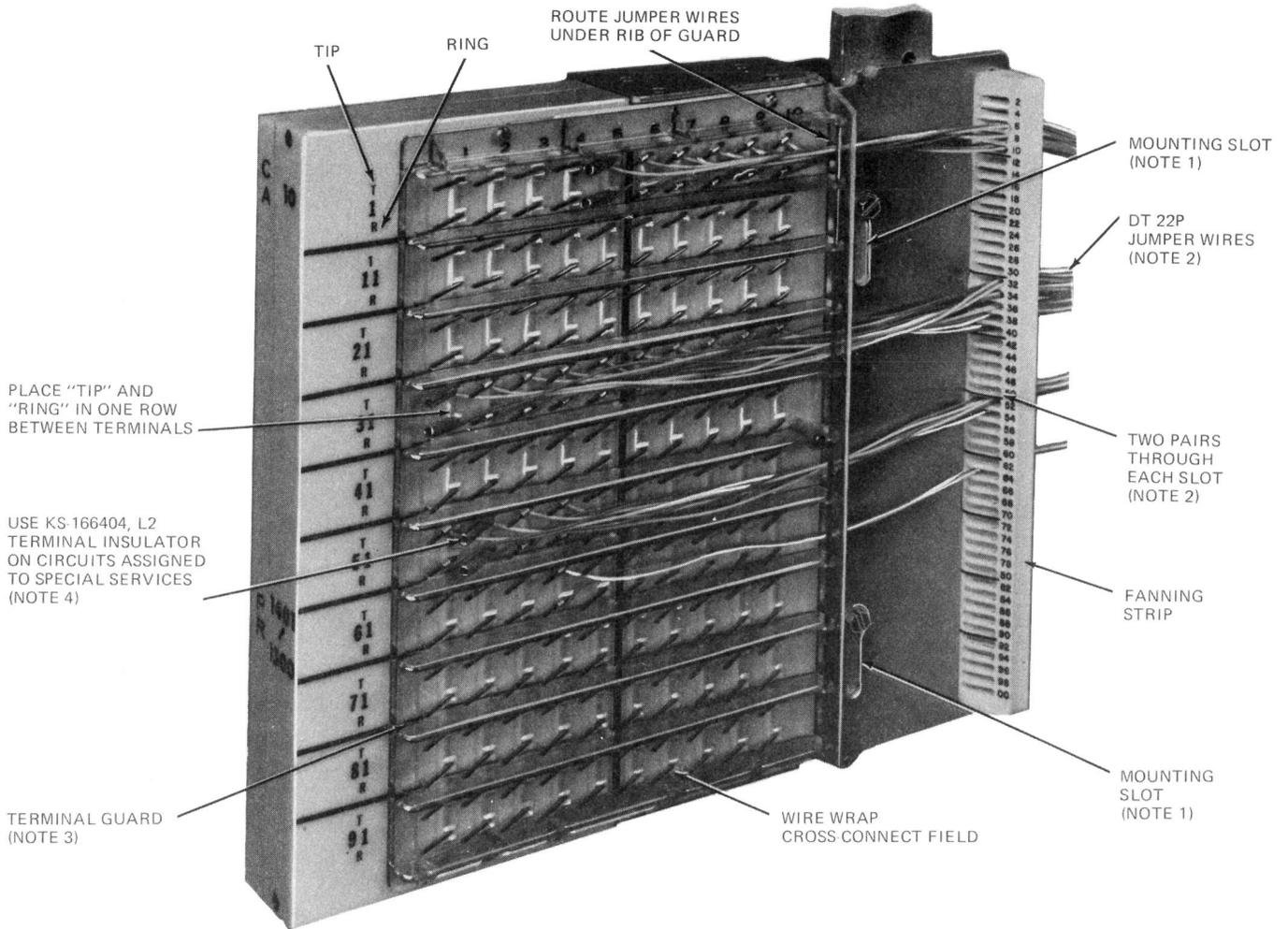


Fig. 17—KS-20353 L1 Guard on 444-Type Jack (301-Type Connector)

RED CASED PROTECTOR UNIT CODED AS 3B3A, 4A3C, OR 5A3D FOR 302A1, 302B1, AND 305-TYPE CONNECTORS OR 3B7A, 4A7C, OR 5A7D FOR 302A2, 302B2 AND 305-TYPE CONNECTORS.



**Fig. 18—Use of KS-14174 Designation Pin and Red Cased Protector Unit for 302-Type Connector (303- and 305-Type Connector Similar)—Special Service Lines**



NOTES:

1. THE 305-TYPE CONNECTOR MOUNTS ON THE FRAME VERTICAL IN AN ORIENTATION WHICH IS 90 DEGREES FROM CONVENTIONAL MOUNTING OF MDF CONNECTORS.
2. BECAUSE OF HIGHER DENSITY ACHIEVED IN THE CROSS-CONNECT FIELD, USE ONLY DT 22P JUMPER WIRE.
3. ENTIRE CROSS-CONNECT FIELD IS PROTECTED BY A REPLACEABLE TERMINAL GUARD (842355604).
4. IF THE TERMINAL INSULATOR FITS LOOSELY ON THE WIRE-WRAPPED CONNECTION, THE INSULATOR SHOULD BE COMPRESSED WITH A PAIR OF PLIERS PRIOR TO INSTALLING IT ON THE TERMINAL.

Fig. 19—Use of KS-16604 L2 Terminal Insulator on 305-Type Connector

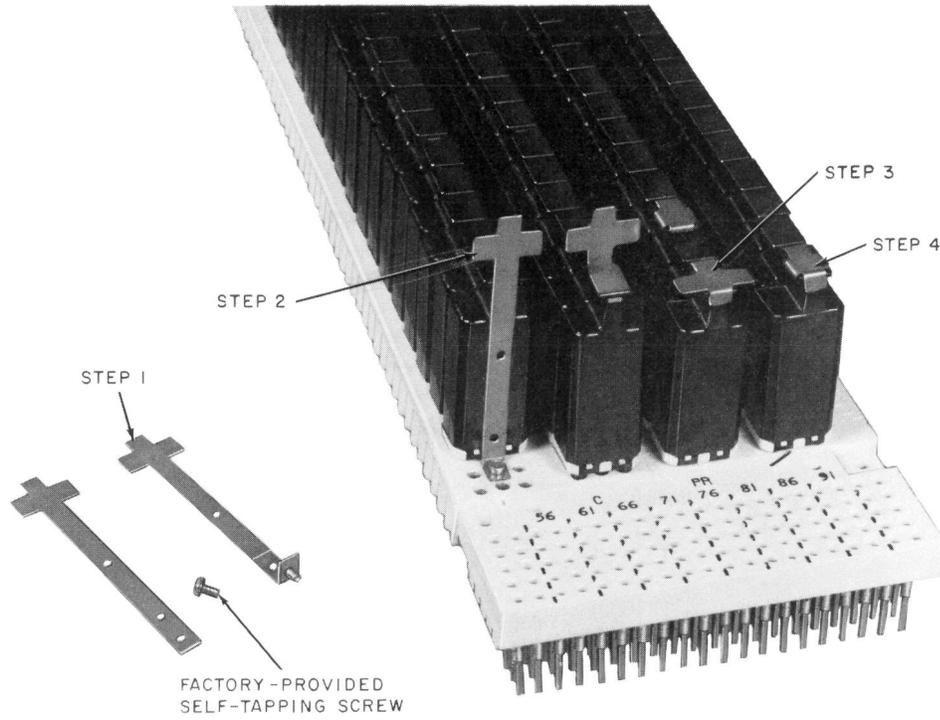


Fig. 20—Installing 20A Circuit Guard

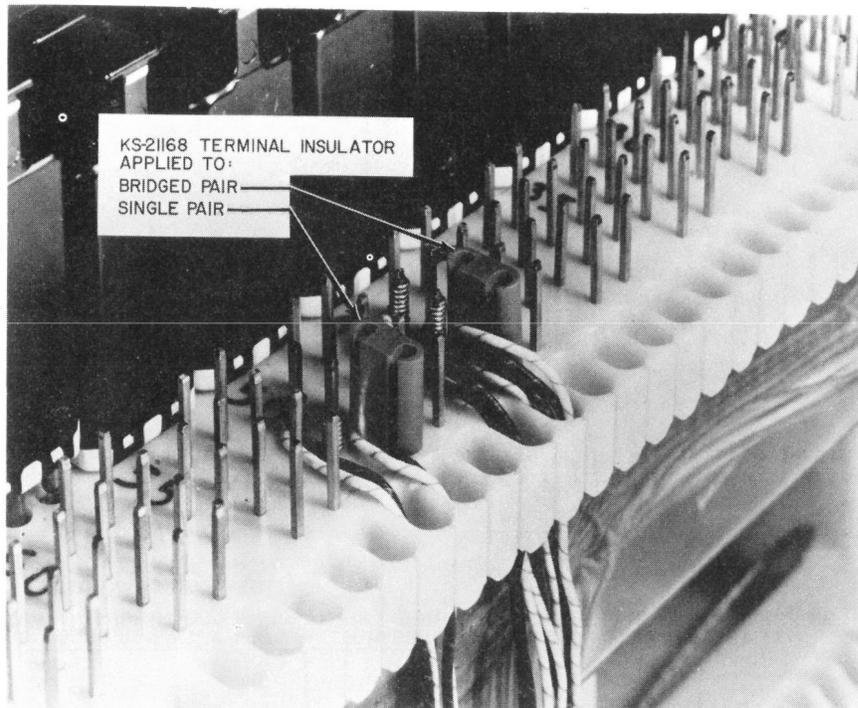
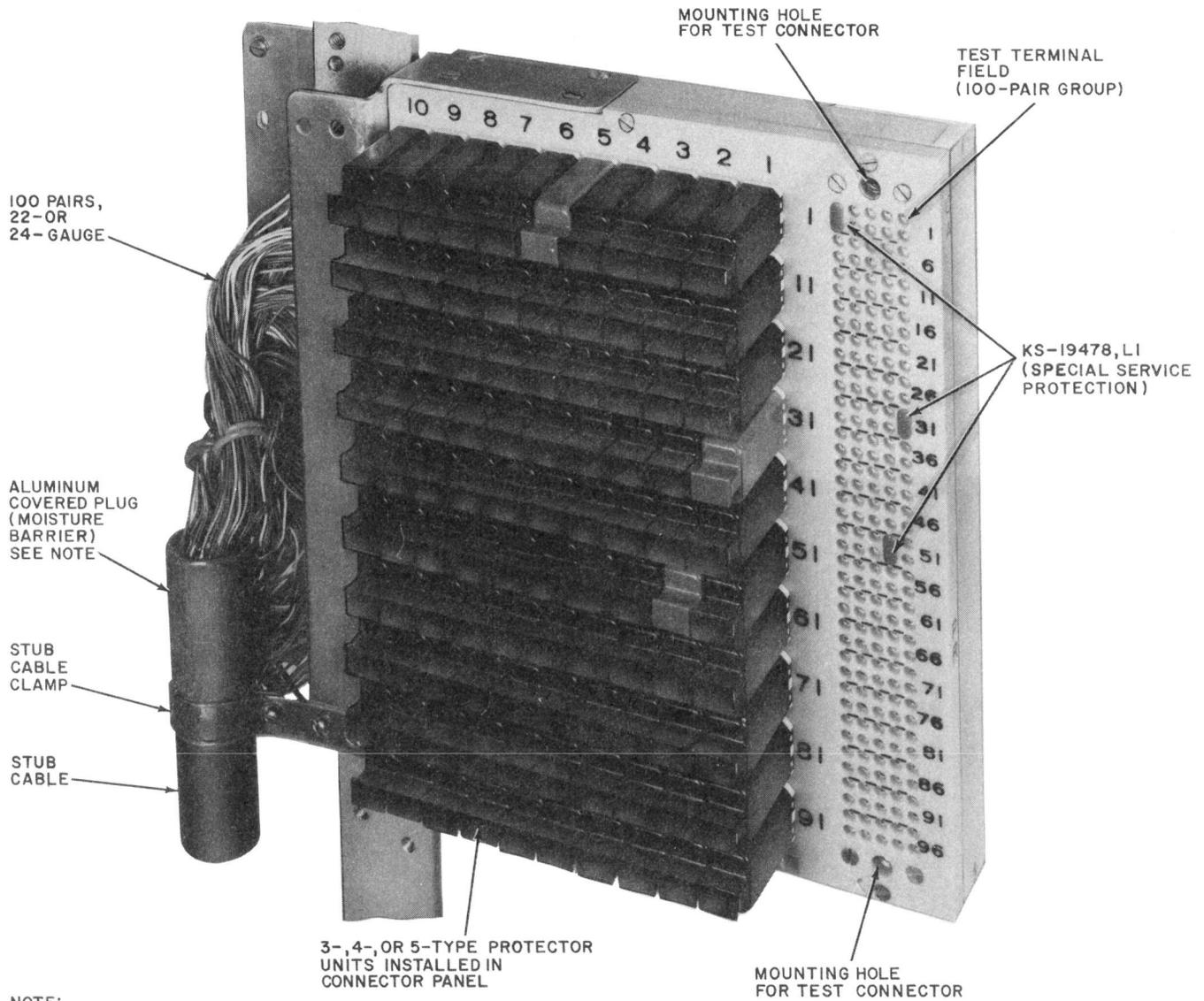


Fig. 21—Protection of Terminal Punchings—Special Service Lines—303-Type Connectors



Fig. 22—KS-19478 L1 Guard



NOTE: FACTORY-INSTALLED PLUG PREVENTS MOISTURE FROM ENTERING THE CO SPLICE DUE TO "BREATHING" ACTION OF CABLE DURING CHANGES IN TEMPERATURE. THESE STUB CABLES MUST NOT BE MAINTAINED UNDER CONTINUOUS PRESSURE.

Fig. 23—KS19478 L1 (Special Service Protection) on 305-Type Connector (302-, and 303-Type Similar)

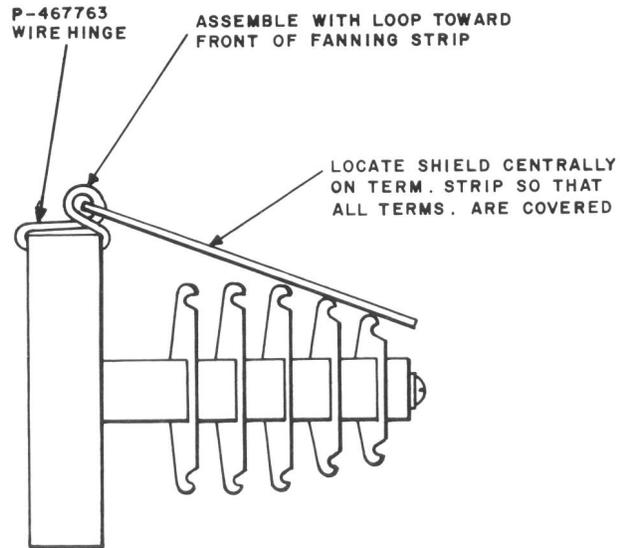


Fig. 24—37-Type Shield on Terminal Strip

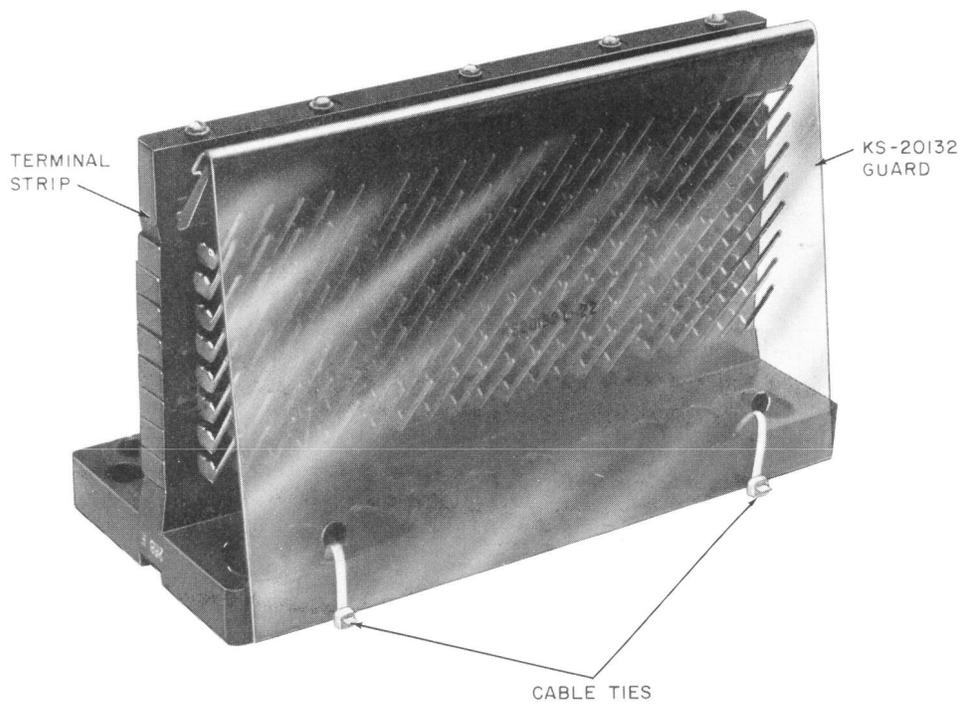


Fig. 25—KS-20132 L1 Through L22 Guards

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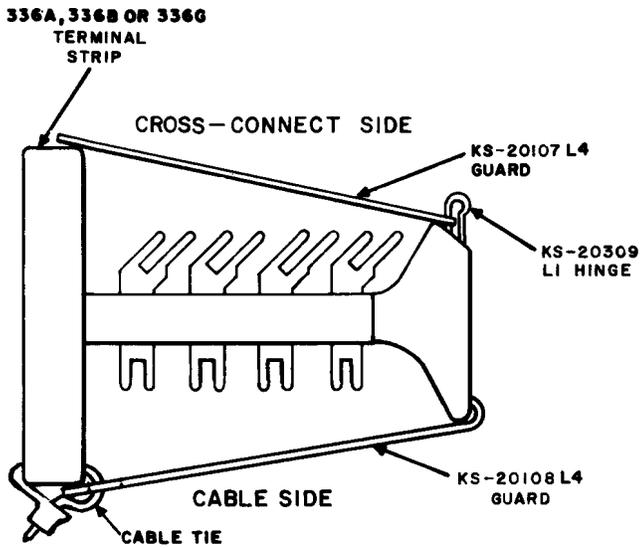
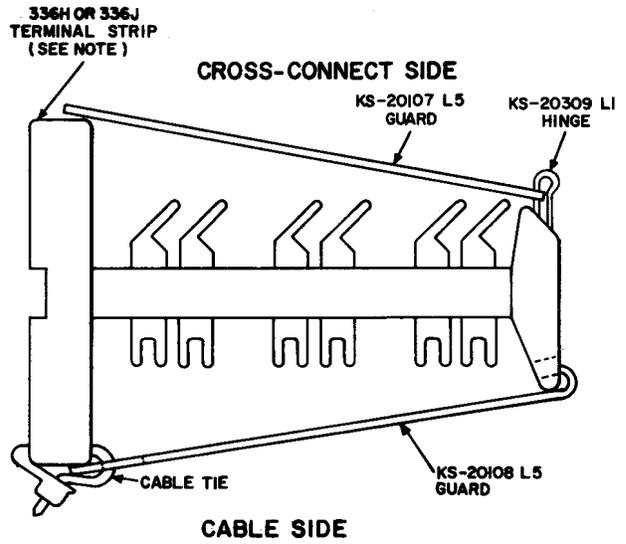
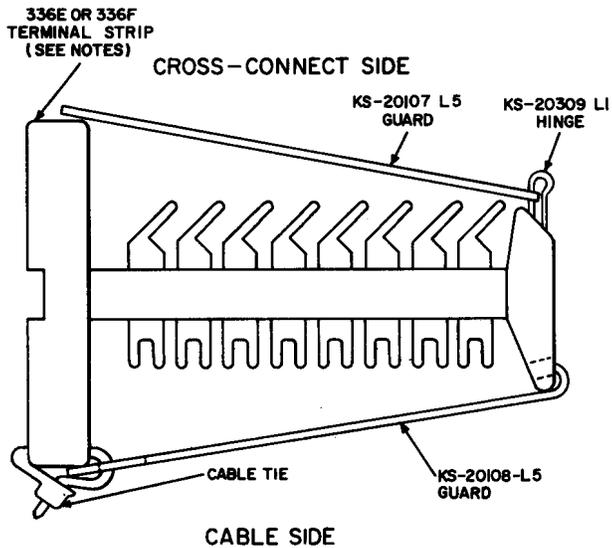


Fig. 26—336A, or 336B or 336G Terminal Strips



NOTE:  
THE 336H AND 336J PROVIDES SPACE FOR AN ADDITIONAL WIRE WRAP ON CROSS-CONNECT (SINGLE TINE) END OF TERMINAL

Fig. 28—336H or 336J Terminal Strips



NOTES:  
1. THE 336E AND 336F PROVIDES SPACE FOR AN ADDITIONAL WIRE WRAP ON CROSS-CONNECT (SINGLE TINE) END OF TERMINAL.  
2. 336C AND 336D ARE MANUFACTURE DISCONTINUED.

Fig. 27—336E or 336F Terminal Strips

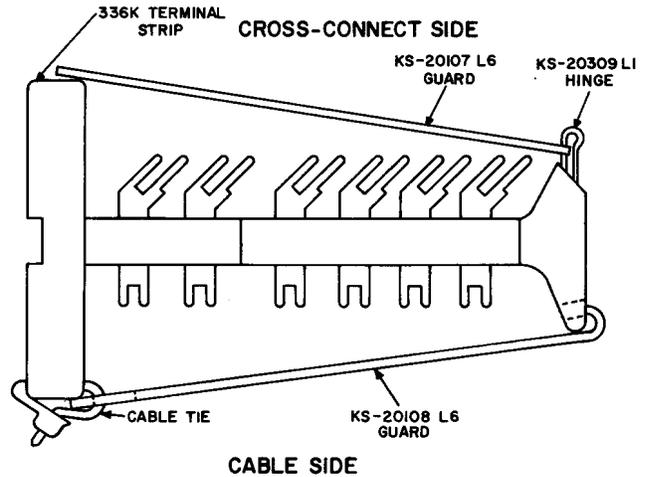


Fig. 29—336K Terminal Strips

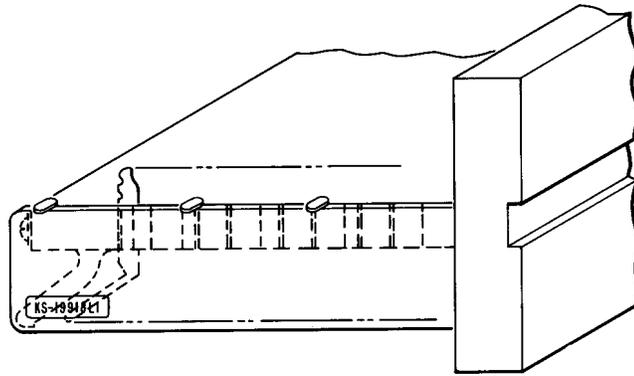


Fig. 30—Method of Mounting KS-19918 L1 Guard on Terminal Strips

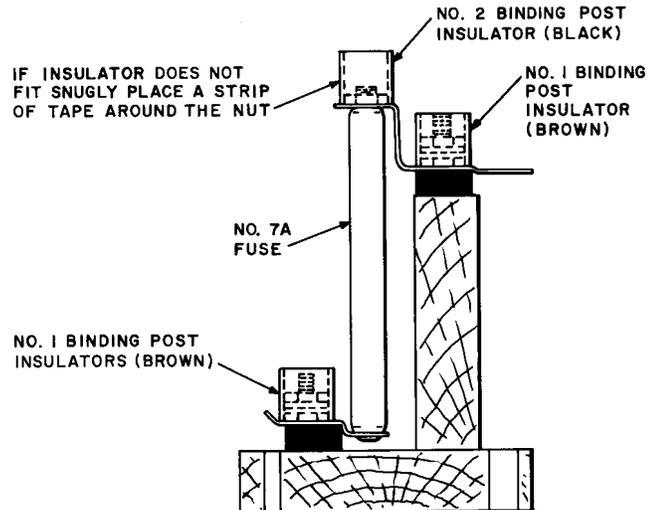


Fig. 31—1- or 2-Type Insulators on 7-Type Fuse Protectors