Bell
Communications
Research

Bellcore Practice
BR 460-110-100
Issue 7, July 1986

SPECIAL SERVICES PROTECTIVE DEVICES

Description

BR 460-110-100
Issue 7, July 1986

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Prepared by
Information Management Services Division
Bell Communications Research
July 1986

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SPECIAL SERVICES PROTECTIVE DEVICES

Description

CONTENTS *Page No.*

FIGURES

LIST OF TABLES

1. GENERAL

A. Introduction

1.01 This practice describes the protective devices which are provided for network facilities and terminations to ensure the continuity and dependability of service for the user. Application of protective devices guards against **accidental mechanical contact** which often results in disturbance to special services and access services. Protective devices provide protection at service and testing access points. Protective devices are applied on special services and access services when Special Safeguarding Measures (SSM) and/or Special Service Protection (SSP) indications are shown on the service order and the Work Order Record and Details (WORD) document.

B. Reasons for Reissue

1.02 This practice is being reissued to:

a. Change to a Bellcore Practice format

b. Change the method of identifying services requiring SSM and/or SSP

c. Add information on protection placed at the premises Network Interface (NI) or Point of Termination (POT).

C. Circuitry

1.03 Circuitry, as discussed in this practice, is cable, carrier and wire facilities furnished by the local telephone company to terminate at a customer premises in a NI for special services, or a POT for access services.

2. ORDERING GUIDE

2.01 Order special service protective devices as follows:

- Indicator, KS-6660, Figure 3
- Indicator, KS-16847, Figure 3

- Cap, Post, Binding, B, Figure 4
- Cap, Post, Binding, C, Figure 4
- Cap, Post, Binding, D, Figure 4
- Cap, Post, Binding, E, Figure 4
- Cap, Post, Binding, F, Figure 4
- Cap, Post, Binding, G, Figure 4
- Cap, Post, Binding, H, Figure 4

- Guard, KS-14539, L5, Figure 5
- Guard, KS-14539, L10 and L11, Figure 6
- Insulator, Post, Binding No. 1, Figure 7
- Insulator, Post, Binding No. 2, Figure 7
- Insulator, Post, Binding No. 3, Figure 7
- Insulator, Post, Binding No. 6, Figure 7
- Insulator, Post, Binding No. 10, Figure 7
- Insulator, Post, Binding No. 11, Figure 7

- Insulator, Punching, Terminal, No. 4, Figure 7
- Insulator, Punching, Terminal, No. 5, Figure 7
- Insulator, Punching, Terminal, No. 7, Figure 7
- Insulator, Punching, Terminal, No. 8, Figure 7
- Insulator, Punching, Terminal, No. 9, Figure 7

- Insulator, Terminal, Clip B, Figure 9
- Insulator, Terminal, Clip C, Figure 9
- Insulator, Terminal, Clip D, Figure 9
- Insulator, Terminal, Clip E, Figure 9
- Insulator, Terminal, Clip F, Figure 9
- Insulator, Terminal, KS-21168, L1, Figure 10
- Guard, KS-20353, L1, Figure 12
- Guard, KS-21369, L1, Figure 16
- Guard, Circuit, 20A, Figure 17
- Form EO-5190, Warning Marker, Figure 13
- Cap, 811655646 Heat Coil, Figure 15
- Tie, Cable, KS-20986, L4 or L3 (used with KS-21369, L1 guard when SSM is required), Figure 16

(Insert Your Company Logo)

Special Service Protection

EO-4106 (10-85)

Binding Post Insulators (Terminals) | **Protector Guard Devices** (Distributing Frames)

Central Office: 18th St, WC 624		Due Date: 6/1/86	Service Ord. No.: X
Date Issued: 5/1	By: E.A.B.	Work Ord. No.: 807-2178	Trans. No.: 178.1
Copy For: FIELD		For Information Call: 624-9984	

Place And Or Remove Special Service Protection At Location Listed.

Cable	Pair	BP	Terminal Locations	Protection: Place	Protection: Remove
1014	209		486 18th St FL3	X	
	228		" " "	X	
	228	11	300 18th St FL4	X	
	209	9	" " FL5		
	209	14	198 18th St FL10	X	
	↓	9	" 8	X	
	↓	5	" 7	X	
	↓	7	" ↓ 3	X	
1062	108		486 18th St FL3		X
	127		" " "		X
	108	7	101 " B2 WALL		X
	↓	3	" " FL2		X
	↓	7	103 " FL5		X
	↓	3	" " FL2		X
	↓	5	129 " FL6		X
	127	7	" " FL4		X
	↓	3	" " FL2		X

Work Completed By | Date | O.K. No.

RETURN TO LAC or PCO 63DXDT 12345

Figure 1 - Facsimile of Form EO-4106

3. SPECIAL SERVICE PROTECTION / SAFEGUARDING METHODS / WORK ORDERS

3.01 Special services and access services designated SSP require special protection to ensure that plant functions do not interfere with their operations. The circuitry is such that momentary shorts, opens, or accidental contact may seriously disrupt customer service.

3.02 Binding post insulators and caps, pair indicators and distributing frame guards are provided to various work groups to use on terminals, distributing frames and bridging locations where the circuitry for special services and access services appears. In addition to physical protection, these markings and protective devices indicate that **approval from the Special Service Center is necessary before doing any work on SSP designated circuitry.**

SPECIAL SAFEGUARDING MEASURES

3.03 Whenever SSM is applicable to a Special Service or Access Service, SSP will also be provided. BR 660-200-300 recommends the use of locked terminal boxes, unbridged pairs and wire in conduit as well as locking type protection on wire center distributing frames. Engineering authorization is required to establish SSM from the serving wire center to premises.

3.04 Services involving national security primarily use SSM.

WORK ORDERS

3.05 When special service protection is required, "SSP" is annotated beside the circuit number on the special or access service order. When special safeguarding measures are required, "SSM/SSP" is noted beside the circuit number. The Work Order Record and Details (WORD) document is noted SSP or SSM, as appropriate, but need not be marked both SSP and SSM as normally required on the service order. In addition, Form EO-4106 (Figure 1) is used to notify the field forces where to place or remove protection when "SSP" or "SSM" is involved.

CIRCUITS REQUIRING SSP/SSM

3.06 The negotiator/originator of the service order or special service **should indicate the requirement for SSP/SSM.** The Service Code of the Common Language Circuit Identification is used to determine the need for SSP. Since billing may be involved, an SSM request is negotiated with the customer.

3.07 Two tables of CLCI Service Codes with a brief description of the service are provided with this practice. Table 1 identifies services which will always require application of SSP. Table 2 lists those services which may require SSP depending on the customer's usage. A complete description for each Service Code is available in BR 795-402-100, Information Aid.

4. HOW TO AVOID DIFFICULTIES

4.01 Difficulties can be avoided by following these simple rules:

- Obtain authorization before working on a special circuit
- Use SSP and/or SSM when required
- Use the 1013A or equivalent hand test set with capacitor in line (monitor position) when first going across a pair
- Avoid shorting terminals when trying to locate a pair. Figure 2 shows what happens if you don't.
- Exercise care to avoid accidental contact with other lines
- Obtain authorization before removing any SSP and/or SSM.

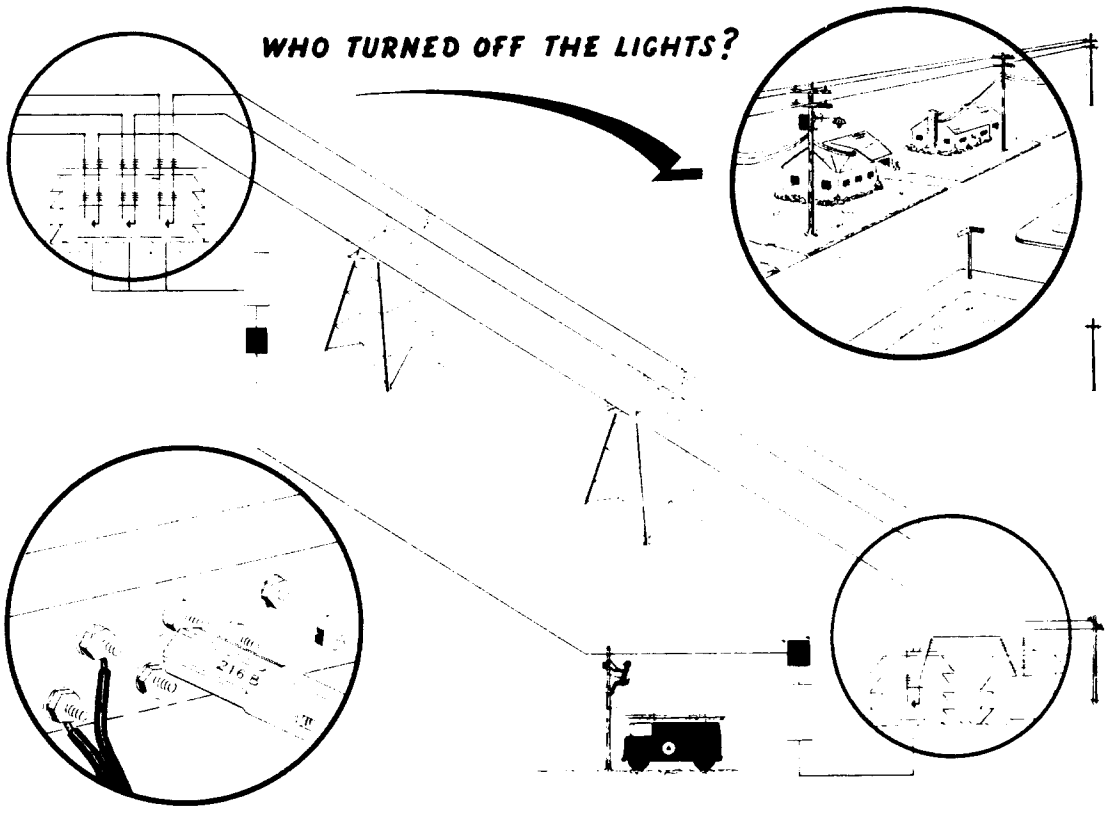


Figure 2 – Who Turned Off the Lights?

5. PROTECTIVE DEVICES

5.01 Common protective devices used on special service circuits. See Figures 3 through 17.

INDICATORS (Figure 3)

5.02 Indicator KS-6660 is a red plastic ring 1/2-inch in diameter. This indicator must be placed on wires before they are terminated. Indicator KS-16847 is a red cellulose-acetate spiral ring, 3/8-inch in diameter. The split-ring feature of this indicator permits placing or removing indicator on terminated wires.

Figure 3 - KS-6660 and KS-16847 Indicators

BINDING POST CAPS (Figure 4)

5.03 Binding post caps are neoprene caps used on cable and wire terminals to protect against accidental contacts on special service lines and to minimize faceplate leakage in distribution cable terminals. They are available in red and black colors. Red caps are intended for use on special service lines and black caps for general use.

5.04 Applications for these binding post caps are as follows:

- **B binding post caps** - use on **nonworking** posts of N, T and 61-type cable terminals.
- **C binding post caps** - use on **working** posts of N, T and 61-type cable terminals
- **D binding post caps** - use on 7A fuses installed in L-type fuse chambers
- **E binding post caps** - use on 49-, 104-, and 105-type cable terminals
- **F binding post caps** - use on terminals equipped with insulation crushing washers such as B buried cable terminals, 30-2, 57B, and 59A-type manufacture discontinued (MD) connecting blocks
- **G binding post caps** - use on 30-type connecting blocks
- **H binding post caps** - use on 31-type connecting blocks.

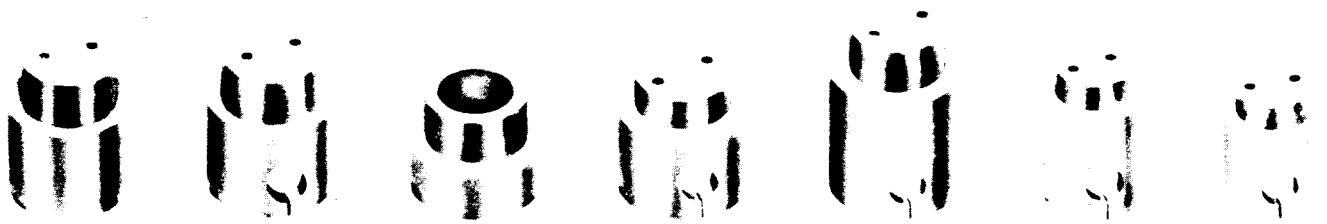


Figure 4 - Binding Post Caps

KS-14539, L5 GUARD (Figure 5)

5.05 The KS-14539, L5 guard is a red plastic hood designed to cover the heat coils and springs on 1177-type protectors.

Protect each special circuit appearing on frame. Place SSP on each end of jumper wire.

Figure 5 - KS-14539, L5 Guard

KS-14539, L10 AND L11 GUARD (Figure 6)

5.06 The KS-14539, L10 and L11 guard, is designed to insulate, protect and designate SSP and SSM circuit pairs on C50 and C52 protectors. L10 is colored red for high visibility, is made of flame retarding plastic and is shaped to wrap-around and be fastened with a beaded cable tie. The KS-14539, L10 is **only** the guard and is used when **SSP** is required; KS-14539, L11 is both the **guard and cable tie** and is used when **SSM** is required.

5.07 The KS-14539, L10 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 to the floor, preventing an accumulation of dislodged heat coils and possible short circuits.

5.08 The KS-14539, L10 and L11 guard is installed as shown in Figure 31. 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 1-inch long.

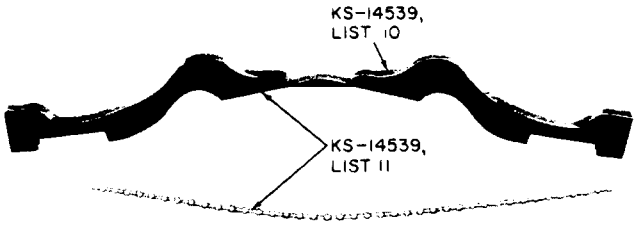


Figure 6 - KS-14539, L10 and L11 Guard

BINDING POST INSULATORS (Figure 7)

5.09 Binding post insulators are used to prevent accidental contact. They are open-ended, red, flame retardant plastic insulators for use on binding posts. These insulators are designated No. 1, 2, 3, 6, 10 and 11.

5.10 Application for these binding post insulators are as follows:

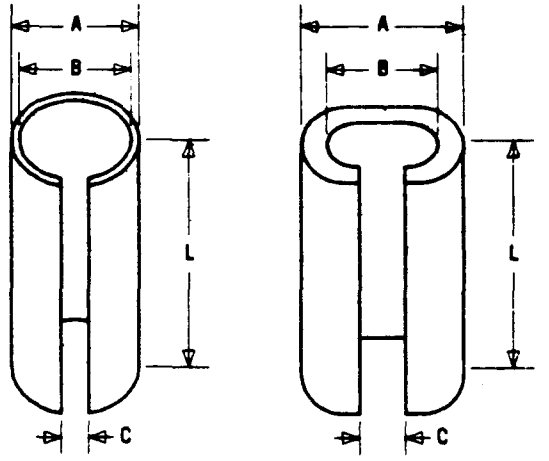
- **No. 1 insulators** - use on binding posts having 3/8-inch hexagonal nuts and on 7T fuses
- **No. 2 insulators** - use on binding posts having 7/16-inch hexagonal nuts and on 7A fuses
- **No. 3 insulators** - use on screw binding posts numbers: BD, BE, BF, BG, BH and BJ cable terminals
- **No. 6 insulators** - use on terminations of the alarm and contractor circuits in T pressure contactor terminals and 3-pair gas-tight terminals
- **No. 10 insulators** - use on BK/BL and 76-type binding post terminals
- **No. 11 insulators** - use on 95-type binding post terminals.

TERMINAL PUNCHING INSULATORS (Figure 7)

5.11 Terminal punching insulators are open-ended, red, flame retardant plastic insulators for use on 300 connector terminals and terminal punchings to prevent accidental contacts. These insulators are designated as numbers: 4, 5, 7, 8 and 9.

5.12 Applications for these terminal punching insulators are as follows:

- **No. 4 and No. 5 insulators** are used on 300 connector terminals and terminal strips. Length - 1/2-inches and 5/8-inches long
- **No. 7 insulators** are used on cable conductor terminating lugs of the C- and E-type protector mountings. Length - 3/4-inch long
- **No. 8 and No. 9 insulators** are used on terminal strips where terminal spacing and wire build-up create a space problem. Length - 1/2-inch and 5/8-inch long.



SIZE NUMBER		A (INCH)	B (INCH)	C (INCH)	L (INCH)
BINDING POST INSULATOR	TERMINAL PUNCHING INSULATOR				
1		35/64	27/64	3/32	5/8
2		39/64	31/64	3/32	5/8
3		13/32	11/32	1/8	7/8
	4	17/64	13/64	1/16	1/2
	5	17/64	13/64	1/16	5/8
6		35/64	27/64	3/32	13/32
	7	17/64	13/64	1/16	3/4
	8	17/64	13/64	3/32	1/2
	9	17/64	13/64	3/32	5/8
10		5/16	1/4	1/16	23/32
11		3/8	5/16	1/16	9/16

Figure 7 - Binding Post and Terminal Punching Insulators

B COIL SPRING INSULATOR (MD) (Figure 8)

5.13 The B coil spring insulator is a fiber insulator designed for use on the 70-type (MD) connecting block. When installed, one B insulator will protect two coil springs, tip and ring, that are mounted on the face or station side of the block. It has a red enamel finish.

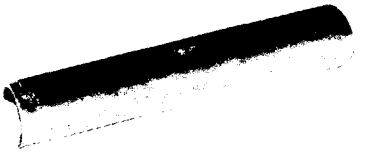


Figure 8 - B Coil Spring Insulator (MD)

CLIP TERMINAL INSULATORS (Figure 9)

5.14 Clip terminal insulators are red plastic insulators designed to protect terminals on 66-, 78-, 5A1- and 88-type connecting blocks.

5.15 Applications for the clip terminal insulators are as follows:

- **B clip terminal insulator** is approximately 2-inches long and is designed to protect one row of terminals on 66-type connecting blocks, or it may be cut to fit any desired number of terminals
- **C clip terminal insulator** is approximately 1/2-inch long with closed ends and is designed to protect two terminals on 66G- and 78A-type connecting blocks
- **D clip terminal insulator** is approximately 7/8-inch long with closed ends and is designed to protect two terminals on 66H- and 78B-type connecting blocks
- **E clip terminal insulator** is designed to protect a single terminal on 5A1- or 66-type connecting blocks
- **F clip terminal insulator** is designed to protect two terminals on an 88-type connecting block.

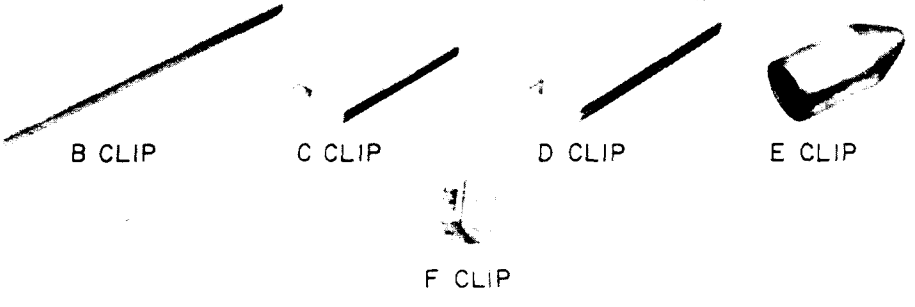


Figure 9 - Clip Terminal Insulators

KS-21168, L1 TERMINAL INSULATOR (Figure 10)

5.16 The KS-21168, L1 terminal insulator is recommended for use on 303-type connector terminals instead of No. 5 terminal punching insulators because they are easier to use and have a positive engagement. One KS-21168, L1 insulator serves the function of two No. 5 insulators. The KS-21168, L1 terminal insulator is used to insulate, protect and to designate special service pairs on 303-type connector terminals. The KS-21168, L1 terminal insulator has dual slots that are open-ended to accept the service pairs. It is made of a red, flame retardant plastic. The insulator may be expanded or compressed to fit snugly over the wire-wrap terminal lugs. Longitudinal slots provide clearance for bridged pairs.

Figure 10 - KS-21168, L1 Terminal Insulator

12-TYPE GUARD (MD) (Figure 11)

5.17 The 12-type guards are designed to protect special service lines appearing on frames that are equipped with 444A test jacks. The 12B guard (MD) (Figure 11) is the same as the 12A guard (MD), except that has a locking screw for maximum security. The 12-type guards have metal frames and brown phenolic fiber sides. These are replaced by the KS-20353, L1 guard as illustrated in Figure 12.

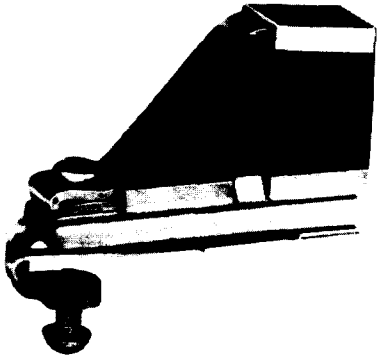


Figure 11 - 12B Guard (MD)

KS-20353 L1 GUARD (Figure 12)

5.18 The KS-20353, L1 guard is used to protect pair positions of the 444 jack on distributing frames and to prevent accidental contact. It consists of a cavity on one side and a rectangular hole through the other. It is made of a red plastic material for high visibility.

Figure 12 - KS-20353, L1 Guard

WARNING MARKER FORM EO-5190 (Figure 13)

5.19 The red warning marker, Form EO-5190, is designed for identification of special lines joined by B wire connectors (MD). It is supplied in tape form which are made of waterproof plastic cloth with a pressure sensitive backing for easy application. The tapes are 1/4-inch wide by 1-1/2-inches long and are supplied on a dispenser card with 36 tapes to a card.

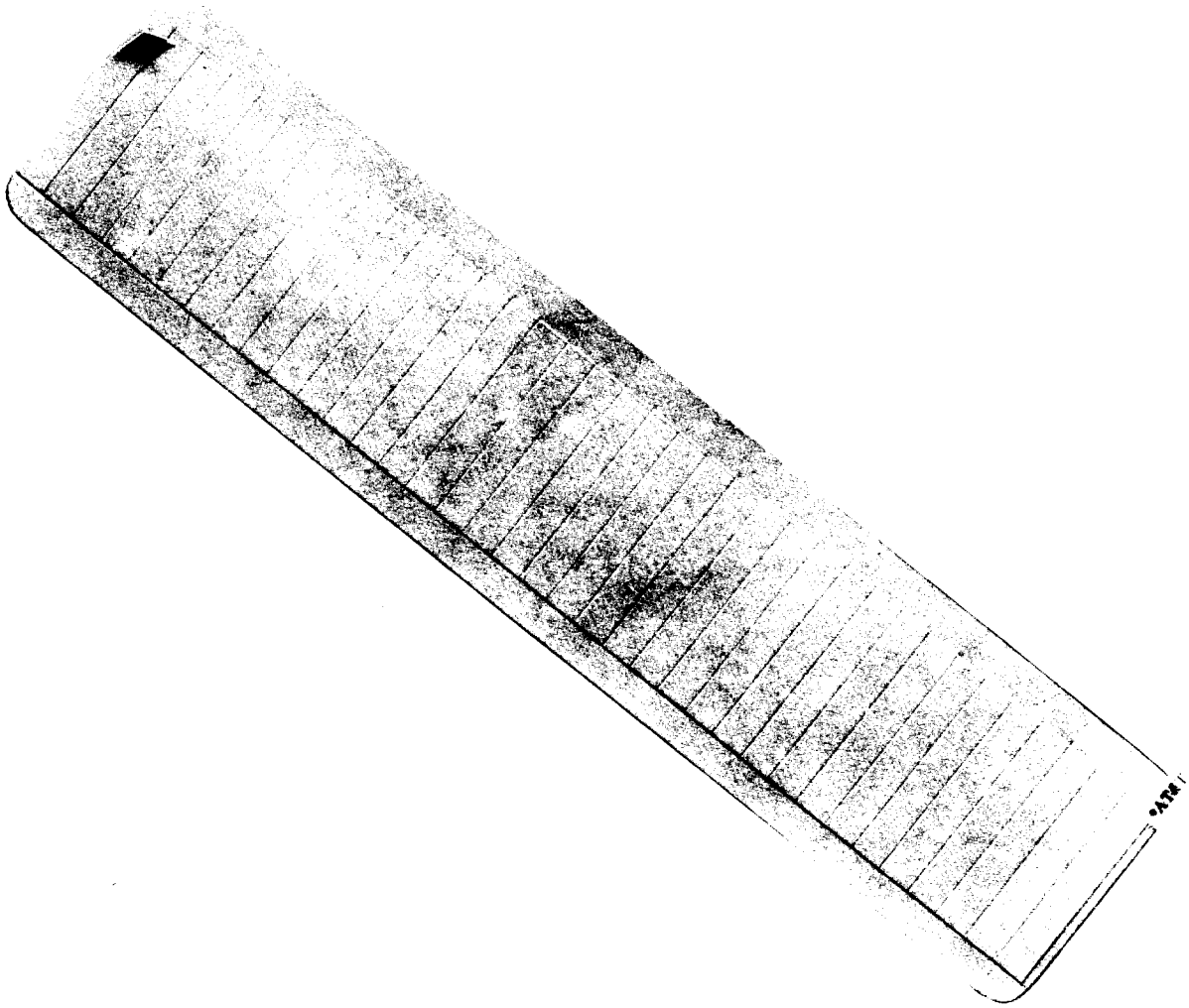


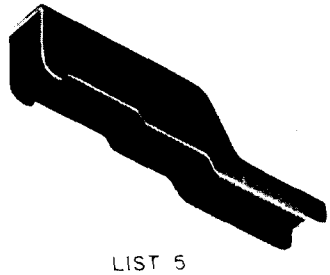
Figure 13 - Warning Marker Form EO-5190

KS-16576 DESIGNATION PLATES (MD) (Figure 14)

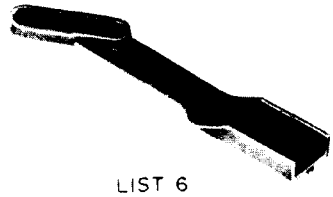
5.20 The KS-16576, L5 designation plate is a red plastic hood designed to cover the wire-wrap terminals of one pair on the jumper wire side of 300-type connectors.

5.21 The KS-16576, L6 designation plate, is a red plastic hood designed to cover the test terminals of one pair on the cable side of 300-type connectors.

5.22 The KS-16576, L5 and L6 designation plates are replaced by the KS-21369, L1 guard.



LIST 5



LIST 6

Figure 14 - KS-16576 Designation Plates (MD)

811655646 HEAT COIL CAP (Figure 15)

5.23 The 811655746 heat coil cap is used with the protector units to indicate a special line and as a guard against accidental opening of the line. The heat coil cap is red plastic for high visibility. It is used with the KS-21369, L1. guard, to provide SSM and SSP on 300-type connectors.

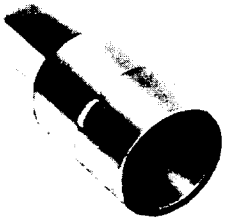


Figure 15 - 811655646 Heat Coil Cap

KS-21369, L1 GUARD AND KS-20986 CABLE TIE (Figure 16)

5.24 The KS-21369, L1 guard is a wrap-around device designed to insulate, protect and designate SSP and SSM circuit pairs on the 300-type connectors. The L1 guard is a red, flame-retardant moulded plastic. 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.

5.25 The KS-21369, L1 guard is installed as shown in Figure 35. 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.

5.26 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 locally provided fanning strip added to the vertical, a longer cable tie, such as the KS-20986, L3, is required.

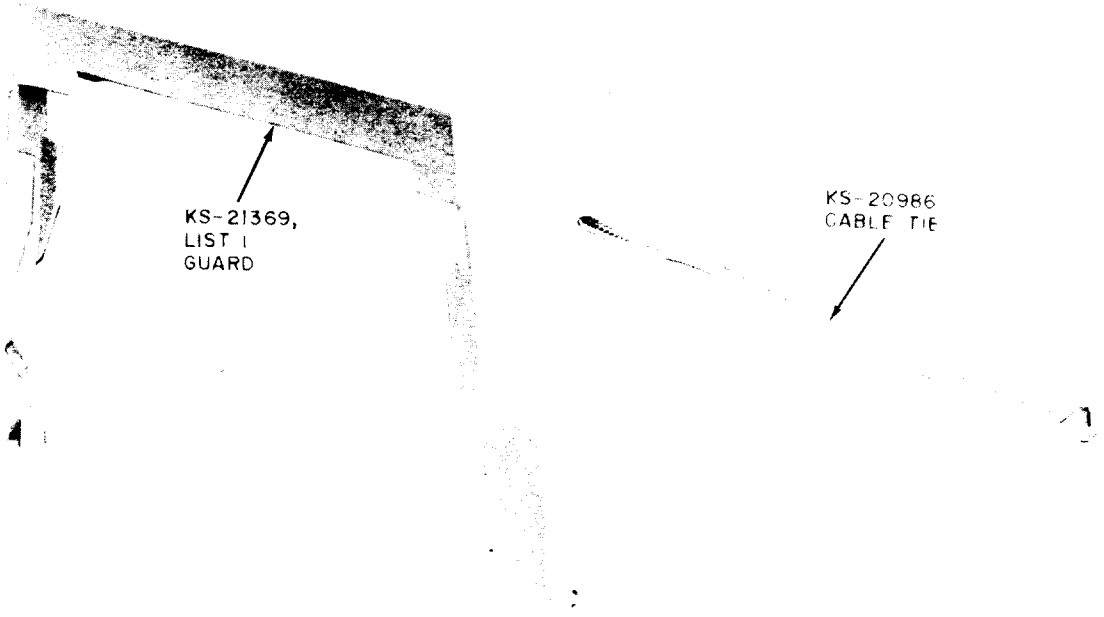


Figure 16 - KS-21369, L1 Guard and KS-20986 Cable Tie

20A CIRCUIT GUARD (Figure 17)

5.27 The 20A circuit guard is a cross-shaped metal strip used to prevent accidental removal of protector units from 302- and 303-type connectors associated with circuits requiring SSM. Installation of the guard with a 4A protector is shown in Figure 37.

The guard is designed with three holes, spaced for use with 3A, 4A and 5A protectors. After determining the proper hole, the excess material, if any, is removed by snipping at the notched edges that are adjacent to the hole. The guard is then attached to the connector with the factory-provided self-tapping screw, which is inserted into a hole located between two contact holes on the connector panel. After the guard is attached to the connector, it is bent to a 90° angle and the protector is inserted, covering the screw head and the three tabs on the locking end of the guard. The tabs are then bent around the edges of the T-shaped pull handle of the protector, locking it in the inserted position.

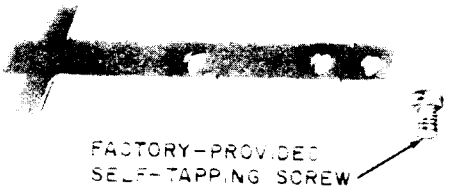


Figure 17 - 20A Circuit Guard

6. INSTALLING AND REMOVING SSP (Figure 18 through 38)

6.01 Upon receipt of Form E0-4106 (Figure 1), SSP may be installed or removed. It is essential that special service lines be protected at all times. Install SSP on binding post caps, terminals, etc., as follows:

1. Select wire pairs to be protected

2. Make sure terminals and surface areas are clean and free from foreign materials before installing protective device.

3. Before terminating special service lines, slip the KS-6660 indicator over wire ends to be identified. The split-ring feature of the KS-16847 indicator permits placing or removing indicator on terminated wires

4. Place caps, terminal insulators, guards, etc., over terminal(s) to be protected by dressing wires through slot of protective devices (if provided). Push on device until it is properly seated against the faceplate of the protected area.

Important - SSP is required at both ends of cross-connecting wires.

Figure 18 - Installing Binding Post Caps

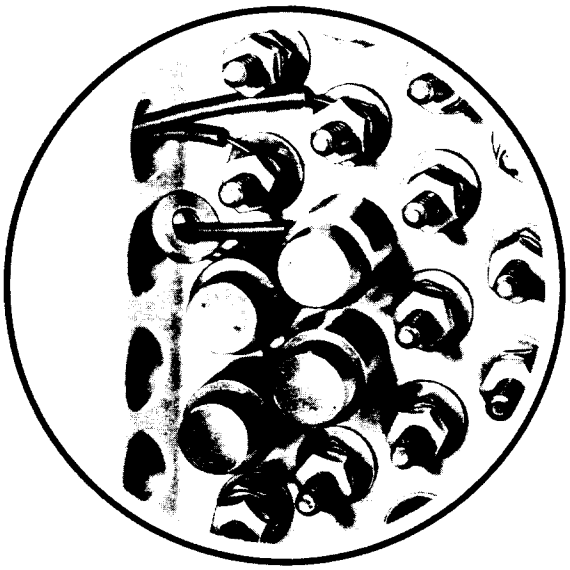


Figure 19 - Installed Binding Post Caps with KS-6660 Indicator

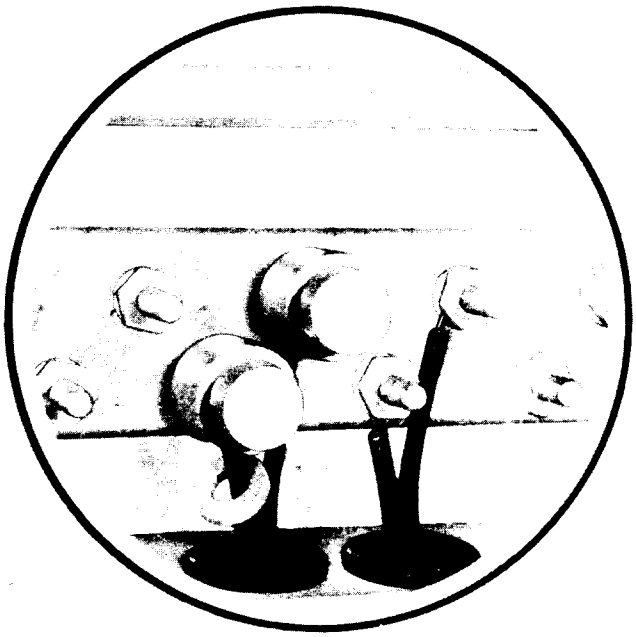
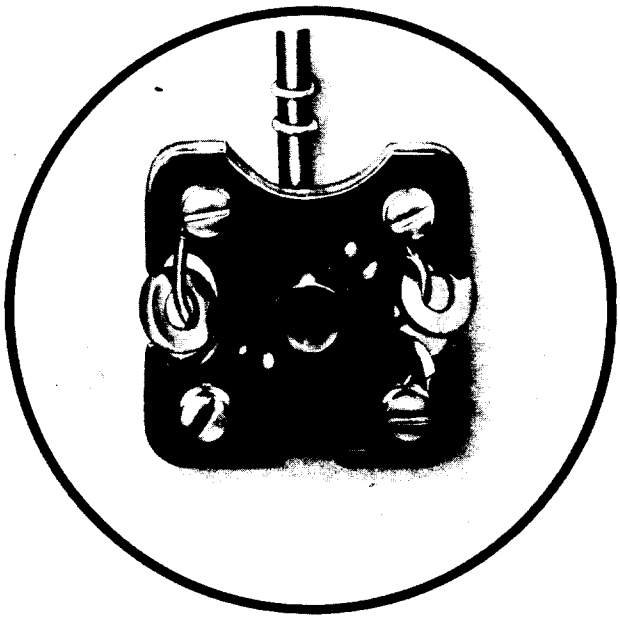
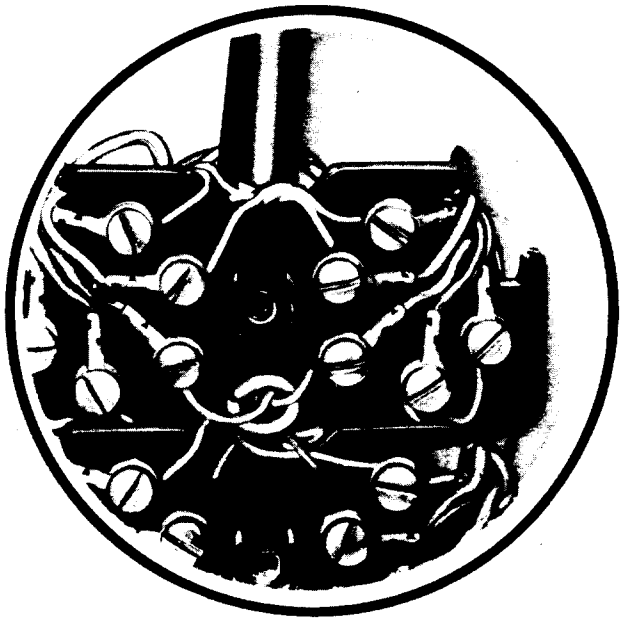


Figure 20 - Installed Binding Post Caps and Indicator at N-Type Cable Terminals

Note: When placing SSP at a premise, NI or POT, only the Bell Operating Company wiring terminal of the 66-type split block is protected. An E Clip, shown in Figure 9, should be used. No marking is placed on the metal clip, because it is a joint used as a test point between CPE and the Bell Operating Company.



42A



44A

Figure 21 - Typical SSP Used with 42A or 44A Connecting Block

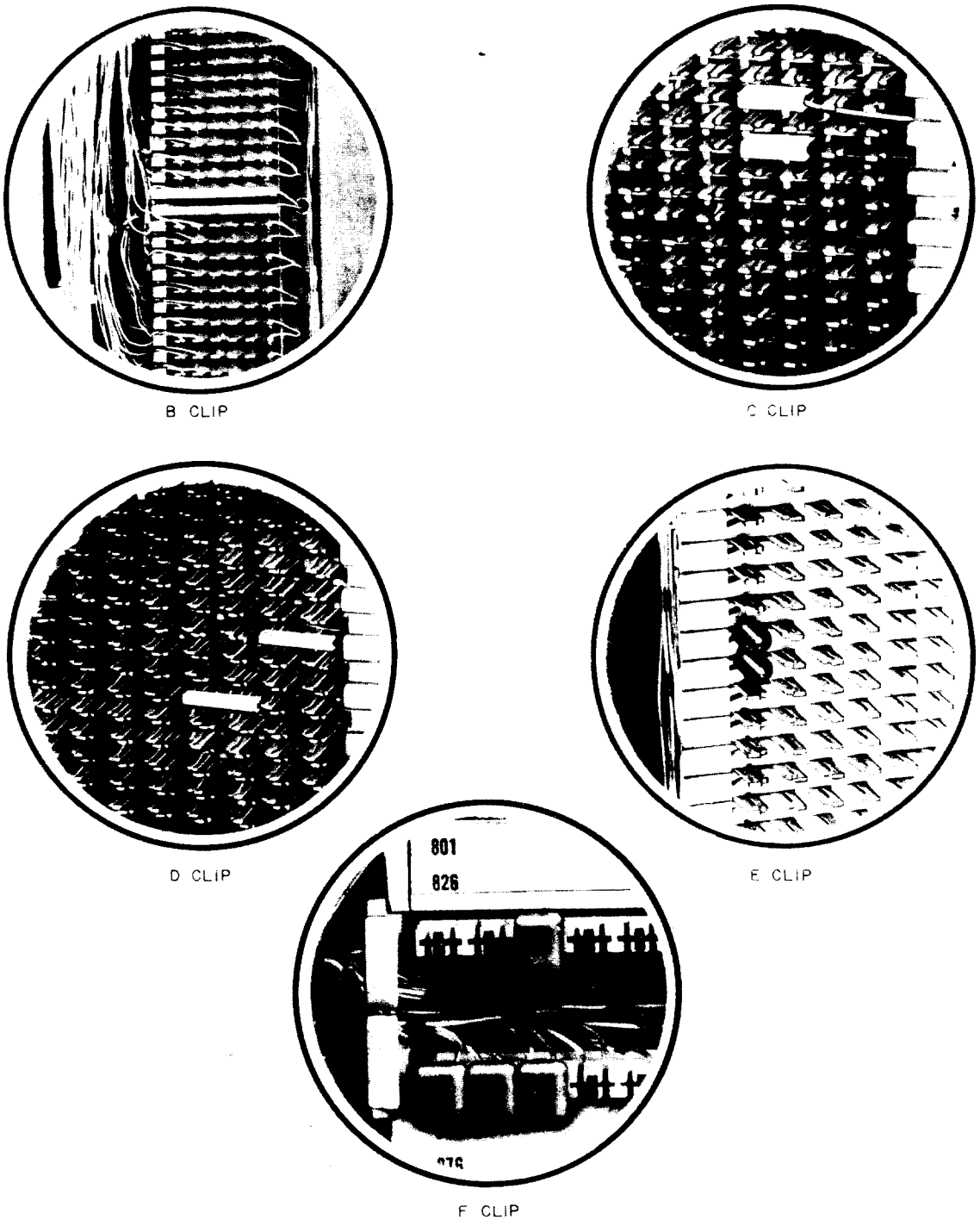


Figure 22 - Clip Terminal Insulators Installed on Connecting Blocks

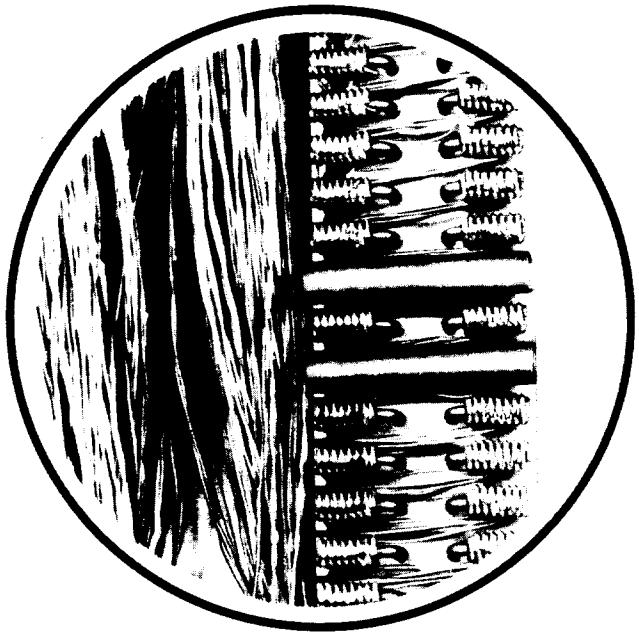


Figure 23 - B Coil Spring Insulators (MD) Installed on 70-type Connecting Block (MD)

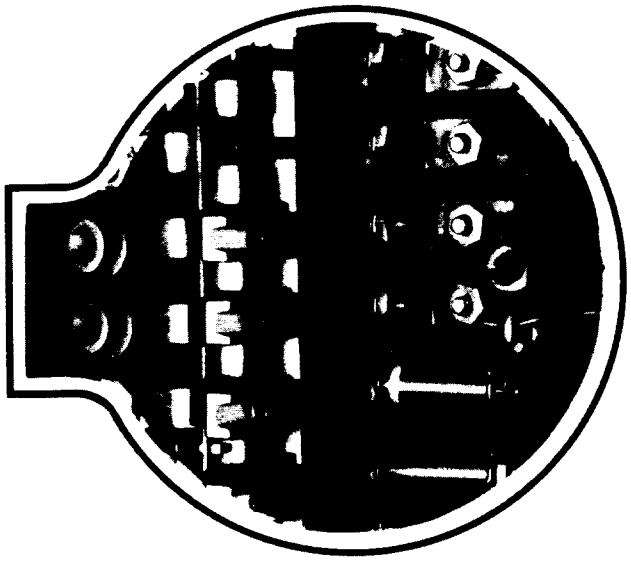


Figure 24 - D Binding Post Caps and Indicators Installed in L-Type Fuse Chamber

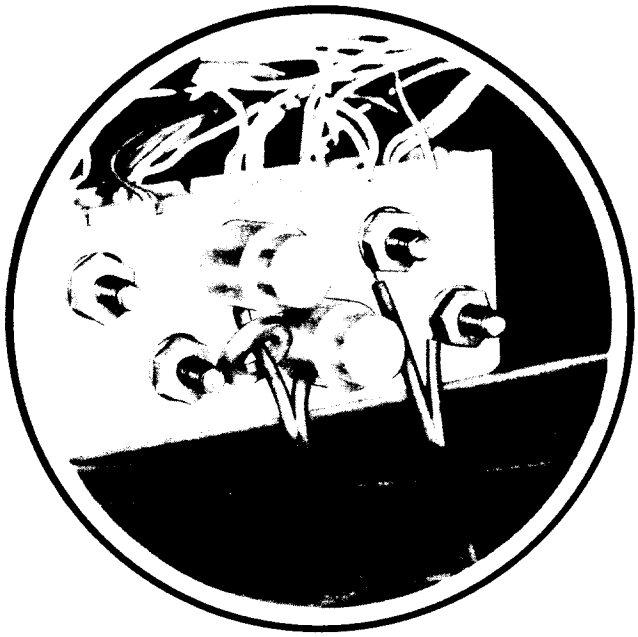


Figure 25 – E Binding Post Caps and Indicators Installed on 49A Cable Terminals

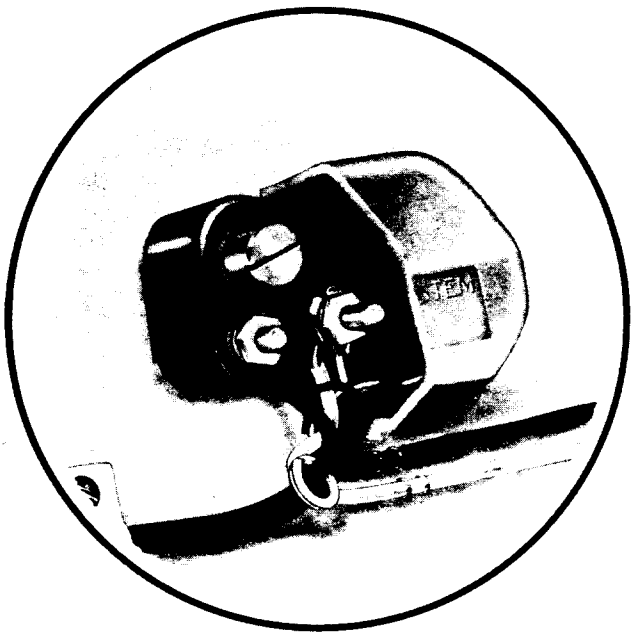


Figure 26 – KS-16847 Indicator Used with Station Protector

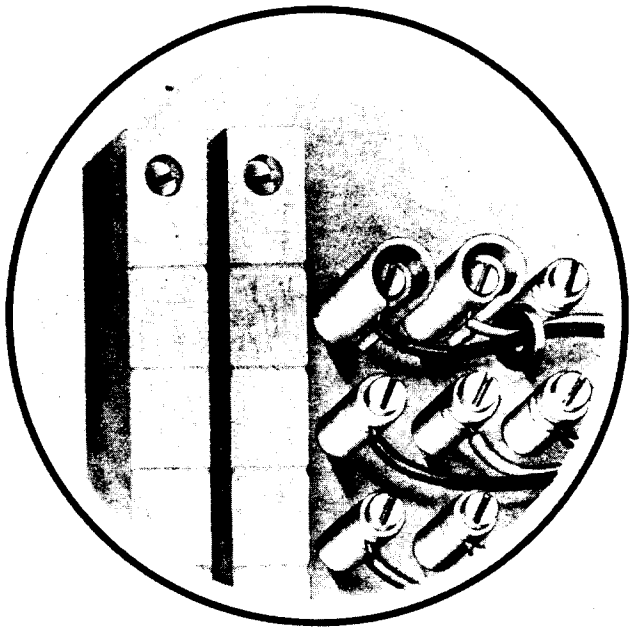


Figure 27 - Binding Post Insulators Installed at BD-Type Cable Terminals

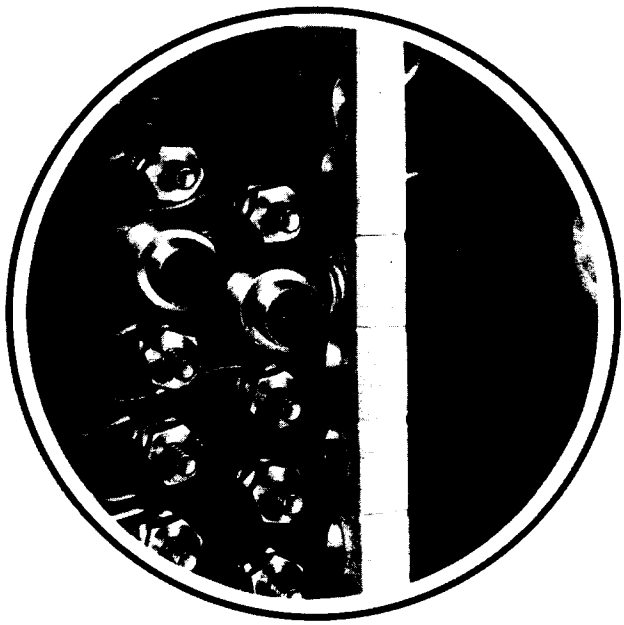


Figure 28 - Typical SSP at 30-Type Connecting Block

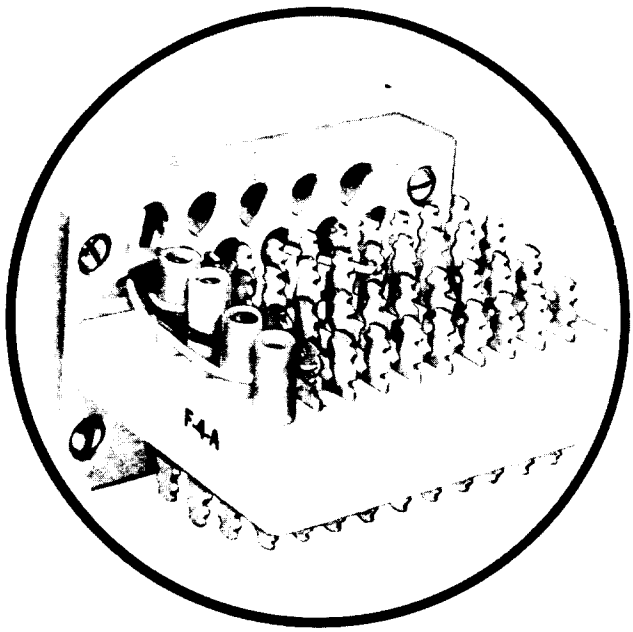


Figure 29 – Typical Installation Using Two Sizes of Punching Insulators on Same Connecting Block

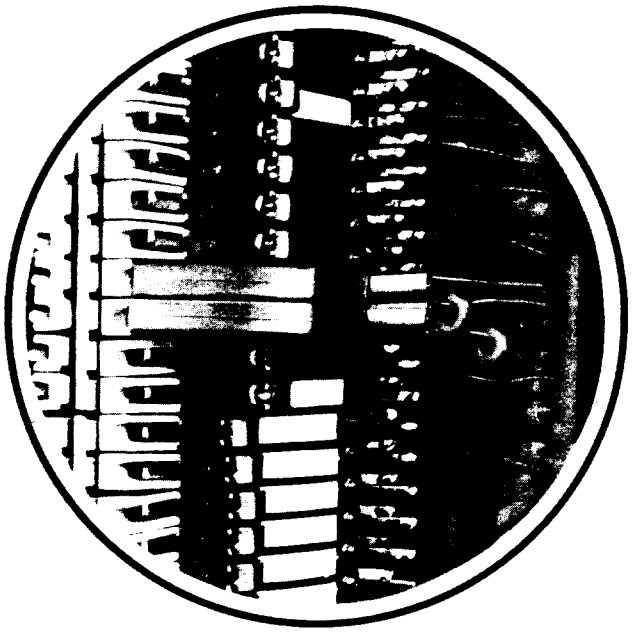


Figure 30 – KS-14539, L5 Guard Installed on 1177 Protector

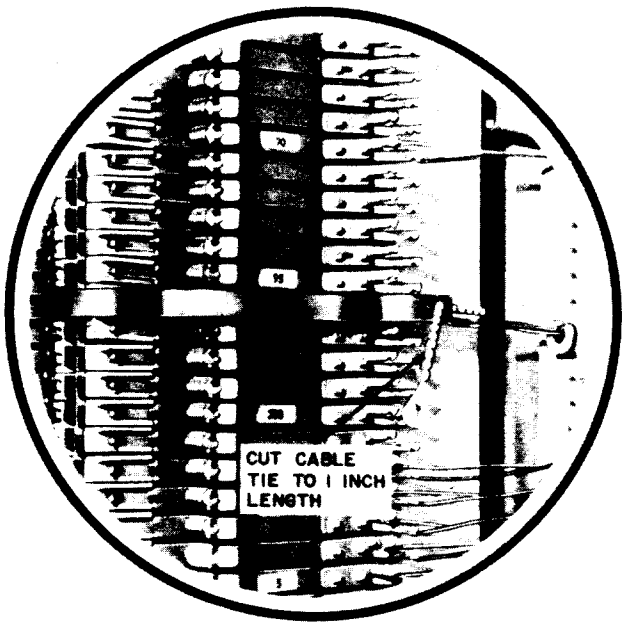


Figure 31 - KS-14539, L11 Guard Installed on C50-Type Protector

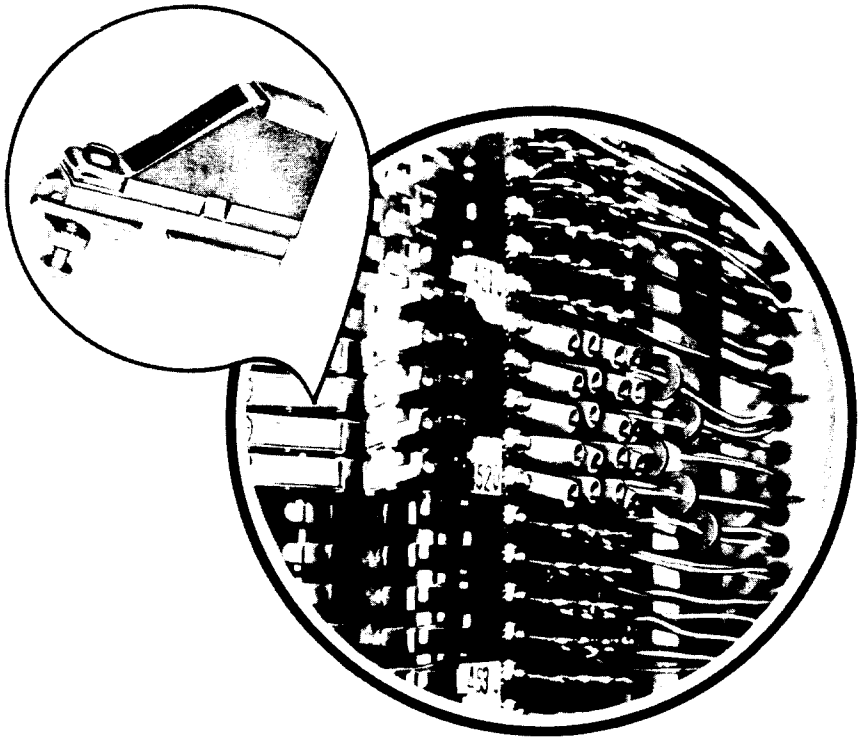


Figure 32 - SSP on Frame Equipped with 444A Test Jacks on 401 Connector

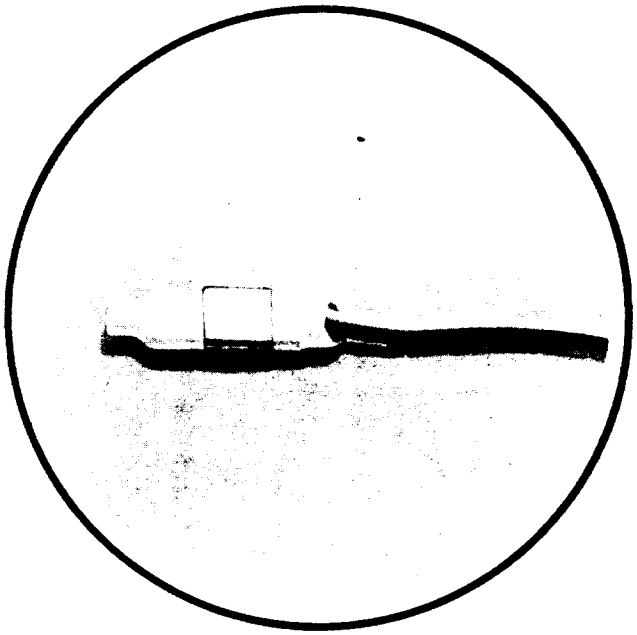
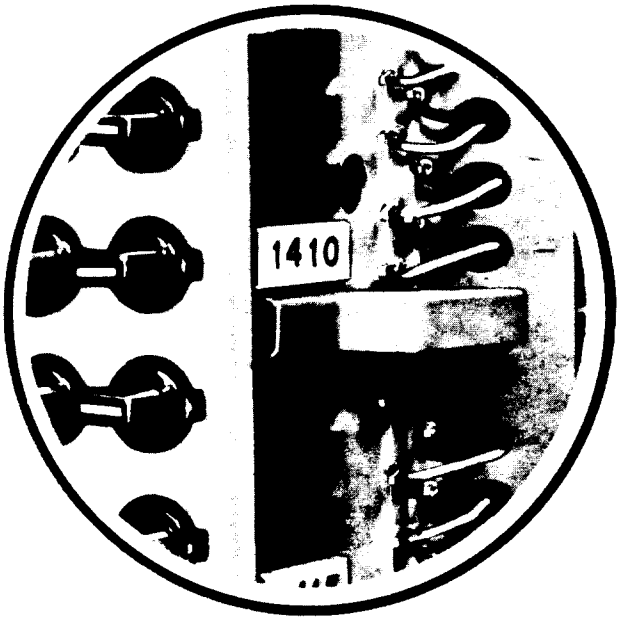
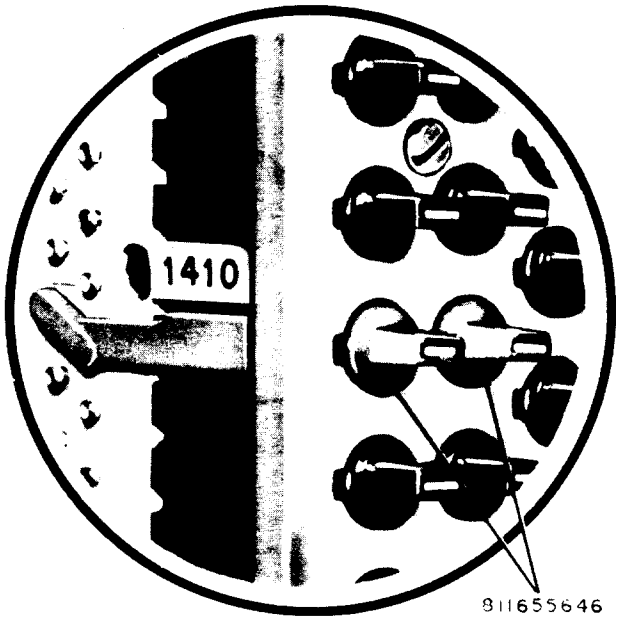


Figure 33 – Warning Marker Form EO-5190 Installed on B Wire Marker



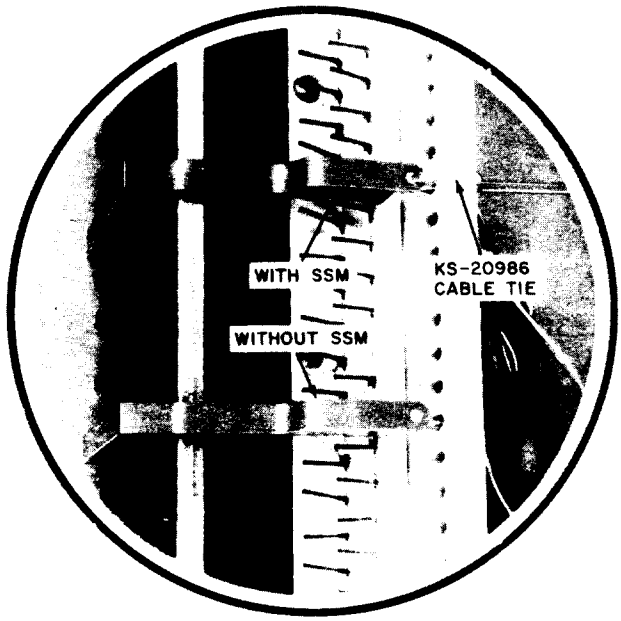
LIST 5



LIST 6

Figure 34 – Installed KS-16576, L5 and L6 Designation Plates (MD) and 811655646 Heat Coil Caps

LEFT SIDE



RIGHT SIDE

Figure 35 - KS-21369, L1 Guard Installed with and without SSM

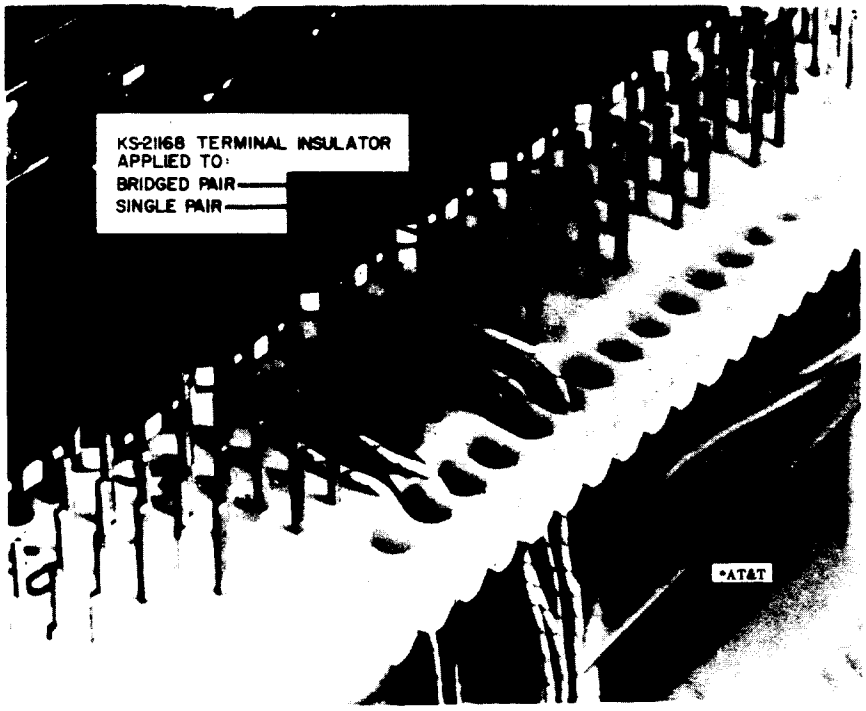


Figure 36 - SSP on 300-Type Connector Using KS-21168, L1 Terminal Punching Insulator

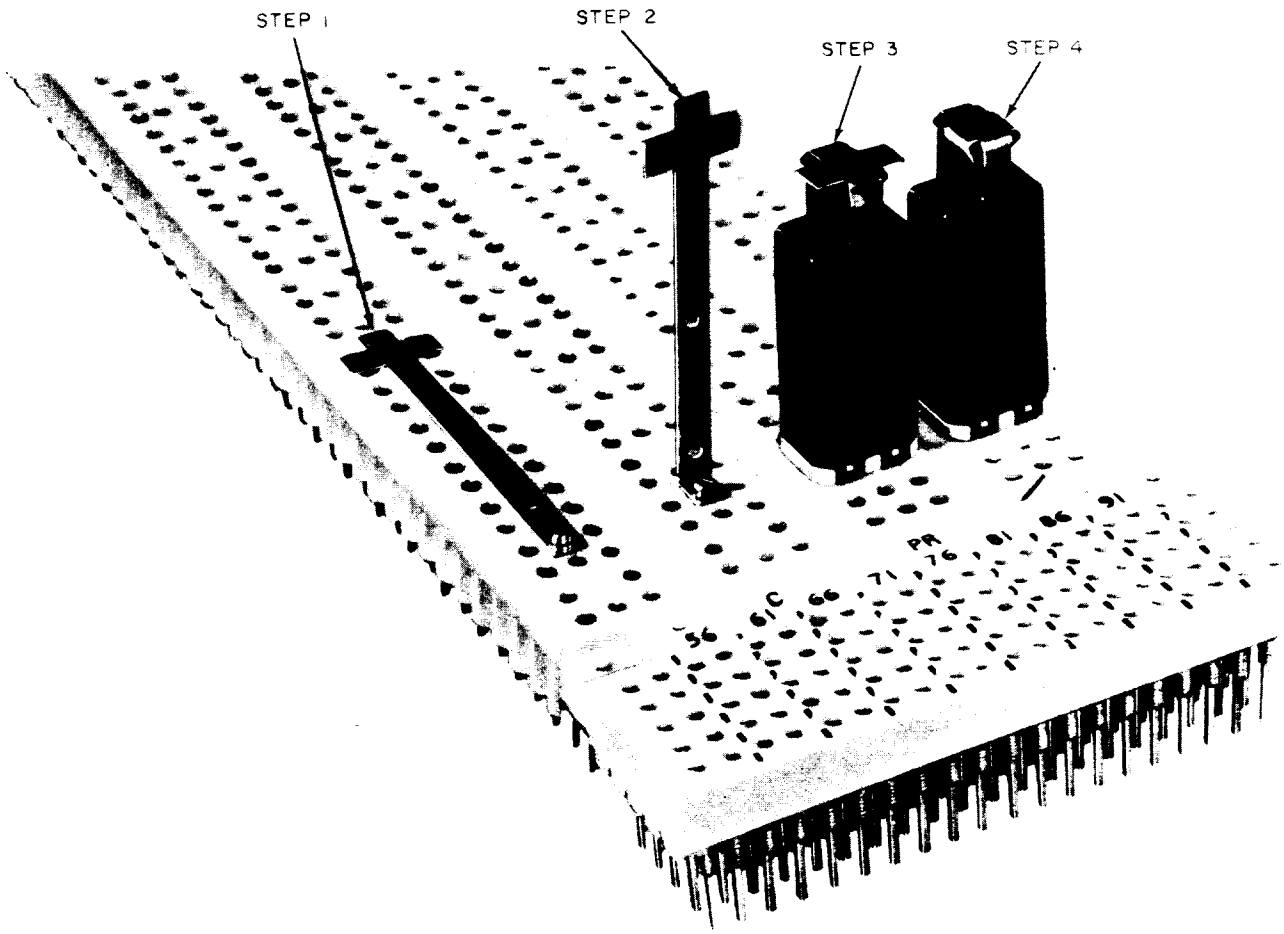


Figure 37 - Installing the 20A Circuit Guard

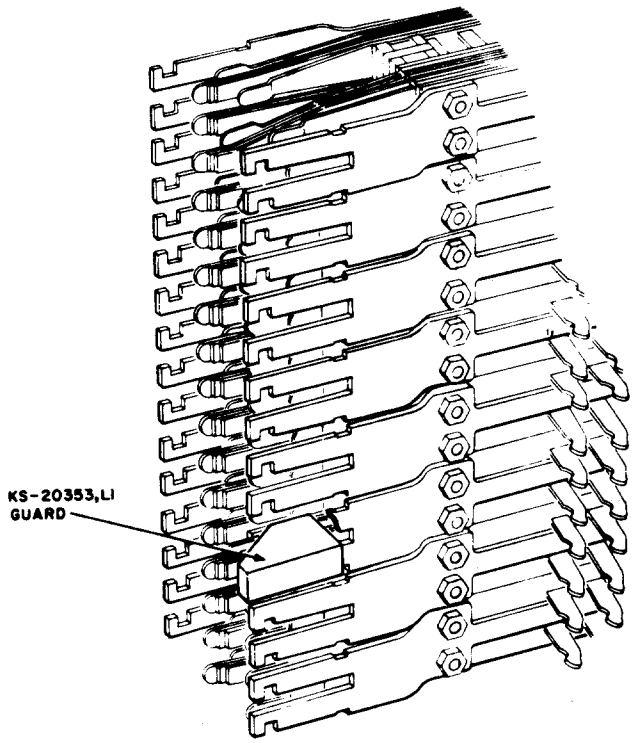


Figure 38 - KS-20353, L1 Guard on 444-Type Jack

TABLE 1 - SERVICES REQUIRING SSP

Services with these codes always require SSP.

CLCI/S/S CODES	SERVICES
AA	Packet Access Line
AB	Packet Switch Trunk
AD	Attendant
AF	Commercial Audio (Full Time)
AI	Automatic Identified Outward Dialing
AM	Packet Off Network Access Line
AO	International/Overseas Audio (Full Time)
AP	Commercial Audio (Part Time)
AT	International/Overseas Audio (Part Time)
BL	Bell and Lights
BS	Siren Control
CB	OCC Audio Facilities
CF	OCC Special Facility
CH	OCC Digital Facility High Speed
CJ	OCC Control Facility
CK	OCC Overseas Connecting Facility Wideband
CM	OCC Video Facility
CP	Concentrator Identifier Signaling Link
CR	OCC Backup Facility
DB	High Speed Switched Digital Service 1.5 MB/S Access Line
DE	Dataphone 50
DF	High Speed Switched Digital Service 3.0 MB/S Hub to Hub
DG	High Speed Switched Digital Service 3.0 MB/s Hub to Earth
DH	Digital Service
DJ	Digital Trunk
DK	Data Link
EL	Emergency Reporting Line

TABLE 1 - SERVICES REQUIRING SSP (Continued

Services with these codes always require SSP.

CLCI/S/S CODES	SERVICE
EM	Emergency Reporting Center Trunk
EP	Entrance Facility - Program Grade
FR	Fire Dispatch
FW	Wideband Channel
HC	High Capacity - 1.544 Mbs
MA	Cellular Access Trunk - 2 Way
NA	CSACC Link (EPSCS)
NC	CNCC Link (EPSCS)
NV	Protective Relaying - Telegraph Grade
PC	Switched Digital - Access Line
PE	Program Audio, 200 - 3500 Hz
PF	Program Audio, 100 - 5000 Hz
PJ	Program Audio, 50 - 8000 Hz
PK	Program Audio, 50 - 15000 Hz
PP	Picturephone Line
PR	Protective Relaying - Voice Grade
PV	Protective Relaying - Telegraph Grade
PW	Protective Relaying - Signal Grade
QS	Packet-Access Line
RA	Remote Attendant
RT	Radio Land Line
RV	Switching Control Link
TV	TV Channel, One Way, 15 KHz Audio
TW	TV Channel, One Way, 5 KHz Audio
VF	Commercial Television (Full Time)
VH	Commercial Television (Part Time)
VO	International/Overseas Television
VR	Noncommercial Television (7003, 7004)
WC	Special 800 Service Trunk
WD	Special WATS Trunk (Out)

TABLE 1 - SERVICES REQUIRING SSP (Continued)

Services with these codes always require SSP

CLCI/S/S CODES	SERVICE
WE	Digital Wideband, 50 Kbs
WF	Digital Wideband, 230.4 Kbs
WH	Digital Wideband, 56 Kbs
WJ	Wideband Analog, 60 KHz to 108 KHz
WL	Wideband Analog, 312 KHz to 552 KHz
WN	Wideband Analog, 10 KHz to 20 KHZ
WP	Wideband Analog, 29 KHz to 44 KHz
XA	Dedicated Digital, 2.4 Kbs
XB	Dedicated Digital, 4.8 Kbs
XG	Dedicated Digital, 9.6 Kbs
XH	Dedicated Digital, 56 Kbs
ZF	Order Wire Circuits Facility
ZS	Switching Control and Transfer Circuits

Any circuit having an FCC-Certified Restoration Priority

CLCI/S/S CODES	SERVICE
BA	Protective Alarm (DC)
NT	Protective Alarm (Metallic)
NU	Protective Alarm
PA	Protective Alarm (AC)
PM	Protective Monitoring
SC	Protective Alarm (DC Serial)
SS	Dataphone Select-A-Station
VM	Control/Remote Metering-Voice Grade

TABLE 2 - SERVICES WHICH MAY REQUIRE SSP

Other Services may receive SSP if the customer designates them as critical. Codes that cover services that sometimes are used in critical applications are as follows:

CLCI/S/S CODE	SERVICE
CS	Channel Service
CV	OCC Voice Grade Facility
DA	Digital Data Off-Net Extension
DS	Digital Data
FD	Private Line - Data
LA	Local Area Data Channel
LF	Data - Low Speed
LG	Basic Data
LH	Voice and Data PSN Access, Tie Trunk
LJ	Voice and Data SSN Access
LK	Voice and Data SSN Access Intermachine Trunk
LN	Data Extension, Voice Grade Data Facility
LP	Telephone and Facsimile
LR	Protective Relay - Voice Grade
NW	Telegraph Grade Facility (75 Baud)
NY	Telegraph Grade Facility (150 Baud)
PL	Private Line Voice
PZ	MSC Constructed Circuit
SD	Switched Access - Improved
TC	Control/Remote
TT	Teletypewriter Channel
ZA	Alarm Circuits
ZC	Call and Talk Circuits
ZP	Test Circuits, Plant Service Center
ZT	Test Circuits, Central Office
ZV	Order Circuits, Service

Note: Service definitions are included in BR 795-402-100, Information Aid.