

302-, 303-, AND 305-TYPE CONNECTORS AND ASSOCIATED PROTECTOR UNITS PIECE PART DATA AND REPLACEMENT PROCEDURES

	CONTENTS	PAGE
1.	GENERAL	1
2.	PRECAUTIONS	2
3.	TOOLS AND MATERIALS	2
4.	REPLACEMENT OF BROKEN OR DAMAGED TERMINALS	2
	REMOVING TERMINALS	2
	REPLACING TERMINALS	3
5.	REPLACEMENT OF ASSOCIATED PARTS— 305-TYPE CONNECTOR	4
6.	REPAIR OF BROKEN OR DAMAGED WIRE CONDUCTORS—305-TYPE CONNECTOR	5
7.	PROTECTOR UNITS	5
8.	AUXILIARY APPARATUS	6

1. GENERAL

1.01 This section covers information for ordering the necessary parts required for maintenance and repair of 302-, 303-, and 305-type connectors and associated protector units.

1.02 This section is reissued to correct minor errors, update ordering information, and incorporate information for the 305-type connector. This section title is revised to include the 305-type connector.

1.03 Due to extensive changes and additions, arrows normally used to indicate changes have been omitted.

1.04 Figures in this section illustrate the various piece parts in their proper relation to other parts of the apparatus. Associated tables provide additional information. The piece-part numbers of the various parts are given together with the names of the parts.

1.05 When ordering piece parts for replacement purposes, give both the part number and name of the part, ie, P-181434 screw. Do not refer to the BSP section number or to any information shown in parentheses following the piece-part numbers.

1.06 Information enclosed in parentheses is not ordering information. It may be references to notes or parts referred to in other portions of the section not considered replaceable or part names in general use in the field if they differ from those assigned by the manufacturer.

1.07 Before making repairs to the apparatus referred to in this section, craft personnel should be familiar with the contents of the following sections:

- 069-132-811—Punched or Wire-Type Terminals (Not Having Notches or Perforations) Method of Making and Removing Wrapped Connections
- 069-140-811—Soldered Connections—Using Soldering Coppers—Method of Making and Removing
- 201-220-801—Conventional Distributing Frames—Terminal Strips—Piece Parts and Replacement Procedures
- 201-208-301—302-, 303-, and 305-Type Connectors and Associated Protector Units—Maintaining Protectors

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

SECTION 201-208-802

- 201-208-501—302-, 303-, and 305-Type Connectors— Protector Unit Tests—Using KS-20100 L1 or L2 Test Sets and 182A Test Set.

1.08 Due to low cost, repairs to protector units are not recommended except for the 4A11C (bridge-lifter). Nevertheless, piece-part information is provided for those who wish to make repairs in the field.

2. PRECAUTIONS

2.01 This section covers only those parts which can be replaced in the field. No attempt should be made to replace parts not designated.

2.02 Exercise extreme care when removing and connecting wires and replacing terminals to prevent damage to adjacent connections and to avoid crosses to operating circuits.

2.03 The ends of wire previously used for a solderless wrapped connection or soldered connection shall not be reused for subsequent connections. The end of the wire must be cut off and reconnected by solderless wrapping or soldered. Except in cross-connection fields, it will be necessary to splice the wire if there is not enough slack to provide the number of turns required for solderless wrapped connections. In cross-connection fields, the wire shall be rerun to provide sufficient length for a solderless-wrapped connection. (See Section 069-132-811.)

2.04 Fig. 1 through 4 illustrate the 302-, 303-, and 305-type connectors and the relationship of piece parts.

3. TOOLS AND MATERIALS

List of Tools and Materials

CODE OR SPEC NO.	DESCRIPTION
—	B long-nose pliers
685B	Terminal extractor
KS-6320	Orange stick
KS-16748	Insertter
—	Sleeving

- Solder
- KS-8740 Soldering copper (or other KS8740 coppers rated at 95 watts)

- Wire wrap gun.

4. REPLACEMENT OF BROKEN OR DAMAGED TERMINALS

REMOVING TERMINALS

4.01 840212476 Terminals (Fig. 5 and 6)

- (1) On the wiring side of the connector, tag and remove the leads from the broken or damaged terminal.
- (2) Using B long-nose pliers, close the tangs on the terminal or break the terminal flush with the back side of the connector panel and remove the terminal from the front side of the connector panel.

4.02 P-46D862 Terminal (Fig. 5, 6, and 7)

- (1) On wiring side of the connector, use a soldering copper and remove all solder from the terminal to be replaced.
- (2) Using B long-nose pliers, close the tangs on the damaged or broken terminal or break the terminal flush with the back side of the connector panel and remove the terminal from the front side of the connector panel.

NOTE: Terminal P-46D862 *cannot* be replaced on the 305-type connector.

4.03 842137986 Terminal (Fig. 5, 6, and 7)

Note: Remove the 841635196 test field cover from the 305-type connector prior to performing Steps (1), (2), and (3) by removing the two screws on the outer edge of the connector and sliding the cover outward to expose the test terminals. See Fig. 8.

- (1) From the wiring side of the connector, tag and remove the leads from the terminal to be replaced.

- (2) Using a new terminal or a sharp instrument, such as a test probe, push the broken terminal through the connector about 1/8 inch.
- (3) From the test contact side of the connector, grasp the terminal head with the B long-nose pliers and pull the terminal from the block.

4.04 P-21E489 Terminal (Fig. 6)

- (1) From the front and rear of the connector, tag and remove all leads from the terminal to be replaced.
- (2) In the event that the wire is soldered, remove all solder from the terminal.
- (3) Using B long-nose pliers or the 658B terminal extractor, carefully remove the terminal from the front of the connector panel. Refer to Section 069-341-801.

4.05 842137796 Terminal (Fig. 7)

- (1) On the cross-connect side of the connector, tag and remove the leads from the terminal to be replaced.
- (2) If the wire-wrap portion of the terminal is not broken, straighten the terminal so that it is perpendicular to the connector panel. Push the straightened terminal through the connector panel and remove it from the protector side of the connector.
- (3) If the wire-wrap terminal is broken at the bent portion, the socket portion will stay attached to the protector unit pin. Removing the protector unit from the connector panel will remove the terminal. Any bent portion of the terminal at the rear of the panel may capture the terminal. If the terminal is captured, the bent portion must be straightened prior to removal.

REPLACING TERMINALS

4.06 Prior to making connections to terminals, refer to 2.03.

4.07 840212476 Terminals (Fig. 5 and 6)

- (1) Using the fingers, properly orient the new terminal and insert into the same hole from

which the old terminal was removed. Push the terminal into the hole as far as possible.

- (2) Insert a protector unit into the connector to hold the terminal in place.
- (3) On the wiring side of the connector, use the B long-nose pliers and pull the terminal into its proper position. Pay attention to the orientation of the terminal. Determine that the terminal is in the correct position by observing the position of adjacent terminals.
- (4) Using B long-nose pliers, carefully spread the tangs of the terminal to lock the terminal in place in the connector panel.
- (5) Reconnect all leads to the terminal.
- (6) Remove the protector unit.

4.08 P-46D862 Terminal (Fig. 5 and 6)

Note: P-46D862 terminal *cannot* be replaced on the 305-type connector.

- (1) Using the fingers, properly orient the new terminal and insert into the same hole from which the old terminal was removed. Push the terminal into the hole as far as possible.
- (2) Insert a protector unit into the connector to hold the terminal in place.
- (3) On the wiring side of the connector, use the B long-nose pliers and pull the terminal into its proper position. Pay attention to the orientation of the terminal. Determine that the terminal is in the correct position by observing the position of adjacent ground terminals.
- (4) Using B long-nose pliers, carefully spread the tangs of the terminal to lock the terminal in place in the connector panel.
- (5) Using the soldering copper, solder the terminal to the ground bus.
- (6) Remove the protector unit.

4.09 842137986 Terminal (Fig. 5, 6, and 7)

SECTION 201-208-802

- (1) From the front side of the connector, insert the new terminal into the same slot from which the old terminal was removed.
- (2) Using the fingers, push the terminal into the slot as far as possible.
- (3) Using an orange stick, push the terminal into its proper position on the connector.
- (4) From the wiring side of the connector, reconnect all leads.

4.10 P-21E489 Terminal (Fig. 6)

- (1) From the front side of the connector, insert the new terminal into the same hole from which the old terminal was removed using the B long-nose pliers or the KS-16748 inserter. Instructions for use of the KS-16748 inserter are given in Section 069-341-801.
- (2) Reconnect all leads to the P-21E489 terminal.

4.11 842137796 Terminal (Fig. 7)

- (1) Using the fingers, properly orient the new terminal and insert into the same hole from which the old terminal was removed. Push the terminal into the hole as far as possible.
- (2) Insert the protector unit into the connector to hold the terminal in place.
- (3) On the cross-connect side of the connector, use the B long-nose pliers and pull the terminal into its proper position. Using thumb pressure, carefully bend the terminal to the proper angle. Determine the proper angle by observing the position of the adjacent terminals.

Note: This terminal has no tangs and is held in position in the connector panel by its bent portion.

- (4) Reconnect all leads to the terminal.
- (5) Remove the protector unit.

5. REPLACEMENT OF ASSOCIATED PARTS (305-TYPE CONNECTOR)

5.01 841635196 Test Field Cover (Fig. 8)

- (1) Remove and retain the two flathead screws on the outer edge of the connector.
- (2) Withdraw the test field cover from the connector, being careful that the 842355604 terminal guard is not damaged.
- (3) Insert the new test field cover in place with the rear edge behind the terminal guard.
- (4) Insert the two flathead screws removed in Step (1) carefully so the threads in the block are not stripped.

5.02 842355604 Terminal Guard (Fig. 8).

This guard attaches to the cross-connect side of the 305-type connector and provides protection against injury from the relatively sharp wire-wrap terminals. It also provides for an orderly arrangement of cross-connect wires in each row. Replace the guard as follows:

- (1) Remove and retain the five self-tapping screws securing the terminal guard.
- (2) Remove the terminal guard from the block, disturbing the cross-connect wires as little as possible.
- (3) Place the new terminal guard on the block, capturing the cross-connect wires within the confines of the terminal guard.
- (4) Replace the five self-tapping screws removed in Step (1) carefully so the threads in the block body are not stripped.

5.03 Older 305-type connectors, which are in service and have a sliding plastic cover assembly on the cross-connect side, can be updated to include the 842355604 terminal guard. The guard, including mounting screws and installation instructions, can be ordered as 102983350 Retro-fit kit.

5.04 842137879 Insert (Fig. 3 and 8).

The 100-pair M-test connector attaches to the 305-type connector by means of two thumbscrew fasteners which engage threaded inserts at the top and bottom of test contact field. Replace the threaded inserts as follows.

- (1) Facing the front of the connector, remove the test field cover as directed in 5.01.

- (2) Observe the mounting of the inserts. At the left side of the connector, remove and retain the two flathead screws which secure the insert in position.
- (3) Remove the insert carefully to prevent a short in the test terminal field. See Fig. 8.
- (4) Install the insert and secure with the two screws removed in Step (2).
- (5) Replace the test field cover as directed in 5.01, Steps (3) and (4).

6. REPAIR OF BROKEN OR DAMAGED WIRE CONDUCTORS—305-TYPE CONNECTOR

6.01 To repair a broken or damaged wire conductor leading from the moisture plug of the stub cable and through the mounting bracket of the 305-type connector (Fig. 8) proceed as follows.

- (1) Remove the test field cover as directed in 5.01.
- (2) Identify the wire conductor to be repaired and remove the wire-wrap connection at the corresponding test terminal.
- (3) Remove the defective wire conductor out through the back of the connector mounting bracket.
- (4) Cut the defective portion of the wire and splice a new length of wire to the remaining section.
- (5) Rerun the new length of wire through the back of the connector mounting bracket and to the test terminals.
- (6) Provide sufficient length of the solderless-wrapped connection.
- (7) Reconnect the wire conductor to the corresponding test terminal.
- (8) Replace the test field cover as directed in 5.01.

7. PROTECTOR UNITS

7.01 The method for disassembly and reassembly of protector units and tools required are covered in Section 201-208-701.

7.02 The method for testing protector units before and after replacement of parts is covered in Section 201-208-501.

7.03 Protector units for the 303-type connectors are smaller than the units originally specified for use with the 302-type connectors. Protector units specified for the 303-type connectors are also for use with 302A2 and 302B2 type connectors (having solder plated terminals) on double-sided protector frames of common system central offices. Protector units specified for the 305-type connector are also for use with 302A1- and 302B1-type connectors (having gold-plated terminals) on modular protector frames. Protector units originally designated for use with 302-type connectors cannot be used on 303- or 305-type connectors because of protector unit size. These larger (oval shaped) protector units (Fig. 9, 10, and 11) have been manufacture discontinued.

7.04 Code designations of the changed protector units are not affected. The larger (oval-shaped) protector units and their respective replacement parts can no longer be ordered. The smaller (rectangular-shaped) units will be supplied whenever protector units are ordered.

7.05 Smaller protector units 3A, 3B, 4A, 5A, the 4A11C (mini-bridge lifter), and the 429F plug (line reversing) are shown in Fig. 12 through 17 respectively. The 3A protector unit (Fig. 12) has been manufacture discontinued and superseded by the 3B protector unit shown in Fig. 13.

7.06 Table A lists the number plates to be used with the 302-type connector.

7.07 Table B lists the heat coils and protector blocks used in the various protector units.

7.08 Tables C, D, and E cover new ordering codes for 302-, 303- and 305-type connectors.

8. AUXILIARY APPARATUS

8.01 Designation Pins: These pins, for use with special circuits, are color coded as listed in Table F.

- (a) Using fingers or the B long-nose pliers, insert the designation pin in the blind hole provided on the face of the connector.
- (b) When properly inserted, the head of the designation pin will be slightly above the surface of the connector, thus permitting easy removal of the pin with the B long-nose pliers.

Note: Due to difficulty in seeing the designation pin on the 305-type connector, its use on the 305-type connector should be at the discretion of the local office.

8.02 Designation Strip and Label—303-Type Connector: The use and description for the AT-8697-F designation strip and the AT-8696-B designation label (Fig. 18 and 19) are covered in Section 201-208-101.

8.03 Modification of 303-Type Connector in Service: Older 303-type connectors (303A1 and 303B1) already in service can be updated to include the clear plastic covers and secondary fanning strip of the 303A2 and 303B2 connectors by using the D-180450 modification kit.

8.04 D-180450 Modification Kit: This kit of parts provides a secondary fanning strip with open slots, clear plastic covers for terminals, a new mounting bracket, and toothpicks. The additional fanning strip will facilitate identification of frame jumper wires. This kit is furnished assembled except for the clear plastic cover (840215750).

8.05 To install the D-180450 modification kit of parts on a 303-type connector in service (Fig. 20), proceed as follows.

- (1) Remove the four panel screws which hold the panel of the connector to the mounting bracket, saving the screws for reuse in Step (10).
- (2) Rotate the panel to the right approximately 80 degrees.

- (3) Support the panel and wiring with waxed lacing cord, frame wire, or other suitable ties so terminals and wiring are not damaged.

Note: If the connector has a gray plastic grid on the back face of the panel, do not use toothpicks.

- (4) Insert the wedge-tipped toothpicks at the back. See Fig. 21. The ground strip has depressions opposite the row of terminals. The toothpicks are inserted at the depressions. The toothpicks are pushed between adjacent rows of terminals prying the wire up and off the back side of the panel. The toothpicks are just long enough to pass beneath the protector field.

- (5) Remove the stub cable clamps and ground wire from old mounting bracket on frame, saving self-tapping screws for reuse. It may be necessary to remove some of the cord ties on the stub cable to obtain working slack.

- (6) Remove the old mounting bracket from the frame and discard. It may be necessary to remove both bracket mounting screws from the vertical frame even though the top bracket has a slot for easy insertion.

- (7) Work the self-tapping screws in and out of the corresponding holes on the new mounting bracket to facilitate later attachment of cable clamps and ground wire in Step (9).

- (8) Place the assembled portion of the kit in place of the old mounting brackets with the fanning strip to the right of the frame support and the jumpers to the right of the fanning strip. This step will be most conveniently accomplished by working the kit in from the left and behind the stub cable.

- (9) Attach the cable clamps and ground wire to the new mounting bracket with the two self-tapping screws.

- (10) Free the panel and rotate it back into the mounting bracket and fasten in place with the same four mounting screws removed in Step (1).

- (11) Snap the left-hand plastic cover in place. The small notched tabs at the edge of the cover should fit over the ends of the ground

wires just inside the ground strip tabs. The cover should be bent and snapped in place so the rear tabs at the top and bottom of the shield go under the shoulders of the screws on the mounting bracket.

If sufficient slack is not available, it may be necessary to leave them out until normal *turnover* allows new connections to utilize the secondary fanning strip.

- (12) Insert the frame jumper wires in the appropriate slots in the new fanning strip.

TABLE A

NUMBER PLATES

USED WITH	PLATE NUMBER	STENCILED
3A or 3B-type Protector Unit	P-19E131	5-6, 30-31, 55-56, 80-81
	P-19E132	10-11, 35-36, 60-61, 85-86
	P-19E133	15-16, 40-41, 65-66, 90-91
	P-19E134	20-21, 45-46, 70-71, 95-96
4A-type Protector Unit	P-46L642	5-6, 30-31, 55-56, 80-81
	P-46L643	10-11, 35-36, 60-61, 85-86
	P-46L644	15-16, 40-41, 65-66, 90-91
	P-46L645	20-21, 45-46, 70-71, 95-96
5A-type Protector Unit	P-19E127	5-6, 30-31, 55-56, 80-81
	P-19E128	10-11, 35-36, 60-61, 85-86
	P-19E129	15-16, 40-41, 65-66, 90-91
	P-19E130	20-21, 45-46, 70-71, 95-96

TABLE B
STANDARD PROTECTOR UNITS

SEE NOTE	CODE	HOUSING		PROTECTOR BLOCKS (1 PAIR EACH)	HEAT COILS (2 EACH)	BASE ASSEMBLY	CONTACT PIN PLATING	FIG. NO.
		COLOR	PART NUMBER					
1	3B1A	Black	841088396	32A & 33B	—	842135402	Gold	13
1, 3	3B2A	Green	841088404	32A & 33B	—	842135428	Gold	13
1	3B3A	Red	841088412	32A & 33B	—	842135402	Gold	13
1	3B4A	Yellow	841088420	32A & 33B	—	842135402	Gold	13
2, 8	3B5A	Black	841088396	32A & 33B	—	842135410	Solder	13
2, 3, 8	3B6A	Green	841088404	32A & 33B	—	842135436	Solder	13
2, 8	3B7A	Red	841088412	32A & 33B	—	842135410	Solder	13
2, 8	3B8A	Yellow	851088420	32A & 33B	—	842135410	Solder	13
1	4A1C	Black	P-43X497	32B & 33B	80A	840216816	Gold	14
1, 3	4A2C	Green	P-43X498	32B & 33B	81A	840216816	Gold	14
1	4A3C	Red	P-43X499	32B & 33B	80A	840216816	Gold	14
1	4A4C	Yellow	P-43X500	32B & 33B	79A	840216816	Gold	14
2, 8	4A5C	Black	P-43X497	32B & 33B	80A	P-43X058	Solder	14
2, 3, 8	4A6C	Green	P-43X498	32B & 33B	81A	P-43X058	Solder	14
2, 8	4A7C	Red	P-43X499	32B & 33B	80A	P-43X058	Solder	14
2, 8	4A8C	Yellow	P-43X500	32B & 33B	79A	P-43X058	Solder	14
1, 2, 5	4A11C	Orange	841638968	32B & 33B	80A	841638976	Gold	16
1, 2, 4, 6	429F	White	840213144	32B & 33B	80A	P-43X058	Gold	17
1	5A1D	Gray	P-43X388	—	—	840216840	Gold	15
1, 3	5A2D	Green	P-43X389	—	—	840216857	Gold	15
1	5A3D	Red	P-43X390	—	—	840216840	Gold	15
1	5A4D	Yellow	P-43X391	—	—	840216840	Gold	15
2, 8	5A5D	Gray	P-43X388	—	—	P-22E038	Solder	15
2, 3, 8	5A6D	Green	P-43X389	—	—	P-43X108	Solder	15
2, 8	5A7D	Red	P-43X390	—	—	P-22E038	Solder	15
2, 8	5A8D	Yellow	P-43X391	—	—	P-22E038	Solder	15
1, 2, 4, 7	5A9D	White	840220685	—	—	840220693	Gold	15

Note 1: For use with 302A1- and 302B1- type connectors on modular protector frames and with 305-type connectors on low profile or tall conventional distributing frames.

2. For use with 302A2- and 302B2-type connectors on double-sided conventional protector frames and with 303-type connectors on low-profile or tall conventional distributing frames.

3. No continuity between outside plant and central office.

4. Line reversing feature.

5. Mini-bridge lifter — contains 410A Switch No. 102605839.

6. Contains circuit board Part No. 840213110.

7. Contains circuit board Part No. 840220669.

8. Manufacture discontinued protector units — equipped with solder-plated contact pins for use in connectors of previous design with solder-plated contact terminals (302A2, 302B2, 303A2, and 303A3 which are manufacture discontinued). After existing stocks are exhausted, only protector units with gold-plated contact pins will be available for use in either the new or existing connectors.

TABLE C
ORDERING CODES FOR STANDARD 302-TYPE CONNECTORS

CODE (NOTE 1)	STUB CABLE SIZE	USED ON		STUB CABLE DIRECTION
		MODULAR PROTECTOR FRAME	DOUBLE-SIDED CONVENTIONAL PROTECTOR FRAME	
302A1-100	24-gauge, 100-pair	X	—	Note 2
302A2-100	24-gauge, 100-pair	—	X	Down
302B1-100	22-gauge, 100-pair	X	—	Note 2
302B2-100	22-gauge, 100-pair	—	X	Down
302C2-100	24-gauge, 100-pair	—	X	Up
302D2-100	22-gauge, 100-pair	—	X	Up
302E1-100	No Stub	X	—	—
302E2-100	No Stub	—	X	—

Note 1: These panels are not supplied with protector units. Required protector units should be ordered separately.

Note 2: The stub cable can be positioned at installation for either upward or downward mounting.

TABLE D

ORDERING CODES FOR STANDARD 303-TYPE CONNECTORS

CODE (SEE NOTE)	STUB CABLE SIZE	STUB CABLE DIRECTION
303A2-100	24-gauge, 100-pair	Down
303B2-100	22-gauge, 100-pair	Down
303C2-100	24-gauge, 100-pair	Up
303D2-100	22-gauge, 100-pair	Up
303E2-100	No Stub	—
303B2-50	22-gauge, two 50-pair	Down

Note: These panels are not supplied with protector units. Required protector units should be ordered separately.

TABLE E

ORDERING CODES FOR STANDARD 305-TYPE CONNECTORS

CODE (SEE NOTE)	STUB CABLE SIZE	STUB CABLE DIRECTION
305A1-100	24-gauge, 100 pair	Down
305B1-100	22-gauge, 100 pair	Down
305C1-100	24-gauge, 100 pair	Up
305D1-100	22-gauge, 100 pair	Up

Note: These panels are not supplied with protector units. Required protector units should be ordered separately.

TABLE F
DESIGNATION PINS .

PIN PART NO.	COLOR
KS-14174, L4	Green
KS-14174, L5	Yellow
KS-14174, L7	Red

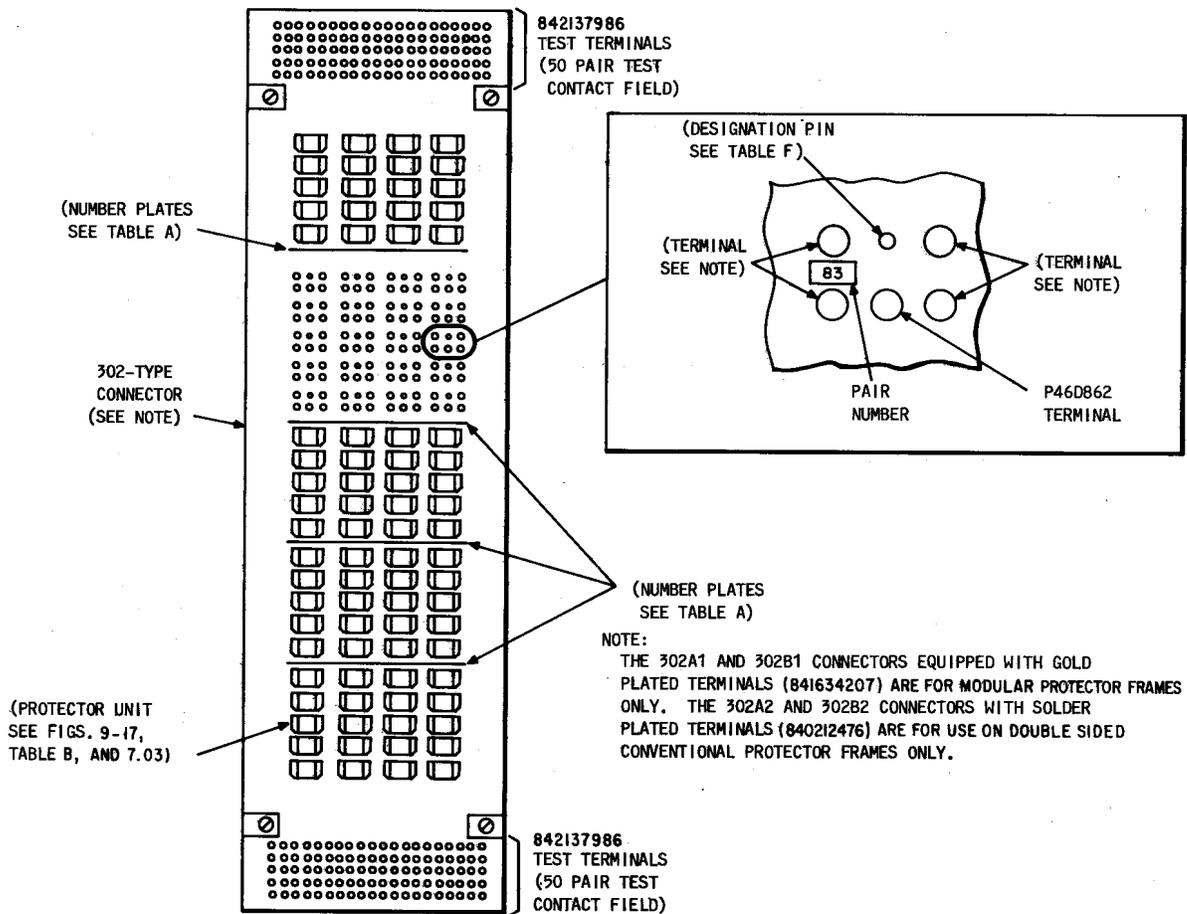


Fig. 1—302-Type Connector Panel

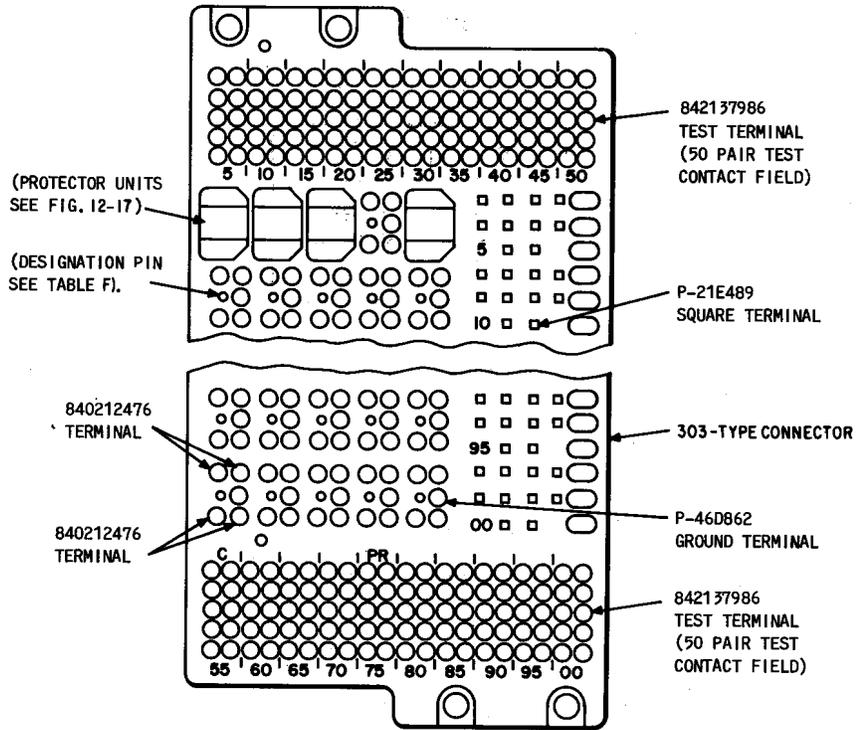


Fig. 2—303-Type Connector Panel

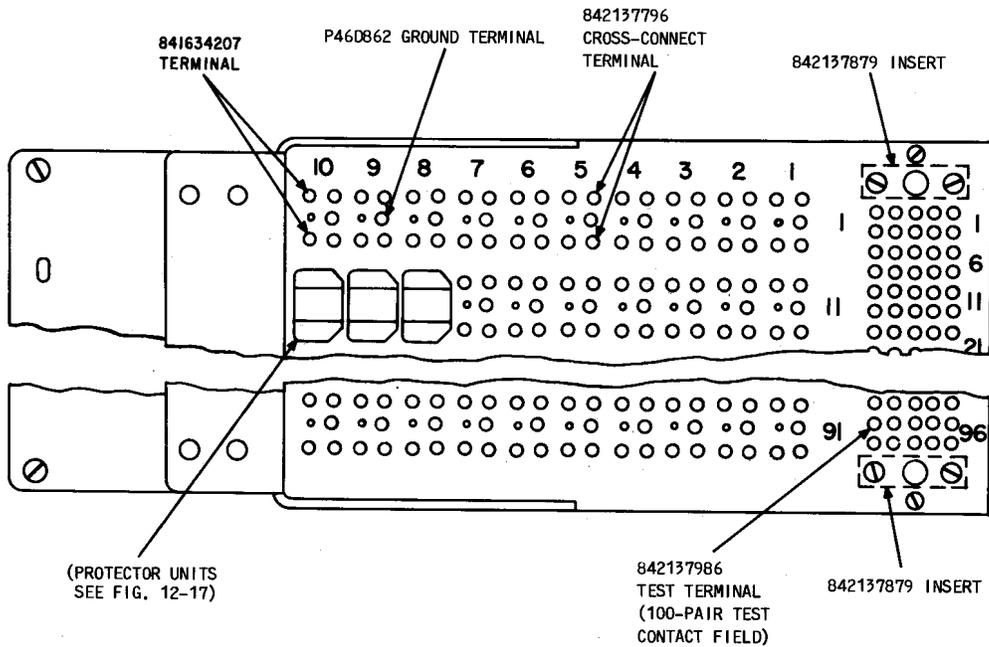


Fig. 3—305-Type Connector Panel, Left Side View

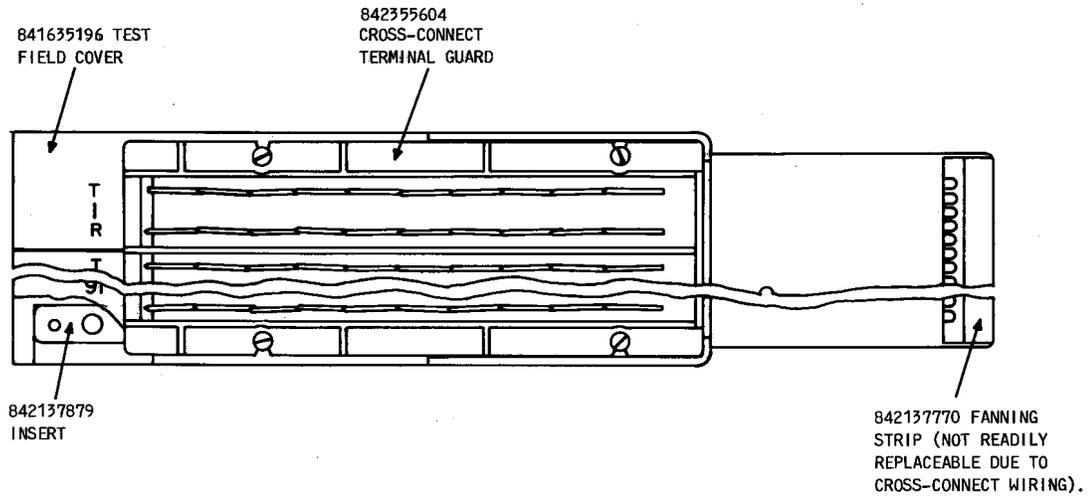


Fig. 4—305-Type Connector Panel, Right Side View

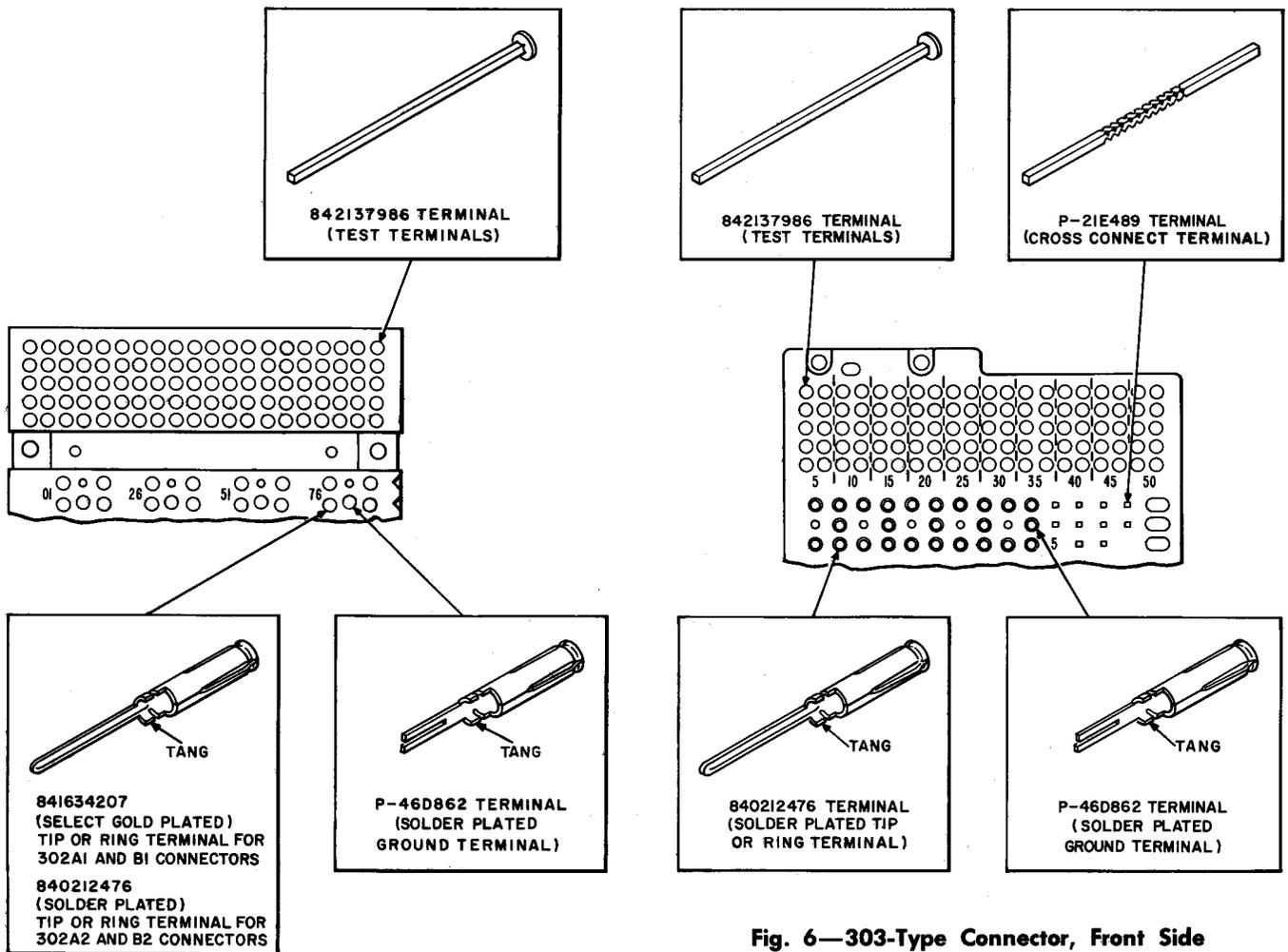


Fig. 6—303-Type Connector, Front Side

Fig. 5—302-Type Connector, Front Side

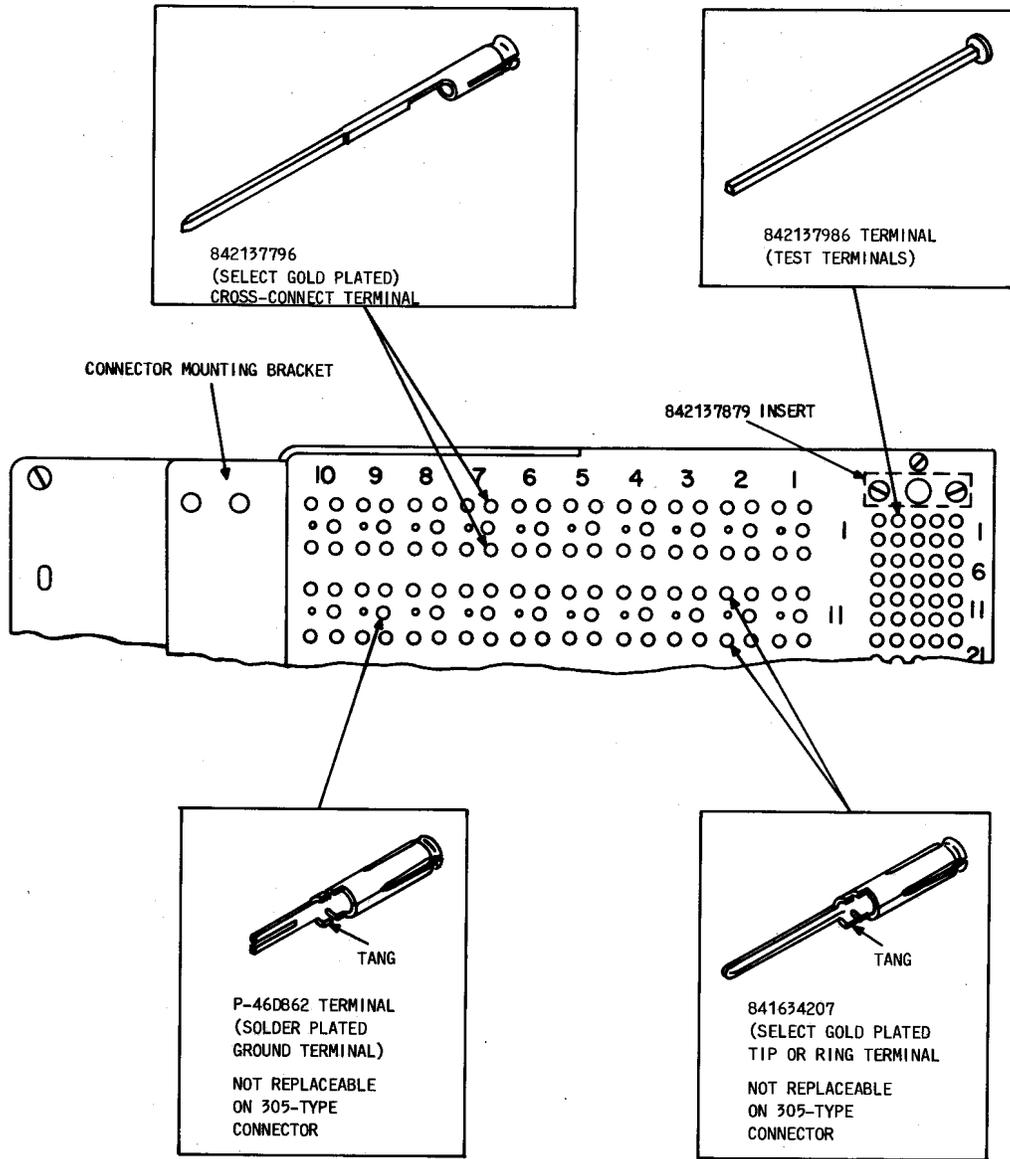


Fig. 7—305-Type Connector, Left Side

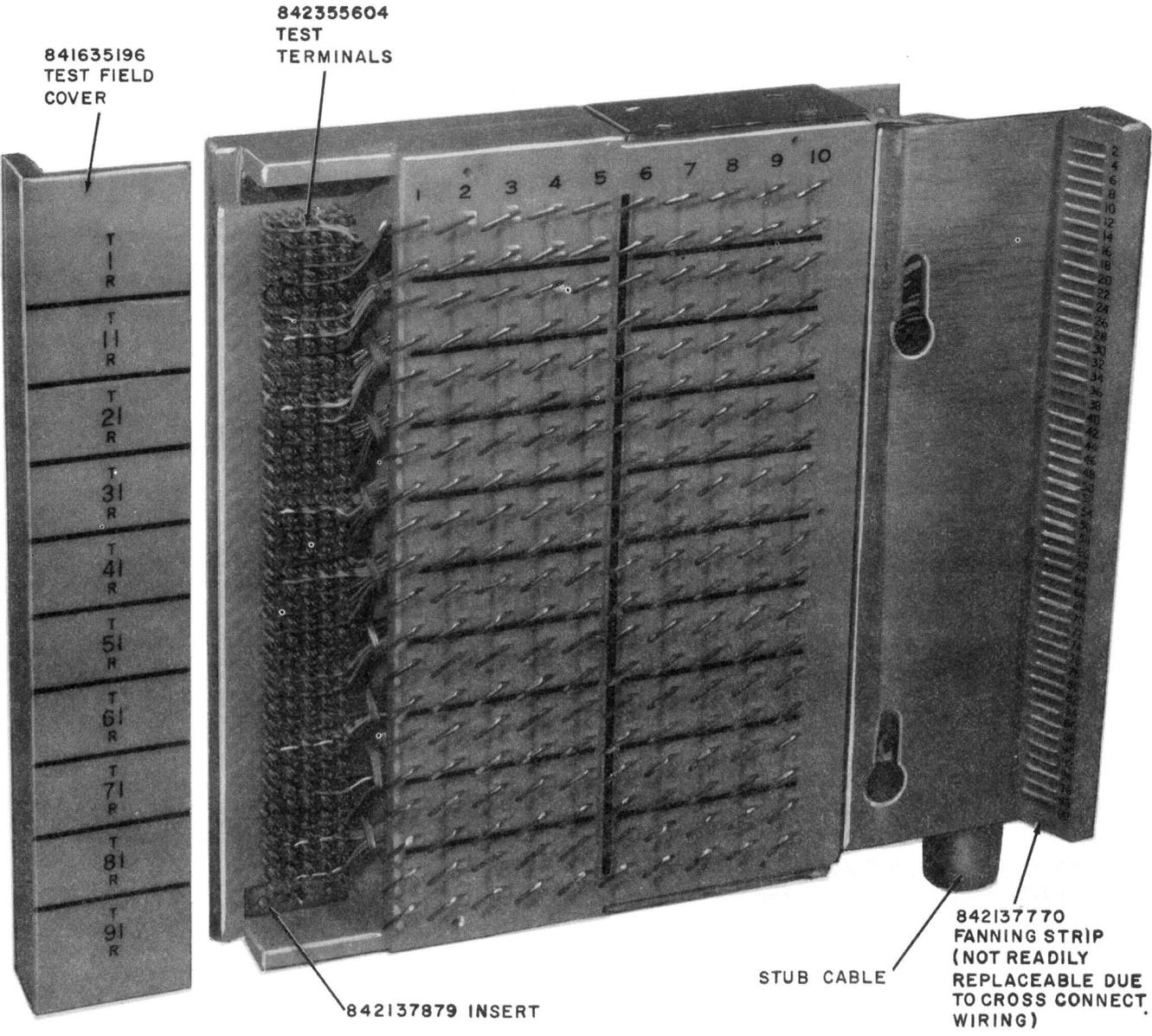


Fig. 8—305-Type Connector—Test Field Cover and Terminal Guard Removed

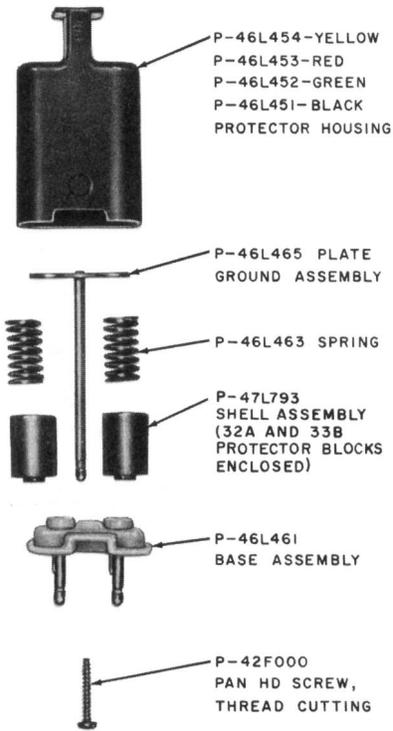


Fig. 9—Oval Shaped 3A-Type Protector Unit (For 302-Type Connector on Modular Protector Frames—Manufacture Discontinued)

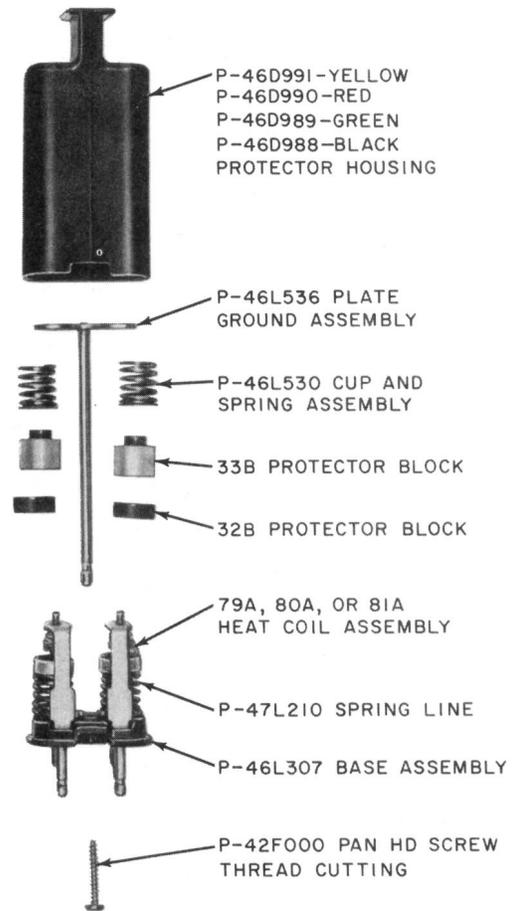


Fig. 10—Oval Shaped 4A-Type Protector Unit (For 302-Type Connectors on Modular Protector Frames— Manufacture Discontinued)

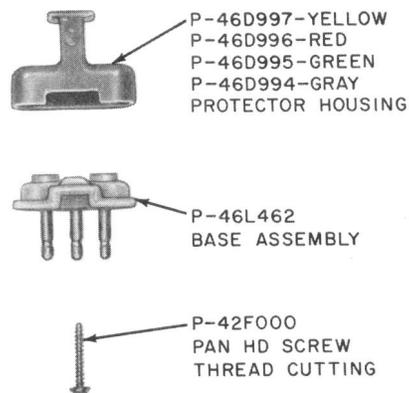


Fig. 11—Oval Shaped 5A-Type Protector Unit (For 302-Type Connectors on Modular Protector Frames—Manufacture Discontinued)

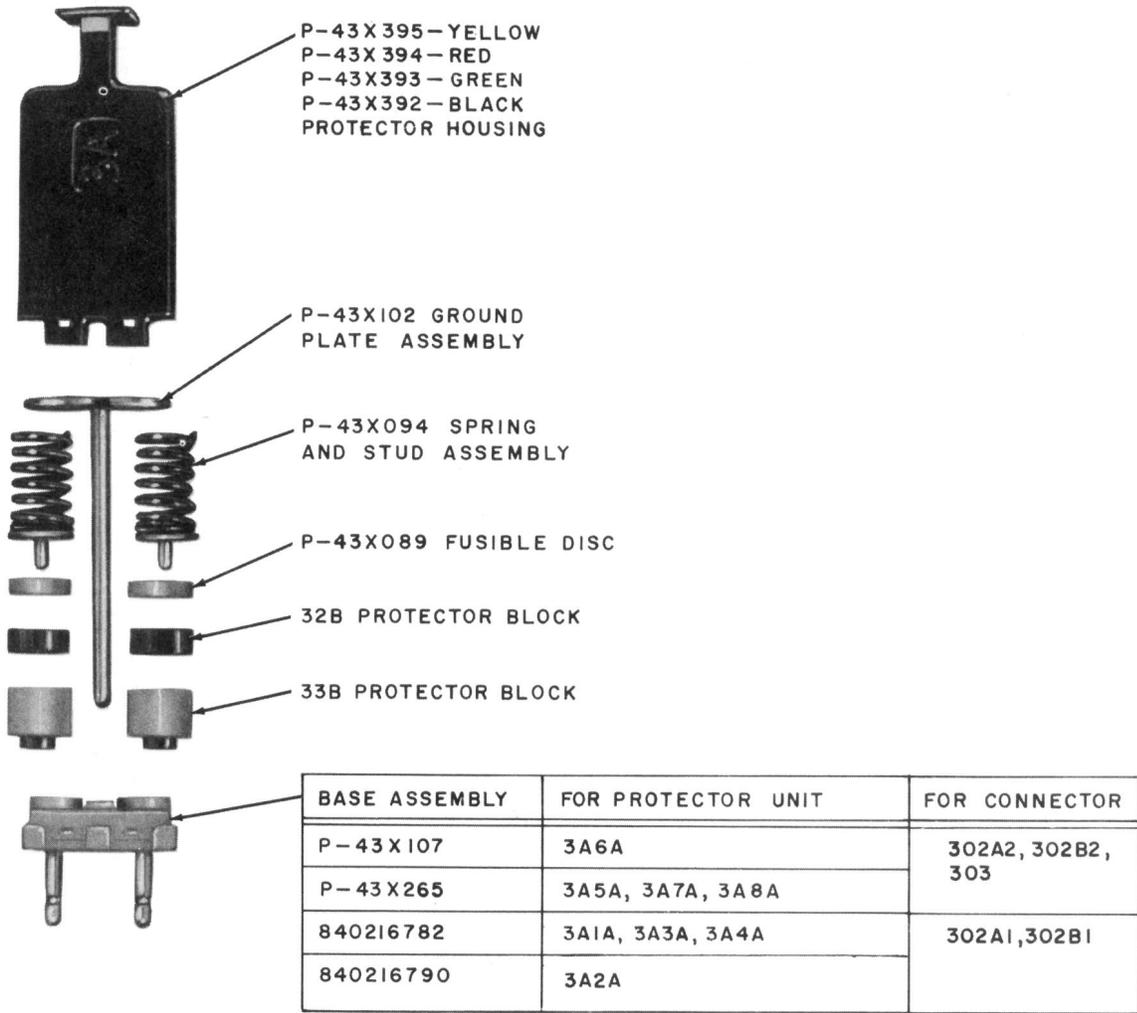
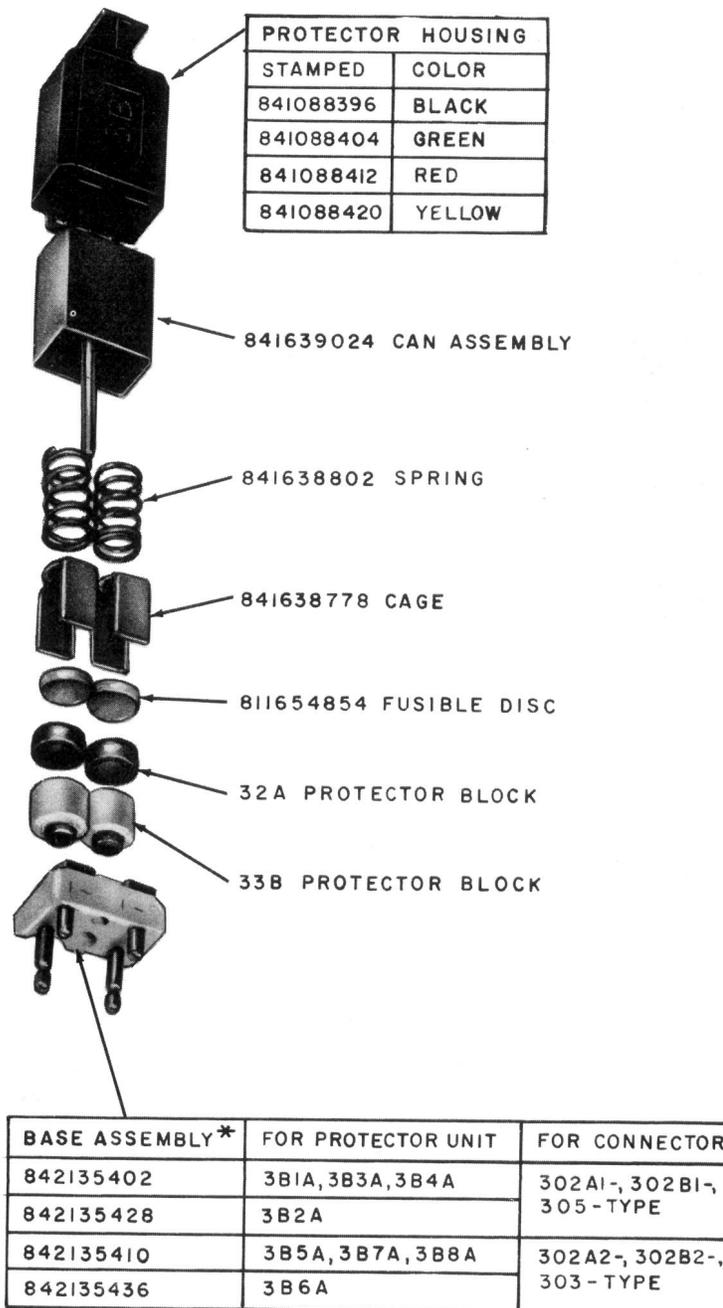


Fig. 12—3A-Type Protector Unit (For All 302- and 303-Type Connectors—Manufacture Discontinued)



* SEE TABLES D AND G

Fig. 13—3B-Type Protector Unit (For All 302-, 303-, and 305-Type Connectors)

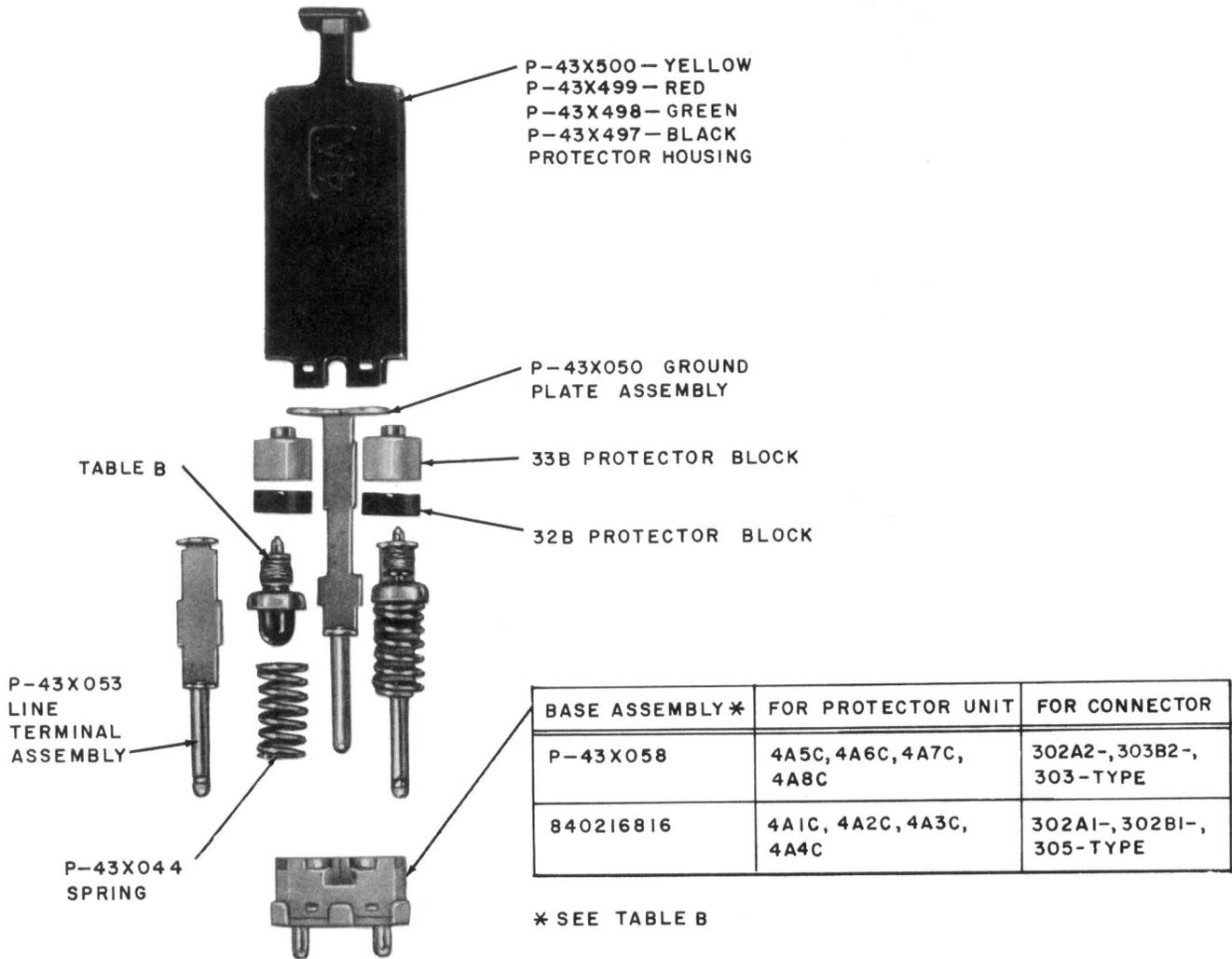
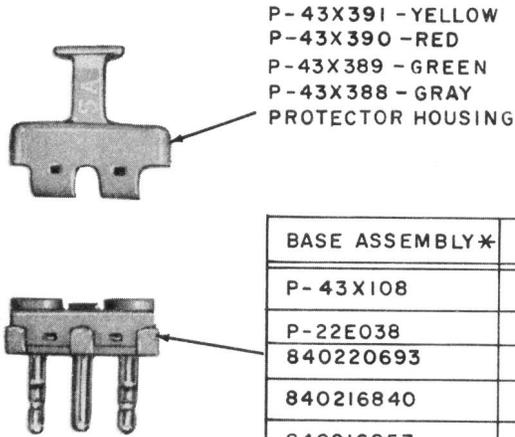


Fig. 14—4A-Type Protector Unit (For All 302-, 303-, and 305-Type Connectors)



BASE ASSEMBLY*	FOR PROTECTOR UNIT	FOR CONNECTOR
P-43X108	5A6D	302A2-, 302B2-, 303-TYPE
P-22E038 840220693	5A5D, 5A7D, 5A8D 5A9D*	
840216840	5A1D, 5A3D, 5A4D	302A1-, 302B1-, 305-TYPE
840216857	5A2D	

*SEE TABLE B

Fig. 15—5A-Type Protector Unit (For All 302-, 303-, and 305-Type Connectors)

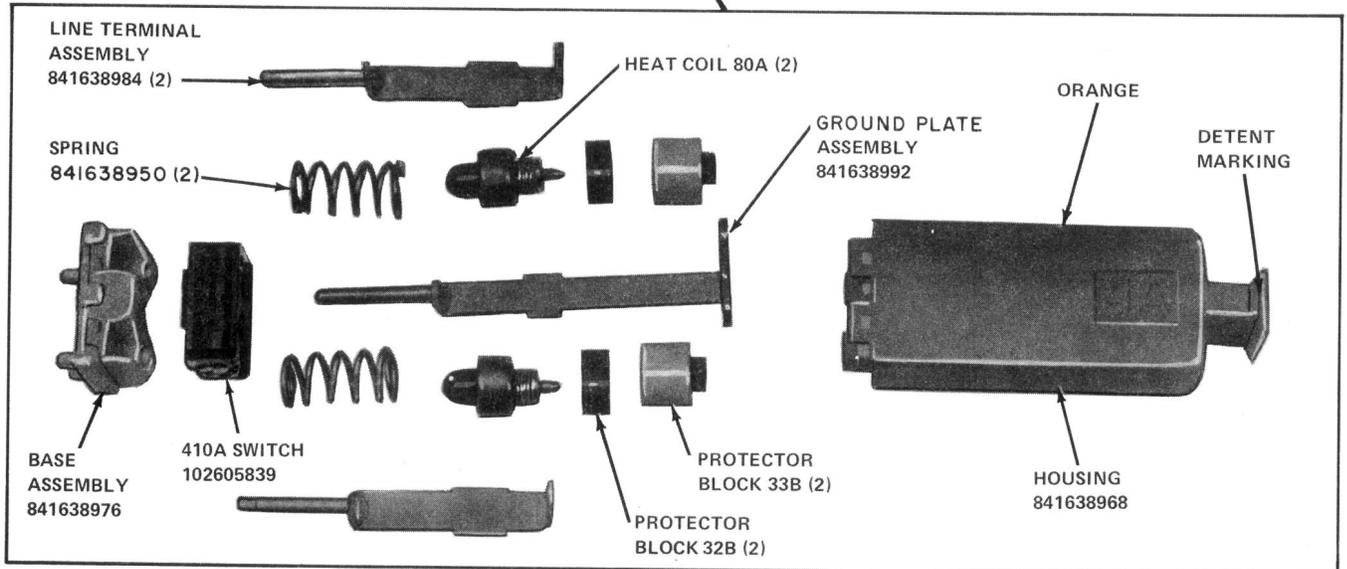
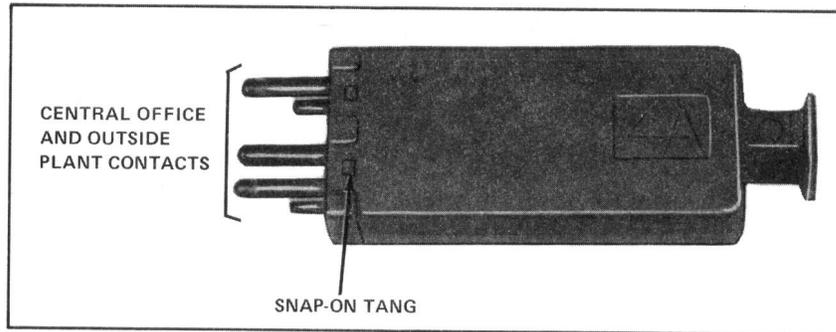


Fig. 16—4A11C Protector Unit (Mini-Bridge Lifter)

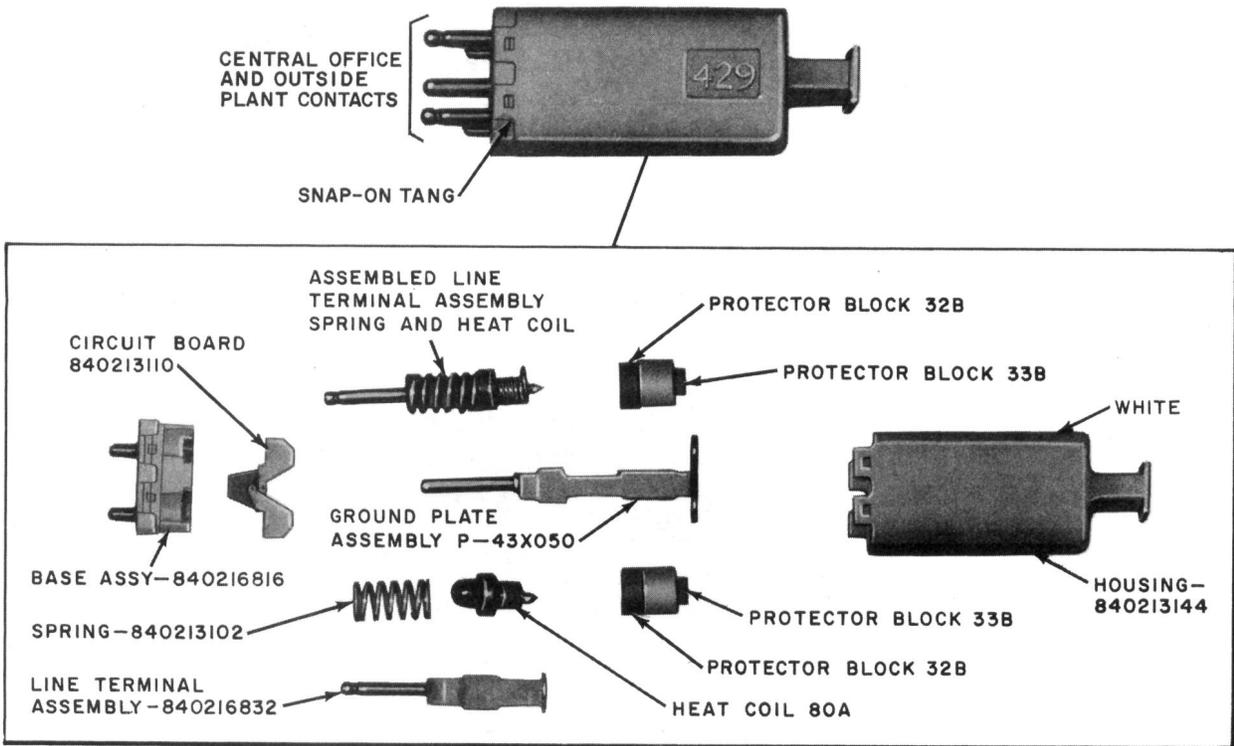


Fig. 17—429F Plug (Line Reversing)

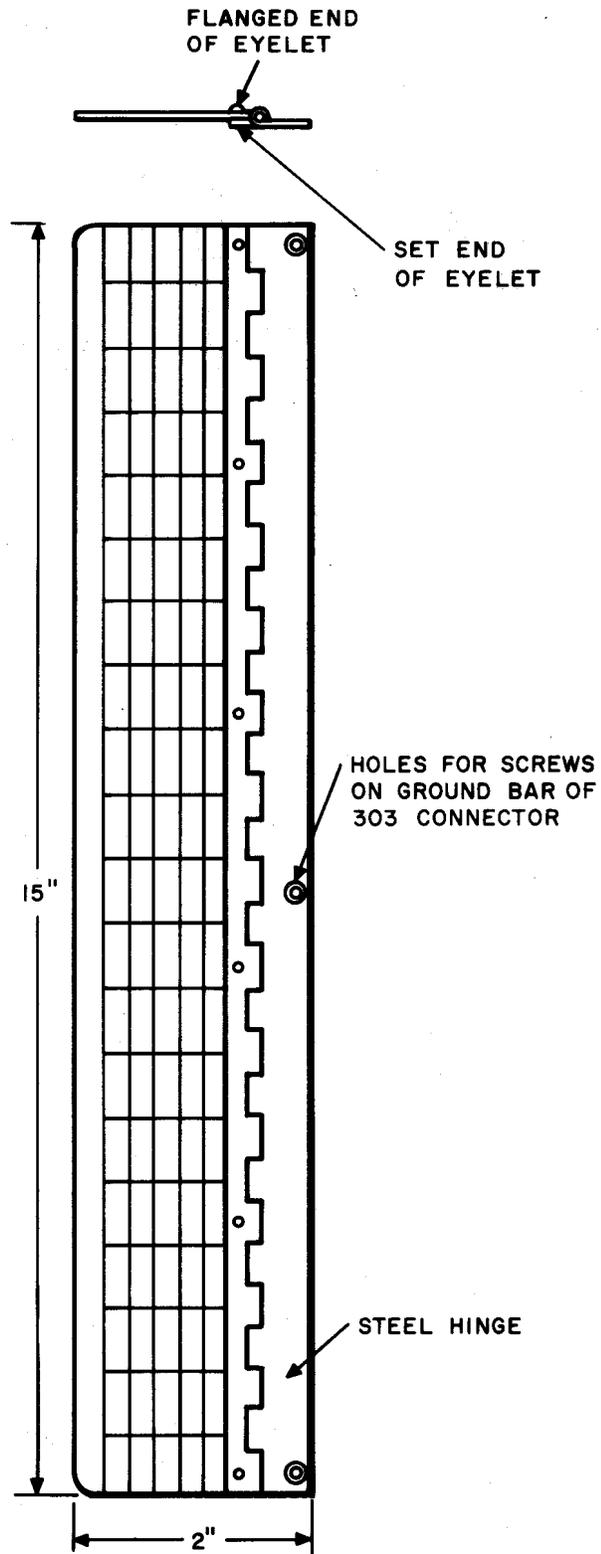
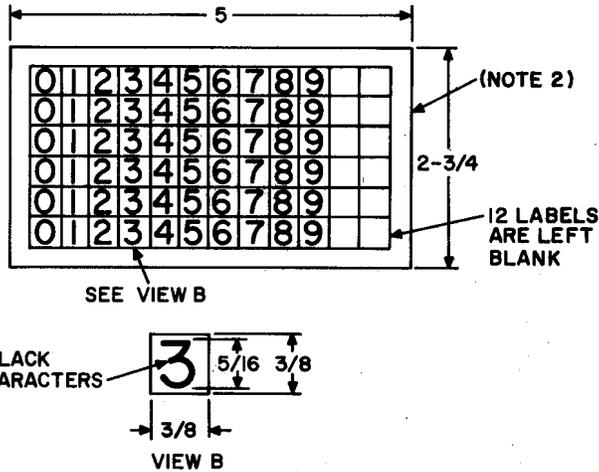
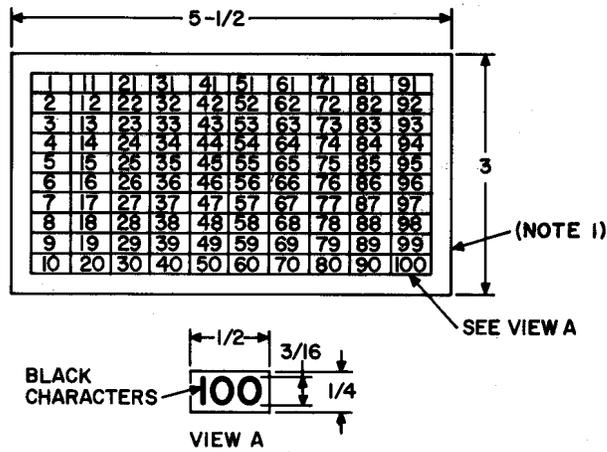


Fig. 18—AT-8697-F Designation Strip



NOTES:

1. 100 LABELS ON EACH SHEET. CONSECUTIVE NUMBERS TO 2700.
TYPE B-1W (WHITE BACKGROUND)
TYPE B-1Y (YELLOW BACKGROUND)
2. 72 LABELS ON EACH SHEET. INDIVIDUAL DIGITS 0-9 AND BLANKS.
TYPE B-2W (WHITE BACKGROUND)
TYPE B-2Y (YELLOW BACKGROUND)
3. ALL DIMENSIONS ARE IN INCHES.

Fig. 19—AT-8696-B Designation Label for the AT-8697F Designation Strip

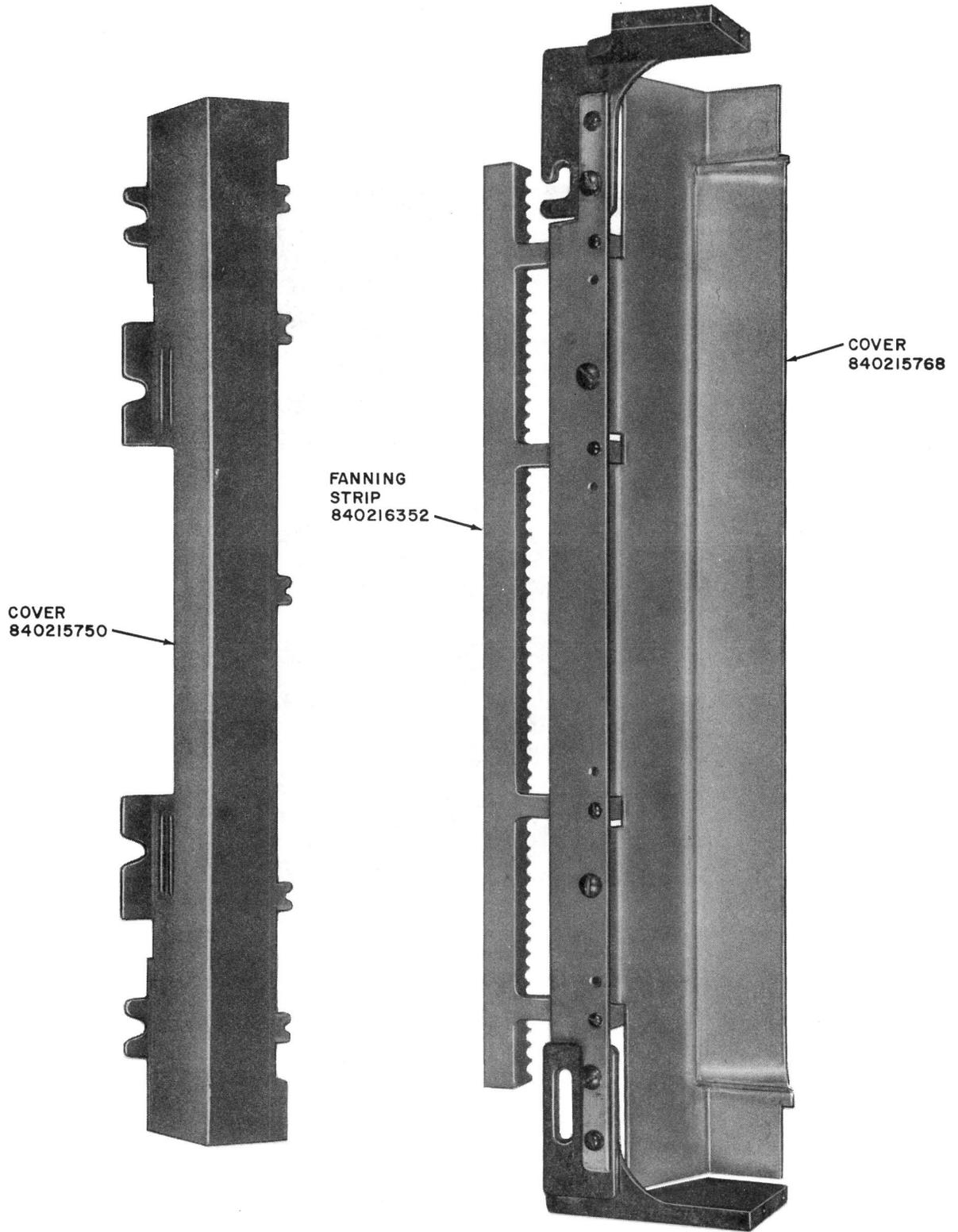
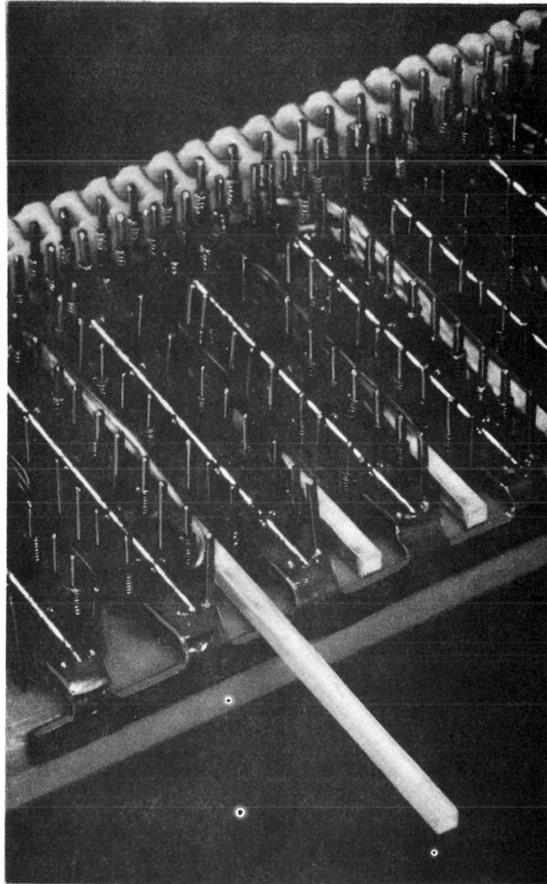


Fig. 20—D-180450 Modification Kit of Part for 303-Type Connector



**Fig. 21—Procedure for Using Toothpicks on 303-Type
Connectors Supplied With D-180450 Modification
Kit of Parts**