

D, G, H, M, N, P, R, T, AND U TEST CONNECTORS AND 299A TEST ADAPTER DESCRIPTION AND INSTALLATION

	CONTENTS	PAGE
1.	GENERAL	1
2.	DESCRIPTION	3
3.	USE	17
	D, G, and H TEST CONNECTORS	17
	M AND N TEST CONNECTORS	17
	P AND R CONNECTORS	17
	T TEST CONNECTOR	17
	U TEST CONNECTOR	17
	299A TEST ADAPTER	17
	SPECIAL SERVICE PAIRS	21
4.	REFERENCES	21

1. GENERAL

1.01 This section covers the description and use of D, G, H, M, N, P, R, T and U test connectors and the 299A test adapter.

1.02 This section is reissued to include information on the U test connector and to reference a new section covering the 309-type connector. Arrows are used to emphasize the more significant changes.

1.03 The D, G, H, M, N, P, R, T, and U test connectors and 299A test adapter are used on the 300-series connectors as shown in Table A. The test connectors are similar except for the mounting arrangement and pair numbering.

NOTICE

Not for use or disclosure outside the
AT&T Companies except under written agreement

◆ TABLE A ◆

STANDARD TEST CONNECTORS

TYPE	AT SPEC.	USED ON	
		CONNECTOR	ASSOCIATED FRAME
D	AT-8265	302 Type 1	Modular protector frame (ED-1A220-31)
G	AT-8353	302 Type 3	Low-profile double-sided protector frame and tall double-sided protector frame
H	AT-8461	303-Type	Tall conventional distributing frame and low-profile conventional distributing frame
M*	AT-8823	305-Type	Tall conventional distributing frame and low-profile conventional distributing frame
N	AT-8882	305-Type	Tall conventional distributing frame and low-profile conventional distributing frame
299A†	None	307-Type	COSMIC‡ II main distribution frame (ED-6C113-30)
P*	AT-8096	308 Type 1	Modular protector frame (ED-97898-31)
		308 Type 2	Low-profile double-sided protector frame (ED-97755-71 or modified ED-97750-70)
R	AT-8916	308 Type 1	Modular protector frame (ED-97898-31)
		308 Type 2	Low-profile double-sided protector frame (ED-97755-71 or modified ED-97750-70)
U	AT-9007	309-Type	Low-profile conventional distributing frame and new framework (ED-97754-74)
T*	AT-8987	310-Type	Tall conventional distributing frame and low-profile conventional distributing frame

* The test connector has two integral 50-pair cables terminated on four (25-pair) connectors for attachment to pair identification equipment.

† The 299A is a test adapter.

‡ Trademark of Western Electric.

2. DESCRIPTION

2.01 The *G test connector (AT-8353)*, shown in Fig. 1, consists of 100 contacts mounted in a plastic housing. Each contact consists of a gold-plated brass plunger, a gold-plated brass spike, and a gold-plated music wire spring which bridges the plunger to the spike. The spring also presses the plunger against the recessed test button on the 302 type 3 connectors. The spikes on the face of the test connector thus protect the gold-plated buttons of the 302 connector from damage when a B test point is used.

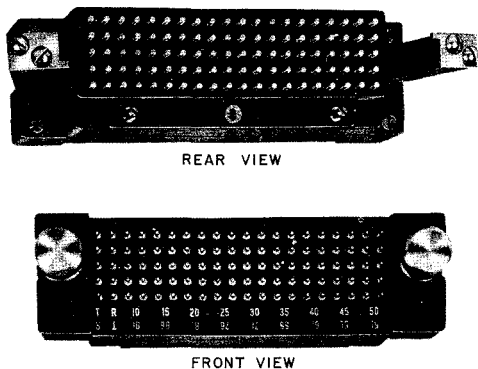


Fig. 1—G Test Connector—Front and Rear View

2.02 The *D test connector (AT-8265)*, shown in Fig. 2, is similar to the G test connector except for the mounting arrangement (Fig. 3). The D test connector mounts on 302 type 1 connectors.

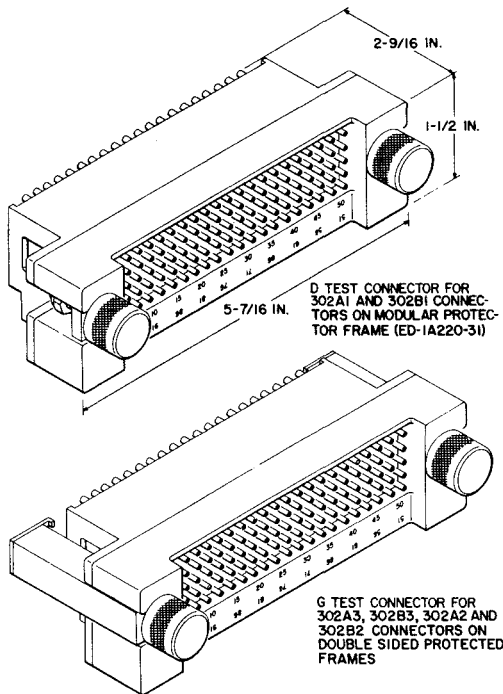


Fig. 2—D and G Test Connector

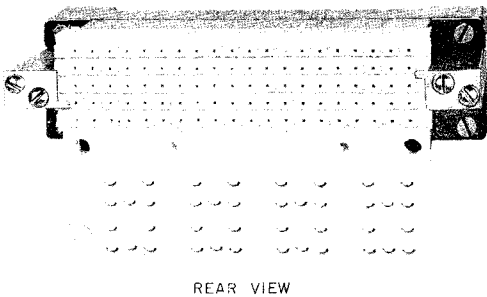
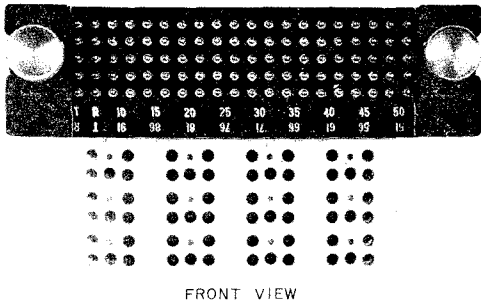


Fig. 3—G Test Connector Mounted—Front and Rear View

2.03 The *H test connector (AT-8461)*, shown in Fig. 4, is similar to the G test connector except for the number of locating pins on the rear and the pair numbering on the front. The H test connector mounts on 303-type connectors.

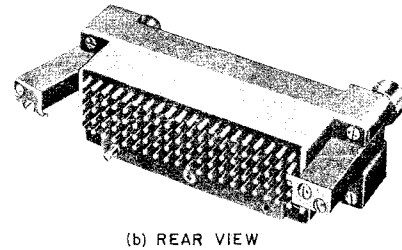
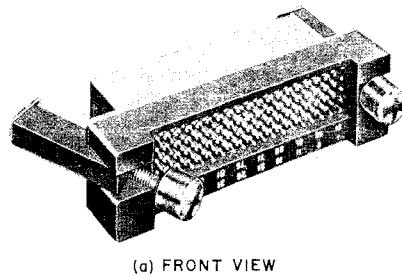


Fig. 4—H Test Connector—Front and Rear View

2.04 The *M test connector (AT-8823)*, shown in Fig. 5, consists of a three-piece, plastic-molded body in which 200 spring-loaded contacts are housed and connected internally to two 50-pair sheathed test cords. Each 15-foot long test cord divides into two 25-pair branches which terminate on KS-19162 List 4 connectors for attachment to pair identification equipment. The KS-connectors are factory marked (1-25, 26-50, 51-75, 76-100) to indicate the respective cable pair count. The M test connector mounts on 305-type connectors.

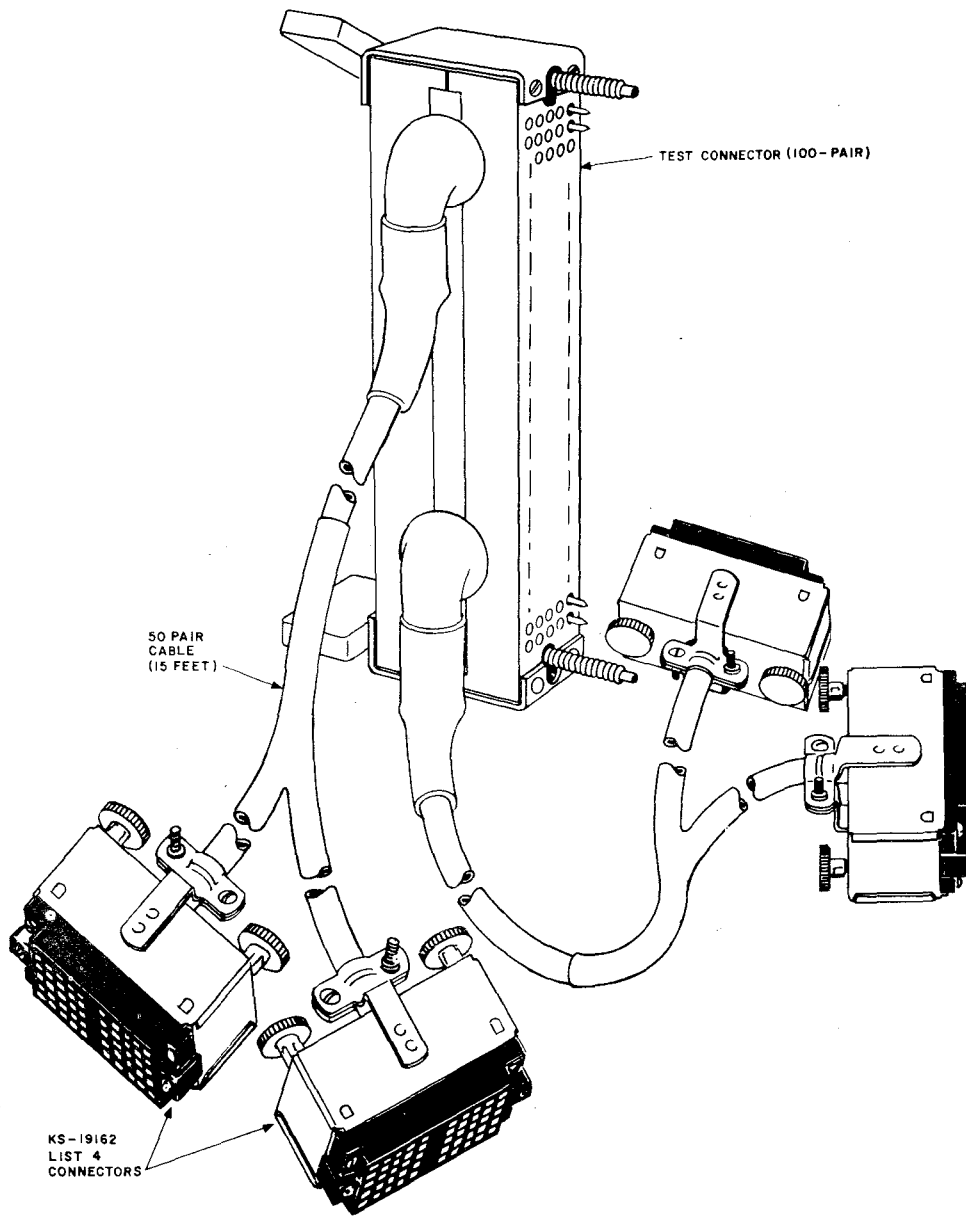
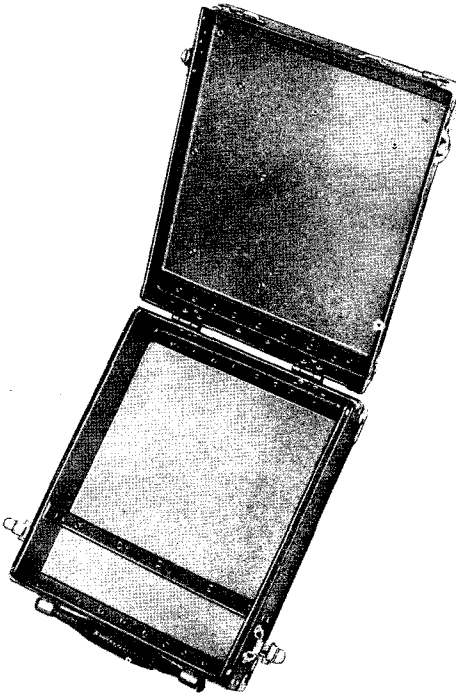
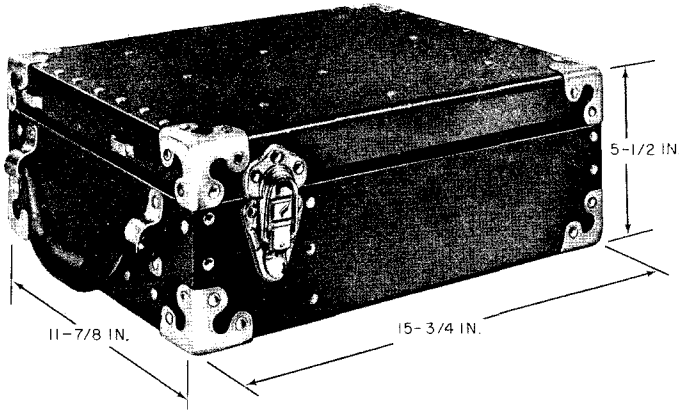


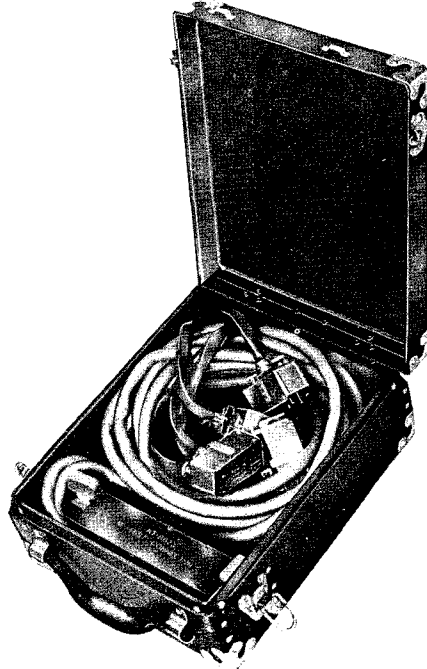
Fig. 5—M Test Connector

Note 1: The M test connector is furnished with an F connector case (AT-8854, Fig. 6). The

case is recommended for protecting and storing the unit when not in use.



F CONNECTOR CASE
WITHOUT M TEST CONNECTOR



F CONNECTOR CASE
WITH M TEST CONNECTOR

Fig. 6—F Connector Case

Note 2: The M test connector cannot be interchanged with the P test connector because of internal wiring differences.

2.05 The *N test connector (AT-8882)*, shown in Fig. 7, consists of a four-piece, plastic-molded body in which 200 spring-loaded contacts are housed and connected internally to 200 exposed test field spikes which are located on the side of the connector. The spikes permit the attachment of test cords to equipment and provide a means of checking one cable pair at a time. The N test connector mounts on the 305-type connector and positions the test field points to face the craft person.

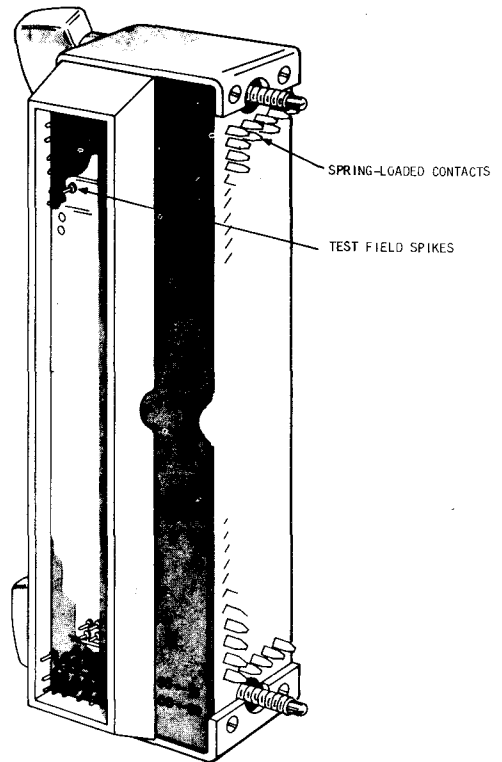


Fig. 7—N Test Connector

2.06 The *P* test connector (AT-8906), shown in

Fig. 8, is similar to the *M* test connector except that the two 50-pair cables enter into the back of the connector and the internal wiring is different. (On the *M* test connector, the cables enter into the side of the connector shown in Fig. 5.) The *P* test connector (Fig. 9) is attached in a manner similar to the *M* test connector. However, the *P* test connector cannot be interchanged with the *M* test connector because of internal wiring differences. The *P* test connector mounts on the 308 (types 1 and 2) connectors.

Note: The *P* test connector is also furnished with an *F* connector case (AT-8854) for protecting and storing the unit when not in use.

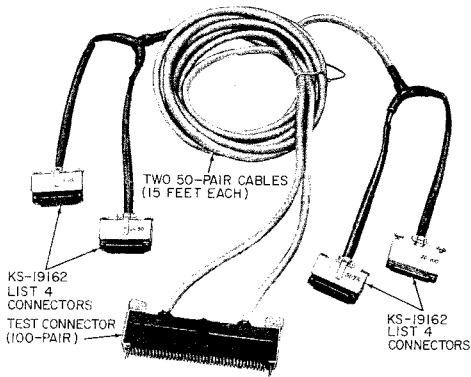


Fig. 8—P Test Connector

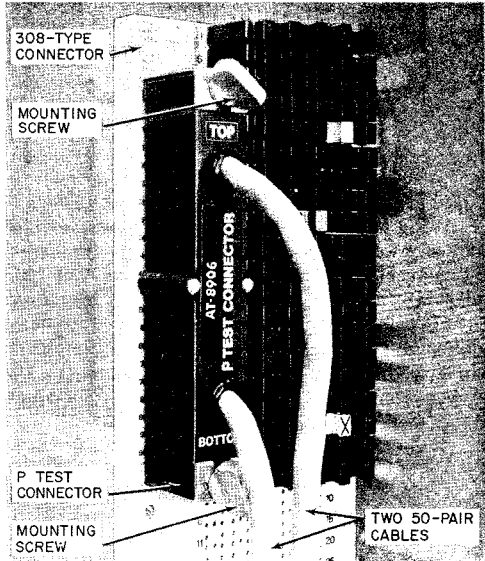


Fig. 9—P Test Connector Mounted

2.07 The *R* test connector (AT-8916), shown in

Fig. 10, is similar to the *N* test connector except that the test access points are at the rear of the connector rather than on the side, and the wiring sequence of the test contacts is different. The *R* test connector mounts on the 308 (types 1 and 2) connectors (Fig. 11) and provides a means of checking one cable pair at a time.

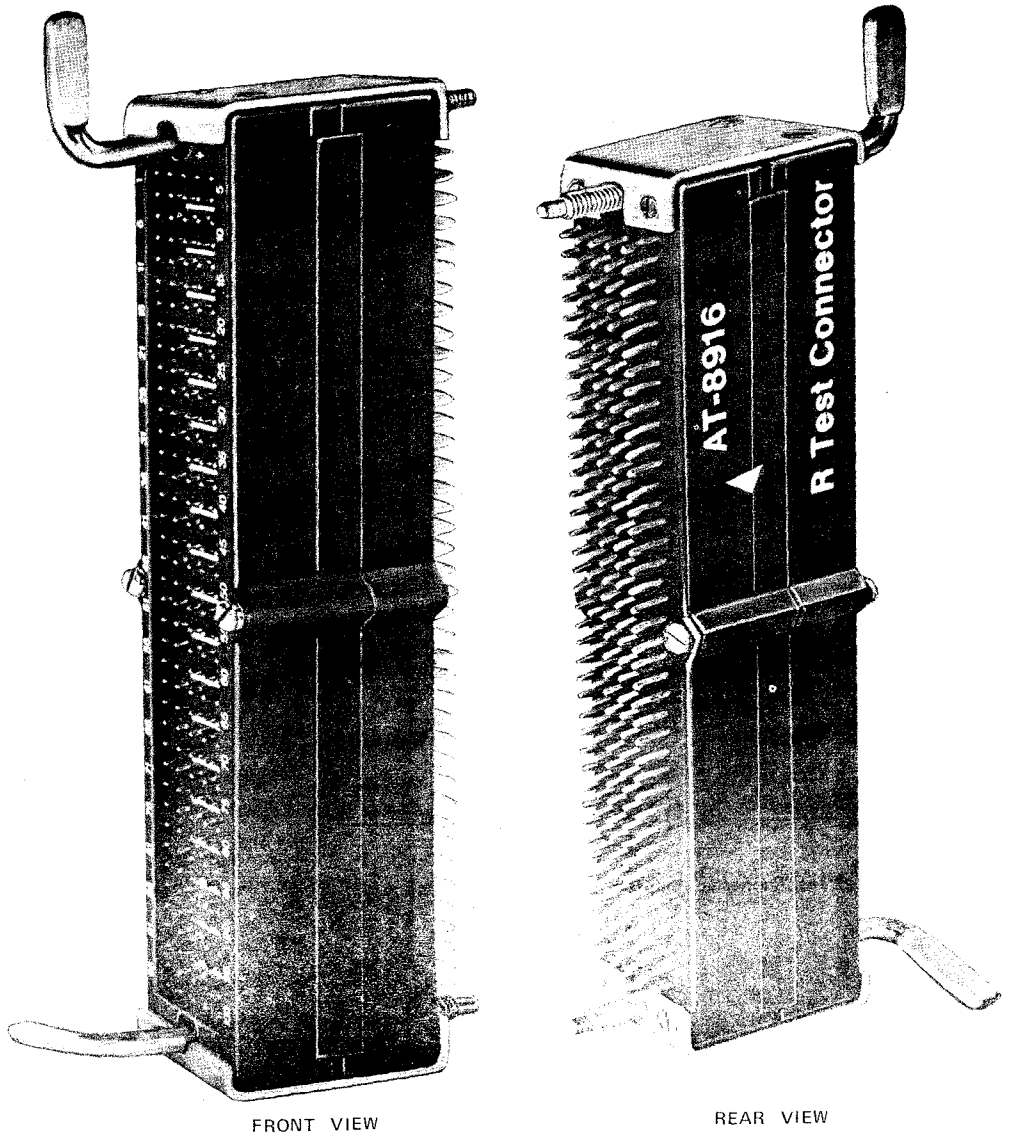


Fig. 10—R Test Connector

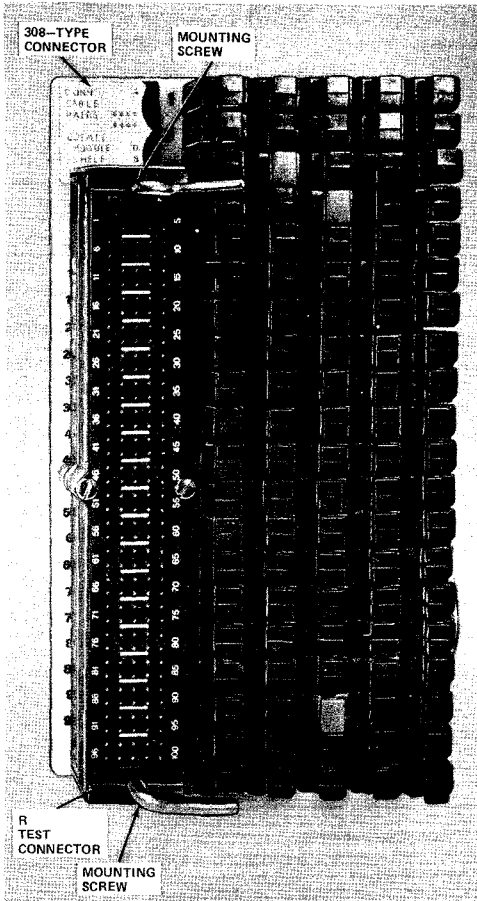


Fig. 11—R Test Connector Mounted

2.08 The *T test connector (AT-8987)*, shown in Fig. 12, consists of a two-piece, plastic-molded body in which 200 spring-loaded contacts are housed and connected internally to two 50-pair sheathed cables. Each 15-foot long test cord divides into two 25-pair branches which terminate on KS-19162 List 4 connectors. The T test connector mounts on 310-type connectors.

Note 1: The T test connector is also furnished with an F test connector case, AT-8854 (Fig. 6), for protecting and storing the unit when not in use.

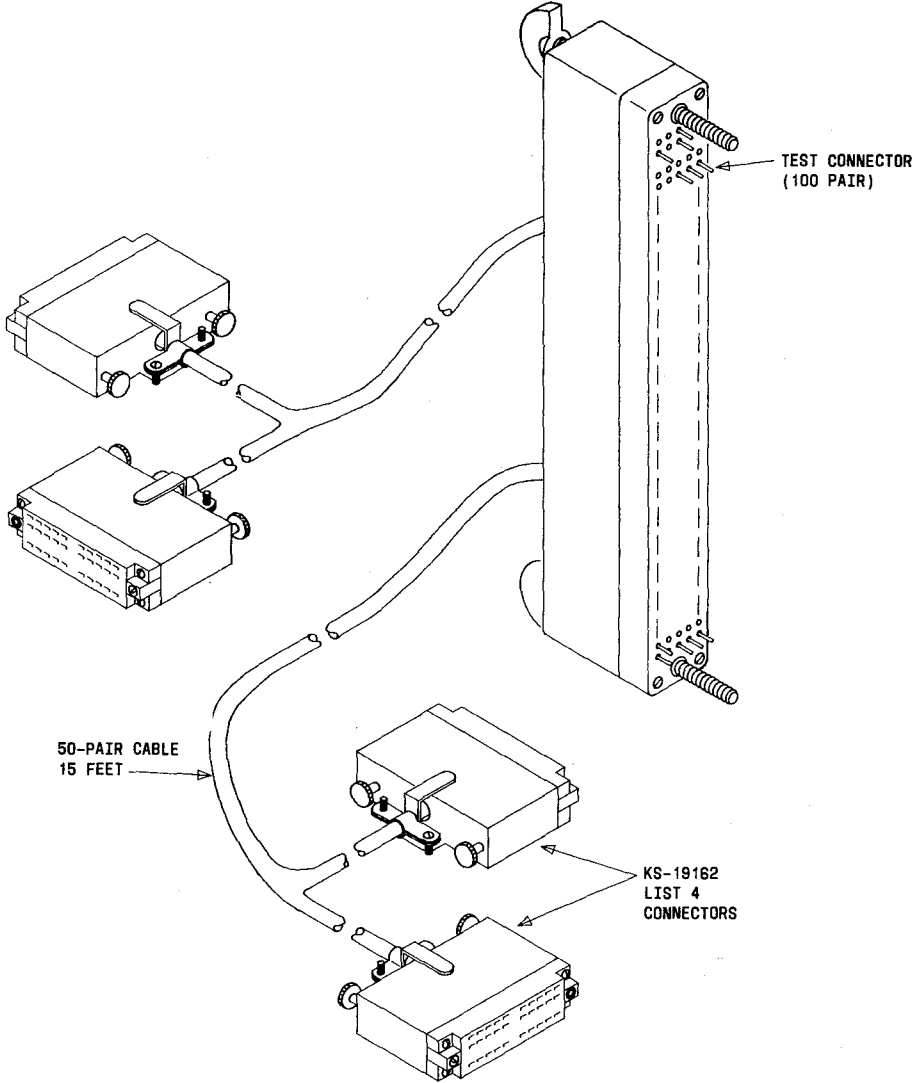


Fig. 12—T Test Connector

Note 2: A separate pick test panel assembly (Fig. 13) is furnished with the T test connector. When in use, the four KS-19162 List 4 connec-

tors are attached to the panel, tone is applied, and a B test point tester is used to identify individual pairs.

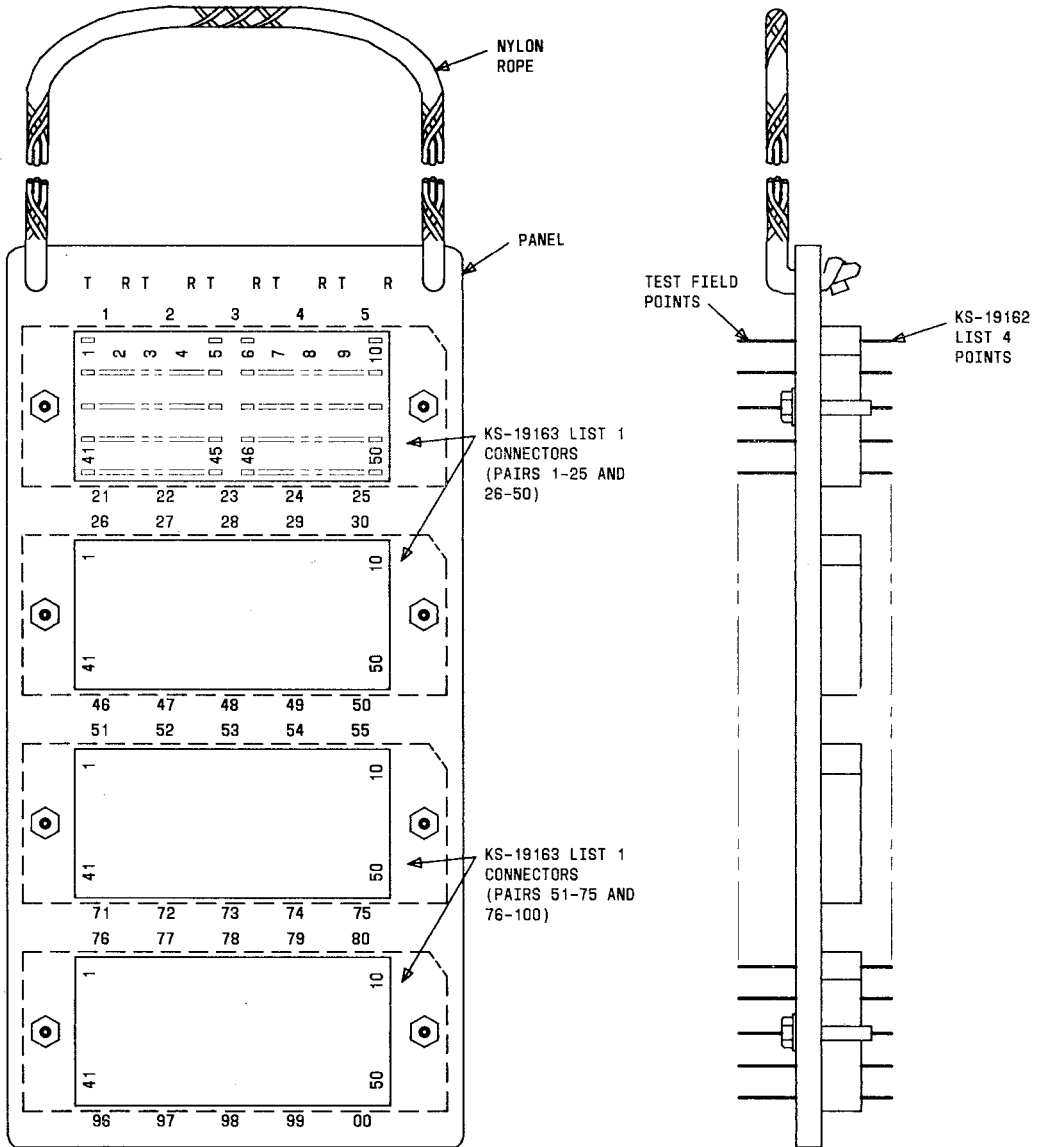


Fig. 13—Pick Test Panel Assembly

2.09 The *U test connector (AT-9007)*, shown in Fig. 14, consists of a three-piece plastic mold in which 200 spring-loaded contacts are housed and connected internally to two 50-pair sheathed cables. Each 15-foot long cable divides into two 25-pair branches which terminate on KS-19162 List 4 connectors. The KS-connectors are factory marked (1-25, 26-30, 51-75, and 76-100) to indicate the respective cable pair count. A cam actuated lever on the U test connector locks the test connector onto the metal bracket associated with the 309A1-200 through 309E1-type connectors. The bracket has two notched areas to provide for two-position testing, ie, with or without 4C-type protector units installed (Fig. 15).

Note 1: The U test connector is furnished with a protective cover with instructions and a KS-22396 List 1 carrying case.

Note 2: A separate pick test panel assembly (Fig. 13) is also furnished with the U test connector. This pick test panel assembly is also used for the T test connector (paragraphs 2.08 and 2.10).†

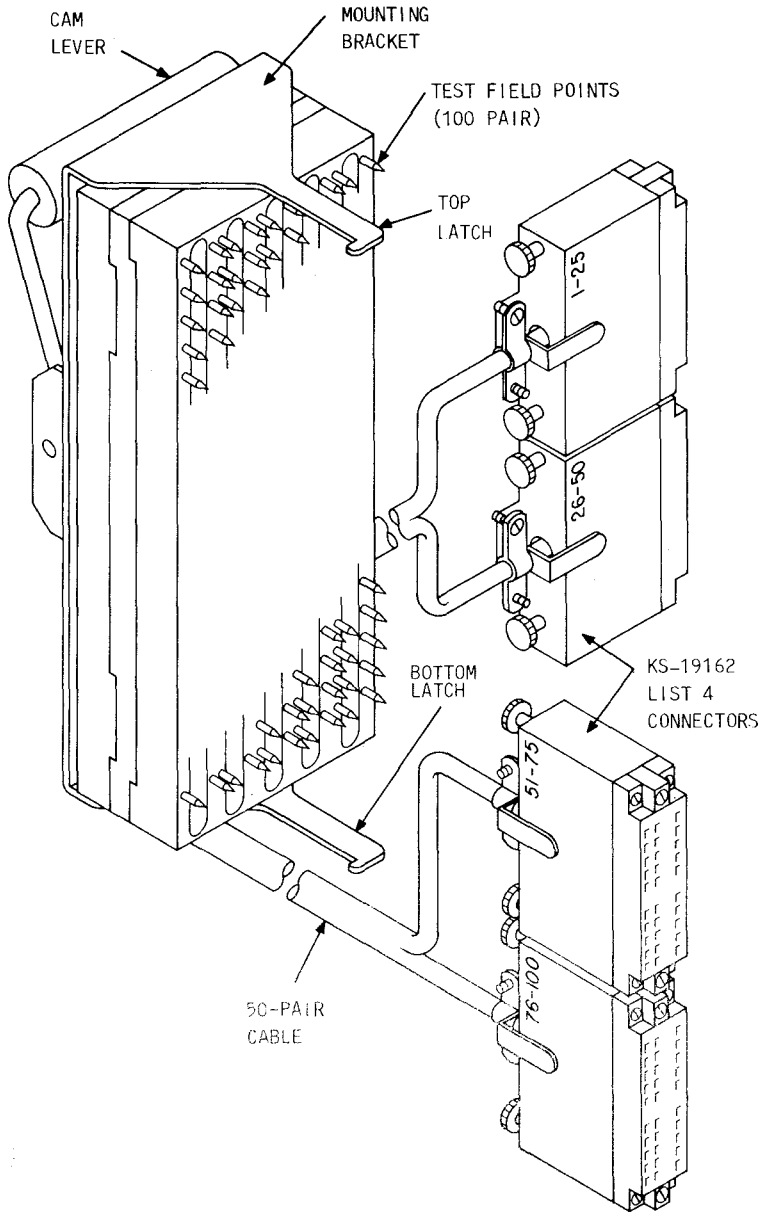


Fig. 14—U Test Connector

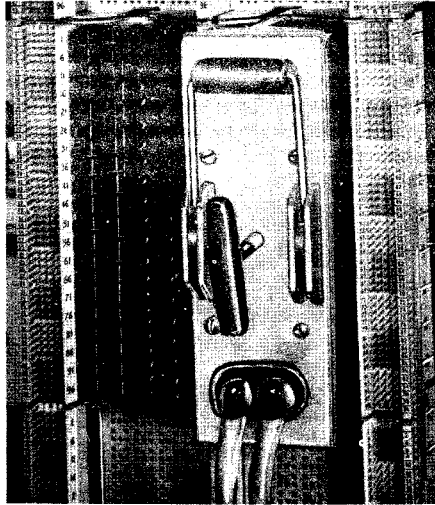
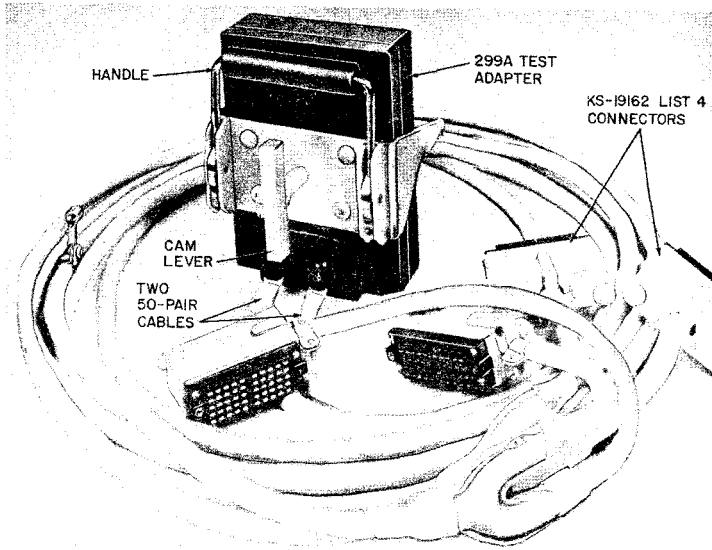


Fig. 15—U Test Connector Mounted

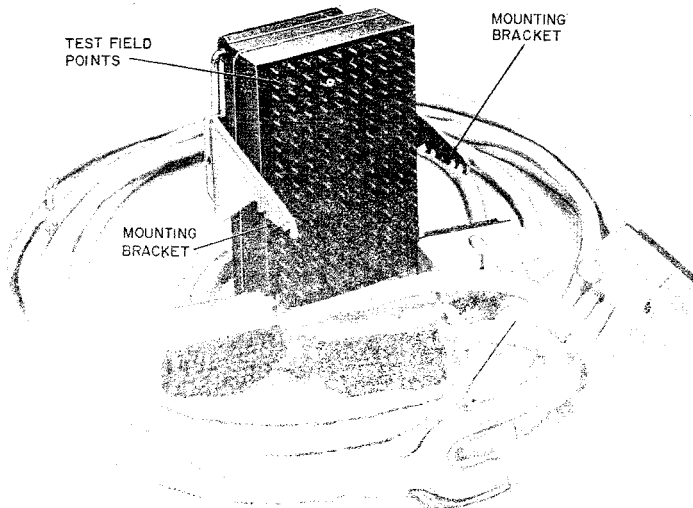
2.10 The **229A test adapter** (Fig. 16) consists of three parts: a handle, a cam lever, and a molded plastic body which contains 200 spring-loaded, gold-plated, contact terminals. The cam lever is used to operate a latching mechanism to secure the test connector onto the 307-type connector. The contact terminals are connected to two 50-pair cables, 16-feet long, which terminate on four KS-19162 L4 connectors. A handle enables easy lifting and attachment of the 299A test adapter. The test adapter has

two-position testing—ie, without 4C protector units installed or with 4C protector units installed.

Note: A separate pick test panel assembly (Fig. 13) is furnished with the 299A test adapter. When not in use, the pick test panel is hung on the handle on the 299A test adapter. When in use, the four KS-19162 List 4 connectors are attached to the pick test panel, tone is applied, and a B test point is used to identify individual pairs.



FRONT VIEW



BACK VIEW

Fig. 16—299A Test Adapter

3. USE

D, G, and H TEST CONNECTORS

3.01 The D, G, or H test connector is placed over the 50-pair test field on the 302- or 303-type connector and held in place by slots in the central office framework (D test connector) or by hooks over the rear of the connector (G and H test connectors). The spikes on the face of the test connector will withstand repeated contacts with a B test point (Section 106-315-102), whereas the recessed gold-plated buttons on the 302- and 303-type connector test field will not.

3.02 The test connector can be used on either of the two 50-pair outside-plant test fields of a 302- or 303-type connector. The D and G test connectors must be inverted from one test field to another (top to bottom). They have two sets of pair numberings: one set (pairs 1 through 50) inverted from the other set (pairs 51 through 100). The H test connector should not be inverted when moved from one test field to another. Both sets of pair numbering on the H test connector have the same orientation.

M AND N TEST CONNECTORS

3.03 The M and N test connectors are placed over the 100-pair test terminal field on the 305-type connector and are held in place by means of two thumb screw fasteners which engage threaded inserts at the top and bottom of the test terminal field.

P AND R CONNECTORS

Caution: *The P test connector must be properly oriented ("TOP" and "BOTTOM" markings).*

3.04 The P and R test connectors are placed over the 100-pair test field on the 308-type connec-

tor and are held in place by two thumb-screw fasteners which engage threaded inserts at the top and bottom of the test terminal field.

T TEST CONNECTOR

Caution: *The T test connector must be properly oriented ("TOP" and "BOTTOM" markings).*

3.05 The T test connector is placed over the 100-pair test field on the 310-type connector and is held in place by two thumb-screw fasteners which engage threaded inserts at the top and bottom of the test terminal field.

U TEST CONNECTOR

DANGER: *The test field points in the U test connector are sharp. Always place the cover over the test field when not in use.*

3.06 The U test connector makes contact with the cable pairs through the test ports in the top of the 4C-type protector units when the protector units are in place on the 309-type connector panel (100 at a time). When the 4C-type protector units are not in place, the test connector makes contact with the contact springs in the 309-type connector panel.⚡

299A TEST ADAPTER

DANGER: *The test field points in the 299A test adapter are sharp. Always place the cover over the test field points when not in use.*

3.07 The 299A test adapter (Fig. 16) is mounted on the 307-type connector and tested as shown in Fig. 17 and 18.

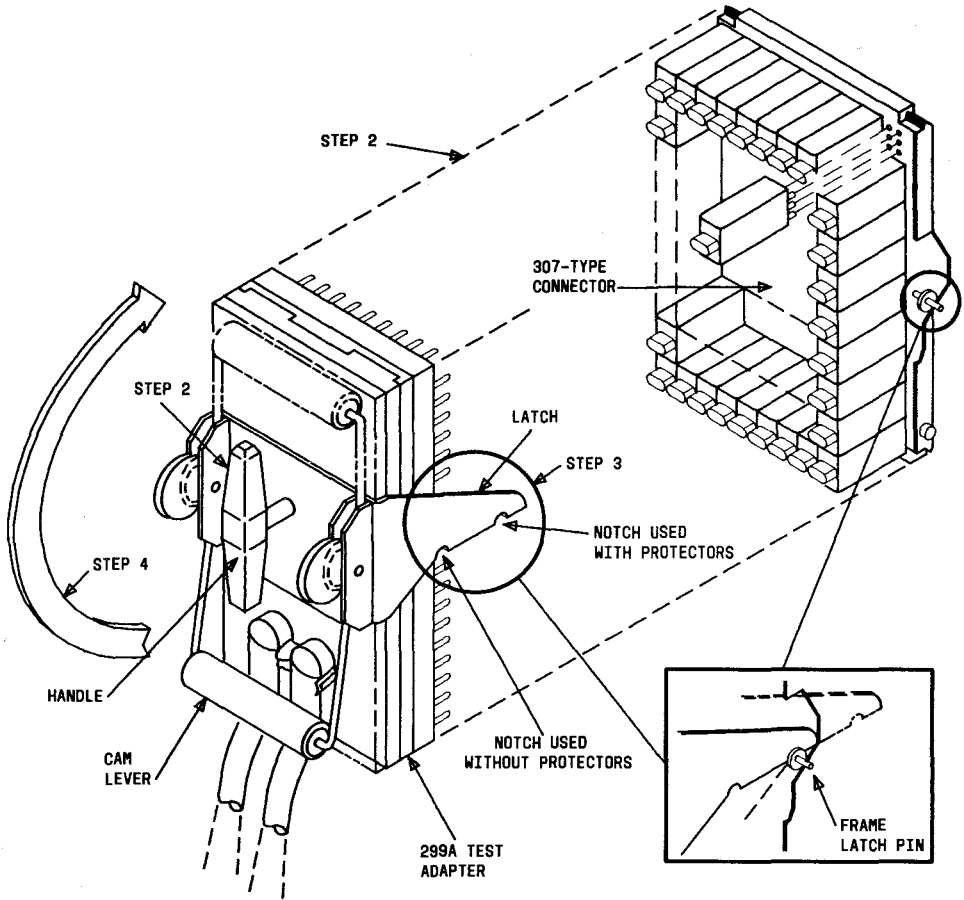


Fig. 17—Mounting 299A Test Adapter on 307-Type Connector

STEP	PROCEDURE
1	See Fig. 17 for numbers that correspond to the following steps.
2	To connect the 299A test adapter, grasp the handle and align the adapter with the 307-type connectors. (The 307-type connector may or may not be equipped with protector units).
3	Place the test adapter onto the 307-type connector. (It may be necessary to move the adapter from side-to-side to align the pins). Pivot the latch slightly upward and onto the frame latch pins.
4	Swing the cam lever up to lock it into place.
	Note: To remove the 299A test adapter, swing the cam lever down. Grasp the handle and lift it off.

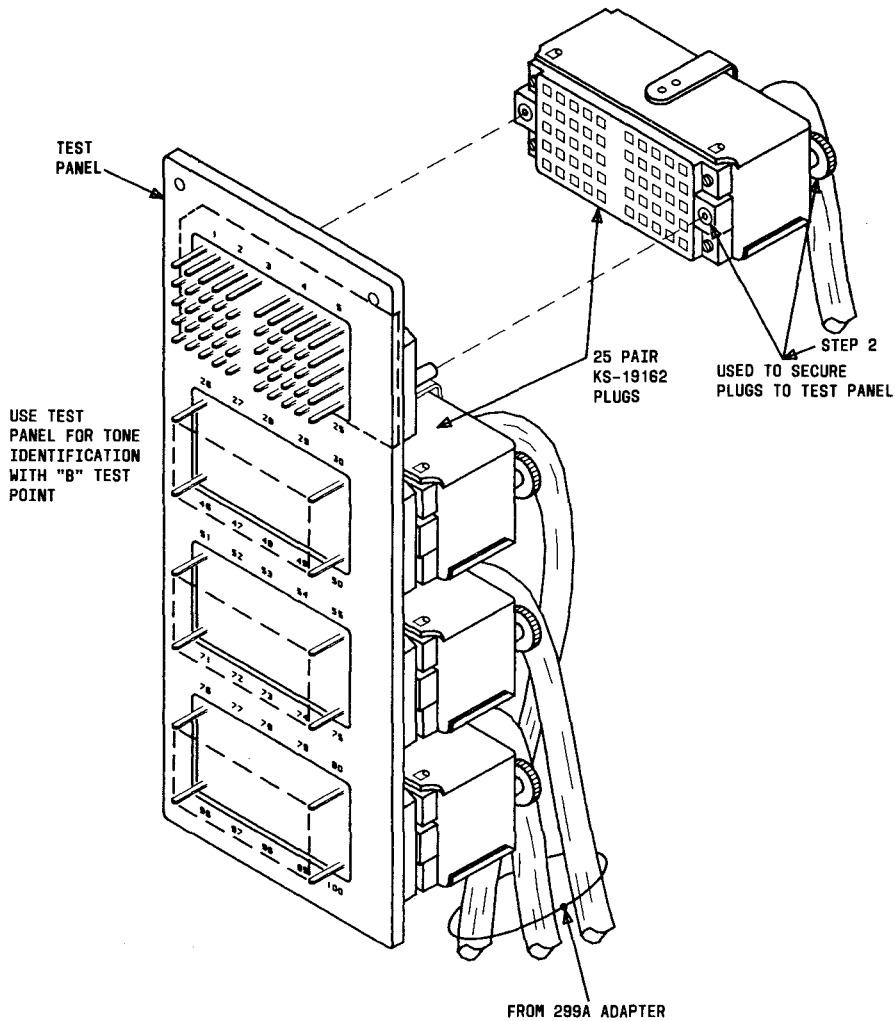


Fig. 18—Testing With B Test Point or With Automatic Pair Identifier

STEP	PROCEDURE	
1	See Fig. 18 for the number that corresponds to the following step.	
2	Mount and secure the pick test panel in the four KS-19162 plugs, apply tone, and test with the B test point or with the automatic pair identifier which may be mounted in the four KS-19162 plugs to make the test.	
SPECIAL SERVICE PAIRS	SECTION	TITLE
3.08 None of the test connectors will make contact with the test buttons of any special service pair covered with a KS-19478 List 1 guard.	202-220-102	Conventional Distributing Frames — Types of Protection
3.09 The 4C3C protector units (having red housings) are used for special services on the 307- and 309-type connectors. These protector units do not have test access ports to ensure tamperproof service.	201-220-103	Conventional Distributing Frames — Types of Protection on B-Type Frames and Double-Sided Protector Frames With Separated Distributing Frames
4. REFERENCES	201-220-301	Conventional Distributing Frames — Methods of Making Connections
4.01 The following practices contain related information:	201-222-101	Common Systems Main Inter-Connecting Frame (COSMIC)—Description
SECTION	TITLE	
201-208-101	302- and 308-Type Connectors — Description	
201-208-105	303-, 305-, and 310-Type Connectors — Description	
201-208-110	307-Type Connectors — Description	
201-208-802	302- and 308-Type Connectors — Repair Procedures	
201-208-805	303-, 305-, and 310-Type Connectors — Repair Procedures	
201-208-810	307-Type Connectors — Repair Procedures	
202-220-101	636-210-218	Terminating Cable in Cross-Connect Cabinet—N or ON Carriers
Conventional Distributing Frames — Description	636-300-050	3-, 4-, and 5-Type Protector Units—Description

SECTION	TITLE	SECTION	TITLE
636-300-100	300-Type Connectors -- Description, Installation, and Marking	636-330-107	307-Type Connector -- Description, Installation, Marking, and Testing
636-310-100	301-Type Connectors -- Description, Installation, and Marking	636-330-108	308-Type Connectors -- Description, Installation, and Marking
636-320-100	302-Type Connectors -- Descriptions, Installation, and Marking	◆636-330-109	309-Type Connectors -- Description, Installation, and Marking◆
636-330-100	303-Type Connectors -- Description, Installation, and Marking	636-330-110	310-Type Connectors--Description, Installation, and Marking
636-330-105	305-Type Connectors -- Description, Installation, and Marking		