

**CENTRALIZED AUTOMATIC REPORTING ON TRUNKS (CAROT 1)
CAROT CENTER OPERATION AND ADMINISTRATION
TRUNK MAINTENANCE FILE—DATA BASE REQUIREMENTS**

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the other forms should be reproduced by each CAROT Center as necessary.

1.05 All of the available information for ROTLs is covered in this section. However, instructions for use of some of the forms and the required information to complete them may also be found in Section 800-102-100 (ATMS and Associated Testing Arrangements, Centralized Tape and Card Administration).

2. STORAGE

2.01 After the data base requirements have been determined and entered on the TMF worksheets (E6303), the information on the TMF worksheets should be used to create a TMF paper change tape for each office. The paper change tape should then be used to create a TMF on cassette as described in Section 010-410-313. It is important to note that when it becomes necessary to update a TMF (Section 010-410-313), the old TMF and the change tape should be retained as a backup TMF.

3. RESPONSIBILITIES

A. General

3.01 The responsibilities for data provision included in Section 800-102-100 are applicable to this section.

B. Functions of CAROT Centers

3.02 To establish operations, office description forms and trunk group description forms as described in this section should be completed for each ROTL office. Information on each trunk outgoing from the ROTL office must be obtained and entered manually on the TMF worksheet (E6303) to establish an initial TMF. This initial TMF must be an accurate record of the ROTL office as of a predetermined date, and, to ensure the continued accuracy of the TMF, methods must be established to incorporate all additions, deletions, and changes as they are subsequently reported.

3.03 On receipt of traffic orders and circuit layout records, the center should screen out those that do not affect trunks originating in ROTL-equipped offices or that cannot be tested by the ROTLs in the particular office. Pertinent information should

be entered on the appropriate worksheets for entry into the processes described in Section 010-410-313.

3.04 Supporting information required by the CAROT Center, other than that described in 3.02 and 3.03, may be found in the following sections:

- (a) Section 010-410-311 for test line and ROTL telephone numbers
- (b) Section 660-402-300 for loss deviation guides
- (c) Section 660-403-500 for noise limits if not provided on the circuit layout record card.

3.05 Methods of record keeping, trunk design and provision, and information distribution are varied within the Bell System. This section describes much of the data base as collected at the CAROT Center. An objective of the CAROT/ROTL, however, must be to combine as much data as possible close to its source, by either manual or mechanized methods. This will allow the CAROT Center to receive one complete input record for each trunk and, at the same time, will allow most of the convert-and-prepare process to take place outside the CAROT Center. Part 4 of this section provides general guidelines and objectives to be applied to the administration of the CAROT data base. Part 5 provides more specific information on the worksheets and data forms that can be used.

4. PROCEDURES FOR GATHERING DATA BASE INFORMATION

A. Information Flow

4.01 Initially much of the information required to establish the TMF may have to be obtained from records and physical inventories in the central offices involved. However, once the TMFs have been established, as much information as possible should be obtained from other sources so that involvement of central office forces is minimized.

4.02 Information required to access and test trunks can be classified as trunk identification, facility identification, transmission parameters, trunk priming information, test line and ROTL type, and telephone numbers. As shown in Fig. 1, information is available from three primary sources: (a) facility and equipment assignment, referred to as the engineering circuit design and provision

group; (b) trunk and common control assignment groups; and (c) central office operations groups. The appropriate engineering, assignment, and operating groups should forward copies of all circuit layout records, traffic and trunk orders, and in-effect notices, together with changes in test connector assignment, to the CAROT Center.

4.03 While the activities of these various functional groups are often correlated, each source may also act independently. For example, the facility assigned to a specific trunk may be changed without a simultaneous change in the trunk equipment assignment, and vice versa. A machine load and balance adjustment may occur independently as a result of equipment additions and changing traffic patterns in an office. Screening and coordinating data inputs for the TMF is the responsibility of the CAROT Center. It is most important, therefore, that the full cooperation of all groups be obtained early in CAROT implementation, and that formal methods be established to assure a timely and accurate flow of information.

B. TMF Preparation

4.04 The methods used to gather the data base information required to generate the TMFs for the CAROT System should be established well in advance of the actual start of automatic testing by the controller.

4.05 Once these methods have been established, the collection of data should be started and the TMFs prepared prior to the turnup of the ROTLs. Some factors to consider in advance preparation are as follows:

- (a) Size and number of trunk groups to be tested
- (b) Availability of information required for the TMF
- (c) Numbers of updates that would occur because of rearrangements during the advance preparation stage.

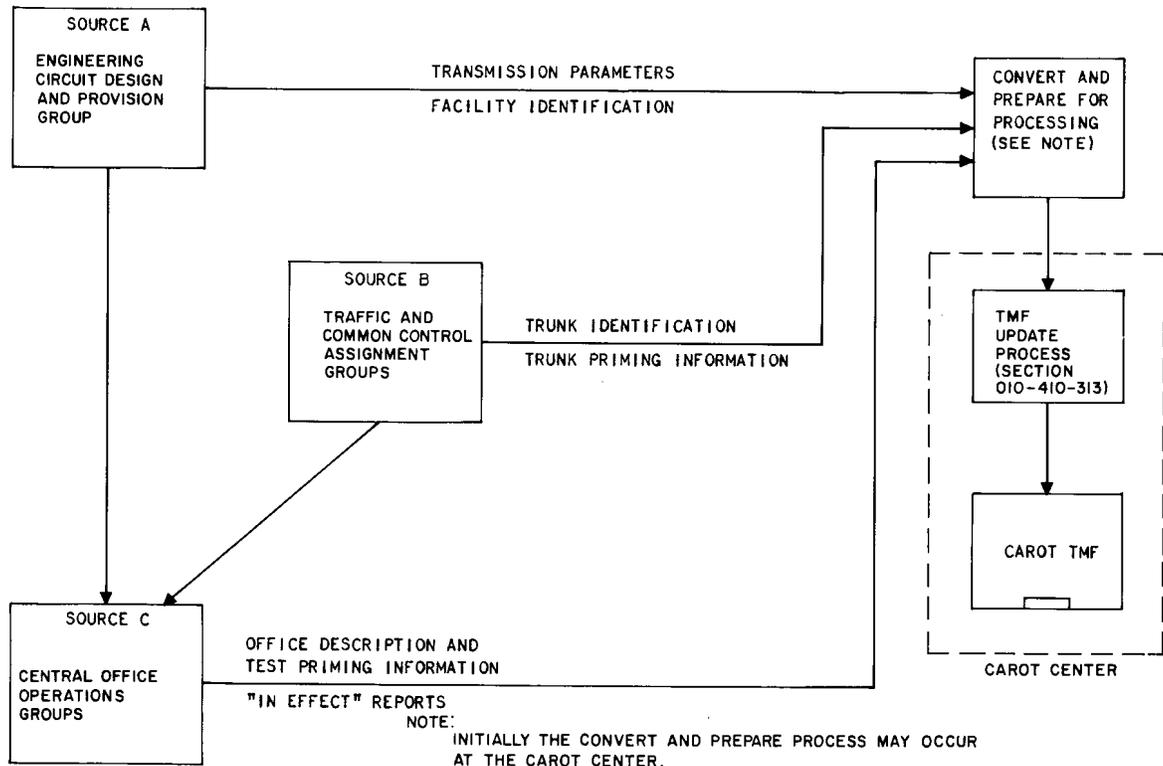


Fig. 1—Information Flow

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4.06 As stated in 3.05, an objective must be to combine as much data as possible close to its source and to provide one input to the CAROT Center. The type of administrative interaction between trunk and common control assignment, circuit provision, and operating organizations which will lead to an efficient and straightforward initial load and update process is shown in Fig. 2 and 3 and outlined below.

C. CAROT TMF Initial Load Process

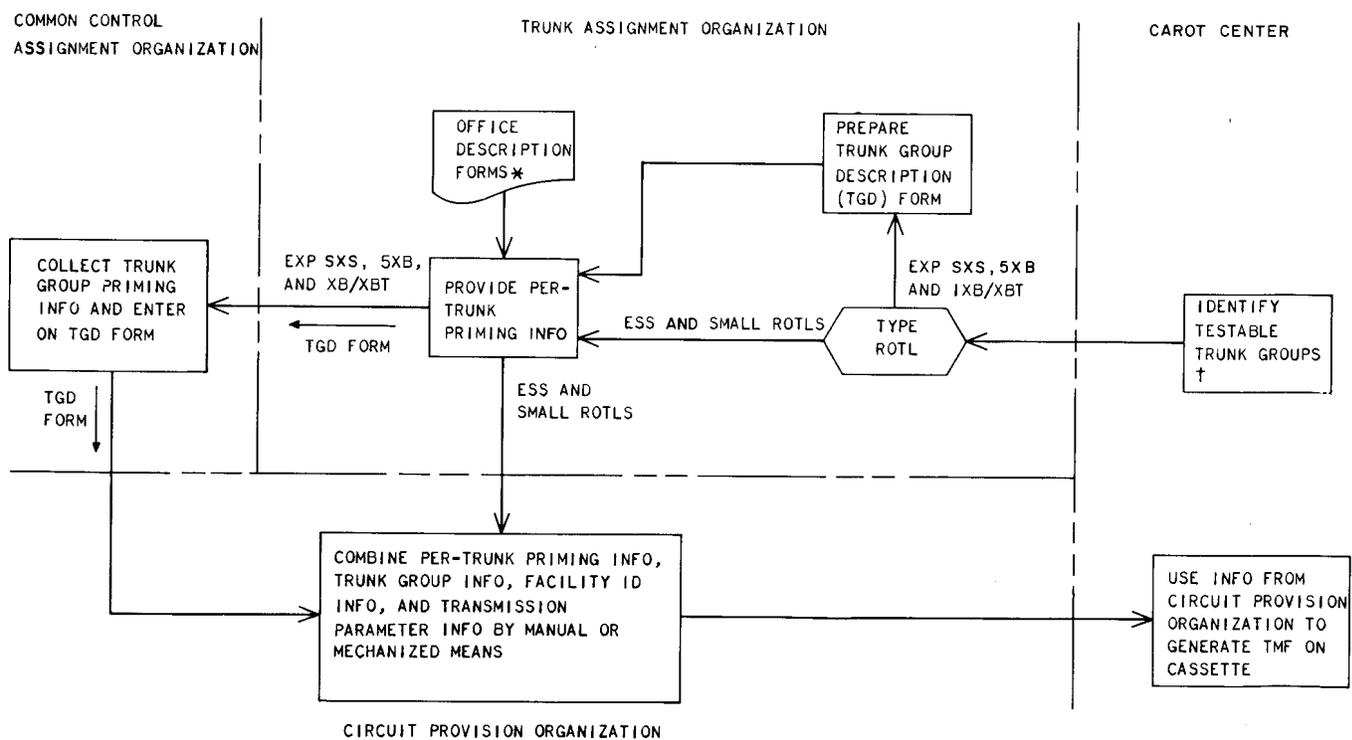
4.07 The process for gathering data for the initial load for ROTLs should minimize the involvement of the central office forces and allow most of the convert-and-prepare process to occur outside the CAROT Center.

4.08 As shown in Fig. 2, the CAROT Center is responsible for identifying testable trunk groups. If the ROTL installed is an ESS or small electromechanical ROTL, the trunk assignment organization will provide the per-trunk priming information.

information and pass this information directly to the circuit provision organization. If the ROTL installed is an expanded electromechanical ROTL, the trunk assignment organization will prepare a trunk group description (TGD) form and enter the per-trunk priming information on the TGD form. The trunk assignment organization will then forward the TGD form to the common control assignment organization. The common control assignment organization is responsible for providing the trunk group priming information on the TGD form. The TGD form will then be forwarded to the circuit provision organization. The circuit provision organization is responsible for the convert-and-prepare process. The circuit provision organization is also responsible for providing the facility assignment and transmission parameter information.

D. CAROT TMF Update Process

4.09 As shown in Fig. 3, the responsibilities of the different organizations for the update process is the same as for the initial load process



* USE OFFICE DESCRIPTION FORMS AS REQUIRED.
 † CHECK GROUPS AND NUMBER OF TRUNKS PER GROUP IN OFFICE, AND CHECK CIRCUIT ENGINEERING AND TRUNK ADMINISTRATION RECORDS.

Fig. 2—CAROT TMF Initial Load Process

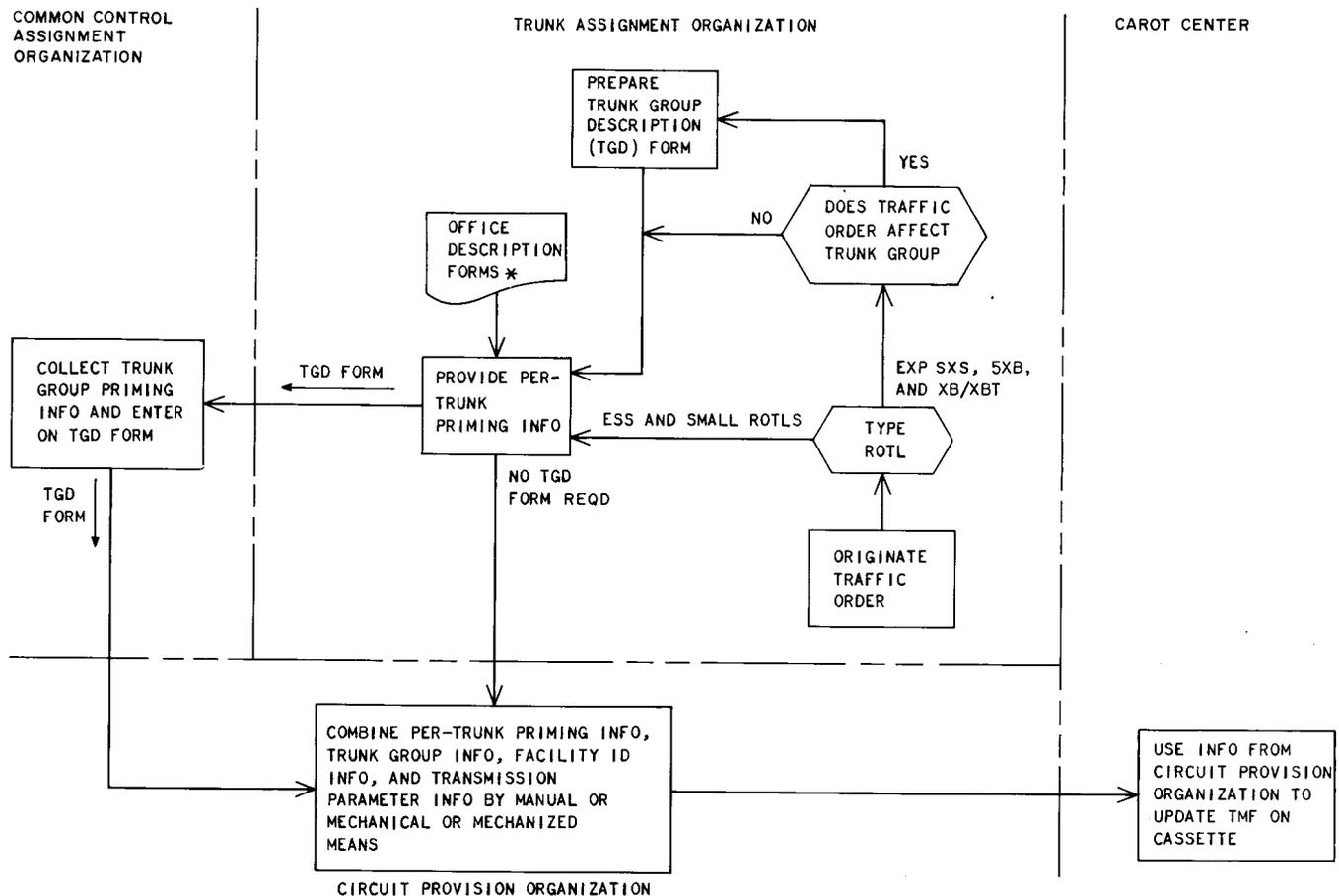


Fig. 3—CAROT TMF Update Process

except that the CAROT Center is not responsible for identifying testable trunk groups. It is important to note that for expanded SXS, 5XB, and 1XB/XBT ROTLs, when the trunk activity does not affect the entire trunk group, TGD forms are not required.

5. INPUT DATA FORMS AND EXAMPLES OF THEIR USE

A. General

5.01 Sets of forms included in this section for use in data compilation for tape preparation are as follows:

- (a) The CAROT ROTL TMF Worksheet (E6303), intended for entering trunk information into the CAROT data base

(b) Office description forms, intended for use in assembling information such as arrangements for automatic trunk testing in each office, ROTL directory numbers, and test connector assignments

(c) Trunk group description forms, intended for use in assembling trunk group dependent data.

B. TMF Worksheet (E6303)

5.02 The TMF worksheet (E6303), shown in Fig. 4, is designed for manually assembling data to be entered via punched paper tape into the CAROT controller update process. The Update Program is used to create as well as to update ROTL office TMFs. Each TMF worksheet covers a data base action on a single trunk group and has been designed

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to require as few entries as practical. Trunks may be listed in any sequence that is most convenient. The processor arranges the data in the sequence specified by the TMF type. The TMF types are T, F, and TF, as described in Section 010-410-313. Figures 5 through 10 contain examples of data entered on the TMF worksheet.

5.03 The TMF worksheet represents file information required by CAROT, including action codes, trunk group identification, transmission testing parameters, and trunk priming information. No other data is required in the TMF on a per-trunk basis.

Action Codes

5.04 Data base entries are divided into separate data fields, each preceded by a code letter. Trunk group identification on the TMF worksheet is preceded by one or more action codes, which indicate the type of change being made in the TMF as follows:

A = Addition of a new trunk group to the file.

B = Addition of trunks to a trunk group already in the file.

D = Deletion of one or more trunks from the file.

C = Change in file information for one or more trunks in the file.

E/C = Change in trunk group identification and/or trunk number for one or more trunks already in the file. An E entry identifying the trunks to be changed must be immediately followed by a C entry indicating the corrected identification.

A change of trunk group identification and/or trunk number and a change of file information must be accomplished as two separate runs of the Update Program, the first processing an E/C change as defined above, and the second processing a C change to correct the file information.

5.05 Addition Records: There are two types of addition records. If the trunk group identification field is preceded by an A, the trunks

being added belong to a new group not previously contained in the TMF. If preceded by a B, the trunks belong to a group already in the TMF. Figures 5 and 6 are examples of additions entered on the TMF worksheet.

5.06 As shown in Fig. 5, each field *must* be filled out completely, with two exceptions:

(1) If facility information is not available, the word NONE may be entered in character positions 3 through 6 of the F field.

(2) If a channel number is not available, it may be left blank, and the trunk will not be put in the facility-ordered TMF.

Each trunk to be added is described by the H field, in which its number is given, and by the preceding A, F, and G fields. For example, the trunk on line 6 is described by the F field on line 5, by the G field on line 5, and by the A field in the trunk group identification. This method of entering data reduces the amount of coding and keying required when the data is put on paper tape.

5.07 Deletion Records: A deletion is identified by a D preceding the trunk group identification as shown in Fig. 7 and 8. The trunk group identification must be filled out completely. The H field will contain either the number of the trunk to be deleted or the word ALL in character positions 3 through 5. This last option will cause the entire trunk group to be deleted from the TMF.

5.08 Change Records: A change is identified by a C preceding the trunk group identification as shown in Fig. 9. A change is very similar to an addition, the principal difference being the contents of the various fields. The C, F, and G fields must be filled out completely; the H field, however, may be only partially filled out. If the channel number or trunk location address is left blank, the channel number or trunk location address currently in the TMF will be left unchanged. The words NO CHANGE in character positions 3 through 11 of either the F or the G field will leave that field unchanged in the TMF. For example, the trunk on line 4 is described by the G field currently in the TMF, by the F field on line 1, and by the C field in the trunk group identification.

5.09 Identification Change Records: An identification change is used to change either the trunk group identification or the trunk numbers. Identification changes are identified by the letter E as shown in Fig. 10. The trunk group identification following the E will be replaced by the trunk group identification following the next C. The trunk number in the upper H field, which follows the E field, will be changed to the trunk number in the lower H field, which follows the C field. The word ALL may be used in character positions 3 through 5 of both H fields when only the trunk group identification changes for the entire group.

Trunk Group Identification

5.10 Trunk group identification is included in character positions 2 through 38 on the TMF worksheet and is the common language identification of trunks and trunk groups as defined in Section 795-400-100 (Common Language Circuit Identification, Message Trunks). In the trunk group identification field, however, the originating office name always appears before the name of the terminating office, which may not be the order on the circuit layout record card. For 2-way trunks, this means that the format in the TMF for the office at one end is the reverse of that in the TMF for the other end. Figure 11 shows the trunk group identification part of the TMF worksheet and provides a list of the data items for each character position. Table A provides a list of the traffic usage codes (character positions 30 and 31) of the testable trunks in CAROT/ROTL, the possible tests, and the type of ROTL used. If additional traffic usage codes are assigned locally, it must be determined whether or not they are CAROT testable.

5.11 The group number data item included in character positions 39 through 46 of the trunk group identification part of the TMF worksheet is for use where trunk groups have a number assignment. The control office data item included in character positions 47 through 57 is not used in CAROT 1 but will be a required portion of the CAROT 2 data base. This information can be stored in the CAROT 1 TMFs for compatibility with CAROT 2.

Facility Group Identification (F Field)

5.12 Facility group identification is the identification of the first major specific facility nearest

the originating office and the terminal locations for that facility. The near-end location in character positions 24 through 34 will be used for a more complete facility analysis in CAROT 2 and can be treated as the control office item in 5.11. Figure 12 shows the facility identification part of the TMF worksheet and provides a list of the data items for each character position.

Transmission Testing Parameters (G Field)

5.13 Transmission testing parameters are obtained from the circuit layout record card and Sections 660-402-300 and 660-403-500. Figure 13 shows the transmission testing parameters part of the TMF worksheet and provides a list of the data items for each character position.

5.14 Test Group Facility: The test group facility information in the G field is a 4-character code (character positions 2 through 5) which indicates the type of facility and the test interval at which routine tests are required per Section 660-402-300. The first two digits of the code specify the type of facility; the last two digits specify the testing interval. The codes used are shown in Table B.

5.15 #FETL Digits, Replacement Numbering Plan Area (NPA), and Replacement NNX: The G field also contains far-end test line (FETL) access information (character positions 19 through 25) that is required to access the proper FETL. In 5XB offices it is used to identify the proper route relay.

5.16 The FETL number for ROTLs such as SXS and 1XB/XBT that access trunks through test connectors must be shortened to the length to be expected by the far-end switch. The FETL number must also reflect any code conversion (deletion or prefix) which the originating machine would normally perform. This information must be provided in character position 19 (number of FETL digits to be outputted) and in character positions 23 through 25 (replacement NNX after code conversion).

5.17 For test connector ROTLs with variable length outputting, the number of digits outputted to the far end may vary from trunk to trunk. In SXS offices, trunks may leave the switch at different selector levels. Thus, the number of digits "used up" in switching a call through the SXS machine may vary from trunk to trunk; however,

TABLE A

TYPES OF TRUNKS TESTABLE VIA CAROT/ROTL

TRAFFIC USAGE CODE	MEANING	TYPE OF TEST POSSIBLE	TYPE OF ROTLS USED*
CA	CAMA	Transmission except when ONI or CAMA Transfer	All
DD	Class 5-to-Class 4 DDD Access Trunk	Transmission and Operational	All
IA	Intraoffice	Transmission	5XB (Small and Expanded)
IE	Interexchange	Transmission and Operational	All
IM	Intermarker Group	Transmission	5XB (Small and Expanded)
IT	Intertoll	Transmission and Operational	All
MT	Intertandem	Transmission and Operational	All
SP	Traffic Service Position	Transmission and Operational Except for TSPS 0— Trunks	All
TC	Toll Completing	Transmission and Operational	All
TE	End Office Toll	Transmission and Operational	All
TG	Tandem Completing	Transmission and Operational	All
TM	Toll Completing and Toll Switching Combined	Transmission and Operational	All
TO	Tandem Originating	Transmission and Operational	All
See Note.	Central Office-to-PBX Trunks Arranged for Direct Inward Dial Except for Those Using Dial Tone as a Start Dial System	Transmission	Expanded 5XB and No. 1 ESS
CN	CCSA Network Trunks	Transmission	Expanded 5XB and No. 1 ESS
ON	CCSA Off-Network Access Lines	Transmission	Expanded 5XB and No. 1 ESS

Note: Common-language usage codes not assigned.

* ESS ROTLs cannot perform operational tests.

TABLE B

TEST GROUP FACILITY CODES

CODE*	FACILITY TYPE	TEST INTERVAL (SEE SECTION 660-402-300)
1000	Carrier Such as L and R Without Group Regulation; K, N, and N1.	Daily†
1010	Carrier Such as L and R With Group Regulation; N2, N3, D1, and D2.	Weekly
1020	Repeaters Other than E-type.	Biweekly
1030	Carrier and Other than E-type Repeater Facilities Where Future Monthly Intervals May be Established.	Monthly†
0520	E-type Repeaters Such as E13, E23, and E6.	Biweekly
0530	Nongain.	Monthly
0030	Noncontrolled, 2-Way.	Monthly†

* While CAROT 1 will continue to operate on previously used alphanumeric designations for facility type, the conversion of CAROT 1 to CAROT 2 will require the use of the above numeric codes.

† These interval codes will not be used in the TTMI results report.

all trunks in a trunk group will usually leave at the same selector level. In any case, the far-end office expects to receive the number of digits remaining, which depends on the originating office. The number of digits remaining in SXS calls can be determined from the selector level at which the trunk originates or from common control information. In 1XB/XBT offices it can be determined from the common control cross-connect records. This information need be entered only if other than seven or ten digits are to be outpulsed and only

if the NPA or NNX is different from that found in the test line directory.

5.18 To ensure the proper routing of calls, common control offices (SXS and 1XB/XBT) sometimes examine the NNX of the called number, and replace it with a substitute NNX, before outpulsing to the next office in the switching network. The far-end office translates the substitute NNX and continues the switching of the call. A typical case of such code conversion may occur on a call to a class 5 office having more than one NNX with the same third digit (947 and 637 for example). A near-end office may, instead of outpulsing six or seven digits to reach a far-end address, outpulse only five. By arrangement between the two offices, the near end can outpulse 7XXXX for a 947 number, and 5XXXX for a 637 number. The far-end will then recognize the prefix 5 as an indication of the 637 exchange. The code conversion used and the replacement NNX required can be obtained from common control information.

5.19 For the conditions described in 5.17 and 5.18 (test connector ROTLs), the ROTL must be given the number normally outpulsed at the point of the test connector. Thus, it must be given the proper number of digits as well as the "post-code conversion" form of the number. Trailing blanks in the test line directory number such as the blank after the 5 in "212 393 105—" are not counted in determining which digits will be outpulsed. In the above example if the number of digits to be outpulsed were five, then 93105 would be used.

5.20 For trunks outgoing from a 5XB office to tandem or toll offices (trunks which normally require a 3-digit FETL number in the format of 10X or NNX) the 5XB marker requires a far-end NNX from the ROTL in order to find the route relay for a trunk group. If the test call is on a trunk terminating at a tandem office, the NNX used is that of an exchange beyond the tandem office to which traffic would ordinarily be routed over the trunk under test. The 5XB marker uses the NNX along with other information to find the route relay, and then deletes the NNX before outpulsing. If the tandem office is also a toll office with a 3-digit terminating toll center (TTC) code, the TTC code may be used instead of an NNX. The use of an NNX causes problems when, for example, a direct trunk group is initiated between the 5XB office and the far-end tandem NNX. The FETL number for the tandem office

trunk group must be changed to use some other NNX routed through the tandem office. Thus, routing changes at 5XB/ROTL offices must be coordinated with CAROT FETL directory changes. An additional difficulty occurs for trunk groups from a 5XB office to a tandem office if they carry traffic only to a foreign NPA from both the 5XB and tandem office NPAs. This situation may occur, particularly in common control switching arrangement (CCSA) networks. For this case the 5XB marker must be provided with the NPA-NNX of an office on the far side of the tandem office. The home NPA of the tandem office cannot be used, and a replacement NPA as well as a replacement NNX must be provided in the G field.

5.21 The office test line directory (Section 010-410-311) stores an FETL number in the format of NPA-NNX-XXXX or NPA-000-XXX for each traffic use of trunks terminating in the office. The terminating office and the traffic use are both used to determine the basic FETL number. For example, this basic FETL number is modified by the information in the G field, character positions 19 through 25, as follows.

- (a) **ESS ROTLs:** Either NPA-NNX-XXXX or NNX-XXXX is used, depending on whether the terminating office is in the same NPA as the ESS office. (In either case, the FETL number may be of the format 10X rather than XXXX, if so specified in the test line directory.)
- (b) **Expanded SXS and 1XB/XBT ROTLs:** If a replacement NNX is used in the G field, it is substituted for the NNX in the test line directory and the number of FETL digits specified in character position 19 is used. Numbers of format NPA-000-10X are converted to 10X.
- (c) **Expanded 5XB ROTL:** If a replacement NPA is used in the G field, it is substituted for the NPA in the test line directory. If a replacement NNX is used in the G field, it is substituted for the NNX or 000 in the test line directory. If the number of digits to outpulse (character position 19) is left blank, NPA-NNX-XXXX or NNX-XXXX (NPA-NNX-10X, NPA-10X, or NNX-10X, if using the 10X-type format) is outpulsed, depending upon the value of the CG digit (character position 22) in the H field. The number of digits to outpulse should be shortened as required.

5.22 Operational Testing Scheduling Code:

Character positions 26 and 27 are used in CAROT 1 to identify trunks such as ANI that cannot be operationally tested. Without the indicator, a separate TMF is needed for operational tests to exclude those trunks that are untestable.

Trunk Priming (H Field)

5.23 Trunk priming information is obtained from both the office description forms and traffic information. Trunk priming varies, depending on the type of ROTL, since this information is used by the ROTL to gain access to a specific trunk. Figure 14 shows the trunk location addresses of the H field of the TMF worksheet and gives the contents of character positions 11 through 22. More detailed information on the trunk priming part of the TMF worksheet is given in Part 6 of this Section.

C. Office Description Forms

5.24 Office description forms are used to aid in assembling information required at the CAROT Center for trunk priming. These forms will be needed initially and from time to time as changes occur in testing arrangements, but they will not be needed as frequently as the TMF worksheet described previously.

Small SXS ROTL Office

5.25 Form ODF-D (Fig. 15) is provided for use with small SXS ROTLs. This testing arrangement uses a test connector to gain access to trunks. Since test connector positions are directly cabled or permanently assigned to the trunk relay equipment, the test connector assignment should be entered on this form. This form is then used as a translation table by the CAROT Center to translate trunk relay assignments appearing on the traffic trunk order into trunk priming digits on the TMF worksheet. This information (assignments) must be determined prior to installation so that WECO can cable and cross-connect. The form should be filled out at the time of assignment and updated as office rearrangements occur.

Small 5XB ROTL Office

5.26 Form ODF-C (Fig. 16) is used to record the route translation assignments for the 20 trunk groups that can be tested via a small 5XB

ROTL. This form should be filled out when the cross-connections are assigned during ROTL installation and updated as trunk groups are added or disconnected.

5.27 For 5XB ROTL offices using 160-point trunk link frames, there is a fixed relationship between the trunk equipment assignment (switch, level, and appearance) made by traffic and the test access information (busy test lead) required as part of the ROTL priming. Tables C and D provide the information necessary to translate from one to the other.

5.28 For 5XB ROTL offices using 200-point trunk link frames (miniswitch), the relationship between the trunk equipment assignment (switch, level, and appearance) made by traffic and the test access information (busy test lead) is flexible and may be assigned in the central office. This arrangement makes CAROT data base administration quite complicated. Effort should be made to have traffic assign the busy test leads or make assignments inflexible as given in Table D and in either case provide the information on the traffic trunk order.

Expanded SXS ROTL Office

5.29 Form ODF-E (Fig. 17) is used to prepare a table relating equipment or selector switch assignment to test connector appearance for expanded SXS ROTLs when the test connector appearances are permanently cabled. Information for this table can be obtained from Western Electric T-drawings. Form ODF-F (Fig. 18) is used to record the cross-connect assignments of assignable test connector appearances for expanded SXS ROTL offices.

1XB/XBT ROTL Office

5.30 Form ODF-G (Fig. 19) is used to prepare a table which may be used for converting office link frame appearances to ITTC appearances for 1XB/XBT ROTL offices. Information for the table may be obtained from Western Electric

T-drawings. The T-drawings may be used directly if convenient.

D. Trunk Group Description Forms

5.31 Trunk group description (TGD) forms are used for expanded SXS, expanded 5XB, and 1XB/XBT ROTL offices to collect trunk group dependent data. These forms will be needed initially and from time to time as changes occur in testing arrangements that affect the trunk group. They will not be needed as frequently as the TMF worksheet described previously.

Expanded SXS ROTL Office

5.32 Figure 20 shows a form which may be used to collect trunk group dependent information for expanded SXS ROTL offices. The number of FETL digits and the replacement NNX may be transferred directly to the G field of the TMF worksheet. Character position 17 in the H field may be determined as shown in Fig. 21.

1XB/XBT ROTL Office

5.33 The form shown in Fig. 22 may be used to collect the trunk group dependent data for 1XB/XBT ROTL offices. The number of FETL digits and the replacement NNX may be transferred directly to character positions 19 and 23 through 25 in the G field of the TMF worksheet. Character positions 16 and 17 in the H field may be determined as shown in Fig. 23 and 24.

Expanded 5XB ROTL Office

5.34 When initializing a 5XB ROTL data base or adding a new trunk group, a form similar to the one shown in Fig. 25 can be used to provide a permanent record of the group dependent data. The form can also be used as a reference when future per-trunk actions are taken on the trunk group.

TABLE C

NO. 5XB – RELATIONSHIP BETWEEN TRUNK MACHINE ASSIGNMENT AND TRUNK LOCATION ADDRESS

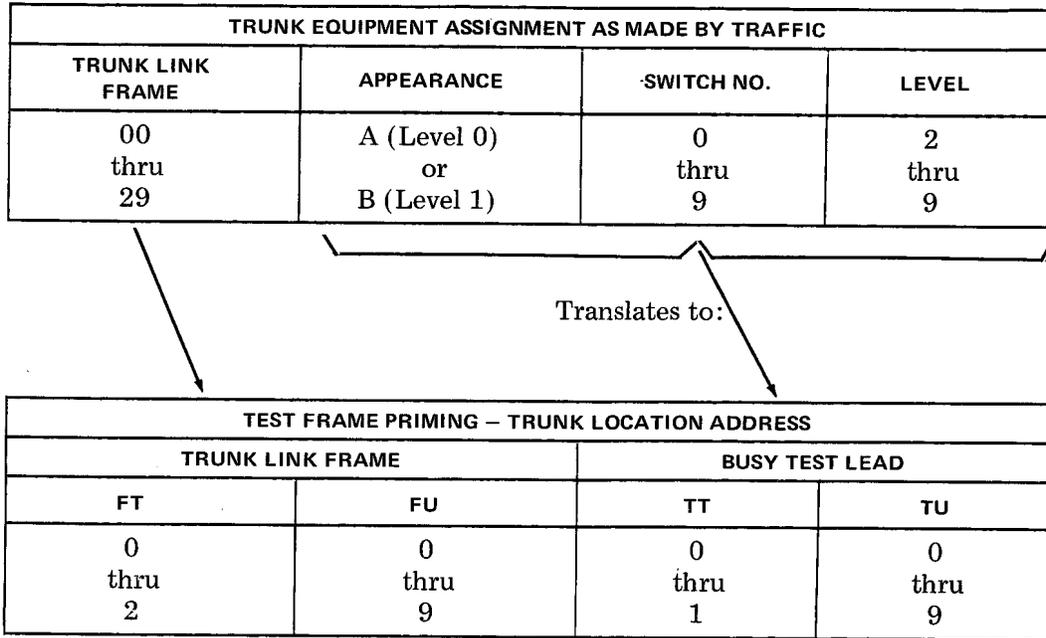


TABLE D

NO. 5XB TRUNK LINK FRAME TRUNK ASSIGNMENT TO TEST ACCESS TRANSLATION DATA APPEARANCE, SWITCH, AND LEVEL TRANSLATION TO BUSY TEST LEAD (TT, TU)

TRUNK LINK FRAME	APPEARANCE	LEVEL	TT	TU
160-Point	A	2, 3, 4, 5, 6, or 8	0	Same as Switch No. (0 thru 9)
		7 or 9	1	
200-Point*	B	2, 3, 4, or 5	1	
		A	2, 3, 4, 5, 6, or 8	
	B	7 or 9	1	
		2, 3, 4, 5, 7, or 9	1	
	6 or 8	0		

*The assignment is flexible in 200-point trunk link frames and may be locally administrated (see 5.27).

5.35 The trunk group location address on the TGD form may be moved directly to the TMF worksheet H field character positions as follows:

TGD CHARACTER	H FIELD CHARACTER POSITION
TYP	11
TR	17
MG	18
CTA	19
CU	20
CRU	21
CG	22

If 2-digit, 5-digit, or XII translation (TR = 4, 9, or 5, respectively) is used, or if no translation is used (TR = 6 or 7), the number of FETL digits must be used to specify the number of digits in the test line number outpulsed by CAROT to the ROTL and acted on by the translator. It may be left blank in other cases. If code conversion is used, one must specify an NPA-NNX, NPA, or NNX which may be routed over the trunk group (5.20) with consideration given to the previously specified route advance, class, rate treatment, and translation information. Ordinarily, this need not be entered and may be left blank since the NPA and NNX or TTC of the distant office will normally already appear in the entry for the distant office in the office test line directory.

6. ROTL AND TRUNK PRIMING INFORMATION

A. SXS ROTL, Small (J34305A)

6.01 The SXS ROTL gains access to a specific trunk through a test connector. The test connector number identifies the trunk uniquely and is outpulsed to the ROTL from CAROT. Figure 26 shows the trunk priming part of the TMF worksheet and provides a list of data items for each character position. It should be noted that if the ROTL is equipped for MF outpulsing, information must be provided in character position 17 to indicate the pulsing used on the particular trunk—a 1 for MF or a 2 for DP.

B. 5XB ROTL, Small (J23263A)

6.02 The 5XB ROTL gains access to a specific trunk through the switching network of the office. To identify a trunk, the ROTL requires the number of the trunk link frame and the busy test lead location on the trunk block relay. In addition, a route translation is needed to access one of 20 cross-connect fields containing marker priming and test line directory number information for each trunk group. Figure 26 shows the trunk priming part of the TMF worksheet and provides a list of data items for each character position.

C. No. 1 ESS ROTL (J2H018)

6.03 The No. 1 ESS ROTL gains access to a specific trunk through the switch. It consists of software, generic programs CC- and SP-CTX6 or later, and hardware. The trunk priming information required for the CAROT TMF is a trunk location address, occupying character positions 11 through 17 of the H field and consisting of a 1-digit modifier to specify local or tandem mode and a 6-digit trunk network number (TNN). The TNN designates the specific appearance of the trunk on the switch and may be initially assigned by Western Electric Company. Additions, deletions, and changes are generally administered by traffic assignment groups.

6.04 The 1-digit modifier that specifies local or tandem mode is either 0, 1, or 2. The digit 0 represents a local originating mode. This mode means that the trunk can be reached only by line origination on the same machine. The digit 1 represents tandem 1 mode, and the digit 2 represents tandem 2 mode. Tandem 1 or tandem 2 controls the configuration of the trunk circuit and refers to the use of a specific isolation transformer.

6.05 If the trunk can be accessed in the tandem mode, a 1 or a 2 should be entered in the TMF as the modifier digit. Otherwise, a 0 should be entered for local originating only. However, in many systems the No. 1 ESS trunk may be accessed in both originating and tandem modes. The maximum number of components are in the transmission path when the trunk is used as local originating, and the trunk should be tested in this mode. If testing is to be done in both modes on the same trunk, a separate TMF is necessary for the tandem mode. Simplified methods of testing

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in alternate modes will be provided in advanced versions of CAROT.

6.06 The six digits making up the TTN and an explanation of each are given in Table E. Figure 27 shows the trunk priming part of the TMF worksheet and provides a list of data items for each character position.

D. No. 2 ESS ROTL (J2039)

6.07 The No. 2 ESS ROTL gains access to a specific trunk through the switch. It consists of software; generic program EF1, Issue 3 or later; and hardware. The trunk priming information required for the CAROT TMF (H field, character positions 11 through 17) is a trunk modifier digit, a 3-digit trunk group number (TGN), and a 3-digit member (MEM) number. The TGN and MEM numbers are software designations for the trunk and may be initially assigned by Western Electric Company. Additions, deletions, and changes are generally administrated by traffic assignment groups. The TGN range is 066 to 511; the MEM number range is 000 to 255.

6.08 The 1-digit modifier is either 0 or 1. A 0 specifies that the trunk is to be placed in the "talk tandem off-hook" state without a transformer in the talking path. A 1 specifies that the trunk is to be placed in the "talk tandem off-hook" state with a transformer in the talking path.

6.09 Figure 27 shows the trunk priming part of the TMF worksheet and provides a list of data items for each character position.

E. No. 4 ESS ROTL (J4A007)

6.10 The No. 4 ESS ROTL is controlled by CAROT 2. The Circuit Maintenance System 1A (CMS 1A) administers the CAROT 2 data base as it concerns the No. 4 ESS. The No. 4 ESS ROTL gains access to a specific trunk through the switch. The trunk priming information required is a 7-digit trunk appearance number (TAN).

F. SXS ROTL-2, Expanded (J34306A and B)

6.11 The expanded SXS ROTL gains access to a trunk through a crossbar test connector. The test connector access point is identified by a 4-digit number to which a 1-digit pulsing identification number is added to comprise the trunk location. Table F describes the entries required for pulsing. Figure 28 shows the trunk priming part of the TMF worksheet and provides a list of data items for each character position.

6.12 The test connector information is either directly related to the selector switch or trunk equipment if it is hardwired, or assignable if not hardwired. Test connector assignments should be made and records maintained by the organization responsible for trunk assignment. In either case, the test connector appearance should appear on all new traffic trunk orders. The office description forms described in 5.29 and the TGD

TABLE E

NO. 1 ESS TRUNK NETWORK NUMBER

DIGIT POSITION	EXPLANATION
1st & 2nd	Trunk Link Network Number, 00, 01, 02, . . . 15
3rd	Trunk Switch Frame Number (0 thru 7)
4th	Grid Number (0 thru 3)
5th	Switch Number (0 thru 7)
6th	Output Switch Level (0 thru 7)

TABLE F

**SXS EXPANDED ROTL PULSING INFORMATION
H FIELD – TMF WORKSHEET (E6303)**

DATA ITEM ENTRY FOR CHARACTER POSITION 17	MEANING OF DATA ITEM ENTRY
0	Dial Pulse, Loop; or Dial Pulse, Loop, HOTL on Connector.
1	Dial Pulse, Loop, Delay Dial.
2	Dial Pulse, Simplex; or Dial Pulse, Simplex, HOTL on Intertoll Selector.
3	Dial Pulse, Simplex, Delay Dial.
4	Multifrequency, Loop.
5	Multifrequency, Simplex.
6	HOTL on Tandem Selectors.
7 or 8	Unassigned.
9	Dial Pulse, Loop (Testing SAMA Trunks to a Tandem Office).

form described in 5.32 should be used as references for obtaining the trunk priming information.

G. 1XB/XBT ROTL (J28555)

6.13 The 1XB/XBT ROTL gains access to a trunk through a test connector. The test connector number is a 5-digit number to which 2 digits of pulsing information are added to comprise the trunk location. Table G describes the pulsing information required. Figure 29 shows the trunk priming portion of the TMF worksheet and provides a list of data items for each character position.

6.14 The test connector number (H field, character positions 11 through 15) is directly related to the office link appearance of the trunk. The office link frame appearance is assigned by the trunk assignment organization. Records are kept there and at the switching office. The relationship between office link frame appearance and ITTC

appearance is documented by Western Electric T-Drawings.

H. 5XB ROTL-2, Expanded (J23263D, E, and F)

6.15 The 5XB ROTL gains access to a trunk through the switching network of the office. The expanded 5XB ROTL receives all of its priming information from the CAROT controller, in contrast to the small 5XB ROTL where marker priming and test line information is cross-connected in the ROTL. The expanded 5XB ROTL is more flexible and is able to access a greater number of trunks but it requires much more complex trunk location information. Figure 30 shows the trunk priming part of the TMF worksheet and provides a list of the data items for each character position. For more detailed information on the trunk location address (H field, character positions 11 through 22), refer to Appendix 1.

TABLE G

NO. 1XB AND XBT ROTL OUTPULSING
H FIELD — TMF WORKSHEET (E6303)

DATA ITEM ENTRIES FOR CHARACTER POSITIONS 16 AND 17		INFORMATION PROVIDED BY DATA ITEM ENTRY	
16	17	TYPE OF PULSING AND SUPERVISION REQUIRED TO COMPLETE TO DISTANT OFFICE	
0	0	MF Pulsing	Wink Start Supervision.
0	1	MF Pulsing	Stop-Go Supervision.
0	2	MF Pulsing	Delay Dial Supervision.
0	3	MF Pulsing	Delay Dial Supervision, 2-Way.
1	0	DP Pulsing	Without Loop Compensation Wink Start Supervision.
1	1	DP Pulsing	Without Loop Compensation Stop-Go Supervision.
1	2	DP Pulsing	Without Loop Compensation Delay Dial Supervision.
1	3	DP Pulsing	With Loop Compensation Wink Start Supervision.
1	4	DP Pulsing	With Loop Compensation Stop-Go Supervision.
1	5	DP Pulsing	With Loop Compensation Delay Dial Supervision.
1	6	DP Battery and Ground Pulsing	Start Supervision.
1	7	DP Battery and Ground Pulsing	Stop-Go Supervision.
1	8	DP Battery and Ground Pulsing	Delay Dial Supervision.
1	9	DP Pulsing	Without Loop Compensation Delay Dial Supervision, 2-Way.
2	0	RP Pulsing	0 Ohms Loop Compensation to Panel Offices Using 24-volt Supervision.
2	1	RP Pulsing	0 Ohms Loop Compensation to Panel and XBT Offices Using 48-volt Supervision.
2	2	RP Pulsing	300 Ohms Loop Compensation to Panel Offices Using 24-volt Supervision.
2	3	RP Pulsing	300 Ohms Loop Compensation to Panel and XBT Offices Using 48-volt Supervision.
2	4	RP Pulsing	600 Ohms Loop Compensation to Panel Offices Using 24-volt Supervision.
2	5	RP Pulsing	600 Ohms Loop Compensation to Panel and XBT Offices Using 48-volt Supervision.
2	6	RP Pulsing	900 Ohms Loop Compensation to Panel Offices Using 24-volt Supervision.
2	7	RP Pulsing	900 Ohms Loop Compensation to Panel and XBT Offices Using 48-volt Supervision.
3	0	PCI Pulsing	0 Ohms Loop Compensation
3	1	PCI Pulsing	300 Ohms Loop Compensation
3	2	PCI Pulsing	600 Ohms Loop Compensation
3	3	PCI Pulsing	900 Ohms Loop Compensation
4	0	RP Pulsing	0 Ohms Loop Compensation to Second XBT Office Over Same Trunk Group.
4	1	RP Pulsing	300 Ohms Loop Compensation to Second XBT Office Over Same Trunk Group.
4	2	RP Pulsing	600 Ohms Loop Compensation to Second XBT Office Over Same Trunk Group.
4	3	RP Pulsing	900 Ohms Loop Compensation to Second XBT Office Over Same Trunk Group.

TRUNK GROUP IDENTIFICATION																	GROUP NUMBER		CONTROL OFFICE																																																																																
ACTION	ORIGINATING OFFICE					TERMINATING OFFICE					TRUNK TYPE							TOWN	STATE	BLOG	UNIT																																																																														
	TOWN	STATE	BLOG	UNIT	PULS-ING	TOWN	STATE	BLOG	UNIT	TRAFFIC OFFICE CLASS	TRAFFIC USE	MOD-IFER	TOWN	STATE	BLOG	UNIT																																																																																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

CHARACTER POSITION	DATA ITEM
1	A - FOR ADDITION OF NEW TRUNK GROUP. B - FOR ADDITION OF TRUNKS TO A TRUNK GROUP ALREADY IN FILE. C - FOR CHANGE TO EXISTING TRUNK OR TRUNK GROUP. D - FOR DELETION OF TRUNKS OR TRUNK GROUP. E/C - FOR CHANGE OF TRUNK GROUP IDENTIFICATION OR TRUNK NO.
2-12	COMMON LANGUAGE NAME OF ORIGINATING OFFICE- 2-7 MUST BE ALPHA, 8-12 MUST BE ALPHA OR NUMERIC, NOT BLANK.
13	PULSING OUT OF ORIGINATING OFFICE- ALPHA OR NUMERIC, NOT BLANK.
14	PULSING OUT OF TERMINATING OFFICE- ALPHA OR NUMERIC, NOT BLANK (SEE NOTE).
15-25	COMMON LANGUAGE NAME OF TERMINATING OFFICE- 15-20 MUST BE ALPHA, 21-25 MUST BE ALPHA OR NUMERIC, NOT BLANK.
26-27	TRAFFIC CLASS- MUST BE ALPHA OR NUMERIC, NOT BLANK.
28	ORIGINATING OFFICE CLASS- MUST BE ALPHA OR NUMERIC, NOT BLANK.
29	TERMINATING OFFICE CLASS- MUST BE ALPHA OR NUMERIC, NOT BLANK.
30-31	TRAFFIC USAGE- MUST BE ALPHA OR NUMERIC, NOT BLANK (SEE NOTE 2).
32-38	MODIFIER- MAY BE ALPHA, NUMERIC, OR BLANK.
39-46	GROUP NUMBER- TRUNK GROUP NUMBER ASSIGNMENT SUCH AS CIRCUIT SUBGROUP NUMBER- MAY BE ALPHA, NUMERIC, OR BLANK.
47-57	CONTROL OFFICE COMMON LANGUAGE NAME. THIS INFORMATION FOR USE IN CAROT 2- MAY BE ALPHA, NUMERIC, OR BLANK.
58	CARRIAGE RETURN *
59	LINE FEED *

NOTES:

1. WHEN NO PULSING IS USED, USE A (-). SEE SECTION 795-400-100.
2. THE TRAFFIC USAGE CODE IS ALSO USED IN THE TEST LINE DIRECTORY TO DETERMINE THE LINE TYPE TO BE USED. SEE TABLE A.

* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 11—Trunk Group Identification Field

FACILITY GROUP IDENTIFICATION																																																																																																			
CODE	FACILITY			FAR END LOCATION					NEAR END LOCATION																																																																																										
	NUMBER	TYPE	TOWN	STATE	BLOG	UNIT	TOWN	STATE	BLOG	UNIT	TOWN	STATE	BLOG	UNIT																																																																																					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

CHARACTER POSITION	DATA ITEM
1	F
2-6	FACILITY NUMBER OF FIRST FACILITY LEAVING ORIGINATING OFFICE- MAY BE ALPHA, NUMERIC, OR BLANK.
7-12	FACILITY TYPE LEAVING ORIGINATING OFFICE- MAY BE ALPHA, NUMERIC, OR BLANK.
13-23	COMMON LANGUAGE NAME OF FAR-END TERMINAL BUILDING OF FACILITY- 13-18 MUST BE ALPHA OR BLANK, 19-23 MAY BE ALPHA, NUMERIC, OR BLANK.
24-34	COMMON LANGUAGE NAME OF NEAR-END TERMINAL BUILDING OF FACILITY- MAY BE ALPHA, NUMERIC, OR BLANK.
35	CARRIAGE RETURN *
36	LINE FEED *

* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 12—Facility Group Identification

ROTL TYPE	CHARACTER POSITIONS											
	11	12	13	14	15	16	17	18	19	20	21	22
SMALL 5XB	RTT	RTU	FT	FU	TT	TU						
EXPANDED 5XB	TYP	RA	FT	FU	TT	TU	TR	MG	CTA	CU	CRU	CG
SMALL SXS				Test Connector Number								
EXPANDED SXS			Test Connector Switch		Test Connector Select Magnet	Test Connector Hold Magnet	Type of Pulsing					
1XB OR XBT	Switch Number		Select Magnet Number	Hold Magnet Number		Type of Pulsing						
NO. 1 ESS	Modifier	Trunk Network Number										
NO. 2 ESS	Modifier	Trunk Group Number			Memory Number							
NO. 4 ESS	Trunk Appearance Number											
5XB APTT*			FT/FTCD	FU	TT	TU/SSN	IHT	ITT	IUT	ITH	ASN	ASH
4XB AOTT*	Train	Test Connector Number										
SXS AOTT*		Test Connector Number										

* Use Forms E6304A and E6304B (Section 010-410-330) for test frame tape preparation.

Fig. 14—Trunk Location Addresses—H Field

ODF-F
CAROT

OFFICE DESCRIPTION FORM
TRUNK MAINTENANCE FILE DATA
EXPANDED STEP-BY-STEP ROTL OFFICE

OFFICE _____

TRUNK NUMBER	TRUNK GROUP IDENTIFICATION	TEST CONNECTOR		
		SWITCH	SEL.	HOLD
				0
				1
				2
				3
				4
				5
				6
				7
				8
				9
				0
				1
				2
				3
				4
				5
				6
				7
				8
				9
				0
				1
				2
				3
				4
				5
				6
				7
				8
				9

PREPARED BY _____ DATE _____ TELEPHONE _____

Fig. 18—Form ODF-F

ODF-6
CAROT

OFFICE DESCRIPTION FORM
TRUNK MAINTENANCE FILE DATA

IXB/XBT ROTL OFFICE

OFFICE _____

OFFICE LINK FRAME PAIR _____
LEVELS _____

OLF TERM	ITT CONNECTOR			OLF TERM	ITT CONNECTOR		
	SWITCH	SELECT	HOLD		SWITCH	SELECT	HOLD
00				25			
01				26			
02				27			
03				28			
04				29			
05				30			
06				31			
07				32			
08				33			
09				34			
10				35			
11				36			
12				37			
13				38			
14				39			
15				40			
16				41			
17				42			
18				43			
19				44			
20				45			
21				46			
22				47			
23				48			
24				49			

PREPARED BY _____ DATE _____ TELEPHONE _____

Fig. 19—Form ODF-G

EXPANDED STEP-BY-STEP ROTL
TRUNK GROUP DESCRIPTION FORM

TRUNK GROUP IDENTIFICATION					↑ LOOP SUPERVISION	↑ SIMPLEX SUPERVISION	↑ DELAY DIAL	# OF DIGITS OUTPULSED	REPLACEMENT NIX	IF NEEDED FOR	CODE CONVERSION	LINE NUMBER
TRUNK TYPE	OFFICE A	PULSING	OFFICE Z									
												01
												02
												03
												04
												05
												06
												07
												08
												09
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20

Fig. 20—Expanded SXS ROTL TGD Form

EXPANDED STEP-BY-STEP ROTL
TRUNK GROUP DESCRIPTION FORM

TRUNK GROUP IDENTIFICATION				LOOP SUPERVISION*	SIMPLEX SUPERVISION*	DELAY DIAL*	# OF DIGITS OUTPULSED	REPLACEMENT NINX IF NEEDED FOR CODE CONVERSION	LINE NUMBER
TRUNK TYPE	OFFICE A	PULSING	OFFICE Z						
									01
									02
		}			1	0	0		03
						1	0	1	04
						0	1	0	05
						0	1	1	06
		}							07
						1	0	X	08
					0	1	X		09
									10
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20

0
1
2
3
4
5
TMF H FIELD
CHARACTER
POSITION
17

* LEGEND:
1 - APPLICABLE
0 - NOT APPLICABLE
X - DON'T CARE

Fig. 21—Example of Using Expanded SXS ROTL TGD Form to Determine Character Position 17 (H Field of TMF Worksheet)

CROSSBAR TANDEM AND NO.1 CROSSBAR ROTL
TRUNK GROUP DESCRIPTION FORM

TRUNK GROUP IDENTIFICATION				SUPERVISION													LINE NUMBER		
TRUNK TYPE	OFFICE A	PULSING	OFFICE Z	LOOP	BATT. AND GRD	O.G. COMP.	300 Ω	600 Ω	900 Ω	TO 24V PANEL	TO 48V XBT OR BAY	WINK START	STOP-GO	DELAY DIAL	TO 1 ST XBT OVER GROUP	TO 2 ND XBT OVER GROUP		# OF DIGITS OUTPULSED	REPLACEMENT MNX IF CODE CONVERSION USED
																			01
																			02
																			03
																			04
																			05
																			06
																			07
																			08
																			09
																			10
																			11
																			12
																			13
																			14
																			15
																			16
																			17
																			18

Fig. 22—1XB/XBT TGD Form

CROSSBAR TANDEM AND NO.1 CROSSBAR ROTL
TRUNK GROUP DESCRIPTION FORM

TRUNK GROUP IDENTIFICATION				SUPERVISION *													LINE NUMBER																																																																																																																																																																																																																																																																																																																	
TRUNK TYPE	OFFICE A	PULSING	OFFICE Z	LOOP	BATT. AND GRD	0 Ω COMP.	300 Ω	600 Ω	900 Ω	TO 24V PANEL	TO 48V XBT OR BAY	WINK START	STOP-GO	DELAY DIAL	TO 1 ST XBT OVER GROUP *	TO 2ND XBT OVER GROUP *		# OF DIGITS OUTPULSED	REPLACEMENT NIX IF CODE CONVERSION USED																																																																																																																																																																																																																																																																																																															
	ONE WAY			X	X	X	X	X	X	X	X	/	0	0	X	X			MF PULSING, OUTGOING	ONE WAY			X	X	X	X	X	X	X	X	0	/	0	X	X				ONE WAY			X	X	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X				ONE WAY			/	0	/	X	X	X	X	X	/	0	0	X	X				ONE WAY			/	0	/	X	X	X	X	X	0	/	0	X	X				ONE WAY			/	0	/	X	X	X	X	X	0	0	/	X	X				ONE WAY			/	0	0	X	X	X	X	X	/	0	0	X	X			DP PULSING, OUTGOING	ONE WAY			/	0	0	X	X	X	X	X	0	/	0	X	X				ONE WAY			/	0	0	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	/	0	0	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																											
MF PULSING, OUTGOING	ONE WAY			X	X	X	X	X	X	X	X	0	/	0	X	X				ONE WAY			X	X	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X				ONE WAY			/	0	/	X	X	X	X	X	/	0	0	X	X				ONE WAY			/	0	/	X	X	X	X	X	0	/	0	X	X				ONE WAY			/	0	/	X	X	X	X	X	0	0	/	X	X				ONE WAY			/	0	0	X	X	X	X	X	/	0	0	X	X			DP PULSING, OUTGOING	ONE WAY			/	0	0	X	X	X	X	X	0	/	0	X	X				ONE WAY			/	0	0	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	/	0	0	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																																														
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	ONE WAY			/	0	/	X	X	X	X	X	/	0	0	X	X				ONE WAY			/	0	/	X	X	X	X	X	0	/	0	X	X				ONE WAY			/	0	/	X	X	X	X	X	0	0	/	X	X				ONE WAY			/	0	0	X	X	X	X	X	/	0	0	X	X			DP PULSING, OUTGOING	ONE WAY			/	0	0	X	X	X	X	X	0	/	0	X	X				ONE WAY			/	0	0	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	/	0	0	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																																																																																																							
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	ONE WAY			/	0	0	X	X	X	X	X	/	0	0	X	X			DP PULSING, OUTGOING	ONE WAY			/	0	0	X	X	X	X	X	0	/	0	X	X				ONE WAY			/	0	0	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	/	0	0	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																																																																																																																																																																
DP PULSING, OUTGOING	ONE WAY			/	0	0	X	X	X	X	X	0	/	0	X	X				ONE WAY			/	0	0	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	/	0	0	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																																																																																																																																																																																			
	ONE WAY			/	0	0	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	/	0	0	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																																																																																																																																																																																																						
	ONE WAY			0	/	X	X	X	X	X	X	/	0	0	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																																																																																																																																																																																																																									
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	ONE WAY			0	/	X	X	X	X	X	X	0	0	/	X	X				TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																																																																																																																																																																																																																																																															
	TWO WAY			X	X	X	X	X	X	X	X	X	X	X	X	X																																																																																																																																																																																																																																																																																																																		

* LEGEND:
I - APPLICABLE
0 - NOT APPLICABLE
X - DON'T CARE

Fig. 23—Example of Using 1XB/XBT ROTL TGD Form to Determine Character Positions 16 and 17 (H Field of TMF Worksheet)—MF and DP Pulsing

TRUNK PRIMING																						
CODE	TRUNK NUMBER					CHANNEL NUMBER					TRUNK LOCATION ADDRESS											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
I																						
H																						
H																						

USE UPPER H FIELD COLUMNS FOR A, B, C, AND D ACTIONS AND AFTER E FOR E/C ACTION. USE LOWER H FIELD COLUMNS AFTER C FOR E/C ACTION AND, IF NEEDED, IN ADDING, DELETING, OR CHANGING A LARGE NUMBER OF TRUNKS.

CHARACTER POSITION	DATA ITEM	
I	H	
2-5	TRUNK NUMBER - ALPHA, NUMERIC, OR BLANK	
6-10	CHANNEL NUMBER OF FIRST FACILITY - NUMERIC OR BLANK	
11-22	TRUNK LOCATION ADDRESS - ALPHA, NUMERIC, OR BLANK SEE BELOW:	
	NO. 5XB ROTL SMALL (J23263A)	SXS ROTL SMALL (J34305A)
11	ROUTE TRANSLATION TENS	BLANK
12	FRAME TRANSLATION UNITS	BLANK
13	FRAME TENS (FT)	BLANK
14	FRAME UNITS (FU)	TEST CONN HUNDREDS
15	BUSY TEST TENS (TT)	TEST CONN TENS
16	BUSY TEST UNITS (TU)	TEST CONN UNITS
17	TYPE OF PULSING * (1-MF; 2-DP)	TYPE OF PULSING * (1-MF; 2-DP)
18	CARRIAGE RETURN †	CARRIAGE RETURN †
19	LINE FEED †	LINE FEED †

* TYPE OF PULSING IF EQUIPPED FOR MF OUTPULSING; OTHERWISE BLANK.
† CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 26—Trunk Priming Field—Small SXS and Small 5XB ROTLs

TRUNK PRIMING																						
CODE	TRUNK NUMBER					CHANNEL NUMBER					TRUNK LOCATION ADDRESS											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
I																						
H																						
H																						

USE UPPER H FIELD COLUMNS FOR A, B, C, AND D ACTIONS AND AFTER E FOR E/C ACTION. USE LOWER H FIELD COLUMNS AFTER C FOR E/C ACTION AND, IF NEEDED, IN ADDING, DELETING, OR CHANGING A LARGE NUMBER OF TRUNKS.

CHARACTER POSITION	DATA ITEM	
I	H	
2-5	TRUNK NUMBER - ALPHA, NUMERIC, OR BLANK	
6-10	CHANNEL NUMBER OF FIRST FACILITY - NUMERIC OR BLANK	
11-22	TRUNK LOCATION ADDRESS - ALPHA, NUMERIC, OR BLANK; SEE BELOW:	
	NO. 1 ESS ROTL	NO. 2 ESS ROTL
11	MODIFIER	MODIFIER
12	TRUNK LINK NETWORK NUMBER	TRUNK GROUP NUMBER
13	TRUNK LINK NETWORK NUMBER	TRUNK GROUP NUMBER
14	TRUNK SWITCH FRAME	TRUNK GROUP NUMBER
15	GRID NUMBER	MEMBER NUMBER
16	SWITCH NUMBER	MEMBER NUMBER
17	OUTPUT SWITCH LEVEL	MEMBER NUMBER
18	CARRIAGE RETURN *	CARRIAGE RETURN *
19	LINE FEED *	LINE FEED *

* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 27—Trunk Priming Field—No. 1 and No. 2 ESS ROTLs

TRUNK PRIMING																						
CODE	TRUNK NUMBER					CHANNEL NUMBER				TRUNK LOCATION ADDRESS												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
I																						
H																						
H																						

USE UPPER H FIELD COLUMNS FOR A, B, C, AND D ACTIONS AND AFTER E FOR E/C ACTION. USE LOWER H FIELD COLUMNS AFTER C FOR E/C ACTION AND, IF NEEDED, IN ADDING, DELETING, OR CHANGING A LARGE NUMBER OF TRUNKS.

CHARACTER POSITION	DATA ITEM
I	H
2-5	TRUNK NUMBER - ALPHA, NUMERIC, OR BLANK.
6-10	CHANNEL NUMBER OF FIRST FACILITY - NUMERIC OR BLANK.
11-12	BLANK.
13-14	TEST CONNECTOR SWITCH NUMBER.
15	TEST CONNECTOR SELECT MAGNET NUMBER.
16	TEST CONNECTOR HOLD MAGNET NUMBER.
17	PULSING (SEE TABLE F).
18	CARRIAGE RETURN.*
19	LINE FEED *
* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND MUST BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.	

Fig. 28—Trunk Priming Field—Expanded SXS ROTL

TRUNK PRIMING																						
CODE	TRUNK NUMBER					CHANNEL NUMBER				TRUNK LOCATION ADDRESS												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
I																						
H																						
H																						

USE UPPER H FIELD COLUMNS FOR A, B, C, AND D ACTIONS AND AFTER E FOR E/C ACTION. USE LOWER H FIELD COLUMNS AFTER C FOR E/C ACTION AND, IF NEEDED, IN ADDING, DELETING, OR CHANGING A LARGE NUMBER OF TRUNKS.

CHARACTER POSITION	DATA ITEM
I	H
2-5	TRUNK NUMBER - ALPHA, NUMERIC, OR BLANK.
6-10	CHANNEL NUMBER OF FIRST FACILITY - NUMERIC OR BLANK.
11-12	ITTC SWITCH NUMBER (00-39). *
13	ITTC SELECT MAGNET NUMBER (0-9).
14-15	ITTC HOLD MAGNET NUMBER (00-19).
16-17	PULSING (SEE TABLE G).
18	CARRIAGE RETURN. †
19	LINE FEED. †
* ITTC SWITCH NUMBER MAY INCLUDE A CONSTANT TO DISTINGUISH BETWEEN ITTCS ASSOCIATED WITH DIFFERENT MARKER GROUPS.	
† CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND MUST BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.	

Fig. 29—Trunk Priming Field—1XB/XBT ROTL

TRUNK PRIMING																						
CODE	TRUNK NUMBER					CHANNEL NUMBER					TRUNK LOCATION ADDRESS											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
I																						
H																						
H																						

USE UPPER H FIELD COLUMNS FOR A, B, C, AND D ACTIONS AND AFTER E FOR E/C ACTION. USE LOWER H FIELD COLUMNS AFTER C FOR E/C ACTION AND, IF NEEDED, IN ADDING, DELETING, OR CHANGING A LARGE NUMBER OF TRUNKS.

CHARACTER POSITION	DATA ITEM
I	H
2-5	TRUNK NUMBER - ALPHA, NUMERIC, OR BLANK.
6-10	CHANNEL NUMBER OF FIRST FACILITY - NUMERIC OR BLANK. *
11	TYPE OF CALL (TYP). *
12	ROUTE ADVANCE AND GROUP ALLOTTER (RA). †
13	TRUNK LINK FRAME TENS (FT). †
14	TRUNK LINK FRAME UNITS (FU). †
15	BUSY TEST TENS (TT). †
16	BUSY TEST UNITS (TU). †
17	TYPE OF TRANSLATOR (TR). *
18	MARKER GROUP (MG). *
19	CLASS OF SERVICE TENS/TANDEM SCREENING (CTA). *
20	CLASS OF SERVICE UNITS (CU). *
21	RATE TREATMENT UNITS (CRU). *
22	RATE TREATMENT TENS/TRUNK CLASS GROUP (CG).
-	CARRIAGE RETURN. ‡
-	LINE FEED. ‡

* - SEE FIG. 2A OF APPENDIX I.
 † - SEE FIG. 3A OF APPENDIX I.
 ‡ - CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 30—Trunk Priming Field—Expanded 5XB ROTL