

**NO. 5 CROSSBAR  
TROUBLE REFERENCE GUIDE - PART 6  
OFFICE TEST FRAME  
BIN LISTINGS -----N, O, P, Q, R**

**1. GENERAL**

**1.01** This section is one of a series of sections comprising the information necessary to guide the central office maintenance force to an understanding of the nature of troubles reported by either trouble indicator-display records or ATA exception reports.

**1.02** Whenever this section is reissued, this paragraph will cover the reason for reissue. This issue does not affect Equipment Test Lists.

**1.03** Refer to Section 218-404-500 for an explanation of a typical bin listing, along with a complete listing of all bins, and the Trouble Reference Guide Part number in which they appear.

**1.04** The method of trouble duplication using the office test frame is provided in Part 11, Section 218-404-510.

**NOTICE**

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

## NO1TR/2TR

**LAMP INFORMATION**

Lamp

No Lamp - 1TR(TRK)/2TR(TR2), or

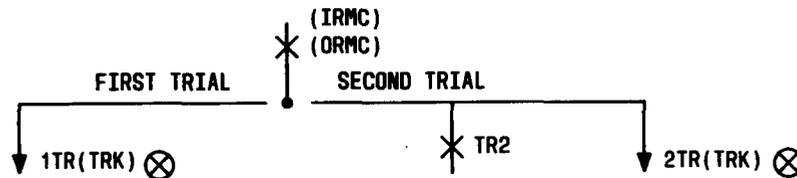
**DESCRIPTION OF CIRCUIT OPERATION**

The marker should receive the (1TR) or (2TR) information from the originating or incoming register. (1TR) indicates a first call and (2TR) indicates a second trial call.

**DESCRIPTION OF FAILURE**

The marker did not receive, from the originating or incoming register, information indicating a first or second trial call.

Probably will not complete on second trial.

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

OGT or INC Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01    FS-32    SC-101    CD-26002-01    Para - 1.08

NO1TR/2TR

NO-RLS.ORLM

**LAMP INFORMATION**

Lamp - DCT1 & FU-/HG-/VF-/CU-/LL-/VG-  
 No Lamp -DIS1

**DESCRIPTION OF CIRCUIT OPERATION**

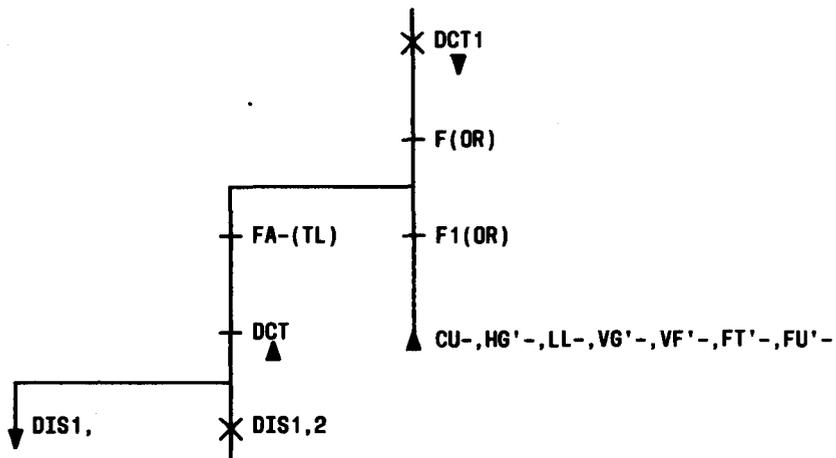
The dial tone marker is checking that the line location memory store leads are clear from false grounds. When the (F) relay releases in the OR, all the data transfer leads should be free from ground potential.

**DESCRIPTION OF FAILURE**

A false ground was detected on one of the leads used to store the line link location into the OR. (DCT1) lighted indicates that the dialing linkage is up. (DIS1) not lighted indicates that the marker did not release from the call.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION**



**TROUBLE DUPLICATION INFORMATION**

Dial Tone Test - See Section 218-404-510 - Part 11

**REFERENCE DOCUMENTS**

SD-26001-01      FS-9,10,46      SC-1      CD-26001-01      Para. None

NO-RLS.ORLM

NO ROUTE

**LAMP INFORMATION**

Lamp - A, B, C  
 No Lamp - TB-, TG-, CR-, CL-

**DESCRIPTION OF CIRCUIT OPERATION**

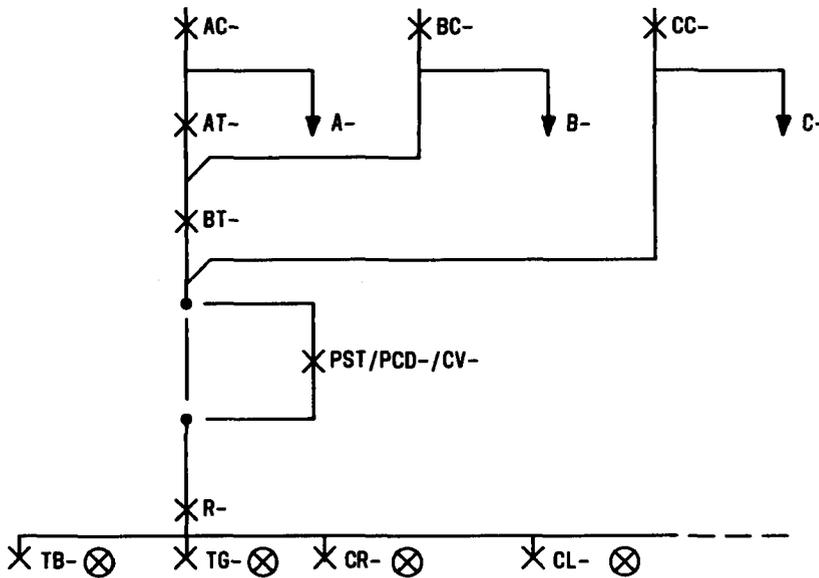
The marker has received the called number and is ready to operate the route relay. The route relay is operated from a one, two, or three digit code point.

**DESCRIPTION OF FAILURE**

The translation has been made, and the dialed number is valid as indicated by the (A-), (B-), (C-) lamps. However, the route relay did not operate.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION**



**TROUBLE DUPLICATION INFORMATION**

IAO or OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01    FS-40    SC-102    CD-26002-01    Para. - 4.04

NO ROUTE

**NUIS-CALL-TRAP****LAMP INFORMATION**

Lamp - LVM/GT5  
 No Lamp - (Does not apply.)

**DESCRIPTION OF CIRCUIT OPERATION**

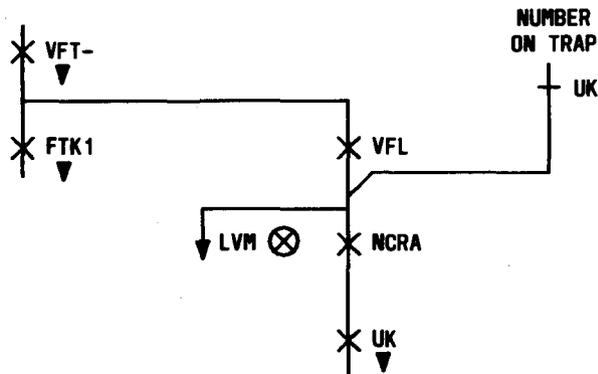
The called number is cross-connected to a trap in the number group to force a trouble record on all calls to this line. The call is allowed to complete but a record is made for later tracing if necessary. If the (XFUT)/(XTV) or (GT5) lamp is present, a number match occurred on this failure that indicates a NUIS-CALL-TRAP.

**DESCRIPTION OF FAILURE**

**LVM**  
 This is not a failure-type trouble record.  
 The call will complete on first trial.

**GT5-**  
 A failure occurred as indicated by the type of lamp present. However, a telephone number match occurred indicating a NUIS-CALL-TRAP.

Probably will not complete on second trial. (GT5 is a second trial call.)

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

(Not necessary.)

**REFERENCE DOCUMENTS**

SD-26002-01      FS-32,85      CD-26002-01 App. 2D      Para - D.10

**NUIS-CALL-TRAP**

## 0-1TR/2TR

**LAMP INFORMATION**

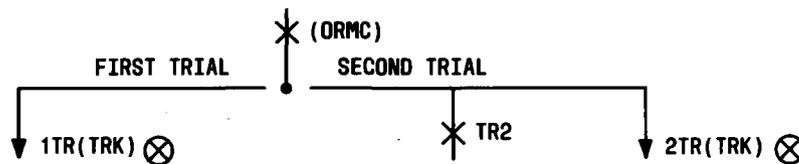
Lamp - OR  
 No Lamp- 1TR/2TR(TR2)

**DESCRIPTION OF CIRCUIT OPERATION**

The marker should receive the (1TR) or (2TR) information from the originating register. (1TR) indicates a first call and (2TR) indicates a second trial call.

**DESCRIPTION OF FAILURE**

The marker did not receive, from the originating register, information indicating a first or second trial call.  
 Probably will not complete on second trial.

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Dial Tone or OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01    FS-32    SC-101    CD-26002-01    Para - 1.08

0-1TR/2TR

**O-MUT.DIG-DP****LAMP INFORMATION**

Lamp - OR ,D  
No Lamp - A2/5 / B2/5 / C2/5 / etc.

**DESCRIPTION OF CIRCUIT OPERATION**

The marker is checking that the (A), (B), (C), etc., digits are registered in two-out-of-five format.

**DESCRIPTION OF FAILURE**

The (OR) lamp indicates the call came in from an originating register and the (D) lamp indicates that the digits were generated by a rotary dial. With the (A), (B), (C), etc. digits not in a two-out-of-five format, the marker recognized this as originating mutilated digits.

Probably will not complete on second trial.

**NORMAL SEQUENCE OF OPERATION**

(Does not apply.)

**TROUBLE DUPLICATION INFORMATION**

Dial Tone or OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26001-01      FS-71,72,73,74,75      SC-101      CD-26002-01      Para - 2.04

**O-MUT.DIG-DP**

O-MUT.DIG-TT

**LAMP INFORMATION**

Lamp - OR, MF  
No Lamp - A2/5 / B2/5 / C2/5 / etc.

**DESCRIPTION OF CIRCUIT OPERATION**

The marker is checking that the (A), (B), (C), etc., digits are registered in two-out-of-five format.

**DESCRIPTION OF FAILURE**

The (OR lamp indicates the call came in from an originating register and the (MF) lamp indicates that the digits were generated by a TOUCH-TONE pad. With the (A), (B), (C), etc. digits not in a two-out-of-five format, the marker recognized this as originating mutilated digits.

Probably will not complete on second trial.

**NORMAL SEQUENCE OF OPERATION**

(Does not apply.)

**TROUBLE DUPLICATION INFORMATION**

Dial Tone or OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26001-01      FS-71,72,73,74,75      SC-101    CD-26002-01      Para - 2.04

O-TRS

**LAMP INFORMATION**

Lamp - TRS and (OR)  
 No Lamp - (Does not apply.)

**DESCRIPTION OF CIRCUIT OPERATION**

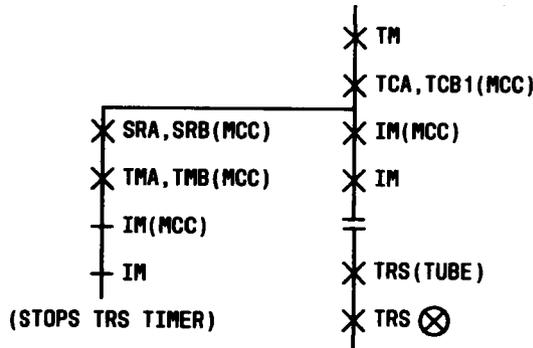
If the (TRS) relay operates in the preference control, the (TRS) relay is operated in the marker. With the (TRS) relay operated, the marker completes the call as usual but forces a trouble just before disconnect to indicate the trouble in the connector.

**DESCRIPTION OF FAILURE**

(TRS) lighted indicates that the preference control failed to seize an idle marker within one second. This call did not fail in the marker, but the marker takes a trouble record to indicate that the call had trouble in the preference control circuit.

Call completes on first trial.

**NORMAL SEQUENCE OF OPERATION**



**TROUBLE DUPLICATION INFORMATION**

Dial Tone or INC Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26001-01	FS-35			
SD-26002-01	FS-32			
SD-26029-01	FS-6	SC-3	CD-26029-01	Para - 3.19 thru 3.22

O-TRS

OS

**LAMP INFORMATION**

Lamp - OSG  
 No Lamp - OS-

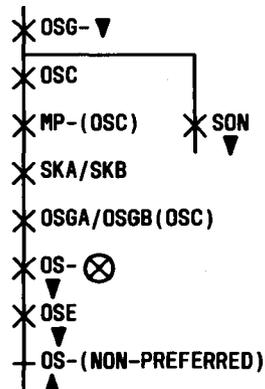
**DESCRIPTION OF CIRCUIT OPERATION**

An (OS-) relay operates for each idle sender in the selected subgroup. Operation of the (OSGA)/(OSBG) relay in the sender connector extends ground from an idle sender to operate an associated (OS-) relay in the marker. Operation of the (OSE) relay in the marker causes the release of all the (OS-) relays except the one most preferred.

**DESCRIPTION OF FAILURE**

Presence of the (OSG) lamp indicates that a sender is required on this call. (OS-) not lighted indicates that the marker did not detect an idle sender within the subgroup after the subgroup was selected.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01    FS-60    SC-112    CD-26002-01    Para - 10.30

OS

**PRT-A,B,C****LAMP INFORMATION**

Lamp - (Does not apply.)  
 No Lamp - A-/B-/C-

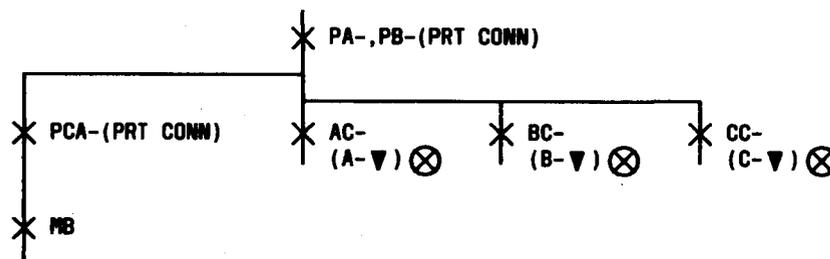
**DESCRIPTION OF CIRCUIT OPERATION**

The pretranslator receives the first 3 digits recorded in the OR. All the necessary digits must be present before the translation can be made and information returned to the OR.

**DESCRIPTION OF FAILURE**

(PRT-ABC) indicates that for one or more of the (A-), (B-) or (C-) digits, no information was received by the pretranslator.

May complete on second trial (second trial failure set the OR to seize a marker after 7 digits).

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Pretranslator or Dial Tone Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-25568-01    FS-2    CD-25568-01    Para - 7.01, 7.02

**PRT-A,B,C**

## PRT-CMABC/CM3

**LAMP INFORMATION**

Lamp - A-,B-,C- (in two-out-of-five)  
 No Lamp - CMA/CMB/CMC/CM3

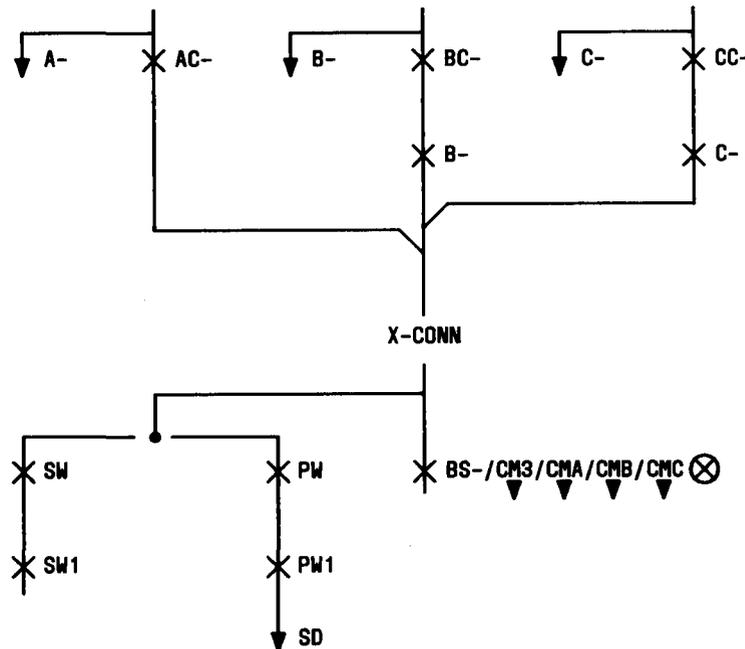
**DESCRIPTION OF CIRCUIT OPERATION**

After the digits are received, a translation is made via various cross-connections which informs the register how this call should be handled. As a result of the cross-connections, the following leads may be grounded: SD, CM3, CMA, CMB, CMC.

**DESCRIPTION OF FAILURE**

The digits are recorded correctly as indicated by the A-, B- and C- lamps. (CMA/CMB/CMC/CM3) not lighted indicates that the pretranslator failed to ground one of these leads to inform the OR how many digits to expect.

May complete on second trial (second trial failure sets the OR to seize a marker after 7 digits).

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Pretranslator or Dial Tone Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-25568-01    FS-7    CD-25568-01    Para - 9.04, 9.05

PRT-CMABC/CM3

**PRT-MUT.DIG****LAMP INFORMATION**

Lamp - A-, B-, C- (at least one lamp per digit)

No Lamp - A-, B-, C- (one or more digits not in two-out-of-five)

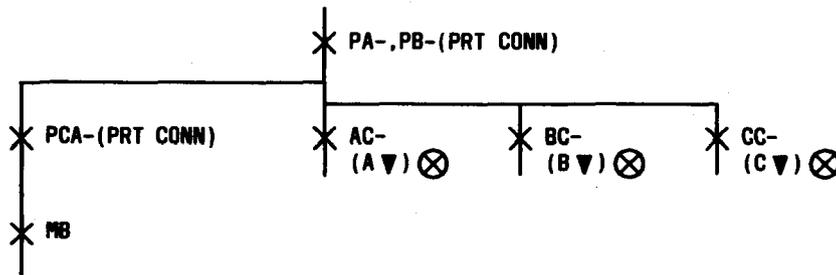
**DESCRIPTION OF CIRCUIT OPERATION**

The pretranslator receives the first 3 digits recorded in the OR and checks them for two-out-of-five registration.

**DESCRIPTION OF FAILURE**

This type of failure indicates that one of the digits was not received from the OR in two-out-of-five.

May complete on second trial (second trial failures set the OR to seize a marker after 7 digits).

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Pretranslator or Dial Tone Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-25568-01      FS-2      CD-25568-01      Para - 7.01, 7.02

**PRT-MUT.DIG**

**PRT-PCK****LAMP INFORMATION**

Lamp - A-, B-, C- (all in two-out-of-five)  
 No Lamp- PCK

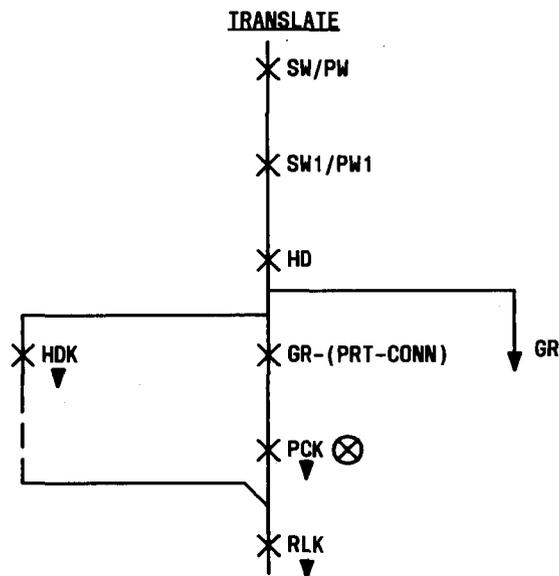
**DESCRIPTION OF CIRCUIT OPERATION**

The pretranslator has received and translated the number and is waiting to verify that the necessary control relays in the connector have operated.

**DESCRIPTION OF FAILURE**

Presence of the digits in two-out-of-five indicates that number was received correctly. (PCK) not lighted indicates that the pretranslator could not verify that the required control relays in the connector operated.

May complete on second trial (second trial set the OR to seize a marker after 7 digits).

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Pretranslator or Dial Tone Test - See Section 218-404-510

**REFERENCE DOCUMENTS**

SD-25568-01    FS-1    CD-25568-01    Para - 10.06

**PRT-PCK**

## PRT-PRL

**LAMP INFORMATION**

Lamp - PCK  
No Lamp - PRL

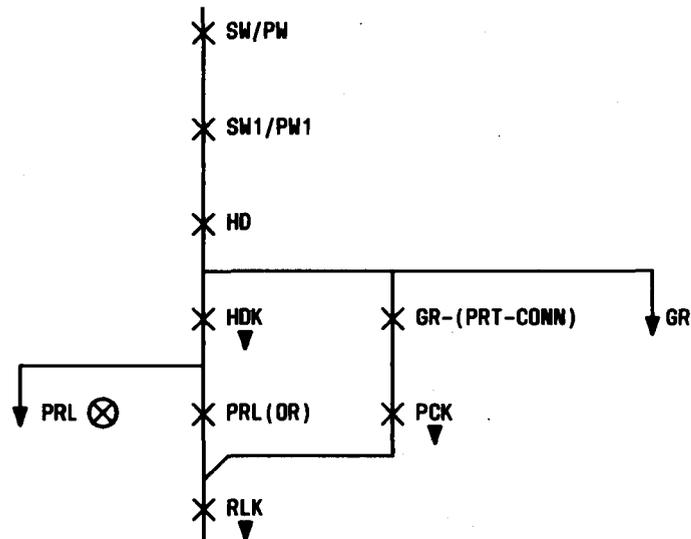
**DESCRIPTION OF CIRCUIT OPERATION**

At this stage in its sequence, the pretranslator has translated the number and is getting ready to release from the call. A normal release consists of operating the (PRL) relay in the OR. This is accomplished by grounding the PRL lead.

**DESCRIPTION OF FAILURE**

(PCK) lighted indicates that all the control relays in the connector have operated. (PRL) not lighted indicates that pretranslator could not or did not give a normal release signal to the OR.

May complete on second trial (second trial failure set the OR to seize a marker after 7 digits).

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Pretranslator or Dial Tone Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-25568-01 FS-8 CD-25568-01 Para - 10.07, 10.08, 11.21

PRT-PRL

## PRT-RLK

**LAMP INFORMATION**

Lamp - PRL  
No Lamp- RLK

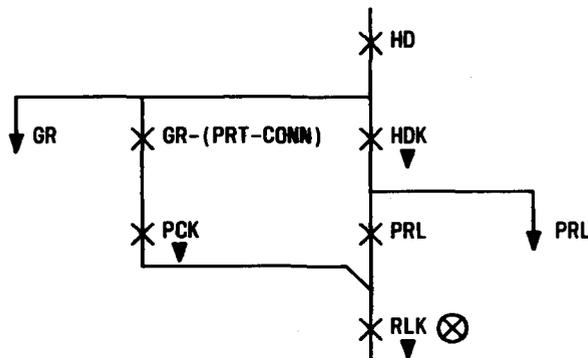
**DESCRIPTION OF CIRCUIT OPERATION**

The pretranslator is checking that the OR received the release signal. When the OR receives the release signal, it should ground the (RLK) lead causing the (RLK) relay to operate.

**DESCRIPTION OF FAILURE**

(PRL) lighted indicates that the (PRL) lead to the OR is grounded. (RLK) not lighted indicates that pretranslator cannot verify that OR received the release signal.

May complete on second trial (second trial failure set the OR to seize a marker after 7 digits).

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Pretranslator or Dial Tone Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-25568-01    FS-8    CD-25568-01    Para - 10.08, 10.09

PRT-RLK

**PRT-RLS.W/RLK****LAMP INFORMATION**

Lamp - RLK, PCK  
No Lamp - (Does not apply.)

**DESCRIPTION OF CIRCUIT OPERATION**

The pretranslator is signaling the OR that it is ready to disconnect.

**DESCRIPTION OF FAILURE**

The OR failed to release the pretranslator. (PCK) lighted indicates that all the necessary control relays in the connector operated. (RLK) lighted indicates that the OR acknowledged the release signal from the pretranslator.

May complete on second trial (second trial failure set the OR to seize a marker after 7 digits).

**NORMAL SEQUENCE OF OPERATION**

(Does not apply.)

**TROUBLE DUPLICATION INFORMATION**

Pretranslator or Dial Tone Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-25568-01      FS-8      CD-25568-01      Para - 11.08, 11.17

**PRT-RLS.W/RLK**

PRT-TRS

**LAMP INFORMATION**

Lamp - TRS  
No Lamp - (Does not apply.)

**DESCRIPTION OF CIRCUIT OPERATION**

If a connector problem occurs while connecting to a pretranslator, a trouble record will be taken at the end of the pretranslator usage.

**DESCRIPTION OF FAILURE**

This is not a pretranslator failure. This is a connector problem that forces a pretranslator trouble record as a means of displaying the trouble.

The call completes after taking a trouble record.

**NORMAL SEQUENCE OF OPERATION**

(Does not apply.)

**TROUBLE DUPLICATION INFORMATION**

Pretranslator or Dial Tone Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-25568-01      FS-9      CD-25568-01      Para - 7.04, 11.07

PRT-TRS

PRT-XX

**LAMP INFORMATION**

Lamp - XX  
No Lamp - (Does not apply.)

**DESCRIPTION OF CIRCUIT OPERATION**

The pretranslator is checking for multiple operation of the translation relays, for a false ground on one of the sending leads to the OR and for a false ground on the PRL lead. These tests are made throughout the call and could occur at any time.

**DESCRIPTION OF FAILURE**

The pretranslator detected multiple operation of the translation relays, or found a false ground on one or more of the sending leads to the OR or the PRL lead. Any combination of these troubles could occur at any time.

May complete on second trial (second trial failure set the OR to seize a marker after 7 digits).

**NORMAL SEQUENCE OF OPERATION**

(Does not apply.)

**TROUBLE DUPLICATION INFORMATION**

Pretranslator Dial Tone Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-25568-01      FS-8      CD-25568-01      Para - 11.01-11.05

PRT-XX

PS

**LAMP INFORMATION**

Lamp - PS  
No Lamp - TRS, WT

**DESCRIPTION OF CIRCUIT OPERATION**

A call that is being set up to a permanent signal trunk or common overflow trunk as a result of the customer not dialing, can be forced to take a trouble record. If the (APS) key is operated on the jack, lamp, and key circuit, all permanent signal calls are forced to take a trouble record.

**DESCRIPTION OF FAILURE**

Since the (WT) and (TRS) lamp are not present, this is not a trouble condition. The (PS) lamp indicates a trouble record is forced on a permanent signal call.

Call completes on first trial.

**NORMAL SEQUENCE OF OPERATION**

(Does not apply.)

**TROUBLE DUPLICATION INFORMATION**

Dial Tone Test- See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01      FS-30      CD-26002-01      Para 2.19

PS

RA

**LAMP INFORMATION**

Lamp - GS  
 No Lamp - RA

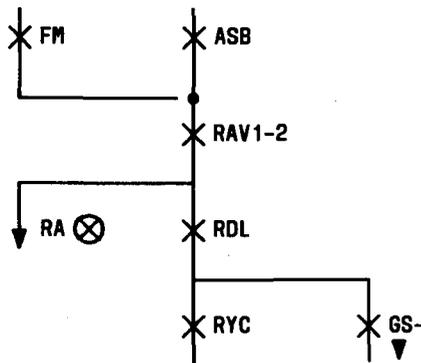
**DESCRIPTION OF CIRCUIT OPERATION**

When the marker tries to complete a call, it may find all the trunks busy, all the senders busy, or other conditions that may cause the marker to route advance.

**DESCRIPTION OF FAILURE**

Presence of the (GS-) lamp indicates that the marker route advanced once. (RA) not lighted indicates a failure to route advance for the last condition encountered.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Dial Tone or OGT test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01    FS-56    SC-128    CD-26002-01    Para - 15.12

RA

RCK3

**LAMP INFORMATION**

Lamp - RCK2  
 No Lamp - RCK3

**DESCRIPTION OF CIRCUIT OPERATION**

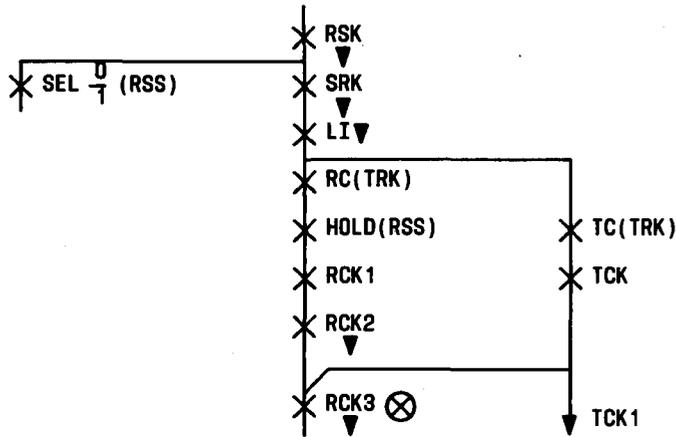
The marker is checking for satisfactory charge and ringing conditions. The (RCK3) relay operates from an operated (RCK2) relay and an operated (TCK) relay.

**DESCRIPTION OF FAILURE**

(RCK3) not lighted indicates that the marker did not verify that ringing was set or that the charge condition was set in the trunk.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION**



**TROUBLE DUPLICATION INFORMATION**

IAO or INC Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01      FS-104    SC-117    CD-26002-01      Para - 8.09

RCK3

RK/LK

**LAMP INFORMATION**

Lamp - JG  
 No Lamp- RK/LK

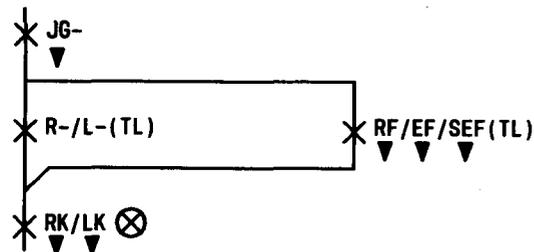
**DESCRIPTION OF CIRCUIT OPERATION**

The marker is checking for the operation of one of the frame extension and left/right relays in the trunk link. The (RK) or (LK) lamp indicates that either the right half or the left half of the trunk link will be used.

**DESCRIPTION OF FAILURE**

Presence of the (JG-) lamp indicates that the marker attempted to operate the (R/RA/ER/RB/SER/RX/L/LA/EL/LB/SEL/LX) relay in the trunk link. (RK/LK) not lighted indicates that the marker could not verify the operation of one of these relays.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

Dial Tone or OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26001-01	FS-17	SC-1	CD-26001-01	Para - 4.62, 4.63
SD-26002-01	FS-17	SC-105	CD-26002-01	Para - 11.61

RK/LK

RK3

**LAMP INFORMATION**

Lamp - RK2  
 No Lamp - RK3

**DESCRIPTION OF CIRCUIT OPERATION**

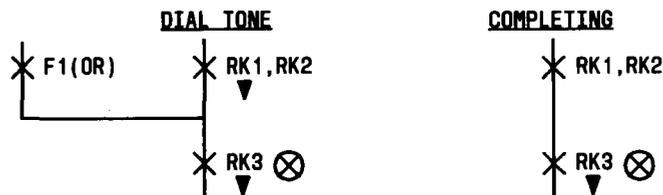
(RK3) relay checks that both the (RK1) and (RK2) relays operated. In addition, on dial tone calls, the (RK3) relay checks that the (F1) relay operated in the (OR).

**DESCRIPTION OF FAILURE**

(RK3) not lighted indicates that either the (RK1) or (RK2) relay did not operate, i.e., mutilated line link location received from the (OR). On dial tone calls, failure of the (F1) relay to operate, in the (OR), will cause a (RK3) failure. On OLI calls, failure of OLI to receive the channel or class information on the calling line, will also cause RK3 failure.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION**



**TROUBLE DUPLICATION INFORMATION**

Dial Tone or OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26001-01	FS-13	SC-1	CD-26001-01	Para - 2.116, 2.117
SD-26002-01	FS-2	SC-106	CD-26002-01	Para - 6.01, 6.15

RN

**LAMP INFORMATION**

Lamp - RN-  
No Lamp - RN

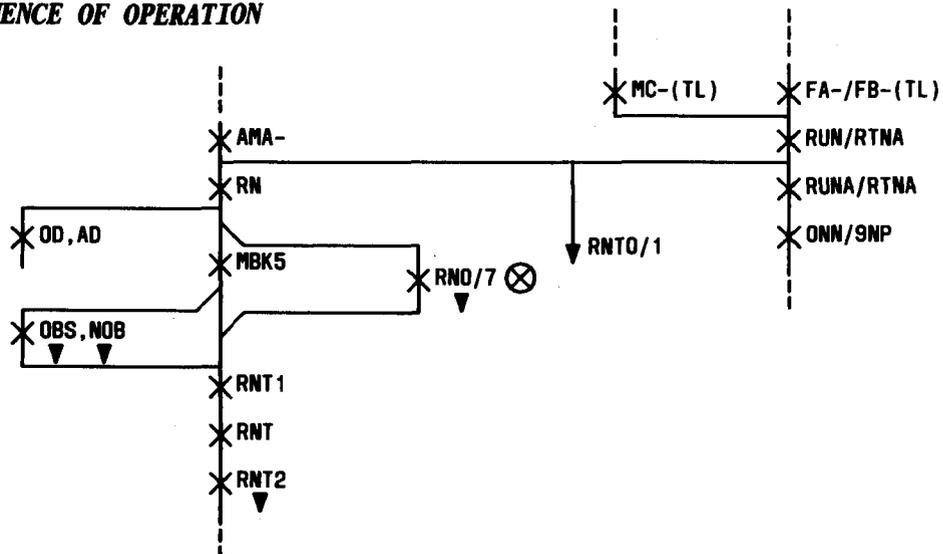
**DESCRIPTION OF CIRCUIT OPERATION**

The marker has received a recorder number from the trunk link circuit and is attempting to pass this information to the sender. The marker (RN) relay operates to pass the recorder number to the sender. The marker checks that two and only two (RNO/7) relays operated, causing the (RNK2) to be lighted if a valid recorder number is transmitted. If (RNK2) is lighted, the marker releases the (RN) relay and tests for locking ground in the associated sender. (RNK) lighted indicates the recorder number was successfully locked in the sender.

**DESCRIPTION OF FAILURE**

The (RN-) lighted indicates the marker received trunk class information from the trunk link frame. The (RN-) not lighted indicates the information was passed to the sender, but failed to be locked in the sender. The trouble may be a marker or a sender trouble. The call may not complete on second trial.

**NORMAL SEQUENCE OF OPERATION**



**TROUBLE DUPLICATION INFORMATION**

OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01 FS-78 SC-115 CD-26002-01 Para - 10.82

RN

RNG

**LAMP INFORMATION**

Lamp - FLG, FUT-, VGT-, HGT-, VFT-  
 No Lamp - RNG

**DESCRIPTION OF CIRCUIT OPERATION**

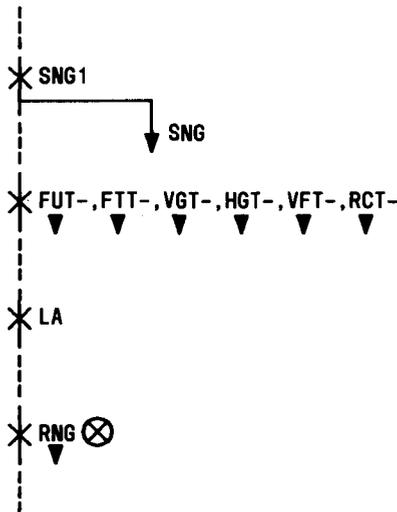
After the marker completes a number group translation and has successfully stored the information in the marker, the (RNG) relay is operated to release the number group. The marker may then proceed to establish and check the linkage.

**DESCRIPTION OF FAILURE**

The marker has completed the called line number group translation as indicated by the (FUT-) (VGT-) (HGT-) and (VFT-) lamps however, the marker was unable to release the number group as indicated by the (RNG) not lighted.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION**



**TROUBLE DUPLICATION INFORMATION**

INC or IAO Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01 FS-85 SC-116 CD-26002-01 Para - 7.47

RNG

## RSC

**LAMP INFORMATION**

Lamp - OSG-, OS-  
No Lamp - RSC

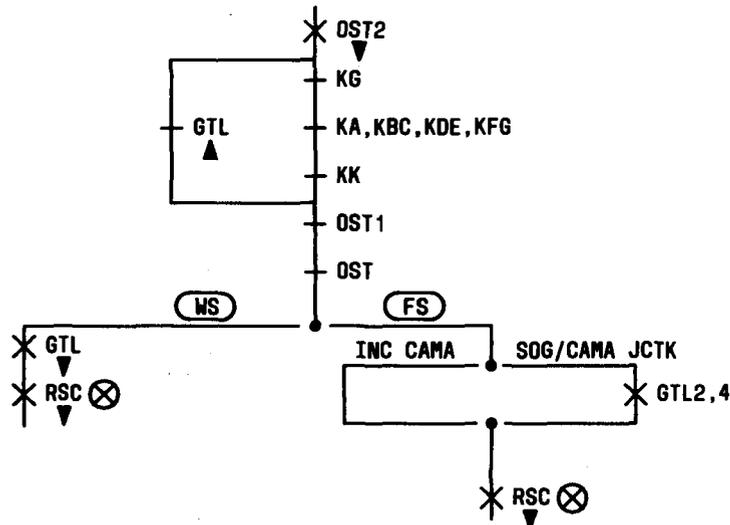
**DESCRIPTION OF CIRCUIT OPERATION**

The (RSC) lamp indicates that the sender has received and locked all the necessary information from the marker. After all (K-) relays release, the marker verifies that all the information is locked up in the sender. If all the information remains up in the sender, the (RSC) relay operates, signaling that the sender connector may be released.

**DESCRIPTION OF FAILURE**

(RSC) not lighted indicates that the marker is not satisfied with the information that it stored in the sender.

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

OGT Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01    FS-77    SC-112    CD-26002-01    Para - 10.104

RSC

## RSK

**LAMP INFORMATION**

Lamp  
No Lamp- RSK

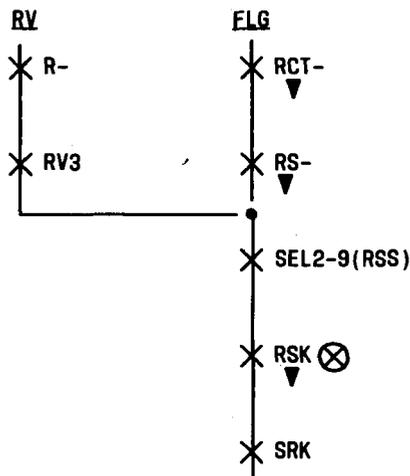
**DESCRIPTION OF CIRCUIT OPERATION**

The marker is checking that a select magnet operated in the Ringing Selection Switch (RSS). Operation of an (RS-) relay in the marker operates a corresponding select magnet in the (RSS). The (RSK) relay operates to verify operation of the (RSS) select magnet.

**DESCRIPTION OF FAILURE**

Presence of the (RS2-9) lamp indicates that the marker attempted to operate a select magnet in the (RSS). (RSK) not lighted indicates that the marker could not verify operation of a select magnet in the (RSS).

May complete on second trial.

**NORMAL SEQUENCE OF OPERATION****TROUBLE DUPLICATION INFORMATION**

INC or IAO Test - See Section 218-404-510 Part 11

**REFERENCE DOCUMENTS**

SD-26002-01 FS-105 SC-117 CD-26002-01 PARA - 8.07

RSK