

**NO. 5 CROSSBAR
TROUBLE REFERENCE GUIDE - PART 7
OFFICE TEST FRAME
BIN LISTINGS -----S, T, U, V, W, X, Y, Z**

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
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SCB

LAMP INFORMATION

Lamp - LK1
 No Lamp - SCB

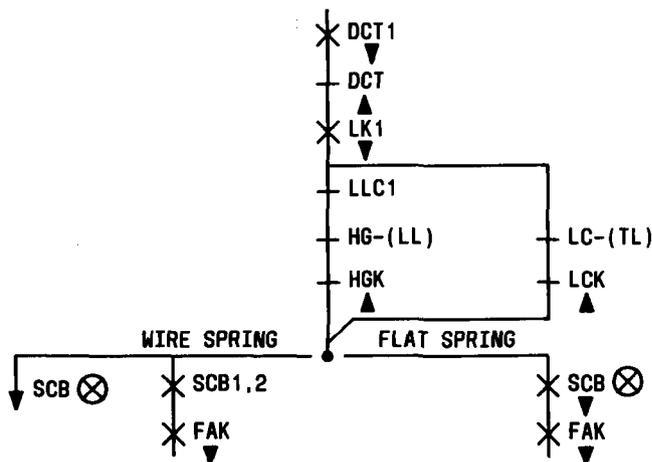
DESCRIPTION OF CIRCUIT OPERATION

On intraoffice calls, the forward linkage must be established, then the call back linkage set up. When the marker starts into the call back linkage, it is indicated by the operation of the (SCB) relay.

DESCRIPTION OF FAILURE

Presence of the (LK1) lamp indicates that the forward linkage has been operated and locked up. (SCB) not lighted indicates that the marker did not start into the call back linkage.

May complete on second trial.

NORMAL SEQUENCE OF OPERATION**TROUBLE DUPLICATION INFORMATION**

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

REFERENCE DOCUMENTS

SD-26002-01 FS-33 SC-105 CD-26002-01 Para - 6.17

SCB

SERV.OBS-TRAP

LAMP INFORMATION

Lamp - OBS, TRS
No Lamp - (Does not apply)

DESCRIPTION OF CIRCUIT OPERATION

This is a nonstandard arrangement where the operating company wires the (OBS) relay to force the (TRS) relay operated. This is to force a trouble record on all service observed calls.

DESCRIPTION OF FAILURE

This is not a failure but a trap condition to force a trouble record.

Call completes on first trial.

NORMAL SEQUENCE OF OPERATION

(Does not apply)

TROUBLE DUPLICATION INFORMATION

(Does not apply)

REFERENCE DOCUMENTS

(none)

SERV.OBS-TRAP

SL

LAMP INFORMATION

Lamp - HMS1
No Lamp - SL

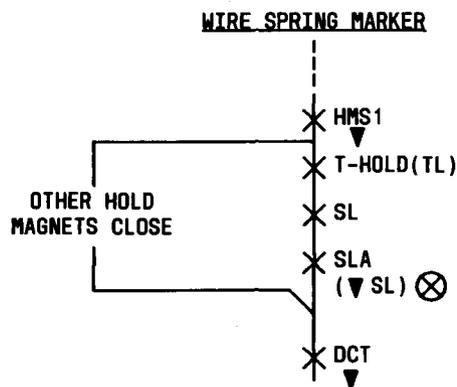
DESCRIPTION OF CIRCUIT OPERATION

The marker is operating the trunk link hold magnets. The marker applies ground to the LH- lead, operating the (T-HOLD) in the trunk link. When the crosspoints close, ground is extended back to the marker operating the (SL) relay.

DESCRIPTION OF FAILURE

The (HMS1) lighted indicates that the marker is ready to close the hold magnets in both the line link and trunk link. (SL) not lighted indicates that the crosspoints of the (T-HOLD) on the trunk link have not been closed.

Probably will not complete on second trial - No second trial if in call back linkage. (Results in dial tone after dialing).

NORMAL SEQUENCE OF OPERATION**TROUBLE DUPLICATION INFORMATION**

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

REFERENCE DOCUMENTS

SD-26001-01	FS-20	SC-1	CD-26001-01	Para - 5.56
SD-26002-01	FS-47	SC-109	CD-26002-01	Para - 13.01

SL

SLK2

LAMP INFORMATION

Lamp - SL
No Lamp - SLK2

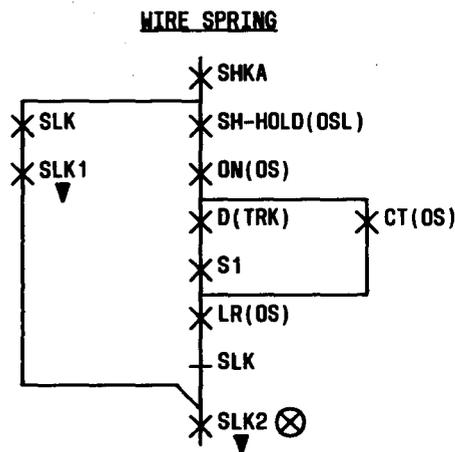
DESCRIPTION OF CIRCUIT OPERATION

The marker is checking that the hold magnet in the outgoing sender link locked operated. The (OSL) hold magnet locking ground shunts down the (SLK) relay, operating the (SLK2) relay.

DESCRIPTION OF FAILURE

Operation of the (SLK1) relay indicates that an attempt was made to operate the (OSL) hold magnet. (SLK2) not operated indicates that the marker did not check the (OSL) hold magnet locked operated.

May complete on second trial - unless in call back linkage. (Results in dial tone after dialing).

NORMAL SEQUENCE OF OPERATION**TROUBLE DUPLICATION INFORMATION**

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

REFERENCE DOCUMENTS

SD-26002-01 FS-61 SC-112 CD-26002-01 Para - 10.129

SLK2

SOG

LAMP INFORMATION

Lamp - OSG-
No Lamp - SOG

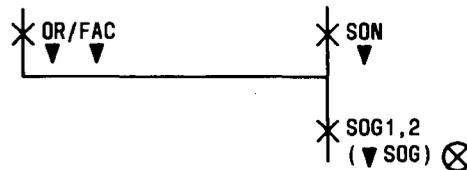
DESCRIPTION OF CIRCUIT OPERATION

The route relay operates to identify the trunk group to be selected (TG-) and the outgoing sender group (OSG-). Operation of the (OSG-) relay should operate the (SON) relay to indicate that a sender is required. The (SON) relay in turn operates the (SOG1,2) relays identifying the type of call (SOG).

DESCRIPTION OF FAILURE

The route relay operated and a sender is required for this call as indicated by the presence of the (OSG-) lamp. (SOG) not lighted indicates that marker did not operate the (SOG1,2) relays.

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-32 SC-103 CD-26002-01 Para - 10.23

SOG

SSA|SSB

LAMP INFORMATION

Lamp - (not available)
 No Lamp -SSA or SSB

DESCRIPTION OF CIRCUIT OPERATION

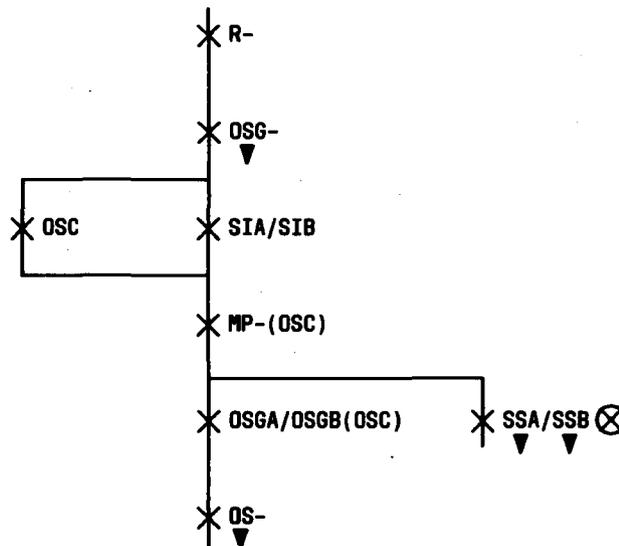
(SSA) or (SSB) relay operated indicates the sender subgroup seized (A or B). The (MP-) relay in the outgoing sender connector operates the (SKA) or (SKB) relay which in turn operates the (SSA) or (SSB) relay.

DESCRIPTION OF FAILURE

(SSA) or (SSB) not lighted indicates that the marker could not verify if either sender subgroup A or B was seized.

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-61 SC-112 CD-26002-01 Para - 10.30

SSA|SSB

TB

LAMP INFORMATION

Lamp - (not available)
 No Lamp- TB-

DESCRIPTION OF CIRCUIT OPERATION

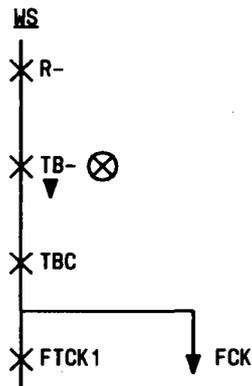
The marker is determining the correct trunk block, to access the correct type of trunk. The (TB-) relay is operated from a cross-connection on the route relay. The dial tone marker provides a ground on the TBO lead at all times.

DESCRIPTION OF FAILURE

(TB-) relay not operated indicates that the trunk block was not determined within the marker.

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-4	CD-26001-01	Para - 3.31
SD-26002-01	FS-25 SC-104	CD-26002-01	Para - 4.04

TB

TCHK

LAMP INFORMATION

Lamp
No Lamp - TCHK

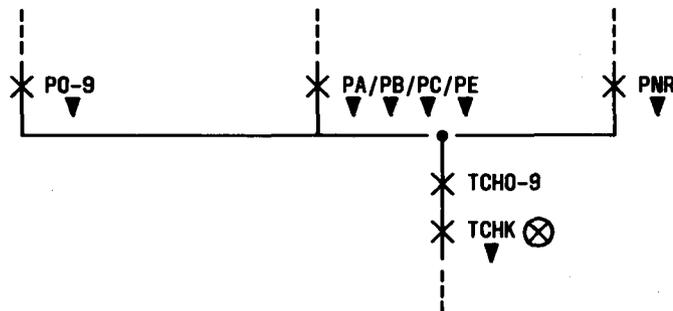
DESCRIPTION OF CIRCUIT OPERATION

Before the marker is able to conduct a channel test, it must first determine the office size and junctor pattern. A (TCH0-9) relay operates for each existing junctor path within the selected junctor subgroup. The operation of one or more (TCH0-9) relays will operate the test channel check (TCHK) relay, which indicates at least one junctor path exists and the marker may proceed to the channel test.

DESCRIPTION OF FAILURE

(TCHK) not lighted indicates the marker (TCH0-9) relays did not operate to identify which junctors are available for testing. The marker is prevented from selecting a channel.

The call 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-18	SC-1	CD-26001-01	Para - 4.50
SD-26002-01	FS-16	SC-108	CD-26002-01	Para - 11.49

TCHK

TF

LAMP INFORMATION

Lamp - TER
 No Lamp - TF-

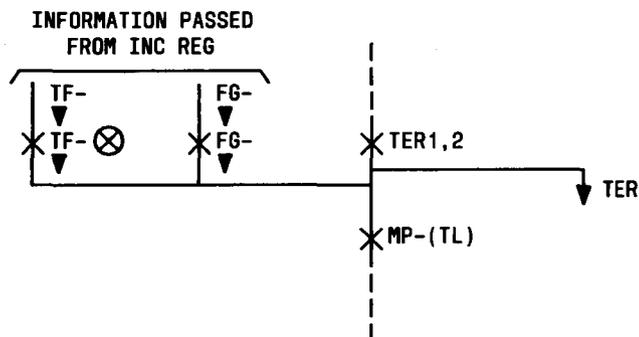
DESCRIPTION OF CIRCUIT OPERATION

On terminating calls, the marker must identify the trunk link frame associated with the incoming trunk. When the incoming trunk is connected to the incoming register, the trunk link number is transmitted from the incoming register link and recorded in the register on the (FG-) and (TF-) relays. When the register is connected to the marker, the trunk link number is passed to the marker and stored on the marker (FG-) and (TF-) relays. A valid trunk number and a terminating mark allows the marker to seize a trunk link frame.

DESCRIPTION OF FAILURE

The (TF) not lighted, indicates the marker failed to receive the trunk link frame units information from the incoming register via the incoming register marker connector. The marker is unable to seize the trunk link frame. The trouble may be in the incoming register link, incoming register or incoming register marker connector.

Probably will not complete on second trial.

NORMAL SEQUENCE OF OPERATION**TROUBLE DUPLICATION INFORMATION**

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

REFERENCE DOCUMENTS

SD-26002-01 FS-24 SC-101,104 CD-26002-01 Para - 5.30

TF

TGT

LAMP INFORMATION

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

DESCRIPTION OF CIRCUIT OPERATION

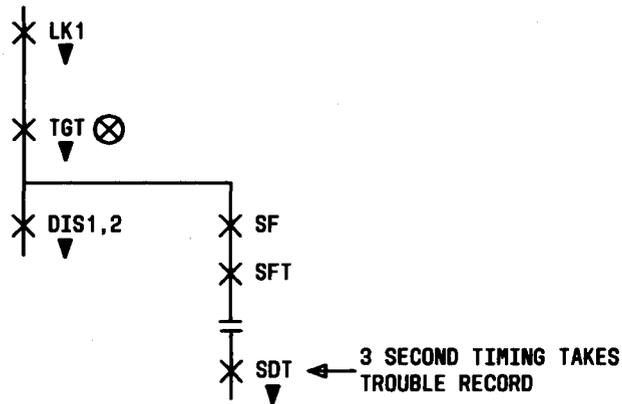
On light traffic calls, the sender remains attached to the marker until the sender passes trunk guard test or until the three second (SDT) timer operates to take a trouble record.

DESCRIPTION OF FAILURE

The sender did not pass trunk guard test within the three second timing interval allowed by the marker.

There will be no second trial, call will not complete.

NORMAL SEQUENCE OF OPERATION



TROUBLE DUPLICATION INFORMATION

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

REFERENCE DOCUMENTS

SD-26002-01 FS-50 SC-113 CD-26002-01 Para - 10.134

TK

LAMP INFORMATION

Lamp - HGK, JCK, TCHK, LCK, FAK/FBK
 No Lamp - TK

DESCRIPTION OF CIRCUIT OPERATION

The (TK) relay operates to indicate that the marker has seized all the circuits necessary to establish crosspoint linkage. The (TK) relay must operate before the hold magnets are operated.

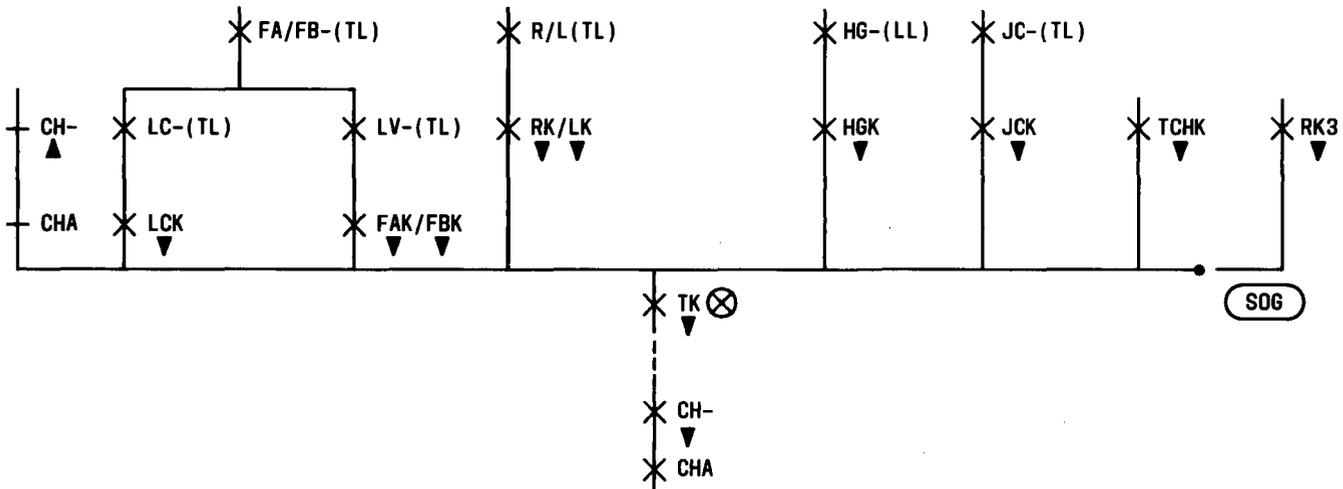
DESCRIPTION OF FAILURE

The (HGK, JCK, TCHK, LCK, FAK/FBK) lamps present indicate that the trunk has been seized and the line horizontal group has been identified. (TK) not lighted indicates that the marker is not satisfied that all the circuits are ready for linkage closure.

Note: If the (CH-) lamp is present, one of two failures could have occurred. First, the (TK) relay could have operated through the break contact of the (CHA) relay and subsequently released when the (CHA) relay operated. This would indicate that the (TK) relay failed to lock up through its make contact. Second, the (CH-) relay could be falsely operated, operating the (CHA) relay, thus preventing the (TK) relay from operating.

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-21	SC-1	CD-26001-01	Para - 4.86, 4.87
SD-26002-01	FS-44	SC-108	CD-26002-01	Para - 11.79

TK

TP|RP

LAMP INFORMATION

Lamp -
No Lamp - TP/RP

DESCRIPTION OF CIRCUIT OPERATION

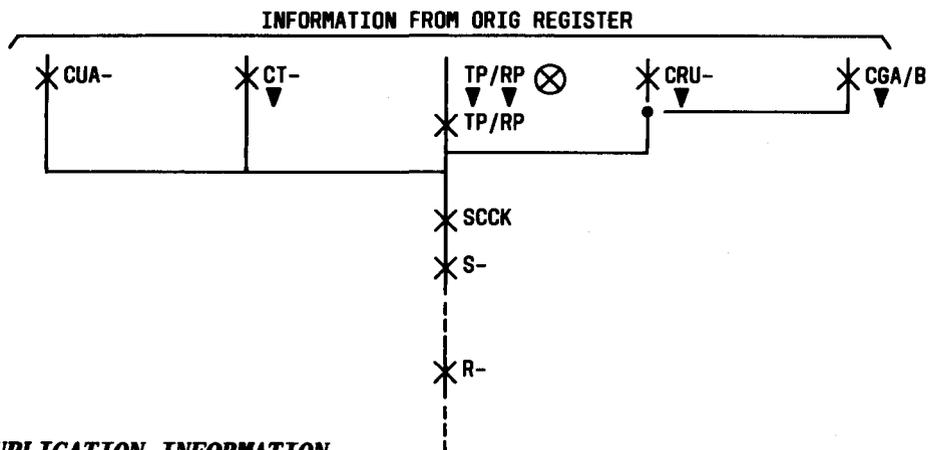
The (TP) or (RP) relay is operated via the "TP" or "RP" lead by the originating register. In certain offices there may be two-party lines having parties that require different class of service treatment. Since both parties have the same line link frame class of of service mark, the (TP) or (RP) information is used to control special marker cross-connections that allow individual treatment for each customer.

The (TP) or (RP) information is also passed from the marker to an outgoing sender (on AMA calls) for transmittal to the AMA equipment, to insure the right party is charged for the call.

DESCRIPTION OF FAILURE

The (TP) or (RP) not lighted indicates the originating register failed to pass the tip or ring party identification signal to the marker. Trouble may be caused by open "TP" or "RP" lead via the originating register marker connector, trouble in originating register, or in the marker. Probably will not 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-10,42,43 SC-101,102,114&135 CD-26002-01 Para - 3.09&3.12

TP|RP

TS

PUNCH INFORMATION

Lamp -
No Lamp - TS-

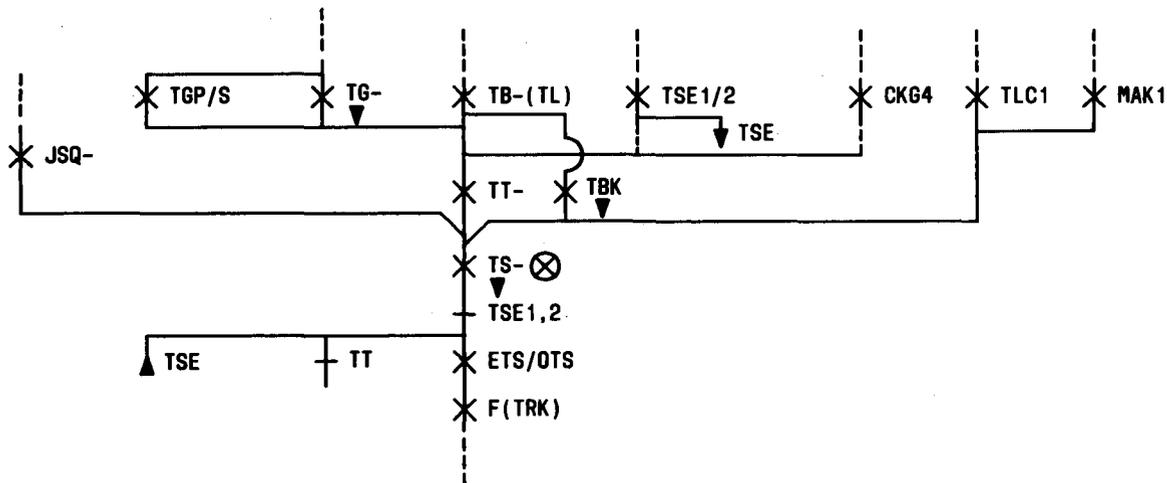
DESCRIPTION OF CIRCUIT OPERATION

The marker has seized a trunk link frame and is in the process of selecting an idle trunk or register. The marker (TT0-9) relays are connected to the "BT-" leads to test ten trunks in either the primary or secondary group of twenty trunks for an idle trunk. One (TT-) relay operates for each idle trunk. The operation of one or more (TT-) relays and one of the (JSQ0-5) relays, operates (TS0-9) relay. The (TS-) relay operated is associated with two trunks; therefore, the marker makes an odd or even test to determine if one or both trunks are idle before making a final selection and operating a trunk (F) relay.

DESCRIPTION OF FAILURE

The (TB), (TG), and (TSE) relays operated indicate the marker is testing a block of trunks for an idle trunk. (TS) not lighted indicates the marker was unable to select a particular trunk. Check for missing trunk link (TG-) to (F-) cross-connections, trunk, trunk link, trunk link connector, or marker troubles.

Call will probably 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-4	SC-1	CD-26001-01	Para - 3.37&3.38
SD-26002-01	FS-27&28	SC-104	CD-26002-01	Para - 5.13

TS

TT

LAMP INFORMATION

Lamp - (Not available)
 No Lamp - TT-

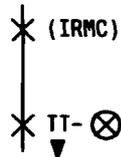
DESCRIPTION OF CIRCUIT OPERATION

On tandem thru calls, the tandem or incoming trunk must be connected to the linkage by its line link location. The line link location is translated by the number group just like any other call. The number that the number group translates is transferred from the incoming register to the marker and is unique to the given incoming tandem trunk.

DESCRIPTION OF FAILURE

Absence of the (TT-) lamp indicates that the marker did not receive the (TT-) information from the incoming register.

Probably will not complete on second trial.

NORMAL SEQUENCE OF OPERATION**TROUBLE DUPLICATION INFORMATION**

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

REFERENCE DOCUMENTS

SD-26002-01 FS-71-75 SC-101 CD-26002-01 Para - 7.16

TT

UT

LAMP INFORMATION

Lamp - (not available)
No Lamp - UT-

DESCRIPTION OF CIRCUIT OPERATION

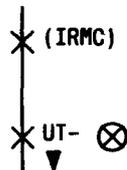
On tandem thru calls, the tandem or incoming trunk must be connected to the linkage by its line link location. The line link location is translated by the number group just like any other call. The number that the number group translates is transferred from the incoming register to the marker and is unique to the given incoming tandem trunk.

DESCRIPTION OF FAILURE

Absence of the (UT-) lamp indicates that the marker did not receive the (UT-) information from the incoming register.

Probably will not complete on second trial.

NORMAL SEQUENCE OF OPERATION



TROUBLE DUPLICATION INFORMATION

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

REFERENCE DOCUMENTS

SD-26002-01 FS-71-75 SC-101 CD-26002-01 Para. - 7.16

UT

VF

LAMP INFORMATION

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

DESCRIPTION OF CIRCUIT OPERATION

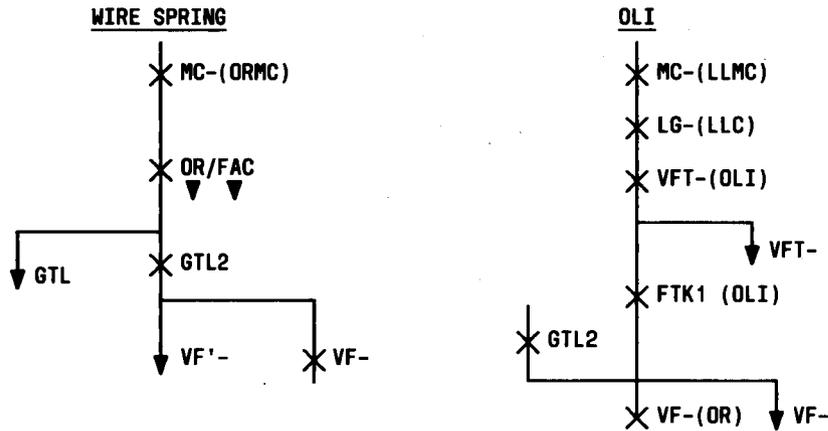
The (VF-) information is received by the marker, from the (OR), so the marker can establish the call back linkage. The (VF-) lamp should be present as soon as the (ORMC) establishes a connection to the marker. This information is also transmitted to the OR on OLI calls.

DESCRIPTION OF FAILURE

(VF-) not lighted indicates that the marker did not receive any vertical file information from the (OR).

Probably will not 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-1 SC-106 CD-26002-01 Para. - 1.08

VF

VF'

LAMP INFORMATION

Lamp - (not available)
No Lamp - VF'

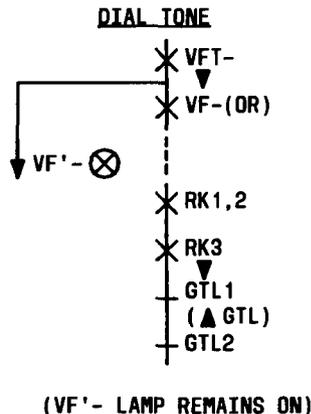
DESCRIPTION OF CIRCUIT OPERATION

The (VF'-) lamp is connected directly to the (VF-) relay winding. When the (GTL-) relays operate the (VF-) lead is connected to the (VF-) relay and the (VF'-) lamp. On dial tone calls the (VF'-) lamp indicates that the (VF-) relay locked operated in the (OR).

DESCRIPTION OF FAILURE

With the (GTL) lamp present, no (VF'-) lamp indicates an internal marker problem, the (VF'-) lamp should match the (VF-) lamp. Without the (GTL) lamp present, no (VF'-) lamp indicates that the (VF-) relay did not lock operated in the sender or (OR) depending on the type of 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-26001-01	FS-9	SC-1	CD-26001-01	Para. - 2.107
SD-26002-01	FS-1	SC-101,112	CD-26002-01	Para. - 10.104

VF'

VFT

LAMP INFORMATION

Lamp - (not available)
 No Lamp - VFT-

DESCRIPTION OF CIRCUIT OPERATION

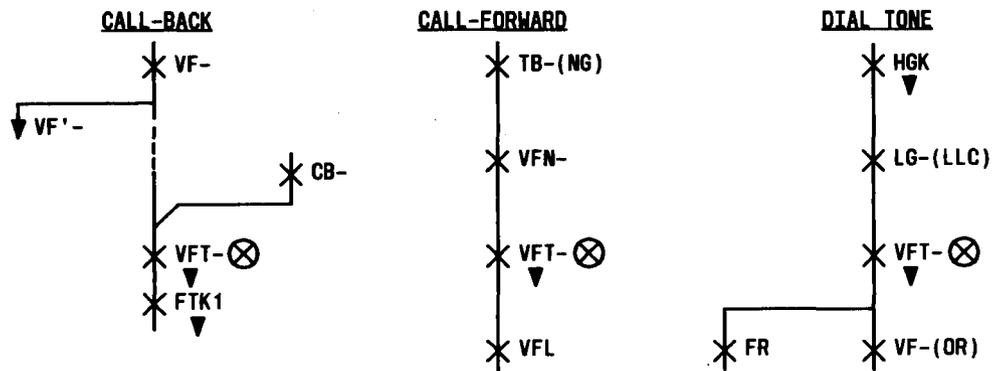
The (VFT-) relay operates to select the correct line link location. The completing marker receives the (VFT-) information from the (VF-) relay on call back and from the (VFN-) relay on call forward linkage. The (VFN-) relay is operated from number group cross-connections. On dial tone calls the (VFT-) relay is operated from the line link location bidding for dial tone.

DESCRIPTION OF FAILURE

(VFT-) not lighted indicates that the marker cannot select the correct line link location. On dial tone calls, absence of the (VFT-) lamp indicates the marker did not receive the line link location from the line link.

Probably will not complete on second 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-8	SC-1	CD-26001-01	Para. - 2.40,2.41
SD-26002-01	FS-8	SC-106,107	CD-26002-01	Para. - 6.15&7.37

VFT

VFT-X

LAMP INFORMATION

Lamp - VFT - at least two lighted
 No Lamp - VFT - not lighted in one-out-of-five format

DESCRIPTION OF CIRCUIT OPERATION

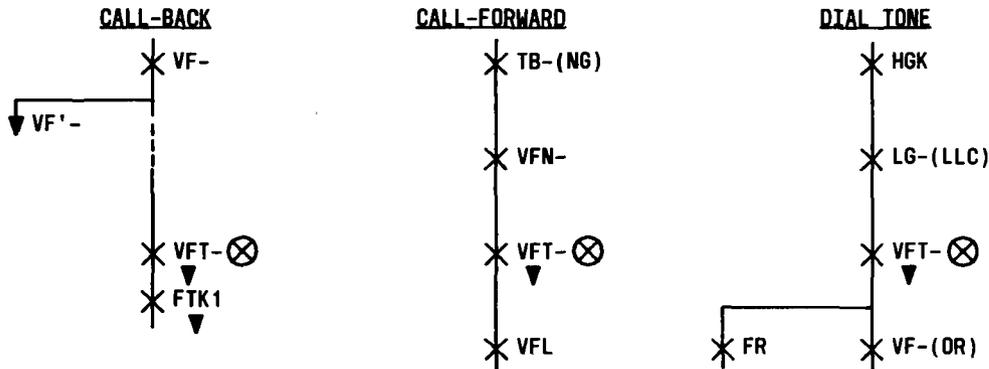
The (VFT-) relay operates to select the correct line link location. The completing marker receives the (VFT-) information from the (VF-) relay on call-back and from the (VFN-) relay on call-forward linkage. The (VFN-) relay is operated from number group cross-connections. On dial tone calls, the (VFT-) relay is operated from the line link location bidding for dial tone.

DESCRIPTION OF FAILURE

(VFT-) not lighted in one-out-of-five indicates that the marker received wrong information from the (OR), (NG), or (LL) depending on the type of call.

Probably will not complete on second 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-8	SC-1	CD-26001-01	Para. - 2.40, 2.41
SD-26002-01	FS-8	SC-106,107	CD-26002-01	Para. - 6.15&7.37

VG

LAMP INFORMATION

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

DESCRIPTION OF CIRCUIT OPERATION

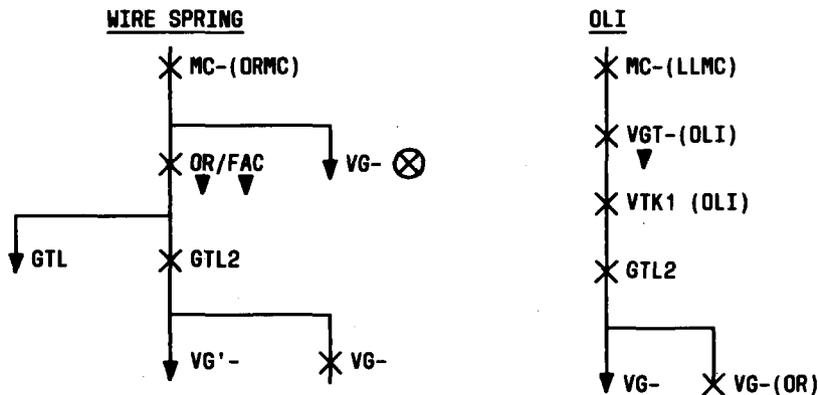
The (VG-) information is received by the marker, from the (OR), so the marker can establish the call back linkage. The (VG-) lamp should be present as soon as the (ORMC) establishes a connection to the marker. This information is also transmitted to the OR on OLI calls.

DESCRIPTION OF FAILURE

(VG-) not lighted indicates that the marker did not receive any vertical group information from the (OR).

Probably will not 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-1 SC-101 CD-26002-01 Para. - 1.08

VG

VG'

LAMP INFORMATION

Lamp - (not available)
No Lamp - VG'-

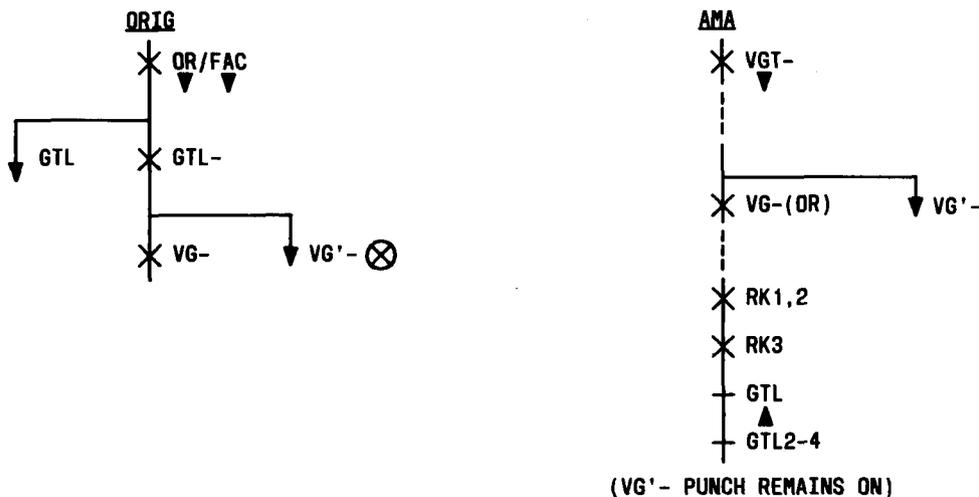
DESCRIPTION OF CIRCUIT OPERATION

The (VG'-) lamp is connected directly to the (VG-) relay winding. When the (GTL-) relays operate the (VG-) lead is connected to the (VG-) relay and the (VG'-) lamp. On AMA calls, the (VG'-) lamp indicates that the associated relay locked operated in the sender circuit. On dial tone calls the (VG'-) lamp indicates that the (VG-) relay locked operated in the (OR).

DESCRIPTION OF FAILURE

With the (GTL) lamp present, no (VG'-) lamp indicates an internal marker problem, the (VG'-) lamp should match the (VG-) lamp. Without the (GTL) lamp present, no (VG'-) lamp indicates that the (VG-) relay did not lock operated in the (OS) or (OR) depending on the type of 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-26001-01	FS-9	SC-1	CD-26001-01	Para. - 2.107
SD-26002-01	FS-1	SC-101,112	CD-26002-01	Para. - 10.104

VG'

VGT

LAMP INFORMATION

Lamp - (not available)
No Lamp - VGT-

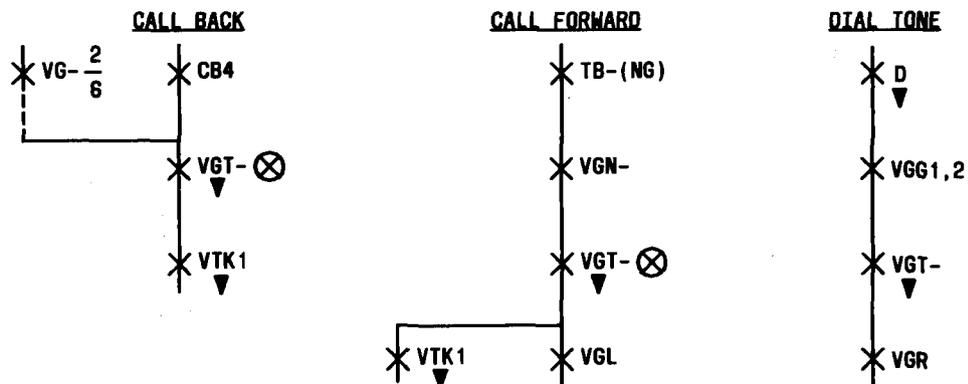
DESCRIPTION OF CIRCUIT OPERATION

The (VGT-) relay operates to select the correct line link location. The completing marker receives the (VGT-) information from the (VG-) relay on call back and from the (VGN-) relay on call forward linkage. The (VGN-) relay is operated from number group cross-connections. On dial tone calls the (VGT-) relay is operated from the line link location bidding for dial tone.

DESCRIPTION OF FAILURE

(VGT-) not lighted indicates that the marker cannot select the correct line link location. On dial tone calls, absence of the (VGT-) lamp indicates the marker did not receive the line link location from the line link.

Probably will not complete on second trial.

NORMAL SEQUENCE OF OPERATION**TROUBLE DUPLICATION INFORMATION**

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

REFERENCE DOCUMENTS

SD-26001-01	FS-6	SC-6	CD-26001-01	Para. - 2.15 thru 2.19
SD-26002-01	FS-6	SC-106,107	CD-26002-01	Para. - 6.15&7.37

VGT

VGT-X

LAMP INFORMATION

Lamp - VGT- (at least two lamps lighted)
 No Lamp - VGT- not lighted in one-out-of-twelve format

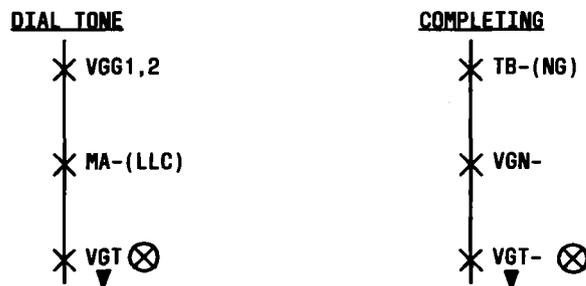
DESCRIPTION OF CIRCUIT OPERATION

Marker is verifying that the line link information received is valid. On dial tone this information comes from the line link. In completing calls, the (VGT-) information is received from the number group.

DESCRIPTION OF FAILURE

The (VGT-) lighted indicates that the marker started to receive the vertical group information. Since the (VGT/U-) information was not recorded in one-out-of-five or two-out-of-five format and (VGT/T-) was not recorded in one-out-of-two format, a (VGT-X) trouble is detected. (The (VGT-) relays are operated in one-out-of-twelve.

Probably will not complete on second trial.

NORMAL SEQUENCE OF OPERATION**TROUBLE DUPLICATION INFORMATION**

Dial Tone or IA0 Test - See Section 218-404-510 - Part 11

REFERENCE DOCUMENTS

SD-26001-01	FS-6	SC-1	CD-26001-01	Para. - 2.17
SD-26002-01	FS-6	SC-116	CD-26002-01	Para. - 6.15, 7.37

VGT-X

XLH

LAMP INFORMATION

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

DESCRIPTION OF CIRCUIT OPERATION

Prior to operating the line hold magnet, the marker checks for crossed leads to the hold magnets. This test is made on light traffic calls only. If the lead tests okay, the (XLH) relay will not operate. With crossed LL- leads, enough current flows through the (XLH) relay winding to cause it to operate. Operation of the (XLH) relays prevents the release of the (LHT) relay.

DESCRIPTION OF FAILURE

(XLH) indicates crossed line hold magnets or shorted LH- leads to the line link.

A trouble record record is taken; however, the call is allowed to complete on first trial.

NORMAL SEQUENCE OF OPERATION

(Does not apply.)

TROUBLE DUPLICATION INFORMATION

Dial Tone or INC Test - See Section 218-105-320 - Part 11

REFERENCE DOCUMENTS

SD-26001-01	FS-20	CD-26001-01	Para. - 9.34-9.36
SD-26002-01	FS-47	CD-26002-01	Para. - 6.31

XLH

XRL

LAMP INFORMATION

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

DESCRIPTION OF CIRCUIT OPERATION

The marker is testing for a false ground on the (RL) lead to the (ORMC).

DESCRIPTION OF FAILURE

Operation of the (XRL) relay indicates a false ground is present on the (RL) lead. This test is made as soon as the marker starts into the call back linkage, but before the idle channel is selected.

May complete on second trial.

NORMAL SEQUENCE OF OPERATION

(Does not apply.)

TROUBLE DUPLICATION INFORMATION

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

REFERENCE DOCUMENTS

SD-26002-01 FS-51 CD-26002-01 Para. - 6.23

XRL

XS

LAMP INFORMATION

Lamp - XS

No Lamp - (Does not apply.)

DESCRIPTION OF CIRCUIT OPERATION

The marker is operating an (S-) relay in the outgoing sender connector.

DESCRIPTION OF FAILURE

(XS) lighted indicates that two or more (S-) relays attempted to operate. The (S-) relay in the connector is operated in series with the (XS) relay in the marker. More than one (S-) relay attempting to operate will cause the operation of the (XS) relay.

May complete on second trial.

NORMAL SEQUENCE OF OPERATION

(Does not apply.)

TROUBLE DUPLICATION INFORMATION

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

REFERENCE DOCUMENTS

SD-26002-01 FS-60,113 CD-26002-01 Para. - 10.37

XS

