

**AUTOMATIC OFFICE-TO-OFFICE
TESTING PROCEDURES
NO. 2B ELECTRONIC SWITCHING SYSTEM**

	PAGE		PAGE
1. GENERAL	1	G. Restoring CUs After Test	9
A. Board-to-Board Test Tape Cartridge	2	H. Removing Test Circuit	10
B. Program Limitations	2	5. INPUT MESSAGES FOR OFFICE-TO-OFFICE TEST	10
2. OFFICE MODIFICATIONS	2	6. OUTPUT MESSAGES FOR OFFICE-TO-OFFICE TEST	11
A. Memory	2	7. MANUAL TESTING	13
B. Test Circuitry	4		
C. Test Trunk Translations	4		
3. PROGRAM DESCRIPTION	5	Figures	
A. General	5	1. Typical Office-to-Office Setup	3
B. Obtaining a List of Telephone Numbers	7	2. Line Insulation Test Data Translations Table	4
C. Aborting Office-to-Office Testing	7	3. Office-to-Office Continuity—Polarity Test Circuit	5
4. OFFICE-TO-OFFICE TESTING PROCEDURES	7	4. Office-to-Office Outgoing Trunk Test Circuit	6
A. Installing and Adjusting Test Circuit	7	5. Line Insulation Test Word Translations Table	7
B. Performing Recent Change Update	8		
C. Inserting Board-to-Board Test Tape Cartridges	8	1. GENERAL	
D. Loading CUs Before Test	8	1.01 This section describes the office-to-office test program used by the operating companies during the turnover interval of a No. 2B Electronic Switching System (ESS).	
E. Testing	8	1.02 Whenever this section is reissued, the reason(s) for reissue will be given in this paragraph.	
F. Inserting Standard Generic Tape Cartridges	9		

NOTICE

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

SECTION 232-302-305

1.03 The following documents are used concurrently with this section and should be available when performing the office-to-office test procedure:

- 232-002-502
- 232-304-301
- 232-304-303
- 232-309-305.

1.04 The office-to-office test program is used in conducting tests on lines that are being transferred from an old telephone office to a precut No. 2B ESS office. The purpose of this test program is to ensure that the connection of these lines to the new office is correct with respect to the existing connections in the old office (Fig. 1). ***This test program is not used in a cutover (in-service) office.***

1.05 This test program is designed to test and verify line connections automatically. This is accomplished through the use of a special generic test program and a special test circuit (NS03502). The input messages listed in Part 5 and output messages listed in Part 6 associated with the test program allow automatic testing of lines and eliminate the need for maintenance personnel to dial up lines for continuity/polarity (C/P) checks between old and new offices. This test checks the translation information against the physical connections.

1.06 The general scheme of this testing procedure consists of two parts:

- (1) The No. 2B ESS office is connected to the old office through the cable splice containing the lines to be tested. The lines are connected through the line trunk network (LTN) to a continuity/polarity test circuit that checks for correct battery and ground on the line under test.
- (2) The No. 2B ESS outpulses the telephone digits to the old office to cause the old office to complete the connection to the customer telephone. Special or modified equipment is used in the old office to prevent ringing and remove battery and ground from the line. The absence of these signals is detected by the No. 2B ESS office through the cable splice,

guaranteeing the correct line is connected to the telephone.

1.07 The office-to-office test program is also known as the line verification test, multiple-to-multiple test, or board-to-board test.

A. Board-to-Board Test Tape Cartridge

1.08 A special board-to-board test tape cartridge is used to provide the board-to-board test program. This test program overlays the automatic line insulation test (ALIT) program located within the generic program on track 1 of the tape. The test tape cartridge initially contains no translation data. Updated translations pertaining to the specific office must be written on the test tape prior to performing the office-to-office test procedure.

1.09 Two test tape cartridges are necessary to perform the office-to-office test procedure during the turnover/cutover interval at the office. Two test tape cartridges containing modified 2B-EF-1 generic programs will be provided when one J2H101A-1, List 3 is ordered. When one J2H101B-1, List 3 is ordered, two test tape cartridges containing modified 2B-EF-2 programs will be provided. The board-to-board test tape should be the same issue of the generic as the standard generic tape used in the office.

B. Program Limitations

1.10 Installation of the No. 2B ESS office to which the lines are being transferred should have progressed to the point where the lines to be tested have been bridged from the old office to the new office.

1.11 The generic program must be functioning normally (automatically satisfied in a turnover interval), in a newly installed No. 2B ESS.

2. OFFICE MODIFICATIONS

A. Memory

2.01 In order to perform the office-to-office test procedure, the following modifications to memory must be made.

- (a) Perform a recent change update on existing office translations

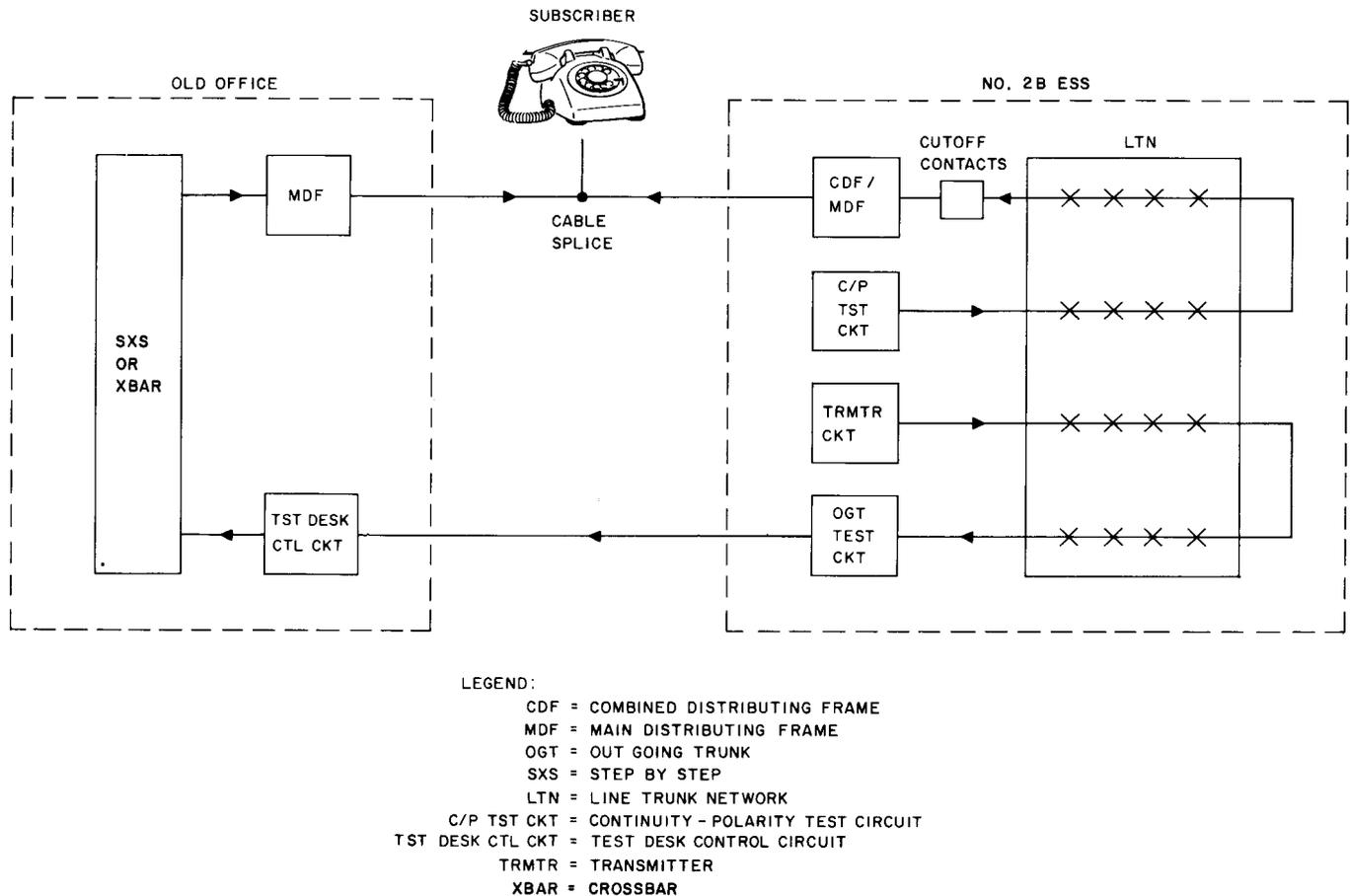


Fig. 1—Typical Office-to-Office Test Setup

- (b) Enter translations on both board-to-board test tape cartridges
- (c) Replace standard generic tape cartridges with board-to-board test tape cartridges
- (d) Transfer test tape information to off-line and on-line control units.

Note: Recent change messages and generic patching should be made on the board-to-board test tape during the office-to-office test procedure. Perform a recent change update prior to restoring standard generic tape cartridges to service and transfer translations to the standard generic tape cartridges.

- (e) Overwrite the line insulation test data (LITDATA) as shown in Fig. 2. The variable information is obtained from office records forms ESS 2202-2 and ESS 2202-3. The address of

each LITDATA word overwrite is obtained from the following listings:

- (1) PR-591118 for 2B-EF-1 generic program
- (2) PR-591119 for 2B-EF-2 generic program.

Note: Prior to restoring standard generic tape cartridges cancel overwrite to restore original LITDATA.

- (f) When replacing a crossbar office, MF outpulsing may be used. If the incoming test trunk in the crossbar office is nonbylink, then "wink start" should be specified for the outgoing board-to-board test trunk. If the incoming test trunk in the crossbar office is bylink, then "no start" should be specified for the outgoing board-to-board test trunk.

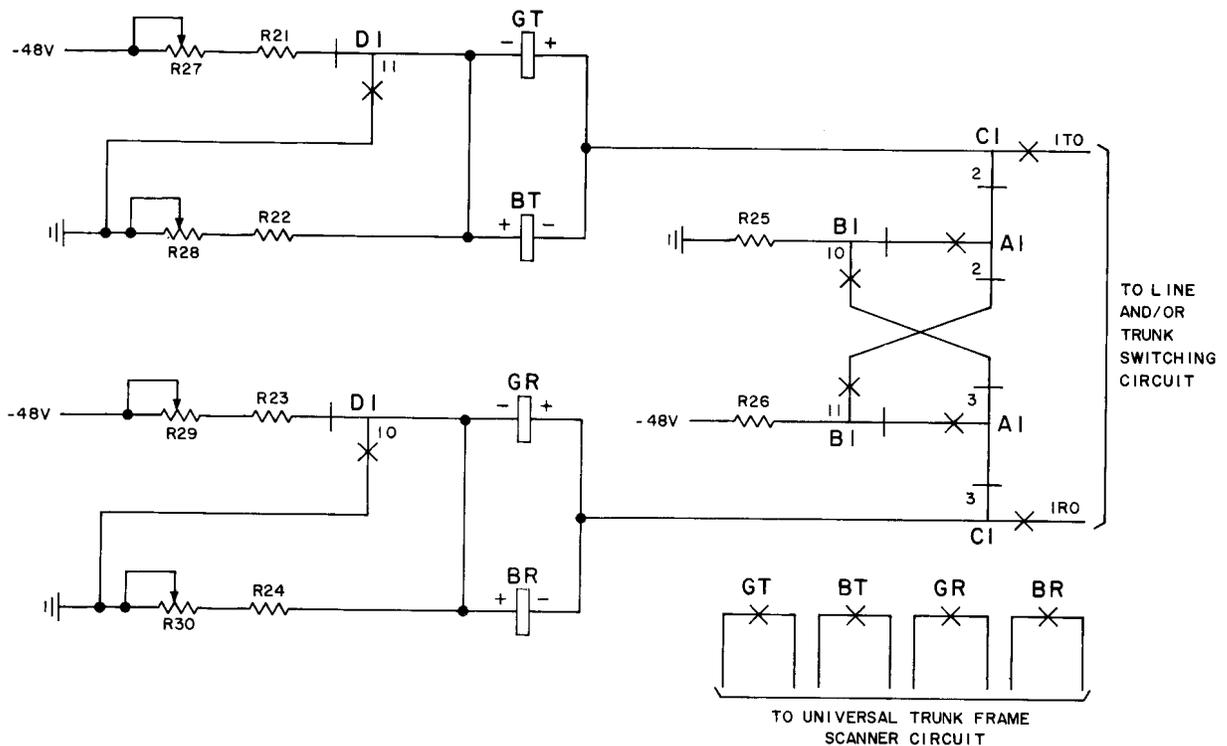


Fig. 3—Office-to-Office Continuity—Polarity Test Circuit

and SD-2H103. This translation information is required for the automatic office-to-office test.

2.07 All associated assignments, such as miscellaneous trunk frame equipment location, scanner assignments, peripheral decoder assignments, fuse assignments, etc, must be specified on ESS input forms.

3. PROGRAM DESCRIPTION

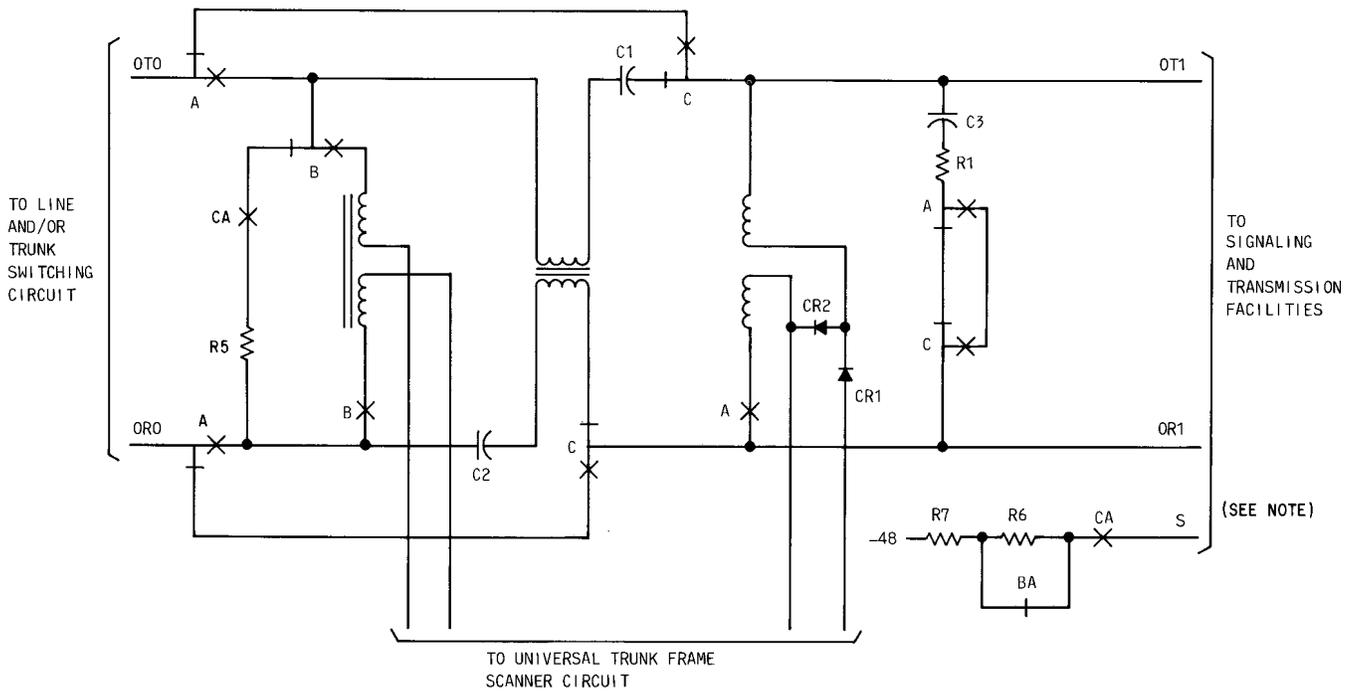
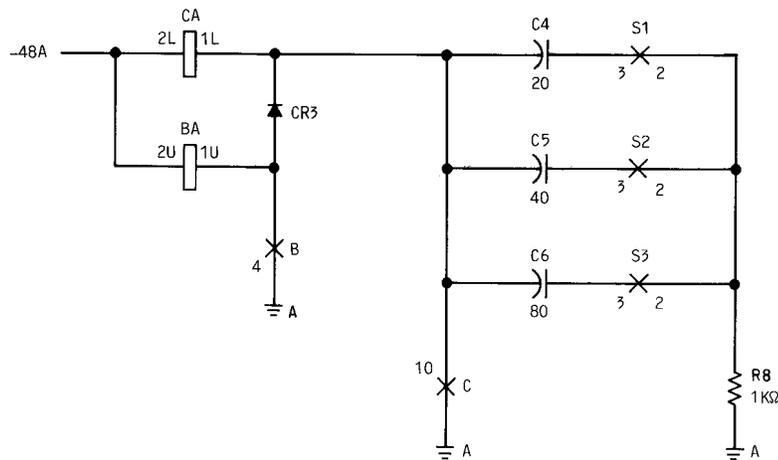
A. General

3.01 The program uses its own input and output messages to interface with maintenance personnel. The output messages will be printed out on the local test desk (LTD) teletypewriter (TTY). The LTD is sometimes called ALIT teletypewriter because the office-to-office test overlays the ALIT program. For convenience of operation, the output messages resulting from the office-to-office test may be transferred from the LTD TTY to the maintenance TTY. This is accomplished by removing the LTD TTY channel (channel 4) from service.

3.02 The type of office-to-office test to be performed is determined by the bit selection (Fig. 5) within the line insulation test word (LITWORD). The setting of these bits is accomplished through TTY input messages and the variable field octal codes (see paragraph 5.05).

3.03 With the M LI ST input message, the program will begin testing lines in the selected 1000s group. The 3-digit access code for the precutover normalized office code (NOC) will be used by the program to test the 1000s group which will be cutover. The program then selects a directory number in the 1000s group under test (starting with x111; x = 1000s group) and connects the test circuit to the customer line (Fig. 1). Proper polarity of the battery and ground on the tip and ring in the old office is verified by the test circuit in the new office through the cable splice, protector frame, and the cross connect on the combined distributing frame (CDF).

3.04 In a step-by-step (SXS) office, the office-to-office incoming trunk is wired to a test desk control circuit which will remove battery and ground from



NOTE:
THE S LEAD IS USED ONLY WITH SXS OFFICES.

Fig. 4—Office-to-Office Outgoing Trunk Test Circuit

the customer line appearance when four digits are outpulsed from the new office. The test program uses these four digits to verify that the TEN and TN of the customer line are properly defined. When a new No. 2B ESS office is connected to a crossbar (XB) office, the OGT from the new office

is connected to an incoming trunk (ICT) in the XB office. Supervision and ringing battery and ground of the ICT must be temporarily removed from the circuit. To accomplish this, the ICT must be modified by blocking open the contacts of the R relay at the old office. The program considers a

LITWRD (CALL STORE)

15	14	13	12	11	10	9	8					0
ACT	OKL	C/P	SP TN	NOC	STP	DGN	GS					PRT

LEGEND

ACT = 0 = OFFICE-TO-OFFICE TEST NOT ACTIVE	GS = 0 = LINE UNDER TEST
ACT = 1 = OFFICE-TO-OFFICE TEST IS ACTIVE	IS LOOP START
OKL = 0 = PRINT FAILING LINES ONLY	GS = 1 = LINE UNDER TEST
OKL = 1 = PRINT ATP LINES	IS GROUND START
C/P = 0 = DO COMPLETE TEST	PRT = 0 = DO NOT PRINT
C/P = 1 = CONTINUITY/POLARITY TEST ONLY	FLAG
SP TN = 0 = DO NOT PRINT SPARE TNS	PRT = 1 = PRINT FLAG
SP TN = 1 = PRINT SPARE TNS	
NOC = 0 = TEST NOC6	
NOC = 1 = TEST NOC7	
STP = 0 = CONTINUE OFFICE-TO-OFFICE TEST	
STP = 1 = ABORT OFFICE-TO-OFFICE TEST	
DGN = 0 = DO NOT DIAGNOSE TEST CIRCUIT	
DGN = 1 = DIAGNOSTIC REQUEST OF TEST CIRCUIT	

Fig. 5—Line Insulation Test Word Translations Table

good C/P test to be battery on ring and ground on the tip. Then four digits are outpulsed from the new office to the old office to verify that the TEN and TN are properly defined. To determine that the new line is connected to the correct old line, the program then rescans the test circuit. The program then advances to the next directory number to be tested. The testing process continues in this manner until the entire 1000s group has been tested.

3.05 The automatic office-to-office test program is designed to test approximately 3000 lines in an 8-hour period as compared to about 500 lines that can be tested manually in the same period of time.

B. Obtaining a List of Telephone Numbers

3.06 The office-to-office test program can be used to obtain a list of TNs that are listed as unassigned in the new office. Only one group of TNs at a time can be specified.

C. Aborting Office-to-Office Testing

3.07 If it is necessary to stop the office-to-office test program, enter the abort message on the LTD TTY or the maintenance TTY. The system will respond with an "OK" following the abort message but will continue printing test results until the TTY buffer register has been emptied. Then

the system will respond with a BB OK ABT message indicating the program testing has stopped.

4. OFFICE-TO-OFFICE TESTING PROCEDURES

A. Installing and Adjusting Test Circuit

4.01 Install and adjust the office-to-office test circuit as follows:

- (a) Mount test circuit (NS03502) on miscellaneous trunk frame.
- (b) Make appropriate TEN, CPD, scanner, power, and ground connections.
- (c) On test circuit, set switches S1, S2, and S3 for an approximate 0.5-second outpulsing delay.
- (d) At the central distributing frame, connect tip and ring leads from the office-to-office test trunks to the appropriate incoming test trunks. If old office is SXS, connect sleeve leads from the test trunks to the appropriate incoming test trunks.
- (e) Adjust the installed test circuit using Section 232-002-502.

SECTION 232-302-305

B. Performing Recent Change Update

4.02 Update translations by performing recent change update procedures given in Section 232-304-301.

C. Inserting Board-to-Board Test Tape Cartridges

4.03 Using procedures given in Section 232-309-305 perform the following:

- (a) Remove and label standard generic tape cartridge from TDC 1.
- (b) Insert *first* board-to-board test tape cartridge into TDC 1. Copy tracks 2, 3, and 4 of the standard generic tape cartridge in TDC 0 onto the board-to-board tape cartridge in TDC 1.
- (c) Remove and label first test tape cartridge from TDC 1.
- (d) Insert *second* board-to-board test tape cartridge into TDC 1. Copy tracks 2, 3, and 4 of the standard generic tape cartridge in TDC 0 onto the board-to-board tape cartridge in TDC 1.
- (e) Restore TDC 1 to service by typing in the following message:
At the maintenance TTY—

RST:TAPE 1!

- (f) Remove TDC 0 from service by typing in the following message:
At the maintenance TTY—

RMV:TAPE 0!

- (g) Remove and label standard generic tape cartridge from TDC 0
- (h) Insert *first* test tape cartridge into TDC 0.

D. Loading CUs Before Test

4.04 Load data into off-line and on-line memory as follows:

- (a) Do a system bootstrap at the SYSTEM INITIALIZATION section of the system status panel (SSP).

At SSP, depress in order:

ENABLE
STABLE
MEMORY RELOAD
RECENT CHANGE
INIT EXECUTE

- (b) Set time and date.

At maintenance TTY—

Type in:
SET:CLK:TIME (hh,mi,ss), day (mo,dd,yy)!

where:

hh = hour (0-24)
mi = minutes (0-59)
ss = seconds (0-59)
mo = month (1-12)
dd = day (1-31)
yy = year (0-99)

- (c) Overwrite words 0 through 5 (for 2B-EF-1) or words 3 through 5 (for 2B-EF-2) of LITDATA in program store translations using Section 232-304-303. [See paragraph 2.01(e).]

E. Testing

Note: Testing may be stopped at any time during this procedure as follows:

At maintenance TTY—

Type in:
M LI:ABT!

System response:

OK
Variable (Remaining contents of buffer)

.
.
.
BB OK ABT

4.05 Diagnose test circuit as follows:

At maintenance TTY—
Type in:
M LI:DGN!

System response:
BB OK TST

4.06 If audit program interferes with TTY printouts, stop periodic audits as follows:

At maintenance TTY—
Type in:
M AU:INH!

System response:
OK

Note: If office-to-office responses are desired at the maintenance TTY, remove the local test desk channel (channel 4) from service.

At maintenance TTY—
Type in:
RMV:TTYC 4!

4.07 Begin office-to-office testing as follows:

At maintenance TTY—
Type in:
M LI:ST:aa bb!

where: aa = Type of test (see paragraph 5.05).

bb = Starting 1000s group of TNs to be tested.

System response:
Variable (See Note)

.
. .
. .
BB OK END

Note: The system response depends upon the type of test performed and the specific condition of each tested line. See paragraphs 6.05 through 6.20 for an explanation of line condition output messages.

4.08 Repeat paragraph 4.07 for each 1000s group until all lines have been tested.**F. Inserting Standard Generic Tape Cartridges**

Note: If recent change messages have been entered during office-to-office testing, perform a recent change update using Section 232-304-301.

4.09 Using procedures given in Section 232-309-305 perform the following:

- (a) Remove board-to-board test tape cartridge from TDC 1.
- (b) Insert **first** standard generic tape cartridge into TDC 1. Copy tracks 2, 3, and 4 of the board-to-board tape cartridge in TDC 0 onto the standard generic tape cartridge in TDC 1.
- (c) Remove and label first standard generic tape cartridge from TDC 1.
- (d) Insert **second** standard generic tape cartridge into TDC 1. Copy tracks 2, 3, and 4 of the board-to-board tape cartridge in TDC 0 onto the standard generic tape cartridge in TDC 1.
- (e) Remove board-to-board test tape cartridge from TDC 0.
- (f) Insert **first** standard generic tape cartridge into TDC 0.

G. Restoring CUs After Test**4.10** Cancel LITDATA overwrite performed in paragraph 4.04(c).

At maintenance TTY—
Type in:
REPT:TAPE STAT!

System Response:
REPT TAPE 00 bb
where bb = status words of the defined tape.

Type in:
ALW:OW!

System Response:
ALW OW COMPL

Type in:
CNL:OW n!
where n = overwrite number

System Response:
CNL OW COMPL

4.11 Load data into off-line and on-line memory as follows:

- (a) Do a system bootstrap at the SYSTEM INITIALIZATION section of the system status panel (SSP).

At SSP, depress in order:

ENABLE
 STABLE
 MEMORY RELOAD
 RECENT CHANGE
 INIT EXECUTE

- (b) Set time and date.

At maintenance TTY—

Type in:
 SET:CLK:TIME (hh,mi,ss), day (mo,dd,yy)!

See paragraph 4.04(b) for explanation of variable fields.

Note: If channel 4 was removed from service, restore service as follows:

At maintenance TTY—

Type in:
 RST:TTYC 4!

If periodic audits were inhibited, restore audit program.

At the maintenance TTY—

Type in:
 M AU RST!

H. Removing Test Circuit

4.12 The office-to-office test circuit may be removed as follows:

- (a) At the central distributing frame, disconnect tip, ring, and sleeve leads
- (b) Disconnect TEN, CPD, scanner, power, and ground connections
- (c) Remove test circuit from miscellaneous frame.

5. INPUT MESSAGES FOR OFFICE-TO-OFFICE TESTS

5.01 **M AU:INH!** - Inhibits all periodic audits. This message is used only if the network audit program interferes with TTY printouts.

5.02 **M AU:RST!** - Restores audit program. This message is used only when the audit program has been removed and the test procedure that required audit program removal has been completed.

5.03 **M LI:ABT!** - Causes the office-to-office test program to stop testing and print out an abort message. Prior to incrementing the directory number, the program checks to see if the "stop" bit of LITWRD in call store is set. This bit is set by the abort message, which in turn, causes the testing to be aborted.

5.04 **M LI:DGN!** - Accesses the program and causes a diagnostic of the test circuit to be performed. The diagnostic checks the ability of the circuit to recognize battery and ground on the tip and ring leads. Success or failure of the diagnostic will be printed out on the appropriate TTY.

5.05 **M LI:ST:aa bb!** - Initiates the office-to-office line testing and may be used to obtain a listing of unassigned TNs.

The variable field **aa** indicates the type of test to be performed. The types of tests are as follows:

- aa = 00 Do complete test on NOC6, don't print spare TNs
- = 01 Do complete test on NOC7, don't print spare TNs
- = 02 Do complete test on NOC6, print spare TNs
- = 03 Do complete test on NOC7, print spare TNs
- = 04 Do C/P test only on NOC6, don't print spare TNs
- = 05 Do C/P test only on NOC7, don't print spare TNs

- = 06 Do C/P test only on NOC6, print spare TNs
- = 07 Do C/P test only on NOC7, print spare TNs
- = 10 Do complete test on NOC6, don't print spare TNs, print ATP TNs
- = 11 Do complete test on NOC7, don't print spare TNs, print ATP TNs
- = 12 Do complete test on NOC6, print spare TNs, print ATP TNs
- = 13 Do complete test on NOC7, print spare TNs, print ATP TNs
- = 14 Do C/P test only on NOC6, don't print spare TNs, print ATP TNs
- = 15 Do C/P test only on NOC7, don't print spare TNs, print ATP TNs
- = 16 Do C/P test only on NOC6, print spare TNs, print ATP TNs
- = 17 Do C/P test only on NOC7, print spare TNs, print ATP TNs.

The variable field **bb** indicates the starting 1000s group of TNs to be tested as follows:

bb = 01 to 12 (octal)—indicating the first 1000s group to be tested. The standard testing progression is 1,2,3,.....0 (ie, if 04 is specified, testing will begin at 4111 and end at 4110).

The program checks the validity of the variables and then initiates an automatic diagnostic of the test circuit. Upon successful completion of the diagnostic, a transient call record (TCR) is initialized for use of the program for the duration of the test.

6. OUTPUT MESSAGES FOR OFFICE-TO-OFFICE TEST

DIAGNOSTIC REPLY

6.01 BB CK BAD—This output message is received when a diagnostic of the office-to-office test circuit fails. This means the circuit is bad and will have to be repaired before testing can be done.

6.02 BB OK TST—This output message is received when a diagnostic of the office-to-office test program has been requested and the circuit passed the test.

ABORT REPLY

6.03 BB OK ABT—This output message is received when testing was stopped by request from an input message.

STOP REPLY

6.04 BB OK END—This message is received indicating that testing was stopped due to the program automatically reaching the last number in the NOC being tested.

LINE TEST REPORT

6.05 The information contained in the line report message consists of:

- (a) **Keyword** - Status of line on test circuit
- (b) **nabc** - Normalized office code (NOC) of line
- (c) **defg** - Telephone number (TN) of line
- (d) **nngcsl** - Terminal Equipment Number (TEN) assigned to TN.
- (e) **oosr** - Scan results indicating condition of line as follows:

0000 = Possible positive or ac voltage on line

0001 = Possible positive or ac voltage on line

0002 = Possible positive or ac voltage on line

0003 = Possible positive or ac voltage on line

0004 = Possible positive or ac voltage on line

0005 = Ground both sides

0006 = Ground tip, battery ring—indicates line is cross-connected or spliced to the wrong old line

0007 = Ground tip, open ring—indicates a split cross-connection or splice

SECTION 232-302-305

0008 = Possible positive or ac voltage on line

0009 = Battery tip, ground ring

0010 = Battery tip, battery ring

0011 = Battery tip, open ring

0012 = Possible positive or ac voltage on line

0013 = Open tip, ground ring

0014 = Open tip, battery ring

0015 = Open both sides.

6.06 BB NG AOP nabc defg nn gcs1 oosr—

This message is received indicating a test failure after outpulsing. However, this message will only be received on a line if the line has first passed the C/P test. To determine the location of the trouble, the line must be tested manually.

0015 = Open both sides—this scan result should not be received since this indicated a good test after outpulsing.

6.07 BB NG BSY nabc defg nn gcs1—

This message is received when a line is tested as busy in the old office. The line was not C/P tested, therefore no scan result printout will accompany the output message. This output message could also indicate a high resistance short on the cable pair.

6.08 BB NG C/P nabc defg nn gcs1 oosr—

This message is received when a line fails the C/P test. When the C/P test fails, this means outpulsing to the old office was not done on this line. A manual test will have to be run on this line to determine the location of the trouble. If one of the following scan results should be received in this message, manual testing may not be necessary.

- oosr = 0006—Ground tip, battery ring—This should not be received since it indicates a good test.

- oosr = 0009—Battery tip, ground ring indicates a reversal—This will be considered a good test for second and fourth parties.

- oosr = 0014—Open tip, battery ring—This will be considered a good test for ground start lines. Outpulsing was not performed on this line.

6.09 BB NG FBY nabc defg nn gcs1 xxxx—

This message is received when a line is found busy in the ESS. Therefore, the line was not tested by the office-to-office test program.

Note: The xs in the variable field of this message, and the messages to follow, have no specific meaning for the particular message.

6.10 BB NG LFC nabc defg nn gcs1 oosr—

The line ferrod cutoff contacts could not be closed or the line is translated as ground start and strapped for loop start or line is translated as loop start and strapped for ground start.

6.11 BB NG LEO nabc defg nn gcs1 oosr—

The line ferrod cutoff contacts could not be opened.

6.12 BB NG MTR nabc defg xx xxxx xxxx—

The number defined by nabc-defg is assigned to a private branch exchange (PBX) or multiline hunting group. It was not tested by the program, and must be manually tested.

6.13 BB NG OKL nabc defg nn gcs1 oosr—

This message is received when a line has passed all tests and it was desired to print out all test passed (ATP) lines.

6.14 BB NG PBO nabc defg nn gcs1 xxxx—

This message is received when a peripheral order buffer (POB) failure occurred while attempting to outpulse to the old office. This line has passed the C/P test. Testing was continued. Repeated receipt of this message indicates a hardware trouble in a trunk, transmitter, or network.

6.15 BB NG POB nabc defg nn gcs1 xxxx—

This message is received when a POB failure occurred while attempting to set the path between this line and the test circuit. Repeated receipt of this message indicates network trouble. This line was not tested.

6.16 BB NG PTH nabc defg nn gcs1 xxxx—

This message is received when a path between this line and the test circuit could not be found. This line was not tested. Repeated receipt

of this message indicates some network blockage that should be investigated before testing is continued.

6.17 BB NG PUL nabc defg nn gcs1 xxxx—

This message indicates a pulsing failure to the old office on this number. The test was not completed, but the line has passed the C/P test. Repeated receipt of this message indicates hardware trouble in the OGT or incoming trunk in the old office.

6.18 BB NG SCN nabc defg nn gcs1 xxxx—

This message indicates a scanner failure has occurred while attempting to scan the test circuit. The test was not done on this line. The failure could have occurred either before or after outpulsing. Repeated receipt of this message indicates a scanner trouble — the scanner being the one to which the test circuit is assigned.

6.19 BB NG TKB nabc defg nn gcs1 xxxx—

This message indicates the program was unable to select an outgoing pulse trunk to the old office. Testing was changed to C/P only, and the program continued testing.

6.20 BB NG UNA nabc defg xx xxxx xxxx—

This output message indicates the directory

number given is unassigned. This message will also be received on all unassigned lines when input message M LI ST has requested them. Also, this message could indicate a denied termination line.

7. MANUAL TESTING

7.01 The output messages received as a result of failing lines during the office-to-office testing are lines that need to be manually tested to identify and correct the cause of the failure. The scan results of an output message may be identified as not having failed the test. Therefore, further testing may not be necessary. Refer to paragraph 6.05(e) for comparing scan results for possible troubles on a line.

7.02 To manually test a line that has failed the office-to-office test program, refer to Section 232-002-509 (Office-to-Office Tests for Turnover/Cutover Interval). This section describes the equipment and procedures necessary for testing particular subscriber lines on a one-at-a-time basis. This procedure is necessary only on those lines that failed the office-to-office test.