

OUTGOING TRUNKS
TESTS USING OUTGOING TRUNK TEST FRAME SD-25177-01
NO. 1 CROSSBAR OFFICES

1. GENERAL

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1.01 This section describes a method of testing outgoing trunks from No. 1 crossbar offices using manual outgoing trunk test circuit SD-25177-01.

1.02 This section is reissued to revise Test S, and change lettered designations of Tests J through U to I through T. The Equipment Test List is affected.

1.03 The tests covered are:

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A. Revertive Pulsing Trunks to No. 1 Crossbar, No. 5 Crossbar, No. 1 ESS, or Panel Offices: Tests of these trunks are made by directing calls to the final multiple test line in panel offices and to the incoming trunk test line in No. 1 ESS or crossbar offices. These test lines, in conjunction with the test frame, check the ringing and supervisory features of trunks as well as the electrical tests of the A and L relays of panel and crossbar trunks. **5**

B. A Relay Nonoperate Test—Panel Incoming 24V Trunks and Crossbar Incoming Trunks: This test makes a nonoperate test of the trunk A relay through the use of compensating resistance while directing a call to a busy line. **6**

C. Revertive Pulsing Trunks to Crossbar Tandem or Panel Office Selector Tandem: Tests of these trunks are made by directing calls to test lines or test line circuits in the respective types of offices. **7**

D. Trunks to Panel Call Indicator (Including Official PBX Trunks Requiring Call Indicator Pulses): These trunks are tested by directing calls to a call indicator test line, a busy number, or a PBX operator. **8**

E. PCI Trunks to Crossbar Tandem (Non-CAMA) or Panel Sender Tandem: These trunks are tested by directing a call to the tandem office test line circuit, to a busy line, or to a test line circuit in a local office reached through the tandem office. Included in this test is a test from the TO jacks (cable side) for trunks arranged for dial coin zone service to a panel sender tandem or, on a PCI basis, to a crossbar tandem. This test excludes the dial coin zone trunk equipment. **9**

F. Dial Pulse (DP) Trunks (Manual Dialing): These trunks are tested by manually dialing a call to a test line or busy line with compensating resistance key settings to check the electrical requirements of the control relays. **9**

G. Dial Pulse (DP) Trunks (Automatic Dialing): The same tests are placed on the trunks as in Test F except that the called number is written up on the register keys and is then pulsed automatically. **10**

H. Multifrequency Trunks: Trunks direct to crossbar offices are tested by directing calls to test lines or busy lines in the respective crossbar offices. Trunks to No. 4A, No. 4M, and tandem

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crossbar offices (non-CAMA) are tested either to the No. 4A, No. 4M, or tandem test line or through the respective office to a terminating office test line. CAMA trunks are tested to the No. 4A, No. 4M, No. 5, or tandem test line except for call-through type tests of (0+ or 0-) ANI trunks which are verified with an operator.	11
I. Overflow Trunks: These trunks are tested on a regular call basis with a check of overflow tone or a supervisory flash on tandem office overflow trunks.	13
J. Free Trunks to Official PBX: These trunks are tested on a regular call basis with a check of audible ringing and proper supervision.	13
K. Information Trunks: These trunks are tested in the same manner as those in Test J.	14
L. Repair Service Trunks: These trunks are tested in the same manner as those in Test J.	14
M. Test Trunk to Local Test Desk: An operation test of these trunks is made with a check of supervision and the tester's ability to hold the connection.	14
N. PCI Trunks to Crossbar Tandem Operator Identified CAMA: These trunks are tested either to the tandem test line or through the tandem office to a terminating office test line.	15
O. Dial Coin Zone Trunks to Panel Sender Tandem or Crossbar Tandem: This test is made from the T jacks and tests through the dial coin zone trunk equipment; the completion of call is under control of the coin operator.	16
P. Trunks to BELLBOY® Personal Signaling System: This test	

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checks that proper supervision and announcement is received over the trunks.	16
Q. Trunks to 6A Teletypewriter Switchboard: This test checks supervisory and reseizure features of the trunks.	17
R. Trunks to 6A or 7A Announcement System: This test checks the functions of the announcement trunk circuit SD-27985-01.	18
S. 911 Emergency Service Trunks: This test checks the features of the 911 emergency service trunks which provide direct access to an emergency bureau.	18
T. PCI ANI CAMA TSP/TSPS Trunks: CAMA trunks are tested to the No. 4A, No. 4M, or tandem test line or through the respective office to a terminating office test line except for call-through type tests of (0+ or 0-) ANI trunks which are verified with an operator.	20
1.04 These tests may affect service, traffic measurements, and/or require an operator, and need to be coordinated with the personnel responsible for these functions.	
1.05 A list should be prepared for each trunk group where required, containing the trunk, A relay operate, A relay nonoperate, and L relay nonoperate compensating resistance settings necessary for test purposes. For dial pulse and multifrequency trunk groups, the list should also contain the type of start pulsing signal and the type of pulsing required for the dial pulse groups.	
1.06 Information for determining the required compensating resistances may be obtained from incoming trunk test frame and marker and decoder cross-connection records together with sections covering compensating resistances and incoming trunk test frame cross-connections.	
1.07 The trunk compensating resistance list should contain the minimum loop resistance value	

for ordinary operation and the maximum loop resistance for testing the various trunk groups under extreme conditions.

1.08 The A relay operate compensating resistance should be a value such that, when added to the trunk loop resistance, the sum is as near as possible to, but not more than, the maximum external circuit loop resistance value for supervision as covered on the circuit drawing.

Note: In the case of trunks to tandem having through supervision or on 2-wire office selectors, no A relay operate compensating resistance should be added and the test should be made on a regular circuit operation basis.

1.09 The A relay nonoperate compensating resistance should be a value such that, when added to the trunk compensating resistance, the L relay nonoperate compensating resistance, 500 ohms (CH relay winding in the test circuit), and the trunk loop resistance, the sum is as near as possible to, but not less than, the value required to produce the nonoperate current test value for the A relay.

1.10 The L relay nonoperate compensating resistance should be a value such that, when added to the trunk compensating resistance, 500 ohms (CH relay winding in test circuit), the trunk loop resistance, and any compensating resistance in use at the distant end when the incoming selector is in the incoming advance position, the sum is as near as possible to, but not less than, the value required to produce the nonoperate current test value of the L relay.

1.11 Lamps and keys associated with jack T1 have a 1 in the designation as ON1, SDR1, etc. Lamps and keys associated with jack T2 have a 2 in the designation as ON2, SDR2, etc. In the procedures for Tests A to U inclusive, it is assumed that the T1 jack is used and reference is made to the associated lamps and keys.

1.12 The REP key (if furnished) when operated on revertive pulse and multifrequency type calls and used with the TST1 cord will automatically make repeat tests only to a "busy" test line or to a test line which conditions the incoming trunk circuit to send back pulses of reversed battery. In order to satisfy the test circuit when the REP key is operated, six pulses (six flashes) of reversed

battery are required from the incoming trunk circuit.

1.13 Overall operational tests of CAMA trunks are not intended to be made with the OGT test circuit into synchronous or nonsynchronous test lines. Automatic test equipment in local and CAMA offices performs operational tests of the trunk equipment at the near and far ends. The test procedures used in making transmission tests with the OGT test circuit into 104-type test lines (Section 216-769-501) checks the ability of the CAMA trunks to complete a call. Removal of test progress tone indicates trunk cut-through, and no further operational functions can be checked.

1.14 When testing an ANI outgoing trunk, the T jack associated with the office link and the MB jack associated with the line side of the trunk circuit should be used. If provided, the ANI key on the OGT test circuit should be operated after connecting to the trunk T jack. With an ANI key provided, test calls may be directed to a special NNX code (a free code) without AMA tape registration. Any other test line termination will be routed to an operator for verification of calling number. When an ANI key is not provided, the only tests which can be performed on the ANI trunks to a 4-type toll office are transmission tests requiring operator assistance. Tests can be directed to those test lines which have been assigned a special NNX code (a free code) on ANI trunks to a crossbar tandem or No. 5 crossbar office.

1.15 When testing a 911 emergency service trunk, patch the T1 jack to the T jack of trunk to be tested and patch MB jack to the T&MB jack of trunk to be tested. Test calls require the assistance of the attendant at the emergency bureau where the trunk is terminated. Action and verification at the trunk equipment frame is required for this test.

1.16 Lettered Steps: A letter a, b, c, etc, added to a step number in Parts 3 and 4 of this section, indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

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2. APPARATUS

2.01 Three P3F cords, 4 feet long, equipped with one 310 plug and one 309 plug (3P12A, 3P12B, and 3P12C cords).

2.02 Head telephone set.

2.03 Outgoing trunk test frame SD-25177-01.

2.04 322A (make-busy) plugs as required.

3. PREPARATION

STEP	ACTION	VERIFICATION
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All Tests

- | | | |
|-----|---|---|
| 1 | Restore all test frame keys to normal. | |
| 2a | If ON1 lamp is lighted—
Momentarily operate DISC1 key. | ON1 lamp extinguished. |
| 3b | If trunk is made busy and is not in use on a service call—
Operate NT1 key. | |
| 4c | If trunk is 4-wire reverse battery supervision—
Patch T and R jacks to T and R jacks of trunks to be tested. | If trunk is busy on service call—
BY1 and ON1 lamps lighted. |
| 5c | Operate MF4W key. | |
| 6d | If making call-through type test to TSP or TSPS on MF or PCI pulsing ANI trunks—
Patch MB jack to T&MB jack of trunk under test. | |
| 7d | Operate ANI- and IG keys (if provided). | |
| 8e | If testing 911 emergency trunks—
Patch MB jack to T&MB jack of trunk under test. | |
| 9f | If trunk to be tested is other than 4-wire reverse battery supervision—
Patch T1 jack to T jack of trunk to be tested. | If trunk is busy on service call—
BY1 and ON1 lamps lighted. |
| 10g | If trunk is 4-wire E and M lead signaling trunk—
Operate EM4W key. | If trunk is busy on service call—
BY1 and ON1 lamps lighted. |
| 11h | If trunk is busy on service call and holding trunk is not desired—
Remove patching cord. | BY1 lamp extinguished. |
| 12h | Momentarily operate DISC1 key. | ON1 lamp extinguished. |
| 13i | If trunk is busy on service call and holding trunk is desired— | BY1 lamp extinguished. |

STEP	ACTION	VERIFICATION
	Insert make-busy plug into MB jack associated with test jack of trunk and remove patching cord.	
14i	Momentarily operate DISC1 key.	ON1 lamp extinguished.
15i	When time has elapsed for trunk to become idle, repeat Step 9f, removing plug from MB jack after T and T1 jacks are patched.	
	Note: Do not proceed until BY1 lamp is extinguished.	
16j	If a 4-wire trunk with a relay on the S lead or a test trunk to local test desk is to be tested— Patch DMB1 jack to trunk S or T&MB jack.	
17k	If trunk has battery on tip and ground on ring when called subscriber receiver is off hook — Operate RS1 key.	

4. METHOD

STEP	ACTION	VERIFICATION
A. Revertive Pulsing Trunks to No. 1 Crossbar, No. 5 Crossbar, No. 1 ESS, or Panel Offices		
18	Operate DM key.	
19l	If trunk has 24V on supervisory relay— Operate TFV key.	
20	Operate required TRK COMP RES and A OPR COMP keys.	
21m	If a nonoperate test of L and A relays on battery cutoff panel trunks is desired— Operate PRE OPR L & A RYS key and required L RY NONOPR COMP RES and A RY NONOPR COMP RES keys.	
	Note: When no A RY NONOPR COMP RES key setting is given, set these keys to 4000.	
22n	If trunk under test is common to two crossbar units and call is to second unit (OFFICE B)— Operate HF key.	

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STEP	ACTION	VERIFICATION
23	Set up number of test line.	
24	Operate TST1 and SDR1 keys.	ON1 lamp lighted. SDR lamp flashed at 120 ipm during selections. When selections completed— SDR lamp extinguished. SUP1 lamp lighted.
25	Operate TLK1 key.	Ringing induction heard for at least one interval. Ringing tripped. SUP1 lamp flashed according to type of test line called. If synchronizing type test line used— Series of clicks in receiver at end of test. When testing trunks to No. 5 Crossbar Centrex Phase 2 or 3, the series of clicks will not be heard. Instead, a busy tone will be heard 6 seconds after series of clicks is normally heard. Failure to hear busy tone indicates failure of transfer feature. SUP1 lamp lighted steadily. If nonsynchronizing type test line used— SUP1 lamp continued to flash with the supervisory relay operate and release.
26o	If repeat test is desired— Momentarily operate DISC1 key. <i>Note:</i> If trunk under test is over carrier facilities, restore TLK1 key until selections are completed.	Test repeated.
27	Remove patching cord from trunk jack.	
28	Restore all keys to normal.	
29	Momentarily operate DISC1 key.	All lamps extinguished.
B. A Relay Nonoperate Test—Panel Incoming 24V Trunks and Crossbar Incoming Trunks		
18	Operate DM and ANO keys.	
19l	If trunk has 24V on supervisory relay— Operate TFV key.	
20m	If a panel incoming trunk— Operate required L RY NONOPR COMP RES keys.	
21	Operate required A OPR COMP, TRK COMP RES, and A RY NONOPR COMP RES keys.	

STEP	ACTION	VERIFICATION
22	Operate TST1 key.	
23	Set up number of busy line.	
24	Operate SDR1 key.	ON1 lamp lighted. SDR lamp flashed at 120 ipm during selections. When selections completed— SDR lamp extinguished. SUP1 lamp flashed at busyback rate.
25	Operate TLK1 key.	Busyback tone heard.
26n	If repeat test is desired— Momentarily operate DISC1 key.	Test repeated.
	Note: If trunk under test is over carrier facilities, restore TLK1 key until selections are completed.	
27	Remove patching cord from trunk jack.	
28	Restore all keys to normal.	
29	Momentarily operate DISC1 key.	All lamps extinguished.
C. Revertive Pulsing Trunks to Crossbar Tandem or Panel Office Selector Tandem		
18	Operate 1 OFF, 1 OFF OB, and 1 OFF OG keys for number of tandem office test trunk or test line circuit.	
19	Operate required A OPR COMP and 1 OFF COMP keys.	
20	Operate TST1 key.	
21	Operate SDR1 key.	ON1 lamp lighted. SDR lamp flashed at 120 ipm during selections. When selections completed— SDR lamp extinguished. SUP1 lamp flashed in accordance with test line called.
		Note: Disregard any MO lamp indication that may occur during this test.
22l	If repeat test is desired— Momentarily operate DISC1 key.	Test repeated.
23	Remove patching cord from trunk jack.	

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STEP	ACTION	VERIFICATION
24	Restore all keys to normal.	
25	Momentarily operate DISC1 key.	All lamps extinguished.
D. Trunks to Panel Call Indicator (Including Official PBX Trunks Requiring Call Indicator Pulses)		
18	Operate CI and TST1 keys.	
19	Operate required A OPR COMP and TRK COMP RES keys.	
Call Indicator Trunks		
20	Set up number of call indicator test line.	
21	Operate SDR1 key.	ON1 lamp lighted. SDR lamp flashed at 60 ipm until call completed. When call completed— SDR lamp extinguished.
22	Operate TLK1 key.	Ringing induction heard for at least one interval. SUP1 lamp flashed according to type of test line. Series of clicks heard in receiver at end of test.
231	If repeat test is desired— Momentarily operate DISC1 key.	Test repeated.
24	Remove patching cord from trunk jack.	
25	Restore all keys to normal.	
26	Momentarily operate DISC1 key.	All lamps extinguished.
PBX Trunks		
27	Set up any 4-digit number.	
28	Operate SDR1 key.	ON1 lamp lighted. SDR lamp flashed at 60 ipm until call completed. When call completed— SDR lamp extinguished. SUP1 lamp lighted.
29	Operate TLK1 key.	Ringing induction heard until operator answers. Note: When operator answers, advise the operator to disregard the call.

STEP	ACTION	VERIFICATION
30m	If repeat test is desired— Momentarily operate DISC1 key.	Test repeated.
31	Remove patching cord from trunk jack.	
32	Restore all keys to normal.	
33	Momentarily operate DISC1 key.	All lamps extinguished.
E. PCI Trunks to Crossbar Tandem (Non-CAMA) or Panel Sender Tandem		
18	Operate required A OPR COMP and TRK COMP RES keys.	
19	Set up number for tandem office test line circuit, or busy line or test line circuit in local office reached through tandem.	
20	Operate SDR1 key.	ON1 lamp lighted. SDR lamp flashed at 60 ipm during selections. When selections completed— SDR lamp extinguished. SUP1 lamp flashed in accordance with test line called.
21l	If repeat test is desired— Momentarily operate DISC1 key.	Test repeated.
22	Remove patching cord from trunk jack.	
23	Restore all keys to normal.	
24	Momentarily operate DISC1 key.	All lamps extinguished.
F. Dial Pulse (DP) Trunks (Manual Dialing)		
18	Operate DT1 key.	
19l	If trunks require battery and ground pulse dialing— Operate BGD key.	
20m	If 4-wire repeater type trunks— Operate ORD key.	
21n	If trunks arranged for delay dial start pulsing signal— Operate TO key.	

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STEP	ACTION	VERIFICATION
22	Operate NO SDR1 key.	ON1 lamp lighted. Wait for SUP1 lamp to light steadily before proceeding.
23o	If testing GO type trunks that give dial tone start pulsing signal— Operate TLK1 key.	Wait for dial tone before proceeding.
24	Dial number of test line.	SUP1 lamp extinguished each time dial is moved off normal. Note: Each time dial returns to normal SUP1 lamp relighted and should not flash before the dial is moved off normal for the next digit. When call is completed— SUP1 lamp flashed in accordance with type of test line called.
25	Remove patching cord from trunk jack.	
26	Remove patching cord from trunk S or T&MB jack.	
27	Restore all keys to normal.	
28	Momentarily operate DISC1 key.	All lamps extinguished.
G. Dial Pulse (DP) Trunks (Automatic Dialing)		
18	Operate required A OPR COMP keys.	
19l	If trunks require dialing on loop basis— Operate LPD key.	
20m	If trunks require dialing on battery and ground basis— Operate BGD key.	
21n	If trunks require dialing on loop resistance basis— Operate ORD key.	
22o	If trunks require GO start pulsing signal— Operate GO key.	
23p	If trunks require delay dial start pulsing signal— Operate TO key.	
24	Set up number of test line.	

STEP	ACTION	VERIFICATION
	<p>Note: If the trunk under test is common to two units, set up the office indicating digit on the TAN U key, if provided. If the TAN U key is not provided, set up the office indicating digit on the TAN H key.</p>	
25q	<p>If desired to check for dial tone on dial tone trunks— Operate DT key.</p>	
	<p>Note: When dial tone is received after Step 26 is performed, release the DT key to allow the test to proceed.</p>	
26	Operate TST1 and DP1 keys.	<p>ON1 lamp lighted. KP lamp flashed during pulsing. When selections completed— KP lamp lighted steadily. SUP1 lamp flashed according to type of test line called.</p>
27r	<p>If desired to check audible test indications— Operate TLK1 key.</p>	
28s	<p>If desired to make repeat test— Momentarily operate DISC1 key.</p>	Test repeated.
29	Remove patching cord from trunk jack.	
30	Restore all keys to normal.	
31	Momentarily operate DISC1 key.	All lamps extinguished.
H. Multifrequency Trunks		
18	Operate required A OPR COMP keys.	
	<p>Note: Operate A OPR COMP O key for 4-wire trunks.</p>	
19l	<p>If trunk requires delayed dial start pulsing signal— Operate TO key.</p>	
20m	<p>If testing to test line in No. 4A, No. 4M, or tandem office— Set up 3-digit office test code followed by any four numerical digits.</p>	
	<p>Note: If trunk to be tested is a CAMA trunk and has been taken out of service at the request of the distant office, do not</p>	

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STEP	ACTION	VERIFICATION
	<i>attempt</i> to make a test call since this can result in an incomplete or false entry on the tape at the CAMA office.	
21n	If testing through a non-CAMA tandem office to a terminating office— Set up the required office code and busy or test line number.	
22o	If testing direct trunks to a crossbar office— Set up the busy or test line number.	
	Note: If the trunk under test is common to two crossbar units, set up the office indicating digit on the TAN U key, if provided. If the TAN U key is not provided, set up the office indicating digit on the TAN H key.	
23p	If making call-through type test on TSP or TSPS special toll (0+) ANI trunks— Insert MB plug into ZP jack.	
24p	Set test number on recording keys.	
25q	If making call-through type test on TSP or TSPS operator assistance (0-) ANI trunks— Operate ZM key.	
26q	Restore recording keys to normal.	
27	Operate TLK1, TST1, and MF1 keys.	<p>ON1 lamp lighted. KP lamp flashed during pulsing. KP lamp lighted steadily after completion of pulsing. If making call-through type test to TSP or TSPS (0+ or 0-) ANI trunks— Operator answered. If call is to a No. 1 or No. 5 crossbar office or non-CAMA 4A, 4M, or tandem office or through a non-CAMA tandem-to-terminating office— SUP1 lamp flashed and audible signals heard in accordance with type of test line called. When testing trunks to No. 5 Crossbar Centrex Phase 2 or 3, a series of clicks will not be heard. Instead, a busy tone will be heard 6 seconds after series of clicks is normally heard. Failure to hear busy tone indicates failure of transfer feature. If call is to a CAMA office— Tone or clicks heard as provided by test line. SUP1 lamp may or may not light.</p>

STEP	ACTION	VERIFICATION
		Note: If the call to the CAMA test line is established for a duration of about 45 seconds or longer, it may be automatically disconnected by the incoming trunk circuit.
28r	If repeat test is desired— Momentarily operate DISC1 key.	Test repeated.
29	Remove patching cord from trunk jack.	
30	Restore all keys to normal.	
31	Momentarily operate DISC1 key.	
32d	If making call-through type test to TSP or TSPS ANI trunks— Remove patching cord between MB jack and T&MB jack.	All lamps extinguished.
I. Overflow Trunks		
18	Operate NO SDR1 and TLK1 keys.	ON1 lamp lighted. Overflow trunks— Overflow tone in receiver. Tandem overflow trunks— SUP1 lamp flashed.
19	Remove patching cord from trunk jack.	SUP1 lamp extinguished.
20	Restore all keys to normal.	
21	Momentarily operate DISC1 key.	All lamps extinguished.
J. Free Trunks to Official PBX		
18	Operate NO SDR1 and TLK1 keys.	ON1 lamp lighted. Ringing induction heard until call answered. SUP1 lamp lighted and remained lighted during conversation.
19	Inform operator that tests are being made and to disregard call.	
20l	If repeat test is required— Momentarily operate DISC1 key.	Test repeated.
21	Remove patching cord from trunk jack.	SUP1 lamp extinguished.
22	Restore all keys to normal.	
23	Momentarily operate DISC1 key.	All lamps extinguished.

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STEP	ACTION	VERIFICATION
K. Information Trunks		
18	Operate NO SDR1 and TLK1 keys.	ON1 lamp lighted. Ringing induction heard until call answered. SUP1 lamp lighted and remained lighted during conversation.
19	Inform operator that tests are being made and to disregard call.	
20	If repeat test is required— Momentarily operate DISC1 key.	Test repeated.
21	Remove patching cord from trunk jack.	SUP1 lamp extinguished.
22	Restore all keys to normal.	
23	Momentarily operate DISC1 key.	All lamps extinguished.
L. Repair Service Trunks		
18	Operate NO SDR1 and TLK1 keys.	ON1 lamp lighted. Ringing induction heard until call answered. SUP1 lamp lighted and remained lighted during conversation.
19	Inform repair clerk that tests are being made and to disregard call.	
20	If repeat test is required— Momentarily operate DISC1 key.	Test repeated.
21	Remove patching cord from trunk jack.	SUP1 lamp extinguished.
22	Restore all keys to normal.	
23	Momentarily operate DISC1 key.	All lamps extinguished.
M. Test Trunk to Local Test Desk		
18l	If 102C retard coil is used in operator's telephone circuit— Operate 500-ohm A OPR COMP key.	
19m	If 102A retard coil is used in operator's telephone circuit— Operate 1000-ohm A OPR COMP key.	
20	Operate MISC TRKS and TST1 keys.	
21	Operate TLK1 and NO SDR1 keys.	ON1 and SUP1 lamps lighted. Ringing induction heard until call answered.

STEP	ACTION	VERIFICATION
22	While tester is on line— Remove plug from trunk jack.	SUP1 lamp remains lighted.
23	Reinsert plug into trunk jack.	
24	Request tester to disconnect— Immediately remove plug from trunk jack.	SUP1 lamp extinguished.
25	Remove patching cord from S or T&MB jacks.	
26	Restore all keys to normal.	
27	Momentarily operate DISC1 key.	All lamps extinguished.
N. PCI Trunks to Crossbar Tandem Operator Identified CAMA		
18	Operate required A OPR COMP and TRK COMP RES keys.	
19	Operate TDM, TST1, and TLK1 keys.	
20l	If testing to test line in tandem office— Set up tandem test code and any four numerical digits.	
21m	If testing through tandem office to a terminating office— Set up the required office code and test line number.	
	Note: If CAMA trunk has been taken out of service at the request of the tandem switch personnel, do not attempt to make a test call since this can result in an incomplete or false entry on the tape at the CAMA office.	
22	Operate SDR1 key.	ON1 lamp lighted. SDR lamp flashed at 60 ipm during pulsing. SDR lamp extinguished after completion of pulsing.
	Note: On calls through a CAMA tandem to a terminating office, the CAMA operator will request a calling number. Give the name of the office which has access to the trunk being tested and a busy line, test line, or a charge number (in accordance with local practice) as the calling number.	
	SUP1 lamp flashed and audible signals heard in accordance with type of test line called.	

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STEP	ACTION	VERIFICATION
23n	If repeat test is desired— Momentarily operate DISC1 key.	Test repeated.
24	Remove patching cord from trunk jack.	
25	Restore all keys to normal.	
26	Momentarily operate DISC1 key.	All lamps extinguished.
O. Dial Coin Zone Trunks to Panel Sender Tandem or Crossbar Tandem		
18	Operate required TRL COMP RES keys.	
19	Operate TDM, TST1, and TLK1 keys.	
20	Set up number for tandem office test line circuit, or busy line or test line circuit in local office reached through tandem.	
21	Operate SDR1 key.	ON1 lamp lighted. SDR lamp flashed at 60 ipm during pulsing. SDR lamp extinguished after completion of pulsing. Ringing induction heard until call answered. Call answered.
22	Inform operator that tests are being made.	
23	Momentarily operate TN key.	At operator's position— Identifying test tone heard. Operator disconnects and call established. Audible signals heard in accordance with test line called. <i>Note:</i> Disregard any MO lamp indication that may occur during this test. Also, due to circuit conditions of dial coin zone equipment, there will be no SUP1 lamp signals.
24l	If repeat test is desired— Momentarily operate DISC1 key.	Test repeated.
25	Remove patching cord from trunk jack.	
26	Restore all keys to normal.	
27	Momentarily operate DISC1 key.	All lamps extinguished.
P. Trunks to BELLBOY Personal Signaling System		
18	Operate DT1 key.	

STEP	ACTION	VERIFICATION
19l	If trunks require battery and ground pulsing, operate BGD key.	
20	Operate NO SDR1 key.	SUP1 lamp lighted.
21	Dial an unassigned BELLBOY number. <i>Note:</i> An unassigned number is any nonworking or out-of-block number.	SUP1 lamp extinguished each time dial is moved off normal. <i>Note:</i> Each time dial returns to normal, the SUP1 lamp relights and should not flash before the dial is moved off normal for the next digit.
		Ringling tone heard when call completed. If testing subscriber trunk— Ringling tone cut off. Intercept announcement heard. If testing operator trunk— Ringling tone cut off. 120-ipm reorder tone heard.
22	Remove patching cord from trunk jack.	
23	Restore all keys.	
24	Momentarily operate DISC1 key.	All lamps extinguished.
Q. Trunks to 6A Teletypewriter Switchboard		
	<i>Note:</i> Before starting this test, request 6A switchboard operator to answer test calls in the talk mode.	
18	Operate TLK1 and NO SDR1 keys.	SUP1 lamp lighted. Ringling tone heard until call answered.
19	Operator answers.	SUP1 lamp extinguished.
20	Request operator to leave plug in trunk jack until cord lamp flashes.	
21	Restore TLK1 and NO SDR1 keys.	
22	Momentarily operate DISC1 key.	
23	Operate TLK1 and NO SDR1 keys.	SUP1 lamp lighted.
24	Operator answers.	SUP1 lamp extinguished. At 6A switchboard— Cord lamp lighted and then flashed at recall rate. When operator removes plug from trunk jack—

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STEP	ACTION	VERIFICATION
		Cord lamp extinguished and trunk lamp lighted. When plug is reinserted in trunk jack— Trunk lamp extinguished.
25	Advise operator that test is completed.	
26	Remove patching cord from trunk jack.	
27	Restore all keys.	
28	Momentarily operate DISC1 key.	
R. Trunks to 6A or 7A Announcement System		
18	Operate NO SDR1 and TLK1 keys.	ON1 lamp lighted. Ringing induction heard until beginning of announcement. Two full announcements heard.
19	Restore NO SDR1 and TLK1 keys.	
S. 911 Emergency Service Trunks		
18	Operate TST1, SUB REC, and NO SDR1 keys.	ON1 lamp lighted. RC lamp lights as an indication to proceed with tests.
Test for False Ground on S Lead		
19	Operate RSG key.	SUP1 lamp lighted.
20	Release RSG key.	SUP1 lamp extinguished.
A Relay S Lead and Tip and Ring Polarity Test		
21	Operate ADJ2 and RCO keys.	SUP1 lamp lighted. Ringing induction heard until call is answered.
22	After attendant answers— Inform attendant that tests are being made.	
Test for Subscriber On-Hook		
23	Request attendant to hold connection.	
24	Restore NO SDR1 key to normal.	SUP1 lamp extinguished. At emergency bureau— Attendant hears steady low tone.
25	Operate NO SDR1 key.	SUP1 lamp lighted. At emergency bureau— Steady low tone removed. If feature provided—

STEP	ACTION	VERIFICATION
		Attendant also receives visual indication of customer on-hook.
Emergency Ringback Test		
261	If emergency ringback feature is provided— Request attendant to ringback.	
271	Attendant rings back.	When attendant rings back— Test frame telephone set bell rings for 5 seconds.
Test for Automatic Coin Return and for Open Sleeve		
28	Request attendant to force release of connection in a few seconds and to reseize trunk after 1 minute.	
29	Restore RCO key to normal and operate RCT key.	SUP1 lamp extinguished.
30	Attendant disconnects.	When attendant disconnects— CR lamp lighted momentarily. 15-25 seconds later SUP1 lamp lighted indicating an open sleeve (R option). If trunk is equipped with TD, ABT and SUP2 relays (Q option), timing interval is 3 to 6 seconds.
6-Minute Timer and Alarm and Busy Tests		
31	Attendant reseizes trunk.	When attendant reseizes trunk— Overflow (120 ipm) tone returned to attendant. In 6 minutes— Aisle pilot lamp lighted. Minor alarm sounded. At trunk equipment frame— MB lamp flashed at approximately 60 ipm. AT OGT test frame— RMB lamp flashed at approximately 60 ipm.
32	At trunk equipment frame— Insert make-busy plug into MB jack.	MB lamp steadily lighted. At OGT test frame— RMB lamp steadily lighted. BY1 lamp lighted.
33	At OGT test frame— Operate RCO keys.	
34	Request attendant to release trunk.	When trunk is released— Aisle pilot lamp extinguished. Minor alarm silenced.

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STEP	ACTION	VERIFICATION
35	At trunk equipment frame— Remove plug from MB jack.	MB lamp extinguished. At OGT test frame— RMB lamp extinguished.
36	Remove all patching cords and restore all keys to normal.	
T. PCI ANI CAMA TSP/TSPS Trunks		
18	Operate required A OPR COMP and TRK COMP RES keys.	
19	Operate TDM, TST1, and TLK1 keys.	
20l	If testing to test line in No. 4A, No. 4M, or tandem office— Set up 3-digit office test code followed by any four numerical recording keys.	
21m	If testing through No. 4A, No. 4M, or tandem office— Set up the required office code and busy or test line number. <i>Note:</i> If CAMA trunk has been taken out of service at the request of the distant office, do not attempt to make a test call since this can result in an incomplete or false entry on the tape at the CAMA office.	
22n	If making call-through type test on TSP or TSPS special toll (0+) ANI trunks— Insert MB plug into ZP jack.	
23n	Set test number on recording keys.	
24o	If making call-through type test on TSP or TSPS operator assistance (0-) ANI trunks— Operate ZM key.	
25o	Restore recording keys to normal.	
26	Operate SDR1 key.	ON1 lamp lighted. SDR lamp flashed at 60 ipm during pulsing. SDR lamp extinguished after completion of pulsing. If making call-through type test to TSP or TSPS (0+ or 0-) ANI trunks— Operator answered. SUP1 lamp flashed and audible signals heard in accordance with type of test line called.

STEP	ACTION	VERIFICATION
27p	If repeat test is desired— Momentarily operate DISC1 key.	
28	Remove patching cord from trunk jack.	
29	Restore all keys to normal.	
30	Momentarily operate DISC1 key.	All lamps extinguished.
31d	If making call-through type test to TSP or TSPS ANI trunks— Remove patching cord between MB jack and T&MB jack.	

