

**VERIFICATION REQUEST, INTERCEPTING, OFFICIAL PBX, INFORMATION,  
AND REPAIR SERVICE TRUNKS AND INTERCEPT JUNCTORS  
FROM LINE LINK FRAME  
TESTS USING MASTER TEST FRAME  
NO. 5 CROSSBAR OFFICES**

**1. GENERAL**

**1.01** This section describes a method of testing both wire-spring- and nonwire-spring-relay type verification requests, intercepting, official PBX, repair service, and information service trunks and intercept junctors using the master test frame (MTF) in No. 5 crossbar offices. Tests of the following circuits are included in this section; ~~SD-25648-01, SD-25662-01, SD-25696-01, SD-25698-01, SD-26094-01, SD-26095-01, SD-26121-01, SD-26122-01, SD-27645-01, SD-27595-01, SD-64582-01~~ and SD 95551-01. For tests of line sleeves that are monitored by software in Electronic Translation System (ETS) equipped offices, refer to Section 218-799-320.4

**1.02** This section is reissued for the reasons listed below. Revision arrows are used to emphasize the more significant changes. This reissue affects Equipment Test Lists.

- (a) To revise paragraph 1.01 to include SD-numbers of circuits addressed in this section and to reference BSP section covering line sleeve tests in offices arranged for ETS.
- (b) Paragraphs 1.09 and 1.10 have been added for clarification of **ACTION** and **VERIFICATION** steps.
- (c) Test A has been modified to include verification of "audible ring until cut-through" feature.
- (d) Test D, Steps 7 through 22 Action and Verification have been modified to be made without using circuit make-busy key.

(e) Test D.1 has been added.

**1.03** The tests covered are:

**OUTGOING TRUNKS**

**PAGE**

- A. Trunk Seizure and Ringing:**  
This test checks trunk seizure, supervision, transmission path, ringing, and if provided, park on features and transfer to an attendant. . . . . **4**
- B. Busy Indications—Operator Fails to Disconnect:** This test checks that a trunk will test busy when the calling party disconnects and the operator does not disconnect after completing a call. . . . . **11**
- C. Busy Indications—Trunk Seized at Line Link Frame:** This test checks that when a trunk is seized at the line link frame it returns a busy indication to the number group, making the trunk busy to subsequent calls until released. It also checks that on trunks with two line link appearances, the second call on a double seizure will receive busy tone. . . . . **12**
- D. Ringing Trip Path Continuity:**  
This test checks the continuity of the ringing trip path when ringing on the ring conductor, and if so arranged, on the tip conductor. . . . . **18**

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<b>D.1 ♦ Automated Loop Testing (ALT) Feature (When Provided):</b> This test verifies that the maintenance termination for intercepted telephone numbers will be enabled when the intercept trunk is seized in an office equipped with ALT.♦ . . . . .	23

**INCOMING TRUNKS**

<b>E. Trunk Seizure and Ringing:</b> This test checks trunk seizure, supervision, transmission path, and ringing. . . . .	24
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<b>F. Busy Indications—Operator Fails to Disconnect:</b> This test checks that a trunk will test busy when the calling party disconnects and the operator does not disconnect after completing a call. . . . .	26
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<b>G. Busy Indications—Trunk Seized at Line Link Frame:</b> This test checks that if a trunk is seized at the line link frame it will return a busy indication to the number group, making the trunk busy to subsequent calls until released. . . . .	27
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<b>H. Ringing Trip Path Continuity:</b> This test checks the continuity of the ringing trip path when ringing on the ring conductor, and if so arranged, on the tip conductor. . . . .	28
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**JUNCTORS**

<b>I. Junctor Seizure and Ringing:</b> This test checks junctor seizure, transmission path, and ringing. . . . .	30
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<b>J. Busy Indications—Operator Fails to Disconnect:</b> This test checks that a junctor will test busy when the calling party disconnects and the operator does not disconnect after completing a call. . . . .	31
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<b>K. Busy Indications—Junctor Seized at Line Link Frame:</b> This test checks that when a junctor is	
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seized at the line link frame, it returns a busy indication to the number group, making the junctor busy to subsequent calls until released. . . . .	31
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<b>L. Busy Indications—Make-Busy Switch Operated:</b> This test checks that a busy indication is returned to the number group when the junctor circuit make-busy switch is operated. . . . .	32
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**1.04** All tests will operate peg count traffic registers associated with PB leads, traffic usage recorder registers associated with BY or S leads, and group-busy registers associated with BY or S leads. Local instructions should be followed for recording and reporting the operation of these registers.

**1.05 Lettered Steps:** A letter a, b, c, etc, added to a step number in Part 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.

**1.06** Tests A and C include methods for testing the line link frame appearance of intercept trunk circuit SD-26121-01 used with the 7A and ♦13A♦ Announcement Systems, and repair service trunk circuit SD-26095-01. Tests of the trunk link frame appearance of SD-26121-01 are covered in Section 218-282-501. Tests of the trunk link frame appearance of SD-26095-01 are covered in Section 218-280-501.

**1.07** The manner of selecting some circuits and test conditions at the MTF and its associated circuits varies depending on the apparatus options furnished with these circuits. Therefore, where variable means of selection are provided, precise instructions for the selection of circuits and test conditions are not given. Precise instructions for the use of these variable means are given in Section 218-106-301.

1.08 The location statement, At MTF—, is used to refer to all apparatus located on the four basic bays of the MTF.

1.09 Unless specified otherwise in a particular test, trunks under test should be in a normal non-made busy state.

1.10 On issue 76D of SD-25800-01 a group of 18 "class of test" lamps was replaced by a single "start test" lamp designated STT. Since the designation given to the lamp is not specific, the lamp will not be called out in the section, as well as the 18 discontinued lamps, DT, ORIG, ITDO, ITNP, OGT, INC, OR, SDR, IR, MISC, IAO, MLV, LT, IMS, PTT, TVT, ATNT, and IMT.

## 2. APPARATUS

2.01 The apparatus required for each test is listed in Table A. The details of each item are covered in the paragraph indicated by the number in parentheses.

TABLE A

APPARATUS	TESTS										
	A,B	C	D	D.1	E,F	G	H	I,J	K	L	
Master Test Frame (2.02)	1	1	1	1	1	1	1	1	1		
Test Set (2.03)		1				1			1	1	
Cord (2.04)		1				1					
Cord (2.05)		1									
32A Test Set			1	1			1				
Head Telephone Set			1				1				
Tools (2.06)		√	√			√	√				
KS-3008 Stop-watch or equivalent	1										

√ As required.

2.02 The MTF circuits required are as follows:

- (a) Master test control circuit, SD-25800-01
- (b) Voltmeter test circuit, SD-25792-01
- (c) Trunk test circuit, SD-25918-01
- (d) Telephone, key, and lamp circuit, SD-25744-01.

2.03 67C test set, equipped with one KS-6278 connecting clip (for checking the presence or absence of battery or ground).

2.04 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 419A (test connector) tool (for establishing test connections to relay contact springs).

2.05 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 624B tool (for establishing test connections to terminal strip terminals of wire-spring-relay type trunks).

2.06 Blocking and insulating tools as required. Use tools and apply as covered in Section 069-020-801.

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3. PREPARATION

STEP	ACTION	VERIFICATION
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Tests A Through F, H Through K

**Note:** Refer to paragraphs 1.07 through 1.10.

- |    |   |                         |
|----|---|-------------------------|
| 1  | At MTF—<br>Restore all keys and switches.   |                         |
| 2  | Momentarily operate RL key.   | All lamps extinguished. |
| 3  | Select marker 0 or 1.   |                         |
| 4a | If trunk or junctor under test is not provided with rectified ringing detection—<br>Operate IT key. |                         |

Tests A, B, C, E, I, J, K

- |   |                          |  |
|---|--------------------------|--|
| 5 | Select LT class of test. |  |
|---|--------------------------|--|

4. METHOD

STEP	ACTION	VERIFICATION
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OUTGOING TRUNKS

A. Trunk Seizure and Ringing

All Trunks

- |   |  |  |
|---|--|--|
| 6 | Select A_ through D_ digits for line number assigned to selected trunk under test. |  |
| 7 | Select office designation of selected trunk.                                       |  |

**Note 1:** If trunk has two line link appearances and if trunk is *not* an intercept trunk arranged for machine announcement (6A Announcement System), or if trunk is an intercept trunk arranged to complete to a test access circuit at an automatic call distribution office, select line number and office designation assigned for first appearance.

**Note 2:** If trunk has two line link appearances and if trunk is an intercept trunk arranged for machine announcement (6A Announcement System), select line number and office designation assigned for second appearance.

STEP	ACTION	VERIFICATION
<b>Trunks Arranged for Operator Completion (SD-25648-01, SD-25662-01, SD-25696-01, SD-25698-01, SD-26094-01, SD-26122-01)</b>		
8	Momentarily operate ST key.	S, MRL lamps lighted.
9	Operate T key.	
10	Operate $\pm$ key for at least 1 but not more than 2 seconds.	<p>If trunk under test is SD-25696-01, SD-25698-01, or SD-26094-01—            Ringing tone heard.            When operator answers—            Ringing tone silenced.            S lamp extinguished.</p> <p>If trunk under test is SD-25648-01, SD-25662-01, or SD-26122-01—            Ringing tone heard.            When operator answers—            Ringing tone silenced.            S lamp remains lighted.</p> <p><b>Note:</b> If trunk is immediately answered or connected to a position, the ringing tone may not be present. In such cases, it may be necessary to request the operator to disregard the next signal for approximately 10 seconds and then repeat test. On trunks working into automatic call-distributing type desks, if necessary and possible, request the operator or operators to remove the headset plugs from the telephone jacks for approximately 10 seconds and then repeat test.</p>
11b	If trunk and switchboard or desk are arranged to return supervision on flashes and it is desired to test this feature— Request operator to return a series of flashes.	S lamp flashes.
12c	If trunk under test is SD-25696-01 or SD-26094-01— Operate and restore $\pm$ key several times.	At central switchboard— Trunk or cord lamp flashes.
13	At MTF— Request operator to disconnect.	S lamp lighted.
14	Momentarily operate RL key.	All lamps extinguished.
15	Restore T key.	

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STEP	ACTION	VERIFICATION
16d	If trunk under test serves offices A and B— Select A_ through D_ digits for line number assigned in office B.	
17d	Select office designation of selected trunk.  <i>Note:</i> If trunk has two line link appearances, select line number and office designation assigned for first appearance.	
18d	Operate REC key.	
19d	Momentarily operate ST key.	S, MRL lamps lighted. Trouble record taken. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated corresponding to line link location of trunk.  <i>Note:</i> On trunks with two line link appearances, check that the location perforated is for first appearance.
20d	Restore REC key.	
21d	Momentarily operate RL key.	All lamps extinguished.
<b>Trunks Arranged for Tip Ringing Identification (SD-25648-01, SD-25662-01, SD-26122-01)</b>		
22	Operate T1 REV key.	
23	Momentarily operate ST key.	S, MRL lamps lighted.
24	Operate T key.	
25	Operate ±key for at least 1 but not more than 2 seconds.	Ringing tone heard. When operator answers— Ringing tone silenced. If off-hook supervision is provided for operator answer on toll or trouble calls— S lamp extinguished.  <i>Note:</i> If trunk is immediately answered or connected to a position, the ringing tone may not be present. In such cases, it may be necessary to request the operator to disregard the next signal for approximately 10 seconds and then repeat test. On trunks working into automatic call-distributing type desks, if necessary and possible, request the operator or operators to remove the headset plugs from

STEP	ACTION	VERIFICATION
		the telephone jacks for approximately 10 seconds and then repeat test.
26	Restore T1 REV key.	
27b	If trunk and switchboard or desk are arranged to return supervision on flashes and it is desired to test this feature— Request operator to return a series of flashes.	S lamp flashes.
28	Request operator to disconnect.	S lamp lighted.
29	Restore T key.	
30	Momentarily operate RL key.	All lamps extinguished.
<b>Intercept Trunks Arranged for Machine Announcement— 6A Announcement System (SD-25648-01, SD-26121-01, SD-26122-01)</b>		
31	Momentarily operate ST key.	S, MRL lamps lighted.
32	Operate T key.	
33	Operate $\pm$ key for at least 1 but not more than 2 seconds.	Ringing tone heard. When announcement connects— Ringing tone silenced. Announcement starts at beginning and is clear and distinct.
<b>Note 1:</b> If trunk under test is SD-26121-01, and marker controlled immediate ringing is provided, announcement may be delayed unless option ZB is provided.		
<b>Note 2:</b> If trunk is immediately connected to the announcement machine, it may be necessary to repeat the test to obtain a ringing tone.		
34	Restore T key.	
35	Momentarily operate RL key.	All lamps extinguished.
<b>Intercept Trunks Arranged for Machine Announcement— 7A Announcement System (SD-25648-01, SD-26121-01, SD-26122-01)</b>		
36	Momentarily operate ST key.	S, MRL lamps lighted.
37	Operate T key.	

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STEP	ACTION	VERIFICATION
38	Operate $\pm$ key for at least 1 but not more than 2 seconds.	<p>Announcement starts and is clear and distinct.</p> <p><b>Note:</b> Announcement may be in progress at operation of T key if another trunk has started announcement machine.</p> <p>◆If audible ringing until cut-through is provided—                      Ringing tone heard.                      When announcement connects—                      Ringing tone silenced.                      Announcement starts at beginning and is clear and distinct.◆</p>
39	Restore T key.	
40	Momentarily operate RL key.	All lamps extinguished.
<p><b>Intercept Trunks Arranged for Machine Announcement and Transfer to an Attendant—6A, 7A, and ◆13A◆ Announcement Systems (SD-26121-01)</b></p>		
41	Momentarily operate ST key.	S, MRL lamps lighted.
42	Operate T key.	
43	Operate $\pm$ key for at least 1 but not more than 2 seconds.	<p>Announcement starts and is clear and distinct.</p> <p><b>Note 1:</b> If trunk under test is SD-26121-01, and marker controlled immediate ringing is provided, announcement may be delayed unless option ZB is provided.</p> <p><b>Note 2:</b> Announcement may be in progress if another trunk had started announcement machine.</p> <p>◆If audible ringing until cut-through is provided—                      Ringing tone heard.                      When announcement connects—                      Ringing tone silenced.                      Announcement starts at beginning and is clear and distinct.◆</p>
44	Listen for 1 or 2 complete announcements according to options provided in trunk.	Recorded announcement not heard.
45	Start timing.	<p>After 4 seconds—                      At switchboard—                      Assistant answers.                      Ringing tone heard in telephone set.                      Restart timing.                      After 2 seconds—</p>

STEP	ACTION	VERIFICATION
		At MTF— Ringing tone not heard. Talking path established to assistant.
46	Momentarily operate RL key.	All lamps extinguished.
47e	If voice alarm and control circuit provided— At relay rack appearance of trunk— Connect ground to terminal strip A, (AUX LL/TL UNIT) terminal 54.	
48	Repeat steps 41 through 43.	Ringing tone heard. When announcement machine connected— Ringing tone silenced. Trunk transferred to attendant.
49	Restore T key.	
50	Momentarily operate RL key.	All lamps extinguished.
<b>Intercept Trunks Arranged for Tip Ringing Identification and Machine Announcement—7A Announcement System (SD-25648-01, SD-26122-01)</b>		
51	Momentarily operate ST key.	S, MRL lamps lighted.
52	Operate T, T1 REV keys.	
53	Operate $\pm$ key for at least 1 but not more than 2 seconds.	Announcement starts at beginning and is clear and distinct.
54	Restore T, T1 REV keys.	
55	Momentarily operate RL key.	All lamps extinguished.
<b>Trouble or Regular Intercept Trunks Arranged for Wide Area Data Service (SD-27645-01)</b>		
56	Momentarily operate ST key.	S, MRL lamps lighted.
57	Operate T key.	
58	Operate $\pm$ key for at least 1 but not more than 2 seconds.	Ringing tone (CPT code 1) momentarily heard. If trunk is arranged for trouble intercept— Prolonged ringing heard (CPT code 1). If trunk is arranged for regular intercept— 40-ipm CPT tone heard.
59	Restore T key.	
60	Momentarily operate RL key.	All lamps extinguished.

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STEP	ACTION	VERIFICATION
<b>Intercept Trunks Arranged to Complete to a Test Access Circuit at Automatic Call Distribution Office (SD-25648-01, SD-25662-01, SD-26122-01)</b>		
61	Operate T, IT keys.	
62	Operate TTC16 key to ON.	
63f	If trunk under test is used with a SF signaling unit— Operate ITDT key.	RT lamp lighted.
64g	If trunk under test is <i>not</i> used with a SF signaling unit— Operate ITND key.	RT lamp lighted.
65	Momentarily operate ST key.	S, MRL lamp lighted.
66	Momentarily operate ±key.	RT lamp extinguished.
67	Restore TTC16 key.	Interrupted dial tone heard from test access circuit at automatic call distribution office.
68	Key digit 2 using TOUCH-TONE® dial.	Milliwatt tone heard.
69	Restore T, IT, and ITDT or ITND keys.	
70	Momentarily operate RL key.	All lamps extinguished.
<b>Repair Service and Local Test Desk Trunks Arranged to Complete to a Distant Office Via a Park-On Circuit (SD-26095-01)</b>		
71	Momentarily operate ST key.	S, MRL lamps lighted.
72	Operate T key.	
73	Operate ±key for at least 1 but not more than 2 seconds.	Ringing tone heard. Announcement heard.
74	At repair service position— Attendant answers.	If trouble in the announcement machine— Only ringing, followed by a repair service attendant, will be heard. If trouble in the park-on circuit— Reorder tone will be heard. If circuit is arranged to transfer to a switchboard— Attendant will answer if the transfer is in effect.
75	Restore T key.	

STEP	ACTION	VERIFICATION
76	Momentarily operate RL key.	All lamps extinguished.
<b>All Trunks</b>		
77	Restore all keys and switches not required in next test.	
<b>B. Busy Indication—Operator Fails to Disconnect (SD-25648-01, SD-25662-01, SD-25696-01, SD-25698-01, SD-26094-01, SD-26095-01, SD-26122-01, SD-27645-01)</b>		
6	Select A_ through D_ digits for line number assigned to selected trunk under test.	
7	Select office designation of selected trunk.	
	<b>Note:</b> If trunk has two line link appearances, select line number and office designation assigned for first appearance.	
8	Select line location of selected trunk.	
9	Select ringing combination of selected trunk.	
10	Select class of service of selected trunk.	
11	Operate FNA or FNB key as required for line verification of selected trunk.	
12	Momentarily operate ST key.	S, MRL lamps lighted.
13	Restore LT class of test and select MLV class of test.	
14b	If regular intercept calls on a combined trunk are handled at a call-distributing type desk—Operate T1 REV key.	
15	Operate T key.	
16	Operate ±key for at least 1 but not more than 2 seconds.	
17b	If regular intercept calls on a combined trunk are handled at a call-distributing type desk—Restore T1 REV key.	
18	When operator answers—Request operator to hold connection for at least 10 seconds after disconnect signal is received and then to disconnect.	

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STEP	ACTION	VERIFICATION
19	Restore T key.	
20	Momentarily operate RL key.	All lamps extinguished.
21	Momentarily operate ST key.	BY, MRL lamps lighted.
22	Momentarily operate RL key.	All lamps extinguished.
23	Restore all keys and switches not required in next test.	

**C. Busy Indications—Trunk Seized at Line Link Frame**

**All Trunks**

- 6 Select A\_ through D\_ digits for line number assigned to selected trunk under test.
- 7 Select office designation of selected trunk.

**Note 1:** If trunk has two line link appearances and if intercepting trunk is **not** arranged for tip ringing identification and machine announcements, select line number and office designation assigned for first appearance.

**Note 2:** If trunk has two line link appearances and if intercepting trunk is arranged for tip ringing identification and machine announcements, select line number and office designation assigned for second appearance.

**Official PBX or Verification Request Trunk Circuits (SD-25696-01)**

- |   |  |  |
|---|--|--|
| 8 | Momentarily operate ST key.            | S, MRL lamps lighted.<br>At relay rack frame—<br>If trunk under test is SD-25696-01—<br>No battery on terminal 7 of 227 type terminal strip or terminal 17 of D type terminal strip on unit. |
| 9 | At MTF—<br>Momentarily operate RL key. | All lamps extinguished.  |

**Trunk Circuits for Information Service— High-Low Supervision (SD-25698-01)**

- |    |   |                       |
|----|---|-----------------------|
| 10 | Momentarily operate ST key.                         | S, MRL lamps lighted. |
| 11 | At relay rack frame—<br>Block nonoperated CT relay. |                       |

STEP	ACTION	VERIFICATION
12b	If trunk is arranged to trip ringing when operator answers— Momentarily operate RU relay manually.	
13	Operate and hold L relay manually.	SR, SL relays operated.
14	Release L relay.	SR relay released. SL relay holds. No battery or ground on terminal 4 of 227 type terminal strip or terminal 17 of D type terminal strip on unit.
15	Remove blocking tool from CT relay.	
16	At MTF— Momentarily operate RL key.	All lamps extinguished.
<b>Intercepting Trunk Circuits Arranged for Tip Ringing Identification and Machine Announcements or Intercepting Trunk Circuits Arranged for Reverse Battery or E and M Lead Supervision (SD-25648-01, SD-26122-01)</b>		
17c	If trunk is arranged for machine announcements— At relay rack frame— When trunk is idle— Block operated SL1 relay.	
18c	At MTF— Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— SL2, BY relays operated. If trunk under test is SD-25648-01— No battery on terminal 3 of terminal strip on unit. If trunk under test is SD-26122-01— No battery on terminal 37 of terminal strip on unit.
19c	At MTF— Operate T key.	Busy tone heard. If trunk under test is SD-25648-01— Depending on trunk options, S lamp may flash at rate of busy tone.
20c	Operate RL key.	All lamps extinguished.
21c	At relay rack frame— Remove blocking tool from SL1 relay. Block operated SL2 relay.	
22c	At MTF— Select line number and office designation assigned for first appearance.	

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STEP	ACTION	VERIFICATION
23c	Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— SL1, BY relays operated. At MTF— Busy tone heard. If trunk under test is SD-25648-01— Depending on trunk options, S lamp may flash at the rate of busy tone.
24c	At MTF— Restore T key.	
25c	At relay rack frame— Remove blocking tool from SL2 relay.	
26d	If subgroup busy indication to the number group is required— At relay rack frame— On trunk circuit SD-25648-01— Ground terminal 17 of terminal strip on unit (appearance number 1).  <i>Note:</i> If the trunk under test is the last trunk in a subgroup, ground will be present on terminal 18 of terminal strip on unit.	Ground on terminal 17 of terminal strip on unit of succeeding circuit.
27d	Remove test connection.	
28d	Ground terminal 19 of terminal strip on unit (appearance number 2).  <i>Note:</i> If the trunk under test is the last trunk in a subgroup, ground will be present on terminal 20 of terminal strip on unit.	Ground on terminal 19 of terminal strip on unit of succeeding circuit.
29d	Remove test connection.	
30d	On trunk circuit SD-26122-01— Ground terminal 35 of terminal strip on unit (appearance number 1).  <i>Note:</i> If the trunk under test is the last trunk in a subgroup, ground will be present on terminal 25 of terminal strip on unit.	Ground on terminal 35 of terminal strip on unit in succeeding circuit.
31d	Remove test connection.	
32d	Ground terminal 36 of terminal strip on unit (appearance number 2).	Ground on terminal 36 of terminal strip on unit in succeeding circuit.

STEP	ACTION	VERIFICATION
	<b>Note:</b> If the trunk under test is the last trunk in a subgroup ground will be present on terminal 26 of terminal strip on unit.	
33	Remove test connection.	
34	At MTF— Momentarily operate RL key.	All lamps extinguished.
35	Restore all keys not required in next test.	
<b>Verification Request, Regular, or Trouble Intercepting Trunk Circuits (SD-25662-01)</b>		
36	Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— SL, BY relays operated. No battery on terminal 7 of terminal strip on unit.
37d	If subgroup busy indication to the number group is required— At relay rack frame— Ground terminal 9 of terminal strip on unit.  <b>Note:</b> If the trunk under test is the last trunk in a subgroup, ground will be present on terminal 8 of terminal strip on unit.	Ground on terminal 9 on terminal strip on unit of succeeding circuit.
38d	Insulate 5T of BY relay.	Ground on terminal 9 of terminal strip on unit of succeeding circuit.
39d	Remove test connection from terminal strip and insulator from BY relay.	
40	At MTF— Momentarily operate RL key.	All lamps extinguished.
<b>Information, Repair, Official PBX, and Verification Request Service Trunks Arranged for E and M Lead Supervision (SD-26094-01)</b>		
41	Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— LS relay operated. No battery on terminal 37 of terminal strip on unit.
42	At MTF— Momentarily operate RL key.	All lamps extinguished.

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STEP	ACTION	VERIFICATION
<b>Intercept Trunks Arranged for Machine Announcement— 7A and 13A Announcements Systems (SD-26121-01)</b>		
43	Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— SL relay operated. No battery on terminal 37 of terminal strip on unit.
44	At MTF— Momentarily operate RL key.	All lamps extinguished.
<b>Trouble and Regular Intercept Trunks Arranged for Wide Area Data Service (SD-27645-01)</b>		
45	Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— BY, SL relays operated. No battery on terminal 37 of terminal strip on unit.
46	When subgroup busy indication to the number group is required— At relay rack frame— Ground terminal 35 of terminal strip on unit.  <i>Note:</i> If the trunk under test is the last trunk in a subgroup, ground will be present on terminal 25 of terminal strip.	Ground on terminal 35 of terminal strip on unit in succeeding trunk circuit.
47	Remove test connection.	
48	At MTF— Momentarily operate RL key.	All lamps extinguished.
<b>Intercept Trunks Arranged to Complete to a Test Access Circuit at Automatic Call Distribution Office (SD-25648-01, SD-25662-01, SD-26122-01)</b>		
49	Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— If trunk under test is SD-25648-01— SL2, BY relays operated. No battery on terminal 3 of terminal strip on unit. If trunk under test is SD-25662-01— SL, BY relays operated. No battery on terminal 7 of terminal strip on unit. If trunk under test is SD-26122-01— SL2, BY relays operated. No battery on terminal 37 of terminal strip

STEP	ACTION	VERIFICATION
		on unit or terminal 34 of terminal strip B on unit with ACD.
50d	If subgroup busy indication to the number group is required— At relay rack frame— On trunk circuit SD-25648-01— Ground terminal 17 of terminal strip on unit.	Ground on terminal 17 of terminal strip of unit of succeeding circuit.
	<b>Note:</b> If the trunk under test is the last trunk in a subgroup, ground will be present on terminal 18 of terminal strip on unit.	
51d	Remove test connection.	
52d	On trunk circuit SD-25662-01— Ground terminal 9 of terminal strip on unit.	Ground on terminal 9 of terminal strip on unit of succeeding circuit.
	<b>Note:</b> If the trunk under test is the last trunk in subgroup, ground will be present on terminal 8 of terminal strip on unit.	
53d	Remove test connection.	
54d	On trunk circuit SD-26122-01— Ground terminal 35 of terminal strip on unit or terminal strip B on unit with ACD.	Ground on terminal 35 of terminal strip on unit or terminal strip B of unit with ACD in succeeding circuit.
	<b>Note:</b> If the trunk under test is the last trunk in subgroup, ground will be present on terminal 25 of terminal strip on unit or terminal strip B on unit with ACD.	
55d	Remove test connection.	
56	At MTF— Momentarily operate RL key.	All lamps extinguished.
<b>Repair Service and Local Test Desk Trunks—Equipped With or Without Park-On Arrangement (SD-26095-01)</b>		
57	Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— BY1, SL relays operated. No battery on terminal 61 of A terminal strip on unit.
58	At MTF— Momentarily operate RL key.	All lamps extinguished.

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STEP	ACTION	VERIFICATION
<b>All Trunks</b>		
59	Restore all keys and switches not required in next test.	
<b>D. Ringing Trip Path Continuity</b>		
<b>All Trunks</b>		
5	Select A_ through G_ digits as required for office code and directory number of selected trunk under test.	
6	Select office designation as required for selected trunk.	
	<b>Note:</b> If trunk under test has two line link appearances, select line number and office designation assigned for first appearance.	
<b>Intercept Trunks Arranged for Tip Ringing Identification and Machine Announcements; Intercept Trunks Arranged for Reverse Battery or E and M Lead Supervision; or Verification Request, Regular, or Trouble Intercept Trunks (SD-25648-01, SD-25662-01, SD-26122-01)</b>		
7	Select LT class of test.	
8	◆Momentarily operate ST key.	S, MRL lamps lighted.
9b	At relay rack frame◆ — If trunk under test is SD-25648-01 or SD-25662-01— Insulate 4T of SZ relay; block operated SZ relay.	
10c	◆At relay rack frame◆ — If trunk under test is SD-26122-01— Insulate 10M of R, T relays; block operated R relay.	
11	At MTF— Momentarily operate ◆RL◆ key.	
12	◆Momentarily operate ST key.◆	S, MRL lamps lighted.
13	Momentarily operate T key.	Ringling tone heard while T key is operated.
14	Operate G, VMT1 keys.	Voltmeter reading is 25 to 49 volts on 120-volt scale.
15	Restore G, VMT1 keys.	

STEP	ACTION	VERIFICATION
16b	At relay rack frame— If trunk under test is SD-25648-01 or SD-25662-01— Manually operate TB relay.	TB relay holds operated.
17c	If trunk under test is SD-26122-01— Remove blocking tool from R relay; block operated T relay.	
18	At MTF— Operate G, T1 REV, VMT1 keys.	Voltmeter reading is 25 to 49 volts on 120-volt scale.
19	Restore G, T1 REV, VMT1 keys.	
20b	At relay rack frame— If trunk under test is SD-25648-01 or SD-25662-01— Remove blocking tool and insulator from SZ relay.	
21c	If trunk under test is SD-26122-01— Remove blocking tool from R or T relay, then insulators from R, T relays.	
22	At MTF— Momentarily operate RL key.	
<b>Official PBX or Verification Request Trunks (SD-25696-01)</b>		
23	Select LT class of test.	
24	At relay rack frame— When trunk is idle— Insulate 5T of L1 relay, then 1B of S relay.	
25	Block operated S relay.	
26	At MTF— Momentarily operate ST key.	S, MRL lamps lighted.
27	Momentarily operate T key.	Ringing tone heard while T key is operated.
28	Operate G, VMT1 keys.	Voltmeter reading is 25 to 49 volts on 120-volt scale.
29	Restore G, VMT1 keys.	
30	Momentarily operate RL key.	All lamps extinguished.
31	At relay rack frame— Remove insulator and blocking tool from S relay.	

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STEP	ACTION	VERIFICATION
32	Remove insulator from L1 relay.	
<b>Information Service Trunks (SD-25698-01)</b>		
33	Select class of service having access to IAO trunk group used in test.	
34	Select MISC class of test.	
35	Select route advance 0.	
36	Operate KY, TLK, LOC FR L keys.	
37	At relay rack frame— Insert plug of head telephone set into frame line circuit jack.	
38	Insert plug of 32A test set into RC jack.	
39	Set MB switch to MB on trunk used in test.	
40d	If trunk is arranged to trip ringing immediately— Block nonoperated CT, SR relays.	
41e	If trunk is arranged to trip ringing when operator answers— Block nonoperated CT relay.	
42	Restore MB switch to N.	
43	Momentarily operate white (ST) button of 32A test set.	Ringing tone heard. RU relay operated and released in unison with ringing tone.
44d	If trunk is arranged to trip ringing immediately— Remove blocking tool from SR relay.	SR relay momentarily operated. Ringing tone silenced.
45e	If trunk is arranged to trip ringing when operator answers— Momentarily operate L relay manually.	SR relay momentarily operated. Ringing tone silenced.
46	Momentarily operate red (RL) button of 32A test set.	
47	Remove blocking tool from CT relay.	
48	Remove head telephone set and 32A test set from jacks.	

STEP	ACTION	VERIFICATION
<b>Information, Repair, Official PBX, and Verification Request Service Trunks Arranged for E and M Lead Supervision (SD-26094-01)</b>		
49	Select class of service having access to IAO trunk group used in test.	
50	Select MISC class of test.	
51	Select route advance 0.	
52	Operate KY, TLK, LOC FR L keys.	
53	At relay rack frame— Insert plug of head telephone set into frame line circuit jack.	
54	Insert plug of 32A test set into RC jack.	
55	Set MB switch to MB on trunk used in test.	
56	When trunk is idle— Insulate 8M of SL relay.	
57	Restore MB switch to N.	
58	Momentarily operate white (ST) button of 32A test set.	Ringing tone heard. RU relay operated and released in unison with ringing tone. SL relay operated.
59	Momentarily operate E relay manually.	Ringing tone silenced.
60	Momentarily operate red (RL) button of 32A test set.	
61	Remove insulator from 8M of SL relay.	
62	Remove head telephone set and 32A test set from jacks.	
<b>Trouble and Regular Intercept Trunks Arranged for Wide Area Data Service (SD-27645-01)</b>		
63	Select LT class of test.	
64	At relay rack frame— Set MB switch to MB on trunk used in test.	
65	When trunk is idle— Insulate 10M of R relay.	

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
66	Block operated R relay.	
67	At MTF— Momentarily operate ST key.	S, MRL lamps lighted.
68	Momentarily operate T key.	Ringing tone heard while T key is operated.
69	Operate G, VMT1 keys.	Voltmeter reading is 25 to 49 volts on 120-volt scale.
70	Restore G, VMT1 keys.	
71	Momentarily operate RL key.	All lamps extinguished.
72	At relay rack frame— Remove blocking tool from R relay and insulator from 10M of R relay.	
73	Restore MB switch to N.	

**Repair Service and Local Test Desk Trunks—Equipped With or Without Park-On Arrangement (SD-26095-01)**

74	Select LT class of test.	
75	At relay rack frame— Set MB switch to MB on trunk used in test.	
76	When trunk is idle— Insulate 2M of CT relay.	
77	Block operated R relay.	
78	At MTF— Momentarily operate ST key.	S, MRL lamps lighted.
79	Momentarily operate T key.	Ringing tone heard while T key is operated.
80	Operate G, VMT1 keys.	Voltmeter reading is 25 to 49 volts on 120-volt scale.
81	Restore G, VMT1 keys.	
82	Momentarily operate RL key.	All lamps extinguished.
83	At relay rack frame— Remove blocking tool from R relay and insulator from 2M of CT relay.	
84	Restore MB switch to normal.	

STEP	ACTION	VERIFICATION
<b>Intercept Trunks Arranged for Machine Announcement and Transfer to an Attendant— 7A Announcement System (SD-26121-01)</b>		
85	Select LT class of test.	
86	At relay rack frame— Set MB switch to MB on trunk used in test.	
87	When trunk is idle— Insulate 10 TR relay or 4 SL relay (according to options used).	
88	Block LK relay operated.	
89	At MTF— Momentarily operate ST key.	S, MRL lamps lighted.
90	Momentarily operate T key.	Ringing tone heard while T key is operated.
91	Operate G, VMT1 keys.	Voltmeter reading is 25 to 49 volts on 120-volt scale.
92	Restore G, VMT1 keys.	
93	Momentarily operate RL key.	All lamps extinguished.
94	At relay rack frame— Remove blocking tool from LK relay and insulator from 10 TR relay or 4 SL relay.	
95	Restore MB switch to N.	
<b>All Trunks</b>		
96	Restore all keys and switches not required in next test.	
<b>D.1 Automated Loop Testing Feature (When Provided)</b>		
<b>Trunks Arranged for Regular or Trouble Intercept SD-25648-01, SD-25662-01, SD-26121-01, and SD-26122-01</b>		
5	Select A_ through G_ digits as required for office code and directory number of selected trunk under test.	
6	Select office designation as required for selected trunk.	
7	Select MISC class of test.	

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
8	Operate KY key.	
9	At relay rack frame— Insert plug of 32A test set into RC jack.	
10	Momentarily operate white (ST) button of 32A test set.	At circuit under test— ALT relay operates within 1/2 second.
11	Momentarily operate red (RL) key of 32A test set.	
12	Repeat Steps 5 through 11 for remaining intercept trunks in service.	
13	Remove 32A test set plug from RC jack.	
14	At MTF— Restore all keys and switches not required in next test.♦	

**INCOMING TRUNKS**

**E. Trunk Seizure and Ringing**

**Trunks Not Arranged for Tip Ringing Identification  
(SD-64582-01, SD-95485-01, SD-95551-01)**

6	Select A_ through D_ digits of line number assigned the selected trunk under test.	
7	Select office designation of selected trunk.	
8	Momentarily operate ST key.	S, MRL lamps lighted.
9	Operate T key.	
10	Operate ±key for at least 1 but not more than 2 seconds.	If trunk under test is SD-64582-01— When operator answers— S lamp extinguished. At switchboard— Trunk lamp extinguished.  If trunk under test is SD-95485-01 or SD-95551-01— Ringing tone heard. When operator answers— Ringing tone silenced. S lamp remains lighted. At switchboard or desk— Trunk lamp extinguished. Toll or trouble identification tone not heard.

STEP	ACTION	VERIFICATION
		<i>Note:</i> If trunk is immediately answered, the ringing tone may not be present. In such cases, it may be necessary to request the operator to disregard the next signal for approximately 10 seconds and then repeat test.
11b	If trunk and switchboard or desk are arranged to return supervision on flashes and it is desired to test this feature— At MTF— Request operator to return a series of flashes.	S lamp flashes.
12c	If trunk under test is SD-64582-01— Momentarily operate ± key several times.	At switchboard— Cord supervisory lamp flashes.
13	At MTF— Request operator to disconnect and then reconnect.	At switchboard or desk— Trunk lamp remained extinguished during disconnect.
14	At MTF— Request operator to disconnect.	S lamp lighted.
15	Momentarily operate RL key.	All lamps extinguished.
16	Restore T key.	
17d	If trunk serves offices A and B— Select A_ through D_ digits for line number assigned in office B.	
18d	Select office designation for selected trunk.	
19d	Operate REC key.	
20d	Momentarily operate ST key.	S, MRL lamps lighted. Trouble record taken. FTT_ FUT_ VGT_ HGT_ VFT_ designations perforated corresponding to the line link location of trunk.
21d	Momentarily operate RL key.	All lamps extinguished.
22d	Restore REC key.	
<b>Trunks Arranged for Tip Ringing Identification (SD-95485-01, SD-95551-01)</b>		
23	Select A_ through D_ digits of line number assigned to selected trunk under test.	
24	Select office designation of selected trunk.	

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STEP	ACTION	VERIFICATION
25	Operate T1 REV key.	
26	Momentarily operate ST key.	S, MRL lamps lighted.
27	Operate T key.	
28	Operate ±key for at least 1 but not more than 2 seconds.	<p>Ringing tone heard.                      When operator answers—                      Ringing tone silenced.                      If off-hook supervision is provided for operator answer on toll or trouble calls—                      S lamp extinguished.</p> <p><i>Note:</i> If trunk is immediately answered, the ringing tone may not be present. In such cases, it may be necessary to request the operator to disregard the next signal for approximately 10 seconds and then repeat test.</p>
29	Restore T1 REV key.	
30b	If trunk and switchboard or desk are arranged to return supervision on flashes and it is desired to test this feature— Request operator to return a series of flashes.	S lamp flashes.
31	Request operator to disconnect.	S lamp lighted.
32	Momentarily operate RL key.	All lamps extinguished.
33	Restore T key.	

**All Trunks**

34 Restore all keys and switches not required in next test.

**F. Busy Indications—Operator Fails to Disconnect (SD-64582-01, SD-95485-01, SD-95551-01)**

- 5 Select A\_ through D\_ digits for line number assigned selected trunk under test.
- 6 Select office designation of selected trunk.
- 7 Select line location of selected trunk.
- 8 Select ringing combination of selected trunk.
- 9 Select class of service of selected trunk.

STEP	ACTION	VERIFICATION
10	Operate FNA or FNB key as required for line verification of selected trunk.	
11	Select LT class of test.	
12	Momentarily operate ST key.	S, MRL lamps lighted.
13	Restore LT class of test; select MLV class of test.	
14	Operate T key.	
15	Operate $\pm$ key for at least 1 but not more than 2 seconds.	
16	When operator answers— Request operator to hold connection for at least 10 seconds after disconnect signal is received and then to disconnect.	
17	Momentarily operate RL key.	All lamps extinguished.
18	Momentarily operate ST key.	BY, MRL lamps lighted.
19	Momentarily operate RL key.	All lamps extinguished.
20	Restore all keys and switches not required in next test.	

#### G. Busy Indications—Trunk Seized at Line Link Frame

##### Verification Request or Operator Training Trunks (SD-64582-01)

1	At relay rack frame— When trunk is idle— Block operated SL relay.	No battery on terminal 4 of terminal strip on unit.
2	Remove blocking tool from SL relay.	

##### Intercepting or Verification Request Trunks (SD-95485-01)

3	At relay rack frame— When trunk is idle— Block operated S relay.	No battery on terminal 4 of terminal strip on unit. If GB relay is provided— GB relay operated.
4a	If GB relay is provided— Block operated SL relay.	
5a	Remove blocking tool from S relay.	GB relay remains operated.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
6b	If subgroup busy indication to number group is required— Ground terminal 17 of terminal strip on unit.  <i>Note:</i> If the trunk tested is the last trunk in a subgroup, ground will be present on terminal 16 of terminal strip on unit.	Ground on terminal 17 of terminal strip on unit of succeeding trunk circuit.
7b	Remove test connection.	
8	Remove blocking tool from SL or S relay.	

**Intercepting or Verification Request Trunks (SD-95551-01)**

9	At relay rack frame— When trunk is idle— Block operated SL, S relays.	No battery on terminal 4 of terminal strip on unit.
10	Remove blocking tool from SL relay.	No battery on terminal 4 of terminal strip on unit.
11b	If a subgroup busy indication to number group is required— Ground terminal 14 of terminal strip on unit.  <i>Note:</i> If the trunk tested is the last trunk in a subgroup, ground will be present on terminal 13 of terminal strip on unit.	Ground on terminal 14 of terminal strip on unit of succeeding trunk circuit.
12b	Block operated SL relay and remove blocking tool from S relay.	Ground on terminal 14 of terminal strip on unit of succeeding trunk circuit.
13b	Remove test connection.	
14	Remove blocking tool from S or SL relay.	

**H. Ringing Trip Path Continuity**

**Intercepting or Verification Request Trunks (SD-95485-01, SD-95551-01)**

5	Select A_ through D_ digits for line number assigned to selected trunk under test.	
6	Select office designation of selected trunk.	
7	Select LT class of test.	
8	At MTF— Momentarily operate ST key.	S, MRL lamps lighted.

STEP	ACTION	VERIFICATION
9	At relay rack frame— When trunk is idle— Insulate 2T, 2B of S relay.	
10	Block operated FL relay.	
11	Momentarily operate T key.	Ringing tone heard while T key operated.
12	Operate G, VMT1 keys.	Voltmeter reading is 25 to 49 volts on 120-volt scale.
13	Restore G, VMT1 keys.	
14b	If trunk is arranged for tip ringing identification— Operate G, T1 REV, VMT1 keys.	Voltmeter reading is 25 to 49 volts on 120-volt scale.
15b	Restore G, T1 REV, VMT1 keys.	
16	Momentarily operate RL key.	All lamps extinguished.
17	At relay rack frame— Remove blocking tool from FL relay and insulators from S relay.	

**Verification Request or Operating Training Trunks  
(SD-64582-01)**

18	Select A_ through G_ digits for office code and line number assigned selected trunk under test.	
19	Select class of service having access to IAO trunk group used for test.	
20	Select route advance 0.	
21	Select MISC class of test.	
22	Operate KY, TLK, LOC FR L keys.	
23	At relay rack frame— Insert plug of head telephone set into frame line circuit jack.	
24	Insert plug of 32A test set into RC jack.	
25	When trunk is idle— Momentarily operate white (ST) button of 32A test set.	Ringing tone heard. R relay operated and released in unison with ringing tone. R1 relay operated. When operator answers—

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STEP	ACTION	VERIFICATION
		Ringing tone silenced. R relay released.
		<b>Note:</b> If trunk is immediately answered, the ringing tone may not be present. In such cases, it may be necessary to request the operator to disregard the next signal for approximately 10 seconds and then repeat test.
26	Request operator to disconnect.	
27	Momentarily operate red (RL) button of 32A test set.	SL relay released.
28	Remove head telephone set and 32A test set from jacks.	

**All Trunks**

- 29 Restore all keys and switches not required in next test.

**JUNCTORS**

**I. Junctor Seizure and Ringing**

**Intercept Junctor Circuit (SD-27595-01)**

6	Select A_ through D_ digits for line number assigned to selected junctor under test.	
7	Select office designation of selected junctor.	
8	Momentarily operate ST key.	S, MRL lamps lighted.
9	Operate T key.	
10	Operate ±key for at least 1 but not more than 2 seconds.	Ringing tone heard. When operator answers— Ringing tone silenced. S lamp remains lighted.
		<b>Note:</b> If trunk is immediately answered, the ringing tone may not be present. In such cases, it may be necessary to request the assistant to disregard the next signal for approximately 10 seconds and then repeat test.
11	Restore T key.	
12	Momentarily operate RL key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
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13	Restore all keys and switches not required in next test.	
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**J. Busy Indications—Operator Fails to Disconnect**

**Intercept Junctor Circuit (SD-27595-01)**

5	Select A_ through D_ digits for line number assigned the selected junctor under test.	
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6	Select office designation of selected junctor.	
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7	Select line location of selected junctor.	
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8	Select ringing combination of selected junctor.	
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9	Select class of service of selected junctor.	
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10	Operate FNA or FNB key as required for line verification of selected junctor.	
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11	Momentarily operate ST key.	
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S, MRL lamps lighted.

12	Restore LT class of test and select MLV class of test.	
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13	Operate T key.	
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14	Operate ± key for at least 1 but not more than 2 seconds.	
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15	When operator answers— Request operator to hold connection for at least 10 seconds after disconnect signal is received and then to disconnect.	
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16	Momentarily operate RL key.	
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All lamps extinguished.

17	Momentarily operate ST key.	
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BY, MRL lamps lighted.

18	Momentarily operate RL key.	
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All lamps extinguished.

19	Restore all keys and switches not required in next test.	
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**K. Busy Indications—Intercept Junctor Circuit Seized at Line Link Frame**

**Intercept Junctor Circuit (SD-27595-01)**

6	Select A_ through D_ digits for line number assigned the selected junctor under test.	
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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
7	Select office designation of selected junctor.	
8	Momentarily operate ST key.	S, MRL lamps lighted. At relay rack frame— Ground present on terminal 35 of terminal strip on unit.
9	At MTF— Momentarily operate RL key.	All lamps extinguished.
10	Restore all keys and switches not required in next test.	

**L. Busy Indication—Make-Busy Switch Operated**

**Intercept Junctor Circuit (SD-27595-01)**

1	When intercept junctor under test is idle— At relay rack frame— Set MB switch to MB.	Ground present on terminal 35 of terminal strip on unit.
2	Restore MB switch.	