

INCOMING INTERTOLL AND INCOMING FEATURES OF 2 WAY INTERTOLL TRUNKS

TESTS USING TRUNK TEST CIRCUIT SD-25918-01

NO. 5 CROSSBAR OFFICES

1. GENERAL

PAGE

1.01 This section describes a method of testing incoming intertoll trunks SD-25844-01, SD-26152-01, SD-26173-01 and incoming features of 2-way intertoll trunks SD-25842-02, SD-25843-01, SD-25845-01, SD-27912-01, and SD-28066-01, in No. 5 crossbar offices.

trunk. (2) Selection and seizure of incoming register. (3) Completion of connection. (4) Return of answering supervision. (5) Continuity and polarity of leads between trunk and incoming register.

9

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes. This reissue affects Equipment Test Lists.

B. Ringing Selection Switch—Trunk Arranged for E and M Lead Signaling: The following features are tested: (1) Application of various ringing combinations. (2) Polarity of ringing current on tip and ring leads of terminating end of trunk.

10

- (a) To add Tests K and L.
- (b) To include SD-26152-01 in paragraph 1.01.
- (c) To make minor changes as required.

B.1 Ringing Selection Switch—Trunk Arranged for Reverse Battery Signaling: The following features are tested: (1) Application of various ringing combinations. (2) Polarity of ringing current on tip and ring leads of terminating end of trunk.

10

1.03 The tests covered are:

LOCAL COMPLETION

PAGE

A. Trunk Seizure, Release, and Pad Control—Trunk Arranged for E and M Lead Signaling: The following features are checked: (1) Seizure of trunk. (2) Selection and seizure of incoming register. (3) Completion of connection. (4) Return of answer supervision. (5) Continuity and polarity of leads between trunk and incoming register. (6) Continuity of P lead and operation of pad control feature.

8

C. Pretrip and Trip—Trunk Arranged for E and M Lead Signaling: This test checks the proper functioning of the tripping relay.

11

A.1 Trunk Seizure and Release—Trunk Arranged For Reverse Battery Signaling: The following features are checked. (1) Seizure of

C.1 Pretrip and Trip—Trunk Arranged for Reverse Battery Signaling: This test checks the proper functioning of the tripping relay.

12

D. Line Busy—Trunk Arranged for E and M Lead Signaling: This test checks that line busy tone is connected to the originating line when the terminating line is found busy.

13

NOTICE

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

D.1 Line Busy—Trunk Arranged for Reverse Battery Signaling:
 This test checks that line busy tone is connected to the originating line when the terminating line is found busy. 13

E. Overflow—Trunk Arranged for E and M Lead Signaling:
 This test checks that overflow tone is connected to the originating line when the marker is unable to establish a terminating connection. 14

E.1 Overflow—Trunk Arranged for Reverse Battery Signaling:
 This test checks that overflow tone is connected to the originating line when the marker is unable to establish a terminating connection. 15

THROUGH-SWITCH

F. Trunk Seizure, Release, and Pad Control—Trunk Arranged for E and M Lead Signaling: The following features are checked: (1) Seizure of trunk. (2) Selection and seizure of incoming register. (3) Selection of outgoing trunk and sender. (4) Completion of connection through line link appearances of this trunk. (5) Return of answer supervision. (6) Transmission of rering signal to called end. (7) Continuity of P lead and operation of pad control (when provided). 15

F.1 Trunk Seizure, Release, and Pad Control—Trunk Arranged for Reverse Battery Signaling:
 The following features are checked: (1) Seizure of trunk. (2) Selection and seizure of incoming register. (3) Selection and seizure of outgoing trunk and sender. (4) Completion of connection through line link appearances of this trunk. (5) Return of answer supervision. (6) Transmission of rering signal to called end. (7) Continuity of P lead and operation of pad control (when provided). 17

G. Overflow—Trunk Arranged for E and M Lead Signaling:
 This test checks that overflow tone is connected to the originating line when the marker is unable to establish a through connection. 19

G.1 Overflow—Trunk Arranged for Reverse Battery Signaling:
 This test checks that overflow tone is connected to the originating line when the marker is unable to establish a through connection. 20

MISCELLANEOUS TESTS

H. Sleeve Busy Indication to Toll Switchboard—Testing at Toll Switchboard—2-way Trunks: This test checks that the trunk tests busy at the toll switchboard when the trunk is seized on an incoming call. (Tests for trunk-idle or trunk-busy lamp indications are covered in separate sections.) 21

I. Sleeve Busy Indication to Toll Switchboard—Testing at Relay Rack Frame—2-way Trunks: This test checks that the trunk places busy potential on the sleeve lead to the toll switchboard when the trunk is seized on an incoming call. 22

J. Time-out—Trunk Arranged for E and M Lead Signaling:
 This test checks that the connection to the called line is held for 13 to 32 seconds after the originating line disconnects when trunk is arranged for time-out. 22

J.1 Time-out—Trunk Arranged for Reverse Battery Signaling:
 This test checks that the connection to the called line is held for 13 to 32 seconds after the originating line disconnects when trunk is arranged for time-out. 23

K. Busy Line Verification-SD-26152-01: This test checks this trunks ability to apply the BLV signal at the time the marker completes

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| the connection between this circuit and the outgoing toll trunk. | 24 | |
| L. Busy Line Verification-SD-26173-01: This test checks this trunks ability to apply the BLV signal at the time the marker completes the connection between this circuit and the outgoing toll trunk. | 24 | |
| 1.04 When making Tests F and F.1 on trunks having two line-link frame appearances, one half of the incoming registers associated with the trunk being tested are made busy. | | |
| 1.05 Test G requires action and verification at the distant office toll testboard. | | |
| 1.06 Test H requires action and verification at the toll switchboard. | | |
| 1.07 All Tests except Test I require action at the relay rack frame of trunk under test. | | |
| 1.08 Local instructions should be followed with reference to recording any register operations caused by performing these tests. | | |
| 1.09 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. | | |
| 1.10 The manner of selecting some circuits and test conditions at the master test frame (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 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. | | |
| 1.11 The location statement, At MTF—, is used to refer to all apparatus located on the four basic bays of the MTF. | | |
| | | 1.12 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. |
| | | 1.13 The statement between the asterisks (* *) after ACTION and VERIFICATION statements is added to clarify the function being simulated or the action being taken in the test procedures. |
| | | 2. APPARATUS |
| | | All Tests—17E Testboard Appearance not Provided |
| | | 2.01 322A (make-busy) plugs, as required. |
| | | All Test Except I |
| | | 2.02 Master test control circuit, SD-25800-01 |
| | | 2.03 Trunk test circuit, SD-25918-01 |
| | | Tests A, B, C, D, E, F, G, H, J, and L |
| | | 2.04 Two testing cords, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord) (for patching trunk test jacks to trunk circuit). |
| | | Tests A.1, B.1, C.1, D.1, E.1, F.1, G.1, H.1, J.1, and K |
| | | 2.05 One testing cord, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord) (for patching trunk test jack to trunk circuit). |
| | | Tests F, F.1—17E Testboard Appearance Provided |
| | | 2.06 322A (make-busy) plugs, as required. |
| | | Tests G, G.1, I |
| | | 2.07 Blocking and insulating tools as required. Use tools and apply as covered in Section 069-020-801. |
| | | Tests J, J.1 |
| | | 2.08 KS-3008 stopwatch or equivalent. |

3. PREPARATION

STEP	ACTION	TEST							
		A	A.1	B	B.1	C	C.1	D	D.1
1	At MTF — Restore all keys and switches.	X	X	X	X	X	X	X	X
2	Momentarily operate RL key.	X	X	X	X	X	X	X	X
3a	If 17E testboard appearance is provided — Have testboard attendant make trunk busy to out- going and incoming calls.	X	X	X	X	X	X	X	X
4b	If 17E testboard appearance is not provided — At MTF jack, lamp, and key circuit — Insert make-busy plug into OGT-MB jack associated with trunk under test and have trunk removed from service at distant end.	X	X	X	X	X	X	X	X
5c	If 17E testboard and OGT-MB jack is not provided — Have trunk removed from service at originating office.	—	—	—	—	—	—	—	—
6	At relay rack — When IN and SG relays on trunk under test are not operated — Patch T1, T2 jacks on trunk under test to TOL T1, TOL T2 jacks on frame.	X	—	X	—	X	—	X	—
7	At relay rack — When D relay on trunk under test is not operated — Patch T jack on trunk under test to ITT jack on frame.	—	X	—	X	—	X	—	X
8	At MTF — Select ITNP class of test.	X	X	X	X	X	X	X	X
9	Select TOL sub-class of test.*	X	—	X	—	X	—	X	—
10	Select ringing combinati on 01.	X	X	—	—	X	X	—	—
11	Operate TLK key.	X	X	X	X	X	X	X	X
12	Operate TTL key.	X	X	X	X	X	X	X	X
13d	If directing digit or digits are required — Select A-, B-, C- digits as required for incoming class of trunk under test.	X	X	X	X	X	X	X	X
14e	If trunk has 1000-ohm loop compensation — Operate COMP key.		X		X		X		X
15	Operate SLP, LS keys.				X		X		X

— Omit step

* TOL lamp lighted

Proceed to METHOD

STEP	ACTION	TEST							
		E	E.1	F	F.1	G	G.1	H	I
1	At MTF — Restore all keys and switches.	X	X	X	X	X	X	X	X
2	Momentarily operate RL key.	X	X	X	X	X	X	X	X
3a	If 17E testboard appearance is provided — Have testboard attendant make trunk busy to outgoing and incoming calls.	X	X	X	X	X	X	X	—
4b	If 17E testboard appearance is not provided — At MTF jack, lamp, and key circuit — Insert make-busy plug into OGT-MB jack associated with trunk under test and have trunk removed from service at distant end.	X	X	X	X	X	X	X	X
5c	If 17E testboard and OGT-MB jack is not provided — Have trunk removed from service at originating office.	—	—	—	—	—	—	—	—
6	At relay rack — When IN and SG relays on trunk under test are not operated — Patch T1, T2 jacks on trunk under test to TOL T1, TOL T2 jacks on frame.	X	—	X	—	X	—	X	
7	At relay rack — When D relay on trunk under test is not operated — Patch T jack on trunk under test to ITT jack on frame.	—	X	—	X	—	X	—	
8	At MTF — Select ITNP class of test.	X	X	X	X	X	X	X	
9	Select TOL sub-class of test.*	X	—	X	—	X	—	X	
10	Select ringing combination 01.	—	—	—	—	—	—	X	
11	Operate TLK key.	X	X	X	X	X	X	X	
12	Operate TTL key.	X	X	X	X	X	X	X	
13d	If directing digit or digits are required — Select A-, B-, C- digits as required for incoming class of trunk under test.		—		—		—	X	
14e	If trunk has 1000-ohm loop compensation — Operate COMP key.		X		X		X		
15	Operate SLP, LS keys.		X		X		X		

— Omit step

* TOL lamp lighted

Proceed to METHOD

SECTION 218-252-501

STEP	ACTION	TEST						
		J	J.1	K	L			
1	At MTF — Restore all keys and switches.	x	x	x	x			
2	Momentarily operate RL key.	x	x	x	x			
3a	If 17E testboard appearance is provided — Have testboard attendant make trunk busy to outgoing and incoming calls.	x	x	—	—			
4b	If 17E testboard appearance is not provided — At MTF jack, lamp, and key circuit — Insert make-busy plug into OGT-MB jack associated with trunk under test and have trunk removed from service at distant end.	x	x	—	—			
5c	If 17E testboard and OGT-MB jack is not provided — Have trunk removed from service at originating office.	—	—	x	x			
6	At relay rack — When IN and SG relays on trunk under test are not operated — Patch T1, T2 jacks on trunk under test to TOL T1, TOL T2 jacks on frame.	x	—	—	x			
7	At relay rack — When D relay on trunk under test is not operated — Patch T jack on trunk under test to ITT jack on frame.	—	x	x	—			
8	At MTF — Select ITNP class of test.	x	x	x	x			
9	Select TOL sub-class of test.*	x	—	—	x			
10	Select ringing combination 01.	x	x	—	—			
11	Operate TLK key.	x	x	x	x			
12	Operate TTL key.	x	x	—	—			
13d	If directing digit or digits are required — Select A-, B-, C- digits as required for incoming class of trunk under test.	x	x	—				
14e	If trunk has 1000-ohm loop compensation — Operate COMP key.		x	x				
15	Operate SLP, LS keys.		x	x				

— Omit step

* TOL lamp lighted

Proceed to METHOD

TABLE A — RINGING CODE CHECK CHART

RINGING COMB. RS1, RS2 KEYS	RINGING SELECTION SWITCH SELECT MAGNETS OPERATED	RINGING DETECTION LAMP LIGHTED	RINGING TEST LINE NO.	RINGING CODES	RINGING INTERVAL IN SECONDS							REMARKS	
					0	1	2	3	4	5	6		
1*†	0,6	R--		Code 1 Gen	█	█	█	█	█	█	█		
2	0,2	R-- R-- R--		Code 1 Gen Code 2 Gen Continuous	█	█	█	█	█	█	█		
3*	0,3	R+ R-- R-- R+		Code 2+ Code 1 Gen Code 3 Gen Code 3+	█	█	█	█	█	█	█		
4	0,4	R-- R-- R--		Code 4 Gen Code 1 HV Code 2 Gen	█	█	█	█	█	█	█		
5*	0,5	R+ R-- R-- §*		Code 2+ Code 2 Gen Code 5 Gen -48 Ring. Grd Tip	█	█	█	█	█	█	█		Silent Level
6	0,7	§* R+ R--		-48 Ring. Grd Tip Code 1+ Code 2 Gen	█	█	█	█	█	█	█		Silent Level
7*	1,7	T-§ T+ T--		-48 Tip. Grd Ring Code 1+ Code 2 Gen	█	█	█	█	█	█	█		Silent Level
8*	0,8	R-- R+		Code 1 Gen Code 2+	█	█	█	█	█	█	█		Free Line
9	1,8	T-- T+		Code 1 Gen Code 2+	█	█	█	█	█	█	█		Free Line
10‡	0,6	R--		Code 1 Gen	█	█	█	█	█	█	█		
11*†	1,6	T--		Code 1 Gen	█	█	█	█	█	█	█		
12*	1,2	T-- T-- T--		Code 1 Gen Code 2 Gen Continuous	█	█	█	█	█	█	█		
13	1,3	T+ T-- T-- T+		Code 2+ Code 1 Gen Code 3 Gen Code 3+	█	█	█	█	█	█	█		
14*	1,4	T-- T-- T--		Code 4 Gen Code 1 HV Code 2 Gen	█	█	█	█	█	█	█		
15	1,5	T+ T-- T-- T-§		Code 2+ Code 2 Gen Code 5 Gen -48 Tip. Grd Ring	█	█	█	█	█	█	█		Silent Level

*These ringing combinations check all equipped crosspoints on the ringing selection switch.

†In offices arranged for marker controlled immediate ring, set RMBR switch to position 1.

‡Ringing combination 10 is listed for information purposes only and should not be used for testing the ringing feature.

§If line link pulsing or direct access to No. 101 ESS is provided, operate RTK key to test silent level.

*No indication.

SECTION 218-252-501

4. METHOD

STEP	ACTION	VERIFICATION
LOCAL COMPLETION		
A. Trunk Seizure, Release, and Pad Control—Trunk Arranged for E and M Lead Signaling		
14	Operate REC key.	
15	Momentarily operate ST key.	Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C). OGT-CS lamp momentarily lighted. If pad control is provided— PAD IN lamp lighted.
16	Operate LS key.	SLV lamp may light momentarily. TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
17	Operate ANS key.	OGT-CS lamp lighted. R- lamp extinguished. High tone heard.
18	Restore ANS key.	OGT-CS lamp extinguished.
19	Restore TLK, LS, REC keys.	TS lamp extinguished.
20	Momentarily operate RL key.	All lamps extinguished ♦except TOL.♦
21	Restore all keys and switches not required in next test.	♦TOL lamp extinguished.♦
22	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
23a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
23b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	

STEP	ACTION	VERIFICATION
A.1	Trunk Seizure and Release—Trunk Arranged for Reverse Battery Signaling	
15	Operate HS, IRV, REC keys.	
16	Momentarily operate ST key.	Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C).
17	Restore REC key.	
18	Momentarily operate ST key.	
19	Operate GS key for approximately 3 seconds.	SLV lamp does not light.
20	Restore IRV key.	
21	Operate SLP key.	SLV lamp lighted. OGT-CS lamp may light momentarily.
22	Operate LS key.	SLV lamp extinguished. TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
23	Operate ANS key.	OGT-CS lamp lighted. R- lamp extinguished. High tone heard.
24	Restore ANS key.	OGT-CS lamp extinguished.
25	Restore TLK, LS, SLP keys.	TS lamp extinguished.
26	Momentarily operate RL key.	All lamps extinguished.
27	Restore all keys and switches not required in next test.	
28	If no further tests are to be performed— At relay rack— Remove patching cord from T jack.	
29a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
30b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack	

SECTION 218-252-501

STEP	ACTION	VERIFICATION
	associated with trunk under test and have distant office restore trunk to service.	
B. Ringing Selection Switch—Trunk Arranged for E-M Lead Signaling		
14	Select ringing combination to be applied to test line (Table A).	
15	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
16	Operate LS key.	SLV lamp may light momentarily. TS lamp lighted. R-, T-, R+, or T+ lamp flashes (Table A). Ringing tone heard in unison with R-, T-, R+, or T+ lamp flashes.
17	Restore TLK, LS keys.	Ringing lamp extinguished. Ringing tone silenced.
18	Momentarily operate RL key.	All lamps extinguished ♦except TOL.♦
19	Operate TLK key.	
20	Repeat Steps 14 through 19 for each ringing combination provided (Table A).	
21	Restore all keys and switches not required in next test.	♦TOL lamp extinguished.♦
22e	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
23a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
24b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
B.1 Ringing Selection Switch—Trunk Arranged For Reverse Battery Signaling.		
16	Select ringing combination to be applied to test line (Table A).	
17	Momentarily operate ST key.	OGT-CS, SLV lamps may momentarily light. TS lamp lighted.

STEP	ACTION	VERIFICATION
		R-, T-, R+, or T+ lamps flashes (Table A). Ringing tone heard in unison with R-, T-, R+, or T+ lamp flashes.
18	Restore TLK, LS keys.	Ringing lamp extinguished. Ringing tone silenced.
19	Momentarily operate RL key.	All lamps extinguished.
20	Operate TLK, LS keys.	
21	Repeat Steps 16 through 20 for each ringing combination provided (Table A).	
22	Restore all keys and switches not required in next test.	
23f	If no further tests are to be performed— At relay rack— Remove patching cord from T jack.	
24a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
25b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
C. Pretrip and Trip—Trunk Arranged for E and M Lead Signaling		
14	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
15	Operate LS key.	SLV lamp may light momentarily. TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
16	Hold PTP key operated for 1/2 second during silent interval of ringing.	R- lamp continues to flash at same rate.
17e	If test circuit has a 1500-ohm test resistance— Hold TRP key operated for 1/2 second during silent interval of ringing.	R- lamp extinguished. Ringing tone not heard.
18f	If test circuit has a 1622-ohm test resistance— Hold TRP key operated for 1 second during silent interval of ringing.	R- lamp extinguished. Ringing tone not heard.

SECTION 218-252-501

STEP	ACTION	VERIFICATION
19	Restore TLK, LS keys.	TS lamp extinguished.
20	Momentarily operate RL key.	All lamps extinguished ♦except TOL.♦
21	Restore all keys and switches not required in next test.	♦TOL lamp extinguished.♦
22g	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
23a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
24b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
C.1 Pretrip and Trip—Trunk Arranged for Reverse Battery Signaling		
16	Momentarily operate ST key.	OGT-CS, SLV lamps may light momentarily. TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
17	Hold PTP key operated for 1/2 second during silent interval of ringing.	R- lamp continues to flash at same rate.
18f	If test circuit has a 1500-ohm test resistance— Hold TRP key operated for 1/2 second during silent interval of ringing.	R- lamp extinguished. Ringing tone not heard.
19f	If test circuit has a 1622-ohm test resistance— Hold TRP key operated for 1 second during silent interval of ringing.	R- lamp extinguished. Ringing tone not heard.
20	Restore TLK, LS keys.	TS lamp extinguished.
21	Momentarily operate RL key.	All lamps extinguished.
22	Restore all keys and switches not required in next test.	
23h	If no further tests are to be performed— At relay rack— Remove patching cord from T jack.	

STEP	ACTION	VERIFICATION
24a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
25b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
D. Line Busy—Trunk Arranged for E and M Lead Signaling		
14	Operate BB key.	
15	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
16	Operate LS key.	SLV lamp may light momentarily. Busy tone heard.
17	Restore TLK, LS keys.	Busy tone silenced.
18	Momentarily operate RL key.	All lamps extinguished ♦except TOL.♦
19	Restore all keys and switches not required in next test.	♦TOL lamp extinguished.♦
20e	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
21a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
22b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
D.1 Line Busy—Trunk Arranged for Reverse Battery Signaling		
16	Operate BB key.	
17	Momentarily operate ST key.	OGT-CS, SLV lamps may light momentarily. Busy tone heard.
18	Restore TLK, LS keys.	Busy tone silenced.
19	Momentarily operate RL key.	All lamps extinguished.

SECTION 218-252-501

STEP	ACTION	VERIFICATION
20	Restore all keys and switches not required in next test.	
21f	If no further tests are to be performed— At relay rack— Remove patching cord from T jack.	
22a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
23b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
E. Overflow—Trunk arranged for E and M Lead Signaling		
13	Select A_ through G_ digits as required for local office code and permanent overflow test number.	
14	Operate KY key.	
15	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
16	Operate LS key.	SLV lamp may light momentarily. Overflow tone heard.
17	Restore TLK, LS keys.	Overflow tone silenced.
18	Momentarily operate RL key.	All lamps extinguished ♦except TOL.♦
19	Restore all keys and switches not required in next test.	♦TOL lamp extinguished.♦
20d	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
21a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
22d	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	

STEP	ACTION	VERIFICATION
E.1	Overflow—Trunk Arranged for Reverse Battery Signaling	
16	Select A_ through G_ digits as required for local office code and permanent overflow test number.	
17	Operate KY key.	
18	Momentarily operate ST key.	OGT-CS, SLV lamps may light momentarily. Overflow tone heard.
19	Restore TLK, LS keys.	Overflow tone silenced.
20	Momentarily operate RL key.	All lamps extinguished.
21	Restore all keys and switches not required in next test.	
22f	If no further tests are to be performed— At relay rack— Remove patching cord from T jack.	
23a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
24b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	

THROUGH-SWITCH**F. Trunk Seizure, Release, and Pad Control—Trunk Arranged for E and M Lead Signaling**

13d	If trunk has two line trunk frame appearance— Insert make-busy plugs into IRMB_ jacks of incoming registers associated with trunk being tested and served by even-numbered incoming register marker connectors.
14	At MTF— Select A_, B_, C_ digits for an office code that will route test call to an outgoing intertoll or toll switching trunk having E and M lead signaling.

SECTION 218-252-501

STEP	ACTION	VERIFICATION
15e	If selected outgoing trunk has outgoing E and M lead signaling— Operate E-M key.	
16	Operate REC key.	
17	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
18	Operate LS key.	SLV lamp may light momentarily. PAD IN, PAD OUT, E lamps lighted per Table B. Trouble record taken. TKT, OCN, TRK/1TR designations perforated. FTT_ FUT_ VGT_ HGT_ VFT_ designations perforated representing the line location of one of the line link frame appearances of the trunk under test.
19d	If trunk has two line link frame appearances— Remove make-busy plugs from IRMB_ jacks.	
20	Operate ANS key.	OGT-CS lamp lighted. High tone heard.
21e	If selected outgoing trunk has E and M lead signaling— Dial digit 1.	E lamp momentarily extinguished.
22	Restore ANS key.	OGT-CS lamp extinguished. High tone silenced.
23	Restore TLK, LS keys.	
24	Momentarily operate RL key.	All lamps extinguished except TOL.
25d	If trunk has two line link frame appearances— Insert make-busy plugs into IRMB_ jacks of incoming registers associated with trunk being tested and served by odd-numbered incoming register marker connectors.	
26d	Operate TLK key.	
27d	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
28d	Operate LS key.	SLV lamp may light momentarily. PAD IN, PAD OUT, E lamps lighted per Table B. Trouble record taken. TKT, ECN, TRK/1TR designations perforated. FTT_ FUT_ VGT_ HGT_ VFT_ designations perforated representing the line location of

STEP	ACTION	VERIFICATION
		one of the line link frame appearances of the trunk under test.
29d	Remove make-busy plugs from IRMB_ jacks.	
30d	Operate ANS key.	OGT-CS lamp lighted. High tone heard.
31d	Restore ANS key.	OGT-CS lamp extinguished. High tone silenced.
32d	Restore TLK, LS keys.	
33d	Momentarily operate RL key.	All lamps extinguished ◆except TOL.◆
34	Restore all keys and switches not required in next test.	◆TOL lamp extinguished.◆
35f	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
36a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
37b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	

F.1 Trunk Seizure, Release, and Pad Control—Trunk Arranged for Reverse Battery Signaling

16f	If trunk has two line link frame appearances— Insert make-busy plugs into IRMB_ jacks of incoming registers associated with trunk being tested and served by even-numbered incoming register marker connectors.	
17	Select A_, B_, C_ digits for an office code that will route test call to an outgoing intertoll or toll switching trunk having E and M lead signaling.	
18g	If selected outgoing trunk has outgoing E and M lead signaling— Operate E-M key.	
19	Select TAN sub-class of test.	◆TAN lamp lighted.◆

SECTION 218-252-501

STEP	ACTION	VERIFICATION
20	Operate REC key.	
21	Momentarily operate ST key.	OGT-CS, SLV lamps may light momentarily. PAD IN, PAD OUT, E lamps lighted per Table B. Trouble record taken. TKT, OCN, TRK/1TR designations perforated. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated representing the line location of one of the line link frame appearances of the trunk under test.
22f	If trunk has two line link frame appearance— Remove make-busy plugs from IRMB_ jacks.	
23	Operate ANS key.	OGT-CS lamp lighted. High tone heard.
24g	If selected outgoing trunk has E and M lead signaling— Dial digit 1.	E lamp momentarily extinguished.
25	Restore ANS key.	OGT-CS lamp extinguished. High tone silenced.
26	Restore TLK, LS keys.	
27	Momentarily operate RL key.	All lamps extinguished except TAN.
28f	If trunk has two line link frame appearances— Insert make-busy plugs into IRMB_ jacks of incoming registers associated with trunk being tested and served by odd-numbered incoming register marker connectors.	
29f	Operate TLK, LS keys.	
30f	Momentarily operate ST key.	OGT-CS, SLV lamps may light momentarily. PAD IN, PAD OUT, E lamps lighted per Table B. Trouble record taken. TKT, ECN, TRK/1TR designations perforated. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated representing the line location of one of the line link frame appearances of the trunk under test.
31f	Remove make-busy plugs from IRMB_ jacks.	
32f	Operate ANS key.	OGT-CS lamp lighted. High tone heard.

STEP	ACTION	VERIFICATION
33f	Restore ANS key.	OGT-CS lamp extinguished. High tone silenced.
34f	Restore TLK, LS keys.	
35f	Momentarily operate RL key.	All lamps extinguished ♦except TAN.♦
36	Restore all keys and switches not required in next test.	♦TAN lamp extinguished.♦
37h	If no further tests are to be performed— At relay rack— Remove patching cord from T jack.	
38a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
39b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	

G. Overflow—Trunk Arranged for E and M Lead Signaling

13	At relay rack— Block nonoperated the following relays on trunk under test: TS1 and TS2 relays. (If provided.) TS relay. (If provided.)	
14	At MTF— Select A_, B_, C_ digits for an office code that will route test call to an outgoing trunk.	
15	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
16	Operate LS key.	SLV lamp may light momentarily. TRL lamp lighted. BT-OF lamp lighted. Trouble record taken. AVK1, LK1 designations not perforated.
17	Restore TLK, LS keys.	
18	Momentarily operate RL key.	All lamps extinguished ♦except TOL.♦
19	At relay rack— Remove blocking tools placed in Step 13.	

SECTION 218-252-501

STEP	ACTION	VERIFICATION
20	At MTF— Restore all keys and switches not required in next test.	♦TOL lamp extinguished.♦
21d	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
22a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
23b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
G.1 Overflow—Trunk Arranged for Reverse Battery Signaling		
16	At relay rack— Block nonoperated the following relays on trunk under test. Non-wire-spring-relay type trunk— TS1 and TS2 relays. Wire-spring-relay type trunk— TS relay.	
17	At MTF— Select A, B, C digits for an office code that will route test call to an outgoing trunk.	
18	Select TAN sub-class of test.	♦TAN lamp lighted.♦
19	Momentarily operate ST key.	OGT-CS SLV lamps may light momentarily. TRL lamp lighted. BT-OF lamp lighted. Trouble record taken. AVK1, LK1 designations not perforated.
20	Restore TLK, LS keys.	
21	Momentarily operate RL key.	All lamps extinguished ♦except TAN.♦
22	At relay rack— Remove blocking tools placed in Step 16.	
23	At MTF— Restore all keys and switches not required in next test.	♦TAN lamp extinguished.♦

STEP	ACTION	VERIFICATION
24f	If no further tests are to be performed— At relay rack— Remove patching cord from T jack.	
25a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
26b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	

MISCELLANEOUS TESTS

H. Sleeve Busy Indication to Toll Switchboard—Testing at Toll Switchboard—2-Way Trunks

14	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
15	Operate LS key.	SLV lamp may light momentarily.
16	Remove make-busy plug from PGT_MB jack.	
17	At toll switchboard— Insert plug of telephone set into position jacks.	
18	Operate TALK key of idle front cord.	
19	Make sleeve busy test.	Trunk tests busy.
20	Remove plug of telephone set from position jacks.	
21	Restore TALK key.	
22	At MTF— Momentarily operate RL key.	All lamps extinguished ♦except TOL♦
23	Restore all keys and switches not required in next test.	♦TOL lamp extinguished.♦
24e	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
25a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	

SECTION 218-252-501

STEP	ACTION	VERIFICATION
26b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
I. Sleeve Busy Indication to Toll Switchboard—Testing At Relay Rack Frame—2-Way Trunks		
6d	If trunk has an appearance at 3C or 3CL switchboard— At relay rack frame— Block operated IN relay on trunk under test.	
7d	Insulate 4B of B relay.	B relay released. Battery present on 7T of B relay.
8d	Remove blocking tool from IN relay.	
9d	Remove insulator from B relay.	
10e	If trunk has an appearance at No. 1 switchboard— At relay rack frame— Block operated MB relay on trunk under test.	B relay released.
11e	Block operated IN relay.	Battery present on 4T of B relay.
12e	Remove blocking tools from MB, IN relays.	
13	At MTF— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
J. Time-out—Trunk Arranged for E and M Lead Signaling		
14	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
15	Operate LS key.	SLV lamp may light momentarily. TS lamp lighted. R- lamp flashes Ringing tone heard in unison with R- lamp flashes.
16	Operate ANS key.	OGT-CS lamp lighted. R- lamp extinguished. High tone heard.
17	Restore LS key.	

STEP	ACTION	VERIFICATION
18	Restore TLK key; <i>start timing.</i>	OGT-CS lamp extinguished. In 13 to 32 seconds— TS lamp extinguished.
19	Momentarily operate RL key.	All lamps extinguished ♦except TOL.♦
20	Restore all keys and switches not required in next test.	♦TOL lamp extinguished..♦
21e	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
22	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
23b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	
J.1	Time-out—Trunk Arranged for Reverse Battery Signaling	
16	Momentarily operate ST key.	OGT-CS, SLV lamps may light momentarily. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
17	Operate ANS key.	OGT-CS lamp lighted. R- lamp extinguished. High tone heard.
18	Restore LS key.	
19	Restore TLK key; <i>start timing.</i>	OGT-CS lamp extinguished. In 13 to 32 seconds— TS lamp extinguished.
20	Momentarily operate RL key.	All lamps extinguished.
21	Restore all keys and switches not required in next test.	
22f	If no further tests are to be performed— At relay rack— Remove patching cord from T jack.	

SECTION 218-252-501

STEP	ACTION	VERIFICATION
23a	If 17E testboard appearance is provided— Have testboard attendant restore trunk to service at both ends.	
24b	If 17E testboard appearance is not provided— At MTF jack, lamp, and key circuit— Remove make-busy plug from OGT-MB jack associated with trunk under test and have distant office restore trunk to service.	

K. Busy Line Verification-SD-26152-01

16	Select TAN sub-class of test.	TAN lamp lighted.
17	Select A_, B_, C_ digits for an office code that will route test call to associated toll switching trunk circuit SD-26178-01 arranged for busy line verification.	
18	Momentarily operate ST key.	OGT-CS, SLV lamps may light momentarily.
19	Operate ANS key.	OGT-CS lamp lighted. Steady high tone heard. *BLV signal valid*
20	Restore ANS key.	OGT-CS lamp extinguished. High tone silenced.
21	Restore TLK, LS keys.	
22	Momentarily operate RL key.	All lamps extinguished except TAN.
23	Restore all keys and switches not required in next test.	TAN lamp extinguished.
24f	If no further tests are to be performed— Remove patching cord from T jack.	
25c	If 17E testboard and OGT-MB jack is not provided— Have trunk returned to service at originating office.	

L. Busy Line Verification—SD-26173-01

13	Select A_, B_, C_ digits assigned to simulated 2-wire trunk (part of SD-25918-01) for through-switched testing.	
14	Operate VFI key.	
15	Operate E-M key.	

STEP	ACTION	VERIFICATION
16	Momentarily operate ST key.	OGT-CS lamp momentarily lighted.
17	Operate LS key.	SLV lamp may light momentarily. TS lamp lighted.
18	Operate ANS key.	OGT-CS lamp lighted. High tone heard. *BLV signal valid*
19	Restore ANS key.	OGT-CS lamp extinguished. High tone silenced.
20	Restore TLK, LS keys.	
21	Momentarily operate RL key.	All lamps extinguished except TOL.
22	Restore all keys and switches not required in next test.	TOL lamp extinguished.
23d	If no further tests are to be performed— At relay rack— Remove patching cords from T1, T2 jacks.	
24	If 17E testboard and OGT-MB jack is not provided— Have trunk restored to service at originating office.◀	

TABLE B

		LAMP LIGHTED
Pad control provided	Outgoing trunks requiring pad to remain in	PAD IN
	Outgoing trunk requiring pad to be switched out	PAD OUT
Pad control not provided		
Outgoing trunk arranged for outgoing E and M lead signaling.		E
Outgoing trunk not arranged for outgoing E and M lead signaling.		

TABLE C

*OPTION	INCOMING TRUNK CLASS (ITC-)		FUNCTION
	NO. †	DESIGNATION	
WK	0	—	Not used.
WL		ONN	Not used.
WK	1	TB	Toll, physical and theoretical.
WL		SE	Supervision, EN number.
WK	2	MB	Manual, physical and theoretical.
WL		SA	Supervision, non-discriminating numbers.
WK	3	FB	Full selector, physical and theoretical.
WL		NA	No supervision, non-discriminating numbers.
WK	4	TT	Toll, theoretical
WL		NE	No supervision, extra theoretical.
WK	5	MT	Manual, theoretical.
WL		ST	Supervision, theoretical.
WK	6	FT	Full selector, theoretical.
WL		NT	No supervision, theoretical.
WK	7	TP	Toll, physical.
WL		RN	Not used.
WK	8	MP	Manual, physical.
WL		SP	Supervision, physical.
WK	9	FP	Full selector, physical.
WL		NP	No supervision, physical.

* Check office wiring lists for option provided.

† Check local records for incoming trunk class (ITC—) used.