

TRUNK LINK CIRCUITS

TESTS

USING OFFICE TEST FRAME TEST CIRCUIT SD-27633-01 (J23260)

NO. 5 CROSSBAR OFFICES

1. GENERAL

PAGE

1.01 This section describes methods for testing trunk links using regular size crossbar switches (SD-26032-01) and small size crossbar switches (SD-27879-01) using the office test frame SD-27633-01 (J23260) in small No. 5 crossbar offices.

1.02 This section is reissued for the following reasons. Revision arrows have been used to emphasize the most significant changes. This reissue does not affect Equipment Test Lists.

- (a) To revise Tests A, B, and D to delete the use of the 329A make-busy plug.
- (b) To revise Test A to include methods for testing small crossbar switches and to provide checks of trunk links to all trunk switches.
- (c) To revise Test D to amend make-busy procedures of individual junctor switches.
- (d) To add paragraph 1.10 to include application of the lamp display control feature (option YR).
- (e) To make minor changes as required.

1.03 The tests covered are:

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A. Trunk Link Availability and Verification of Trouble Indicator Function (LC_ Leads): This test checks that all trunk links are available and that the LC_ leads are extended to the trouble indicator.

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B. Verification of Trouble Indicator Functions (LV_ Leads) Using Outgoing or Intraoffice Trunks: This test checks that the LV_ leads are extended to the trouble indicator.

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C. Verification of Trouble Indicator Functions (LV_ Leads) Using Originating Registers: This test checks that the LV_ leads are extended to the trouble indicator.

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D. Junctor Switch Make-Busy Features: This test checks that the individual junctor switches are made busy when a make-busy plug is inserted into the associated JS_ jack.

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E. Frame Make-Busy Feature: This test checks that a trunk link frame is made busy to dial tone and originating traffic when a make-busy plug is inserted into the associated TMB jack.

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1.04 Test A requires action at the line link frame.

1.05 Tests A, B, and C require actions at the trunk link frame and verifications at the TIC.

1.06 Test E is made with a trunk link frame made busy.

1.07 Tests for junctor availability and for crosses on junctor sleeves are covered in the section for testing the line link circuits. The line link circuit tests check the operation of the relays and

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the junctor select magnets associated with the junctors in the trunk link circuit. Also, the functions of the trunk connector and the trunk switch level connector relays in the trunk link circuit are tested in the individual sections for testing trunks or originating registers.

1.08 Local instructions should be followed for recording and reporting any register operations caused by performing these tests.

1.09 All tests in this section should be made during periods of light traffic.

1.10 When lamp display control feature (option YR) is provided at the trouble indicator and connector circuit (TIC), a stored trouble condition is indicated by a lighted red DR lamp. Momentary operation of the LD key will cause the trouble indicating lamps to light. These lamps will be extinguished with the momentary operation of the RLS key. Application of this feature will prevent trouble lamp displays from occurring in unattended offices.

2. APPARATUS

All Tests

2.01 Office test frame test circuit (OTF), SD-27633-01 (J23260).

2.02 Trouble indicator and connector circuit (TIC), SD-27634-01.

2.03 322A (make-busy) plugs as required.

Test A

2.04 Patching cord, P3U cord, 7 feet long, equipped with one 310 plug and one 351A plug (3P27B) for regular size crossbar switches or patching cord, P3BE cord, 7 feet long, equipped with one 310 plug and one 459A plug for small size crossbar switches.

2.05 Patching cord, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord).

2.06 351C plug for regular size crossbar switches or 459E plug for small size crossbar switches.

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

Tests A, D, E

2.08 349A make-busy plugs as required.

Tests D, E

2.09 32A test set.

3. PREPARATION

Tests A, D

3.01 Determine from office records the following information:

- (a) An outgoing trunk or intraoffice trunk associated with each trunk switch on the trunk link frame to be tested.
- (b) The office code assigned to the trunk selected.

Test B

3.02 Determine from office records the following information:

- (a) An outgoing trunk or intraoffice trunk on each level (0 through 9) assigned to levels of the trunk switches to be tested
- (b) The office code assigned to the trunk selected
- (c) Omit levels assigned to originating registers.

Test C

3.03 Determine from office records the following information:

- (a) An originating register on each level assigned to originating registers associated with each trunk switch to be tested.

Test E

3.04 Determine from office records the following information:

- (a) An outgoing or intraoffice trunk associated with the trunk link frame selected for test.

3. PREPARATION (Cont)

STEP	ACTION	VERIFICATION
Tests A, B, D, E		
1	At OTF— Restore all keys and switches.	All lamps extinguished.
2	At TIC— Momentarily operate RLS key.	All lamps extinguished.
3	Operate MKR_ key to select completing marker.	
4	Operate NT, MCB keys.	
5	Set PS switch for required pulsing speed.	
6	Set L-L switch to 0.	
7	Operate REC key.	
8	At jack, lamp, and key circuit or relay rack frame— Insert 322A make-busy plug into OGT-MB jack or set MB switch to MB for trunk to be used in test.	
9	At OTF— Operate FS_ key for trunk link frame associated with trunk selected.	
10	Set TS switch to select trunk on trunk switch to be used in test.	
11	Operate EVEN or ODD key as required for selected trunk.	
12	Operate GPA or GPB key as required when selected trunk is in an allotted group.	
13	Set A through N DIAL switches as required to select trunk made busy in Step 8 and any test line number.	
14	Set CST, CSU switches to select class of service having access to trunk selected.	
15	Operate _D key as required.	
Tests B, D		
16	Operate OTL key.	

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STEP	ACTION	VERIFICATION
Test E		
17	At trunk link frame— Insert 32A test set into RC jack.	

4. METHOD

STEP	ACTION	VERIFICATION
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A. Trunk Link Availability—Verification of Trouble Indicator Functions (LC_ Leads)

16a	◆If office is equipped with regular size crossbar switches— At line link frame— Patch P3U cord from SP jack to any spare line link appearance (even numbered frame).	
17b	If office is equipped with small size crossbar switches— At line link frame— Patch P3BE cord from SP jack to any spare line link appearance (even numbered frame).	
18	At jack, lamp, and key circuit— Patch P3K cord from SP jack to OTL jack.	
19	At OTF— Operate OTLP, CH keys.	
20	Set CH switch to select first channel to be tested.	
21	Operate ST key.	At TIC— LC_ lamp corresponding to trunk switch of selected trunk lighted. CH_ lamp corresponding to channel selected lighted (refer to paragraph 1.10).
22	Momentarily operate RLS key.	All lamps extinguished.
23	At OTF— Restore ST key.	
24	◆At trunk link frame— Insert 349A make-busy plug into JS_ jack corresponding to channel selected in Step 20.	
25a	If office is equipped with regular size crossbar switches— After verifying that T_ hold magnet corresponding to trunk switch of selected trunk is not	T_ hold magnet operated.

STEP	ACTION	VERIFICATION
	operated, insert 351C plug into vertical of trunk switch.	
26b	If office is equippd with small size crossbar switches— After verifying that T_ hold magnet corresponding to trunk switch of selected trunk is not operated, insert 459E plug into vertical of trunk switch.	T_ hold magnet operated.
	Note: The vertical of the trunk switch and the junctor switch at the trunk link frame are always numbered the same as the channel with respect to the left or right-half of the trunk and junctor switches.	
27	Remove 349A make-busy plug from JS_ jack placed in Step 24.	
28	At OTF— Operate ST key.	Overflow tone heard.
29	At TIC— Momentarily operate RLS key.	All lamps extinguished. At OTF— Overflow tone silenced.
30	Restore ST key.	
31	At trunk link frame— Remove 351C plug or 459E plug from vertical of trunk switch placed in Step 25a or 26b.	T_ hold magnet released.
32	Repeat Steps 20 through 31 until all remaining channels associated with even numbered line link frames have been tested.	
33	Repeat Steps 16a or 17b and 20 through 31 using odd numbered line link frames until all channels have been tested.	
34	At jack, lamp, and key circuit or relay rack frame— Remove 322A make-busy plug from OGT-MB jack or restore MB switch to N.	
35	Repeat Steps 8 through 34 for remaining trunk switches as required.	
36	At line link frame— Remove P3U or P3BE cord from SP jack and line link appearance.	

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STEP	ACTION	VERIFICATION
37	At OTF— Restore all keys and switches not required in next test.†	
B. Verification of Trouble Indicator Functions (LV_ Leads) Using Outgoing or Intraoffice Trunks		
17	Operate ST key.	At TIC— LV_ lamp corresponding to level of selected trunk lighted (refer to paragraph 1.10).
18	Momentarily operate RLS key.	All lamps extinguished.
19	At OTF— Restore ST key.	
20	Repeat Steps 17 through 19 using selected trunks until all levels of switch have been tested.	
21	At jack, lamp, and key circuit or relay rack frame— Remove 322A make-busy plug from OGT-MB jack or restore MB switch to N.	
22	Restore all keys and switches not required in next test.	
C. Verification of Trouble Indicator Functions (LV_ Leads) Using Originating Registers		
1	At TIC— Momentarily operate RLS key.	All lamps extinguished.
2	At OTF— Operate MKR2 key to select dial tone marker.	
3	Operate REC, OTL keys.	
4	Operate FS_ key to select trunk link frame of register being used in test.	
5	Set RSG switch to ORG.	
6	Set RSS switch to select particular register.	
7	Operate ST key.	At TIC— LV_ lamp corresponding to level on which selected originating register appears lighted (refer to paragraph 1.10).
8	Momentarily operate RLS key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
9	At OTF— Restore ST key.	
10	Repeat Steps 4 through 9 for all levels that have originating registers assigned.	
11	Restore all keys and switches not required in next test.	
D. Junctor Switch Make-Busy Features		
17	◆Operate CH key.	
18	Select Ch switch to select first channel to be tested.	
19	Operate ST key.	At TIC— LC_ lamp corresponding to trunk switch of selected trunk lighted. CH_ lamp corresponding to channel selected lighted (refer to paragraph 1.10).
20	Momentarily operate RLS key.	
21	At OTF— restore ST key.	
22	At trunk link frame— Insert 349A make-busy plug into JS_ jack corresponding to channel selected in Step 18.	
23	At OTF— Momentarily operate ST key.	Overflow tone heard. At TIC— LC_ lamp corresponding to trunk switch of selected trunk lighted. CH_ lamp corresponding to channel selected not lighted (refer to paragraph 1.10).
24	Momentarily operate RLS key.	All lamps extinguished.
25	At OTF— Restore ST key.	
26	At trunk link frame— Remove 349A make-busy plug from JS_ jack placed in Step 22.	
27	Repeat Steps 18 through 26 until all remaining channels have been tested.	
28	At jack, lamp, and key circuit or relay rack frame—	

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STEP	ACTION	VERIFICATION
	Remove 322A make-busy plug from OGT-MB jack or restore MB switch to N.	
29	At OTF— Restore all keys and switches not required in next test.†	
E. Frame Make-Busy Feature		
<i>Caution: Make this test as quickly as possible since the trunk link frame is excluded from all dial tone and originating traffic while the frame is made busy.</i>		
18	Insert 349A make-busy plug into TMB jack.	TMB lamp lighted. At jack, lamp, and key circuit— TLMB lamp lighted.
19	Momentarily operate white (ST) button on 32A test set.	At TIC— FTCK, JCK, TCHK lamps lighted. FS_ lamp <i>not</i> lighted (refer to paragraph 1.10).
20	At trunk link frame— Remove make-busy plug from TMB jack.	TMB lamp extinguished. At jack, lamp, and key circuit— TLMB lamp extinguished.
21	Momentarily operate red (RL) button on 32A test set.	
22	At TIC— Momentarily operate RLS key.	All lamps extinguished.
23	At jack, lamp, and key circuit or relay rack frame— Remove make-busy plug or restore MB switch to N.	
24	At trunk link frame— Remove 32A test set.	
25	At OTF— Restore all keys and switches.	