

JUNCTOR CIRCUIT SD-27725-01
TESTS USING TRUNK TEST CIRCUIT SD-25918-01
NO. 5 CROSSBAR OFFICES

1. GENERAL

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1.01 This section describes a method of testing junctor circuit SD-27725-01 for completion of intraoffice calls to line link pulsing circuits. This junctor is arranged for automatic message accounting and may be furnished with or without Phase III centrex features. These tests are performed using the master test control circuit SD-25800-01 and the trunk test circuit SD-25918-01 in No. 5 crossbar offices.

C. Supervision — Terminating End Disconnect: The following features are checked: (1) Charge functions. (2) Timed release in 13 to 32 seconds when only the terminating end disconnects. **8**

1.02 This section is reissued for the reasons listed below. Arrows are used to emphasize the most significant changes. Equipment test lists are affected.

D. Noncharge Supervision: This test checks that a charge condition is not established when an answered call is held less than 2 seconds. **9**

- (1) To add calling data transmitter (CDT) features to all tests except E
- (2) To clarify use of DL_ keys and selection of digits.

E. Cancel Disconnect Entry (LAMA-C, CDT, or ETS not Provided): This test checks cancellation of disconnect entry and release of the junctor if a disconnect entry is not completed within 2 to 6 seconds after disconnect. **10**

1.03 The tests covered are:

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A. Junctor Seizure and Release:
 The following features are checked:
 (1) Seizure of junctor. (2) Continuity of originating and terminating sleeve leads.
 (3) Continuity and polarity of originating tip and ring leads. **6**

F. Call to Free Line: This test checks that no-answer or disconnect entries are made on a free-line call. **11**

B. Supervision — Originating End Disconnect: The following features are checked: (1) Charge functions. (2) Ability to hold if extra digits are dialed into the junctor. (3) Timed release in 13 to 32 seconds when only the originating end disconnects. **7**

G. Junctor Busy: This test checks that only a test call can complete to an idle made-busy junctor. It also checks that a service call can complete to an idle junctor. **12**

H. Reorder: This test checks that an overflow tone is returned to the originating end when an outgoing sender is unable to complete its function. **13**

I. Line Busy: This test checks that a busy tone is returned to the originating end when the called line is found busy. **13**

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J. Universal Pad Control: This test checks the operation of the PCA and PCB relays which are used for pad control in the junctor circuit.	14
 PHASE III CENTREX	
K. Listed Directory Number — LDN: The following features are checked: (1) Completion to an attendant. (2) Answer entry. (3) Supervision. (4) Release.	15
L. Transfer to Attendant: This test checks the ability of the junctor to recognize a transfer request and allow completion of a call to an attendant from a previously called station.	17
M. Attendant Start-In Call: The following features are checked: (1) Ability of the junctor to complete an LDN call to an attendant. (2) Transfer call to a station within the customer group. (3) Release destination and retransfer to a second station.	20
N. No Transfer Register Available: This test checks the ability of the junctor to maintain a transmission path when no transfer register is available.	24
O. Transfer Denied: This test checks the ability of the junctor to recognize and deny a transfer request from a customer (noncentrex) not allowed to initiate a transfer.	25
P. Station-to-Station Transfer: This test checks the ability of a centrex station to transfer an incoming call to another station within the customer group.	26
Q. Don't Answer Transfer: This test checks for automatic transfer to an attendant when an incoming call is not answered within a specific time.	27

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R. Called Party Disconnect First: This test checks the ability of the junctor to return to normal within 3 seconds when the called party disconnects and calling party remains on-hook for more than 2 seconds.	29
1.04 Test J requires actions and verifications at the master test frame (MTF) and the relay rack frame.	
1.05 Test N requires that all transfer registers be made busy.	
1.06 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.	
1.07 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 When the office is arranged for LAMA-C or ETS, the distributors and scanners associated with the marker and trunk used in the test call must be in service or in a <i>maintenance-busy</i> condition—not in an <i>out-of-service</i> condition. To change a scanner or distributor from an <i>out-of-service</i> to a <i>maintenance-busy</i> condition, use the procedure given in the following sections for the office arrangement.	
218-798-308—Taking LAMA-C Equipment Out-of-Service.	

218-799-701—Taking ETS Equipment Out-of-Service.

1.10 When the trunk under test is arranged for ETS, the first completed test call from the MTF will cause the TST bit to be set in the trunk register associated with the selected trunk, enabling trunk supervisory scanning to be repeated on the FT, CS, and S1 lamps at the MTF trunk test circuits. As long as the TST bit is set in the trunk register, supervision will continue to be repeated on the lamps, even on service calls. The TST bit will remain set in the trunk register until (1) a test call is made from the MTF to another trunk, or (2) the command **STOP:TRK TST** is entered at the maintenance TTY.

1.11 When CDT (calling data transmitter) billing system is provided in the office, this trunk may or may not handle billable calls. When it is arranged for billable calls, supervisory scan points will be assigned and supervision will be repeated from the scan points on test calls to the MTF by CS and S1 lamps.

1.12 When CDT is provided, there may be several configurations in the office—single controller, dual controller with the trunk assigned to one controller, or dual controller and the trunk is assigned to both controllers. When assigned to both controllers in a dual controller configuration, one test must be made to each controller to verify scan points for each controller.

2. APPARATUS

All Tests

2.01 Master test control circuit, SD-25800-01.

3. PREPARATION

STEP

ACTION

VERIFICATION

All Tests

Note: Refer to paragraphs 1.07 through 1.12.

- 1 At MTF—
Restore all keys and switches.
- 2 Momentarily operate RL key.
- 3 Select marker.

2.02 Trunk test circuit, SD-25918-01.

Tests A Through E, I, K

2.03 KS-3008 stopwatch or equivalent.

Test E

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

Test J

2.05 Connecting cord, 2 feet or 3 feet 6 inches long, equipped with two P-15A864 chucks (W1AL) as required (for connecting terminal strip terminals).

Tests K, L, M — If Test Attendant Trunk is Arranged for Console Operation

2.06 1B-type test console equipped with a D-75A-61 cord with a KS-16409, L19 connector unit.

2.07 53-type head telephone set or equivalent.

Tests K, L, M — If Test Attendant Trunk is Arranged for 608A Switchboard Operation

2.08 2500D TOUCH-TONE® telephone set or equivalent equipped with a 3W9A cord with 310 plug.

Test N

2.09 322A (make-busy) plugs as required.

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STEP	ACTION	VERIFICATION
4	Select MISC class of test.	
5	Select route advance as required.	
6	Select junctor under test.	
7	Select A_, B_, C_ digits as required for route served by junctor under test.	
8	Select class of service and rate treatment having access to junctor under test.	
9	Select trunk link frame.	
10	Select originating class of call and associated translator indication.	
11	Operate KY, TLK keys.	
12	Operate DL3/DL6 keys as required. (Refer to Table A.)	

Note: Examples are given below for the use of either the DL3 or DL6 (Delete 3 or 6 digit) keys. Suppose office code 394 is used to route to the selected junctor and the associated incoming register expects 7 digits. 394 plus local office code plus number for terminating test line (MTF) will be set up on A through K keys or switches, and the DL3 key operated. The incoming register will then receive from the sender only the local office code and the number of the MTF terminating test line. Suppose the junctor is selected by the thousands digit of the directory number 384-8XXX, and the incoming register expects only 4 digits. 384 plus 8XX plus number of MTF terminating test line will be set up on the A through K keys or switches and the DL6 key operated. The incoming register will then receive from the sender only the number of the MTF terminating test line. ♦If the LLP group is determined by the hundreds digit, in order to use the terminating test line, a test number must be cross-connected into the hundred series in the number group that the LLP group uses. Use the line location associated with the terminating test line, and the ringing combination for the silent level.♦

STEP	ACTION	VERIFICATION
All Tests Except E		
13a	If ETS provided— Operate PCS, PTS keys.	
14b	♦If trunk is to be tested for CDT— Operate CDTT key.	
15b	When trunk is assigned to CDT dual controllers, select controller— Operate CDC 0/1 key.	
16b	When a trouble record is to be taken from the CDT translator access (TA) circuit— Operate TREC key.	
17b	When the CDT controller operates with both shared and dedicated translator circuits and a particular translator circuit is to be used for the test— Operate TAD key to select dedicated TA circuit or operate TAS key to select shared TA circuit.	
	Note: When a TA circuit is not selected, the controller will select the next available TA circuit.♦	
All Tests Except J		
18	Operate FS, TS keys.	
Tests A, B, C, D, E, G, H, J, R		
19	Select D_ through K_ digits to route to POTS terminating test line. (Refer to Table A.)	
	Note: Local office code plus 4 digits assigned to POTS terminating test line. The number of digits required in the local office code may vary or may not be required, depending upon the incoming class assigned to the junctor circuit in the incoming register link.	
Tests K Through N, Q, R		
20	Operate CNTX key.	
Tests K, L, M, Q		
21c	If test attendant trunk is arranged for console operation—	

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STEP	ACTION	VERIFICATION
	At test console— Operate TST CNSL key.	
22c	Plug attached cord of test console in CNTX TST CONN T jack.	
23c	Plug head telephone set into operator telephone jack.	
24d	If phase III test attendant trunk is arranged for 608A switchboard operation— At MTF— Patch cord of TOUCH-TONE telephone set into ORT jack. (Check that handset is on hook.)	

Tests L, N, O, P, Q

25 At MTF—
Select D_ through K_ digits to route to centrex terminating test line 2. (Refer to Table A.)

Note: Local office code plus 4 digits assigned to centrex terminating test line 2. The number of digits required in the local office code may vary or not be required depending upon the incoming class assigned to the junctor circuit in the incoming register link.

4. METHOD

STEP	ACTION	VERIFICATION
A. Junctor Seizure and Release		
20	Momentarily operate ST key.	<p>◆If CDTT key is operated— S1 lamp lighted.◆ If ETS provided— FT, S1 lamps lighted. If LAMA-C, ◆CDT,◆ or ETS <i>not</i> provided— IE, RN_, T_, and U_ lamps lighted. If LAMA-C provided— S1 lamp lighted. AS, TS lamps lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If answer and disconnect supervision is provided— PK lamp lighted.</p>

STEP	ACTION	VERIFICATION
21	Operate ANS key; <i>start timing</i> .	♦If CDTT key is operated— CS lamp lighted.♦ R- lamp extinguished. Ringing tone silenced. High tone heard. If LAMA-C, ♦CDT,♦ or ETS <i>not</i> provided— In 2 to 6 seconds— AE lamp lighted. If LAMA-C or ETS provided— CS lamp lighted. If answer and disconnect supervision is provided— PK lamp extinguished. After 38 seconds— AS, TS lamps remain lighted.
22	Restore TLK, ANS keys.	♦If CDTT key is operated— S1, CS lamps extinguished.♦ AS, TS lamps extinguished. High tone silenced. If disconnect entry is provided, and LAMA-C, ♦CDT,♦ or ETS <i>not</i> provided— DE lamp lighted. If LAMA-C provided— CS, S1 lamps extinguished. If ETS provided— FT, CS, S1 lamps extinguished.
23	Momentarily operate RL key.	All lamps extinguished.
24	Restore all keys and switches not required in next test.	

B. Supervision — Originating End Disconnect

20	Momentarily operate ST key.	♦If CDTT key is operated— S1 lamp lighted.♦ If LAMA-C provided— S1 lamp lighted. If ETS provided— FT, S1 lamps lighted. If LAMA-C, ♦CDT,♦ or ETS <i>not</i> provided— IE, RN_, T_, and U_ lamps lighted. AS, TS lamps lighted. R- lamp flashes. Ringing tone heard in unison with R_ lamp flashes. If answer and disconnect supervision is provided— PK lamp lighted.
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STEP	ACTION	VERIFICATION
21	At MTF telephone circuit— Dial digit 9.	At MTF— AS, TS lamps remain lighted.
22	Operate ANS key; <i>start timing</i> .	<p>◆If CDTT key is operated— CS lamp lighted.◆ R- lamp extinguished. Ringing tone silenced. High tone heard. If answer and disconnect supervision is provided— PK lamp extinguished. If LAMA-C, ◆CDT,◆ or ETS <i>not</i> provided— In 2 to 6 seconds— AE lamp lighted. If ETS or LAMA-C provided— CS lamp lighted.</p>
23	In 2 minutes— Restore TLK key; <i>start timing</i> .	<p>◆If CDTT key is operated— S1, CS lamps extinguished.◆ If ETS provided— FT, S1 lamps extinguished. If LAMA-C provided— S1 lamp extinguished. AS lamp extinguished. High tone silenced. If disconnect entry is provided and LAMA-C, ◆CDT,◆ or ETS <i>not</i> provided— DE lamp lighted. In 13 to 32 seconds— TS lamp extinguished. If ETS or LAMA-C provided— CS lamp extinguished.</p>
24	Restore ANS key.	
25	Momentarily operate RL key.	All lamps extinguished.
26	Restore all keys and switches not required in next test.	
C. Supervision — Terminating End Disconnect		
20	Momentarily operate ST key.	<p>◆If CDTT key is operated— S1 lamp lighted.◆ If LAMA-C provided— S1 lamp lighted. If ETS provided— FT, S1 lamps lighted. If LAMA-C, ◆CDT,◆ or ETS <i>not</i> provided— IE, RN_, T_, and U_ lamps lighted. AS, TS, lamps lighted. R- lamp flashes.</p>

STEP	ACTION	VERIFICATION
		<p>Ringling tone heard in unison with R_ lamp flashes.</p> <p>If answer and disconnect supervision is provided—</p> <p>PK lamp lighted.</p>
21	Operate ANS key; <i>start timing</i> .	<p>◆If CDTT key is operated—</p> <p>CS lamp lighted.◆</p> <p>R- lamp extinguished.</p> <p>Ringling tone silenced.</p> <p>High tone heard.</p> <p>If LAMA-C, ◆CDT,◆ or ETS <i>not</i> provided—</p> <p>In 2 to 6 seconds—</p> <p>AE lamp lighted.</p> <p>If answer and disconnect supervision is provided—</p> <p>PK lamp extinguished.</p> <p>If LAMA-C or ETS provided—</p> <p>CS lamp lighted.</p>
22	In 2 minutes— Restore ANS key; <i>start timing</i> .	<p>If answer and disconnect supervision is provided—</p> <p>PK lamp lighted.</p> <p>High tone silenced.</p> <p>In 13 to 32 seconds—</p> <p>AS, TS lamps extinguishd.</p> <p>If disconnect entry is provided, and LAMA-C, ◆CDT,◆ or ETS is <i>not</i> provided—</p> <p>DE lamp lighted.</p> <p>If answer and disconnect supervision is provided—</p> <p>PK lamp extinguished.</p> <p>If ETS provided—</p> <p>FT, CS, S1 lamps extinguished.</p> <p>If LAMA-C provided—</p> <p>CS, S1 lamps extinguished.</p> <p>◆If CDTT key is operated—</p> <p>S1, CS lamps extinguished.◆</p>
23	Momentarily operate RL key.	All lamps extinguished.
24	Restore all keys and switches not required in next test.	
D. Noncharge Supervision		
20	Momentarily operate ST key.	<p>◆If CDTT key is operated—</p> <p>S1 lamp lighted.◆</p> <p>If LAMA-C provided—</p> <p>S1 lamp lighted.</p> <p>If ETS provided—</p> <p>FT, S1 lamps lighted.</p>

STEP	ACTION	VERIFICATION
		<p>If LAMA-C, CDT, or ETS <i>not</i> provided— IE, RN, T, and U lamps lighted. AS, TS lamps lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If answer and disconnect supervision is provided— PK lamp lighted.</p>
21	Operate ANS key for 1-1/2 to 2 seconds; <i>start timing.</i>	<p>If ETS or LAMA-C provided or CDTT key is operated— CS lamp lighted while ANS key is operated. High tone heard while ANS key is operated. AE lamp <i>not</i> lighted. If answer and disconnect supervision is provided— PK lamp extinguished.</p>
22	In 7 to 9 seconds— Restore TLK key.	<p>If CDTT key is operated— S1 lamp extinguished. If LAMA-C provided— S1 lamp extinguished. If ETS provided— FT, S1 lamps extinguished. AS, TS lamps extinguished. If disconnect entry is provided— DE lamp <i>not</i> lighted.</p>
23	Momentarily operate RL key.	All lamps extinguished.
24	Restore all keys and switches not required in next test.	
E. Cancel Disconnect Entry (LAMA-C, CDT, or ETS Not Provided)		
20	Momentarily operate ST key.	<p>AS, TS, T_{2/5}, U_{2/5}, IE, RN lamps lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If answer and disconnect supervision is provided— PK lamp lighted.</p>
21	Operate ANS key.	<p>R- lamp extinguished. Ringing tone silenced. High tone heard. In 2 to 6 seconds— AE lamp lighted. At relay rack frame— MA relay associated with circuit under test</p>

STEP	ACTION	VERIFICATION
		operated. If answer and disconnect supervision is provided— At MTF— PK lamp extinguished.
22	At relay rack frame— Block operated S2 relay associated with circuit under test.	
23	At MTF— In 2 minutes— Restore ANS key; <i>start timing</i> .	High tone silenced. In 13 to 33 seconds— AS, TS lamps extinguished. If disconnect entry if provided— DE lamp <i>not</i> lighted. At relay rack frame— S1 relay associated with circuit under test released. In 2 to 5 seconds after release of S1 relay— MA relay associated with circuit under test released.
24	Remove blocking tool from S2 relay.	
25	At MTF— Momentarily operate RL key.	All lamps extinguished.
26	Restore all keys and switches not required in next test.	

F. Call to Free Line

- 19 Select D_ through K_ digits to route to POTS terminating test line for free call. (Refer to Table A.)

Note: Local office code plus 4 digits assigned to POTS free number terminating test line. The number of digits required in the local office code may vary or may not be required, depending upon the incoming class assigned to the junctor circuit in the incoming register link.

- 20 Momentarily operate ST key.

◆If CDTT key is operated—
S1 lamp lighted.◆
If LAMA-C provided—
S1 lamp lighted.
If ETS provided—
FT, S1 lamps lighted.
AS, TS lamps lighted.
IE lamp *not* lighted.

STEP	ACTION	VERIFICATION
		R- lamp flashes. Ringing tone heard in unison with flashing R- lamp. If answer and disconnect supervision is provided— PK lamp lighted.
21	Operate ANS key; <i>start timing</i> .	◆If CDTT key is operated— CS lamp lighted.◆ If ETS or LAMA-C provided— CS lamp lighted. R- lamp extinguished. Ringing tone silenced. If LAMA-C or ETS <i>not</i> provided— In 2 to 6 seconds— AE lamp <i>not</i> lighted. If answer and disconnect supervision is provided— PK lamp extinguished.
22	Restore ANS, TLK keys.	◆If CDTT key is operated— S1, CS lamps extinguished.◆ If LAMA-C provided— CS, S1 lamps extinguished. If ETS provided— CS, FT, S1 lamps extinguished. High tone silenced. AS, TS lamps extinguished. If disconnect entry is provided— DE lamp <i>not</i> lighted.
23	Momentarily operate RL key.	All lamps extinguished.
24	Restore all keys and switches not required in next test.	
G. Junctor Busy		
20	At relay rack frame— Set MB switches to MB associated with all junctors of same route on same trunk link frame as junctor under test.	MB lamp lighted.
21	At MTF— Momentarily operate ST key.	TB lamp lighted. AS, TS, T _{2/5} , U _{2/5} , IE, RN ₁ lamps not lighted.
22	Momentarily operate RL key.	All lamps extinguished.
23	Restore FS, TS keys.	
24	Operate NTFS, NTTS keys.	

STEP	ACTION	VERIFICATION
25	Momentarily operate ST key.	<p>◆If CDTT key is operated— S1 lamp lighted.◆ If LAMA-C provided— S1 lamp lighted. If ETS provided— FT, S1 lamps lighted. AS, TS lamps lighted. If LAMA-C, ◆CDT,◆ or ETS <i>not</i> provided— IE, RN_, T_, and U_ lamps lighted.</p>
26	Momentarily operate RL key.	<p>All lamps extinguished. If ETS provided— FT lamp remains lighted.</p>
27	At relay rack frame— Set all MB switches to N.	<p>MB lamp extinguished. If ETS provided— FT lamp extinguished.</p>
28	At MTF— Restore all keys and switches not required in next test.	

H. Reorder

20	Operate ROT key.	
21	Momentarily operate ST key.	<p>◆If CDTT key is operated— S1 lamp lighted.◆ If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted. Overflow tone heard. AS lamp lighted.</p>
22	Momentarily operate RL key.	<p>Overflow tone silenced. All lamps extinguished.</p>
23	Restore all keys and switches not required in next test.	

I. Line Busy

19	Select D_ through K_ digits to route to POTS terminating test line for permanent busy test number. (Refer to Table A.)	
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Note: Local office code plus 4 digits assigned to office permanent busy test number. The number of digits required in the local office code may vary or may not be required depending

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STEP	ACTION	VERIFICATION
	upon the incoming class assigned to the junctor circuit in the incoming register link.	
20	Momentarily operate ST key.	Busy tone heard.
21	Momentarily operate RL key.	Busy tone silenced. All lamps extinguished.
22	Restore all keys and switches not required in next test.	
J. Universal Pad Control		
20	Operate NTFS, NTTS keys.	
21	At relay rack frame— Set MB switch associated with junctor under test to MB.	
22	Connect terminals 42 to 52 on terminal strip A associated with junctor circuit under test.	
23	Connect terminals 42, and 52 on terminal strip B associated with junctor circuit under test.	
24	At MTF— Momentarily operate ST key.	♦If CDTT key is operated— S1 lamp lighted.♦ If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted. AS, TS lamps lighted. At relay rack frame— PCA, PCB relays associated with junctor under test operated.
25	Remove connection from terminals 42, and 52 on terminal strips A and B.	PCA, PCB relays remain operated.
26	At MTF— Momentarily operate RL key.	If ETS provided— FT lamp remains lighted. All lamps extinguished. At relay rack frame— PCA, PCB relays released.
27	At MTF— Restore all keys and switches not required in next test.	
28	At relay rack frame— Set MB switch to normal.	If ETS provided— FT lamp extinguished.

STEP	ACTION	VERIFICATION
PHASE III CENTREX		
K. Listed Directory Number — LDN		
25	Select D_ through K_ digits for routing to test attendant trunks.	
	Note: Local office code plus 4 digits assigned to test attendant trunk. The number of digits required in the local office code may vary or may not be required depending upon the incoming class assigned to the junctor circuit in the incoming register link.	
26	Operate CDN key.	CDN, TRF lamps lighted.
27	Momentarily operate ST key.	<p>◆If CDTT key is operated— S1 lamp lighted.◆ If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted. AS lamp lighted. Ringing tone heard. If test attendant trunk is arranged for console operation— At test console— CW, TST lamps lighted. If test attendant trunk is arranged for 608A switchboard operation— At MTF— Within 4 seconds— CTX lamp flashes at 60 ipm. If LAMA-C, ◆CDT,◆ or ETS not provided— IE, RN_, T_2/5, U_2/5 lamps lighted identifying trunk.</p>
28c	If test attendant trunk is arranged for console operation— At test console— Momentarily operate RLS key.	RLS lamp lighted. TST lamp extinguished.
29c	Momentarily operate TST key.	TST lamp lighted. RLS lamp extinguished. Source lamp flashes at 60 ipm. Audible signal sounds.
30c	Momentarily operate Talk key.	Talk lamp lighted. Source lamp lighted steadily. Audible signal silenced. CW lamp extinguished. At MTF—

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STEP	ACTION	VERIFICATION
		Ringing tone silenced. Talking path established to test console. If LAMA-C, ◆CDT,◆ or ETS <i>not</i> provided— In 2 to 5 seconds— AE lamp lighted. If LAMA-C or ETS provided— CS lamp lighted. ◆If CDTT key is operated— CS lamp lighted.◆
31c	At test console— Momentarily operate HOLD key.	Talk lamp flashes at 30 ipm. No talking path to MTF.
32c	Momentarily operate Talk key.	Talk lamp lighted steadily. Talking path established to MTF.
33c	At MTF— Restore TLK key.	AS lamp extinguished. No talking path to test console. If disconnect entry is provided, and LAMA-C, ◆CDT,◆ or ETS not provided— Within 6 seconds— DE lamp lighted. If LAMA-C provided— CS, S1 lamps extinguished. If ETS provided— FT, CS, S1 lamps extinguished. ◆If CDTT key is operated— S1, CS lamps extinguished.◆
34c	At test console— Within 13 seconds— Momentarily operate RLS key.	All lamps extinguished.
35c	At MTF— Momentarily operate RL key.	All lamps extinguished.
36d	If Phase III test attendant trunk is arranged for 608A switchboard operation— Operate CANS key.	CTX lamp extinguished. Ringing tone silenced.
37d	At telephone in ORT jack— Remove handset.	Talking path established to telephone on MTF.
38d	Replace handset.	
39d	Restore TLK key.	AS lamp extinguished. If LAMA-C provided— S1 lamp extinguished. If ETS provided— FT, S1 lamps extinguished. ◆If CDTT key is operated— S1 lamp extinguished.◆

STEP	ACTION	VERIFICATION
40d	Within 13 seconds— Restore CANS key.	
41d	Momentarily operate RL key.	All lamps extinguished.
42	Restore all keys and switches not required in next test.	
43e	If no further tests are to be performed— Remove telephone set from ORT jack.	
L. Transfer to Attendant		
26	Operate CTX4 key.	
27	Momentarily operate ST key.	◆If CDTT key is operated— S1 lamp lighted.◆ If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted. AS, TS2 lamps lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
28	Operate ANS key.	◆If CDTT key is operated— CS lamp lighted.◆ R- lamp extinguished. Ringing tone silenced. High tone heard. If ETS or LAMA-C provided— CS lamp lighted.
29	Operate CTX2 key.	High tone silenced. If ETS or LAMA-C provided— CS lamp extinguished. ◆If CDTT key is operated— CS lamp extinguished.◆
30	After 5 seconds— Momentarily restore TLK key.	TS2 lamp may flash. Ringing tone heard. If test attendant trunk is arranged for console operation— At test console— CW, TST lamps lighted. If test attendant trunk is arranged for 608A switchboard operation— At MTF— Within 4 seconds— CTX lamp flashes at 120 ipm.

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STEP	ACTION	VERIFICATION
31c	If test attendant trunk is arranged for console operation— At test console— Momentarily operate RLS key.	RLS lamp lighted. TST lamp extinguished.
32c	Momentarily operate TST key.	TST lamp lighted. RLS lamp extinguished. Audible signal sounds. Source lamp flashes at 120 ipm. Destination lamp lighted.
33c	Momentarily operate Talk key.	Talk lamp lighted. CW lamp extinguished. Source lamp lighted steadily. Audible signal silenced. At MTF— Ringing tone silenced. Talking path established to test console.
34c	Restore CTX2 key.	High tone heard. If ETS or LAMA-C provided— CS lamp lighted. ♦If CDTT key is operated— CS lamp lighted.♦
35c	Restore ANS key.	♦If CDTT key is operated— CS lamp extinguished.♦ If ETS or LAMA-C provided— CS lamp extinguished. High tone silenced. After 2 seconds— TS2 lamp extinguished.
36c	At test console— Momentarily operate RLS DEST key.	Destination lamp extinguished. Talking path established to MTF.
37c	At MTF— Restore TLK key.	♦If CDTT key is operated— S1 lamp extinguished.♦ If LAMA-C provided— S1 lamp extinguished. If ETS provided— FT, S1 lamps extinguished. AS lamp extinguished.
38c	At test console— Momentarily operate RLS key.	All lamps extinguished.
39c	At MTF— Momentarily operate RL key.	All lamps extinguished.
40d	If Phase III test attendant trunk is arranged for 608A switchboard operation—	CTX lamp extinguished. Ringing tone silenced.

STEP	ACTION	VERIFICATION
	At MTF— Operate CANS key.	
41d	At telephone in ORT jack— Remove handset.	Talking path established to telephone in ORT jack.
42d	Restore CTX2 key.	High tone heard at MTF and TOUCH-TONE telephone. If ETS or LAMA-C provided— CS lamp lighted. ◆If CDTT key is operated— CS lamp lighted.◆
43d	Restore ANS key.	After 2 seconds— TS2 lamp extinguished. High tone silenced. If ETS or LAMA-C provided— CS lamp extinguished. ◆If CDTT key is operated— CS lamp extinguished.◆
41d	At telephone in ORT jack— Replace handset.	
45d	Momentarily operate RD key.	CTX lamp momentarily lighted.
46d	At telephone in ORT jack— Remove handset.	Talking path established to MTF.
47d	At MTF— Restore TLK key.	◆If CDTT key is operated— S1 lamp extinguished.◆ If LAMA-C provided— S1 lamp extinguished. If ETS provided— FT, S1 lamps extinguished. AS lamp extinguished. No talking path to MTF.
48d	Restore CANS key.	
49d	Momentarily operate RL key.	All lamps extinguished.
50d	At telephone in ORT jack— Replace handset.	
51	At MTF— Restore all keys and switches not required in next test.	
52e	If no further tests are to be performed— Remove telephone set from ORT jack.	

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STEP	ACTION	VERIFICATION
M. Attendant Start-In Call		
25	Select D_ through K_ digits for routing to test attendant trunk.	
	Note: Local office code plus 4 digits assigned to test attendant trunk. The number of digits required in the local office code may vary or may not be required depending upon the incoming class assigned to the junctor circuit in the incoming register link.	
26	Operate CDN key.	
27	Momentarily operate ST key.	<p>◆If CDTT key is operated— S1 lamp lighted.◆ If LAMA-C provided— S1 lamp lighted. If ETS provided— FT, S1 lamps lighted. AS, T lamps lighted. Ringing tone heard. If test attendant trunk is arranged for console operation— At test console— CW, TST lamps lighted. If test attendant trunk is arranged for 608A switchboard operation— At MTF— Within 4 seconds— CTX lamp flashes at 60 ipm.</p>
28c	<p>If test attendant trunk is arranged for console operation— At test console— Momentarily operate RLS key.</p>	<p>RLS lamp lighted. TST lamp extinguished.</p>
29c	Momentarily operate TST key.	<p>TST lamp lighted. RLS lamp extinguished. Source lamp flashes at 60 ipm. Audible signal sounds.</p>
30c	Momentarily operate Talk key.	<p>Talk lamp lighted. Source lamp lighted steadily. Audible signal silenced. CW lamp extinguished. At MTF— Ringing tone silenced. Talking path established to test console.</p>

STEP	ACTION	VERIFICATION
31c	At test console— After 5 seconds— Momentarily operate STI key.	Dial tone heard. If RDY lamp is provided— RDY lamp lighted.
32c	Dial 4-digit number assigned to centrex terminating test line 1A. (Consult office records.)	
33c	Momentarily operate END key.	If RDY lamp is provided— RDY lamp extinguished. Destination lamp flashes at 30 ipm. Ringing tone heard. At MTF— TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
34c	Operate ANS key.	◆If CDTT key is operated— CS lamp lighted.◆ If ETS of LAMA-C provided— CS lamp lighted. R- lamp extinguished. Ringing tone silenced. High tone heard. At test console— Destination lamp lighted steadily. Ringing tone silenced. High tone heard.
35c	Momentarily operate RLS DEST key.	Destination lamp extinguished. High tone silenced. At MTF— TS lamp extinguished. High tone silenced. If ETS or LAMA-C provided— CS lamp extinguished. ◆If CDTT key is operated— CS lamp extinguished.◆
36c	Restore ANS key.	
37c	At test console— Momentarily operate STI key.	Dial tone heard. If RDY lamp is provided— RDY lamp lighted.
38c	Dial 4-digit number assigned to centrex terminating test line 1A. (Consult office records.)	
39c	Momentarily operate END key.	If RDY lamp is provided— RDY lamp extinguished.

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STEP	ACTION	VERIFICATION
		Destination lamp flashes at 30 ipm. Ringing tone heard. At MTF— TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
40c	Operate ANS key.	R- lamp extinguished. Ringing tone silenced. High tone heard. At test console— Destination lamp lighted steadily. Ringing tone silenced. High tone heard. If ETS or LAMA-C provided— CS lamp lighted. ♦If CDTT key is operated— CS lamp lighted.♦
41c	Momentarily operate RLS key.	♦If CDTT key is operated— CS lamp extinguished.♦ If ETS or LAMA-C provided— CS lamp extinguished. High tone silenced. After 2 seconds— All lamps extinguished.
42c	At MTF— Restore TLK key.	♦If CDTT key is operated— S1 lamp extinguished.♦ If LAMA-C provided— S1 lamp extinguished. If ETS provided— FT, S1 lamps extinguished. AS lamp extinguished. In 13 to 19 seconds— TS lamp extinguished.
43d	If Phase III test attendant trunk is arranged for 608A switchboard operation— At MTF— Operate CANS key.	CTX lamp extinguished. Ringing tone silenced.
44d	After 5 seconds— Operate STI key.	If RDY lamp is provided— RDY lamp lighted.
45d	At telephone in ORT jack— Remove handset.	Dial tone heard.
46d	Dial 4-digit number assigned to centrex terminating test line 1A. (Consult office records.)	

STEP	ACTION	VERIFICATION
47d	Replace handset.	
48d	Restore STI key.	TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. CTX lamp flashes at 30 ipm. If RDY lamp is provided— RDY lamp extinguished.
49d	At telephone in ORT jack— Remove handset.	Ringing tone heard.
50d	Operate ANS key.	◆If CDTT key is operated— CS lamp lighted.◆ If LAMA-C or ETS provided— CS lamp lighted. Within 2 seconds— CTX lamp lighted steadily. R- lamp extinguished. High tone heard at both telephones.
51d	Momentarily operate RD key.	◆If CDTT key is operated— CS lamp extinguished.◆ If LAMA-C or ETS provided— CS lamp extinguished. TS, CTX lamps extinguished.
52d	At telephone in ORT jack— Replace handset.	High tone silenced.
53d	Restore ANS key.	
54d	Operate STI key.	If RDY lamp is provided— RDY lamp lighted.
55d	At telephone in ORT jack— Remove handset.	Dial tone heard.
56d	Dial 4-digit number assigned to centrex terminating test line 1A. (Consult office records.)	
57d	At MTF— Restore STI key.	TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. CTX lamp flashes at 30 ipm. If RDY lamp is provided— RDY lamp extinguished.

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STEP	ACTION	VERIFICATION
58d	Operate ANS key.	♦If CDTT key is operated— CS lamp lighted.♦ If ETS or LAMA-C provided— CS lamp lighted. Within 2 seconds— CTX lamp lighted steadily. Ringing tone silenced. High tone heard.
59d	Restore CANS key.	At telephone in ORT jack— High tone silenced. At MTF— If ETS or LAMA-C provided— CS lamp extinguished. ♦If CDTT key is operated— CS lamp extinguished.♦ CTX lamp extinguished.
60d	At telephone in ORT jack— Replace handset.	
61d	At MTF— Operate CTX1 key.	High tone silenced.
62d	Restore ANS key.	
63d	Operate CTX4 key.	
64d	After 3 seconds— Momentarily restore TLK key.	TS lamp may momentarily flash. Dial tone heard.
65d	Dial 4-digit number assigned to centrex terminating test line 2. (Consult office records.)	R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. TS2 lamp lighted.
66d	Restore CTX1 key.	Ringing tone silenced.
67d	Momentarily operate RL key.	All lamps extinguished.
68	Restore all keys and switches not required in next test.	
69e	If no further tests are to be performed— Remove telephone set from ORT jack.	
N. No Transfer Register Available		
26	Momentarily operate ST key.	♦If CDTT key is operated— S1 lamp lighted.♦ If LAMA-C provided— S1 lamp lighted.

STEP	ACTION	VERIFICATION
		If ETS provided— FT, S1 lamps lighted. AS, TS lamps lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
27	Operate ANS key.	◆If CDTT key is operated— CS lamp lighted.◆ If ETS or LAMA-C provided— CS lamp lighted. R- lamp extinguished. Ringing tone silenced. High tone heard.
28	Make busy all transfer registers at TFRMB_ jacks.	
29	Restore ANS key for 1 second.	If ETS or LAMA-C provided ◆or CDTT key operated—◆ CS lamp extinguished while ANS key restored. High tone silenced.
30	Operate CTX1 key.	High tone <i>not</i> heard.
31	Restore CTX1 key.	
32	Momentarily restore ANS key.	High tone heard.
33	Restore TLK, ANS keys.	◆If CDTT key is operated— S1, CS lamps extinguished.◆ If LAMA-C provided— CS, S1 lamps extinguished. If ETS provided— FT, CS, S1 lamps extinguished. AS, TS lamps extinguished.
34	Momentarily operate RL key.	All lamps extinguished.
35	Remove all plugs from TFRMB_ jacks.	
36	Restore all keys and switches not required in next test.	
O. Transfer Denied		
26	Momentarily operate ST key.	◆If CDTT key is operated— S1 lamp lighed.◆ If LAMA-C provided— S1 lamp lighted. If ETS provided—

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STEP	ACTION	VERIFICATION
		FT, S1 lamps lighted. TS, AS lamps lighted.
27	Operate ANS key.	◆If CDTT key is operated— CS lamp lighted.◆ If ETS or LAMA-C provided— CS lamp lighted. High tone heard.
28	Restore ANS key for 1 second.	If ETS or LAMA-C provided ◆or CDTT key operated—◆ CS lamp extinguished while ANS key is restored. High tone silenced while ANS key is restored.
29	Restore ANS, TLK keys.	◆If CDTT key is operated— S1, CS lamps extinguished.◆ If LAMA-C provided— CS, S1 lamps extinguished. If ETS provided— FT, CS, S1 lamps extinguished. AS, TS lamps extinguished. High tone silenced.
30	Momentarily operate RL key.	All lamps extinguished.
31	Restore all keys and switches not required in next test.	

P. Station-to-Station Transfer

26	Momentarily operate ST key.	◆If CDTT key is operated— S1 lamp lighted.◆ If LAMA-C provided— S1 lamp lighted. If ETS provided— FT, S1 lamps lighted. AS, TS lamps lighted.
27	Operate ANS key.	◆If CDTT key is operated— CS lamp lighted.◆ If ETS or LAMA-C provided— CS lamp lighted. High tone heard.
28	Operate CTX1 key.	◆If CDTT key is operated— CS lamp extinguished.◆ If ETS or LAMA-C provided— CS lamp extinguished. High tone silenced.
29	Restore ANS key.	

STEP	ACTION	VERIFICATION
30	Operate CTX4 key.	
31	After 3 seconds— Momentarily restore TLK key.	TS lamp may momentarily flash. Dial tone heard.
32	Dial 4-digit number assigned to centrex terminating test line 2. (Consult office records.)	TS2 lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
33	Restore CTX1 key.	Ringing tone silenced.
34	Operate CTX1 key.	Ringing tone heard.
35	Operate ANS key.	R- lamp extinguished. Ringing tone silenced. high tone heard. If ETS or LAMA-C provided— CS lamp lighted. ◆If CDTT key is operated— CS lamp lighted.◆
36	Restore CTX1 key.	High tone silenced.
37	Momentarily restore ANS key.	High tone heard.
38	Operate CTX1 key.	High tone heard.
39	Restore TLK key.	High tone silenced. TS lamp extinguished.
40	Operate TLK key.	
41	Restore CTX1 key.	High tone heard.
42	Restore TLK, ANS keys.	◆If CDTT key is operated— S1, CS lamps extinguished.◆ If LAMA-C provided— CS, S1 lamps extinguished. If ETS provided— FT, CS, S1 lamps extinguished. AS, TS2 lamps extinguished. High tone silenced.
43	Momentarily operate RL key.	All lamps extinguished.
44	Restore all keys and switches not required in next test.	
Q. Don't Answer Transfer		
26	Operate CTX4 key.	

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STEP	ACTION	VERIFICATION
27	Set TERT switch to DAT.	
28	Momentarily operate ST key.	<p>◆If CDTT key is operated— S1 lamp lighted.◆ If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted. If LAMA-C, ◆CDT,◆ or ETS <i>not</i> provided— IE, RN, T, U lamps lighted. AS, TS2 lamps lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.</p> <p>Note: Determine from office records ringing interval for which office is arranged (15, 30, 45, or 60 seconds).</p> <p>If interrupter has been seized just prior to test call seizure— Timing interval could be as much as twice the above listed timing intervals. When ringing interval is exceeded— TS2, R- lamps extinguished.</p> <p>If test attendant trunk is arranged for console operation— At test console— CW, TST lamps lighted.</p> <p>If test attendant trunk is arranged for 6C3A switchboard operation— At MTF— Within 4 seconds— CTX lamp flashes at 60 ipm.</p>
29c	If test attendant trunk is arranged for console operation— At test console— Momentarily operate RLS key.	
30c	Operate TST key for approximately 1 second.	RLS lamp extinguished. Source lamp flashes at 60 ipm. Audible signal sounds.
31c	Momentarily operate Talk key.	Talk lamp lighted. TST, CW lamps extinguished. Source lamp lighted steadily. Audible signal silenced. At MTF— Ringing tone silenced. Talking path established to test console.

STEP	ACTION	VERIFICATION
32c	Restore TLK key.	◆If CDTT key is operated— S1 lamp extinguished.◆ If LAMA-C provided— S1 lamp extinguished If ETS provided— FT, S1 lamps extinguished. AS lamp extinguished. No talking path to test console.
33c	At test console— Within 13 seconds— Momentarily operate RLS key.	All lamps extinguished.
34c	At MTF— Momentarily operate RL key.	All lamps extinguished.
35d	If Phase III test attendant trunk is arranged for 608A switchboard operation— Operate CANS key.	CTX lamp extinguished. R- lamp extinguished. Ringing tone silenced.
36d	At telephone in ORT jack— Remove handset.	Talking path established to MTF telephone.
37d	Replace handset.	
38d	Restore CANS, TLK keys.	◆If CDTT key is operated— S1 lamp extinguished.◆ If LAMA-C provided— S1 lamp extinguished. If ETS provided— FT, S1 lamps extinguished. AS lamp extinguished.
39d	Momentarily operate RL key.	All lamps extinguished.
40	Restore all keys and switches not required in next test.	
41e	If no further tests are to be performed— Remove telephone set from ORT jack.	
R. Called Party Disconnect First		
21	Momentarily operate ST key.	◆If CDTT key is operated— S1 lamp lighted.◆ If LAMA-C provided— S1 lamp lighted. If ETS provided— FT, S1 lamps lighted. AS, TS lamps lighted R- lamp flashes.

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STEP	ACTION	VERIFICATION
22	Operate ANS key; <i>start timing</i> .	Ringing tone heard in unison with R- lamp flashes. R- lamp extinguished. Ringing tone silenced. High tone heard. If ETS or LAMA-C provided— CS lamp lighted. ♦If CDTT key is operated— CS lamp lighted.♦
23	After 5 seconds— Restore ANS key; <i>start timing</i> .	♦If CDTT key is operated— CS lamp extinguished.♦ If ETS or LAMA-C provided— CS lamp extinguished. High tone silenced In approximately 2 seconds— TS lamp extinguished.
24	Restore TLK key.	AS lamp extinguished. If LAMA-C provided— S1 lamp extinguished. If ETS provided— FT, S1 lamps extinguished. ♦If CDTT key is operated— S1 lamp extinguished.♦
25	Momentarily operate RL key.	All lamps extinguished.
26	Restore all keys and switches.	

TABLE A

DELETE INFORMATION	SET UP DIGITS AS FOLLOWS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
DL3* KEY	3 DIGIT LLP CODE			TERMINATING TEST LINE NUMBER				← 4 DIGIT INC					
				INC OFF CODE	TERMINATING TEST LINE NUMBER			← 5 DIGIT INC					
				INCOMING OFFICE CODE			TERMINATING TEST LINE NUMBER				← 7 DIGIT INC		
DL6† KEY	OFFICE CODE			TH DIGIT LLP CODE	FILLER DIGITS	TERMINATING TEST LINE NUMBER				← 4 DIGIT INC			
						INC OFF CODE	TERMINATING TEST LINE NUMBER			← 5 DIGIT INC			
						INCOMING OFFICE CODE			TERMINATING TEST LINE NUMBER				
NO DL‡ KEY	OFFICE CODE			CROSS CONNECTED TERMINATING TEST LINE NUMBER				← 7 DIGIT INC					

* WHEN LLP CODE IS UNIQUE IN OFFICE (SPECIAL 3 DIGIT CODE)

† WHEN LLP CODE IS DETERMINED BY THOUSAND DIGIT

‡ WHEN LLP CODE IS DETERMINED BU HUNDREDS DIGIT, IN ORDER TO USE THE TERMINATING TEST LINE, A TEST NUMBER MUST BE CROSS CONNECTED INTO THE HUNDREDS SERIES IN THE NUMBER GROUP THAT LLP GROUP USES. USE THE LINE LOCATION ASSOCIATED WITH THE TERMINATING TEST LINE, AND THE RINGING COMBINATION FOR THE SILENT LEVEL.

