INCOMING TRUNK CIRCUIT
NONCENTREX
TESTS USING MASTER TEST FRAME (MTF)
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.001 This addendum supplements Section 218-251-501, Issue 11. Place this pink sheet ahead of Page 1 of the section.

1.002 This addendum is issued to revise Test I to correct the action statements in Steps 7, 10, and 14.

2. CHANGES TO SECTION

2.001 On page 15, Step 7 revise the action statement to read:

Insulate contact 6B of R relay.

2.002 On page 15, Step 10 revise the action statement to read:

DIAL any digit; operate LS key.

2.003 On page 16, Step 14 revise the action statement to read:

Remove insulator from 6B of R relay.

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1. GENERAL

1.01 This section describes methods for testing non centrex features of nonwire-spring-relay and wire-spring-relay type incoming trunks. For centrex tests, use BSP Section 218-251-502.

1.02 The reasons for reissuing this section are listed below. Since this reissue is a general revision, no revision arrows have been used to denote significant changes. This reissue affects Equipment Test Lists.

(a) The section has been divided into two separate sections to segregate tests of centrex features from regular tests covered in this section.

(b) The section title and paragraph 1.01 have been changed to reflect the above information.

(c) The majority of the tests have been relettered to maintain alphabetical continuity, minor changes have been made in test contents.

(d) Paragraph 1.09 and 1.10 have been added, and the effect of 1.09 has been applied throughout the section.

1.03 The tests covered are:

A. Trunk Seizure: The following features are tested: (1) Seizure of trunk. (2) Continuity and polarity of tip and ring leads of originating end of trunk. (3) Continuity and polarity of tip lead between incoming trunk and incoming register. (4) Nonoperate test of A relay.

B. Ringing—Local Completion: 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.

C. Pretrip and Trip—Local Completion: This test checks the operation of the trip relay.

D. Supervision—Originating and Terminating Ends Disconnect: The following features are tested: (1) Reverse battery supervision to originating office on a charge call. (2) Release of trunk on simultaneous disconnect.

E. Supervision—Terminating End Disconnect: The following features are tested for step-by-step trunks: (1) Reverse battery supervision to originating office on a charge call. (2) Timed release of trunk. (3) Permanent signal to connected step-by-step office. The following features are tested for other than step-by-step trunks: (1) Reverse battery supervision to originating office on a charge call. (2) Trunk held under control of originating party.

F. Supervision—Originating End Disconnect—Local Completion: The following features are tested: (1)
Reversing battery supervision to originating office on a charge call. (2) Timed release of trunk in 13 to 32 seconds. (3) Verification of 10-ohm ground on the terminating sleeve on a service call basis.

**G. Line-Busy—Local Completion:**
This test checks that line-busy tone (and flash if provided) is connected to the originating line when the terminating line is found busy.

**H. Overflow—Local Completion:**
This test checks that overflow tone (and flash if provided) is connected to the originating line when the marker is unable to establish a connection.

**I. Overflow Bylink Path Failure:**
This test checks that calls from SXS offices that are dialed before the bylink path is set will return overflow.

**J. Free Call—Local Completion:**
This test checks the polarity of tip and ring leads on originating end of trunk for a noncharge condition on a free call.

**INCOMING TRUNKS—CONTROLLED RINGING**

**K. Call to Ringing Test Line:**
The following features are tested: (1) Seizure of trunk and incoming register. (2) Application of ringing. (3) Pretrip and trip. (4) Supervision.

**L. Ringing:**
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.

**M. Rering:**
This test checks the ability of trunks to rering called station when receiver is on-hook or when off-hook.

**N. Coin Control:**
The following features are tested: (1) Collection and return of coin. (2) Test for presence of coin.

**O. Overflow:**
This test checks the ability of trunk to return overflow flashes when marker is unable to establish a connection.

**P. Call to Busy Line:**
This test checks the ability of trunk to return busy tone and/or busy flashes when terminating line is busy.

**Q. Call to Busy Line—No Test:**
This test checks the ability of trunk to connect to a busy line by using the no-test connector.

1.04 Tests K through Q require action and verification at the distant office switchboard.

1.05 Table A is included for recording local office information that affects the use of the lettered steps in the test procedures.

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, the steps designated by that letter should be omitted.

1.07 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 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 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.

1.10 On Test A—If non operate test of A relay is desired—two craftspeople will be required for verification.

2. APPARATUS

Test A

2.01 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and two KS-6278 connecting clips (for making test connections to terminal strip terminals).

Tests A Through J

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

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

Tests A Through N

2.04 Trunk test circuit, SD-25918-01.

Tests D, E, F

2.05 KS-3008 stopwatch or equivalent.

Test I

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

3. PREPARATION (Cont)

Note: Refer to paragraph 1.07 and 1.08.

Tests A Through N

1 At MTF—
  Restore all keys and switches.

3. PREPARATION

Tests A Through J

3.01 Obtain information regarding incoming trunks from office records and trunk circuit SD drawings. In Table A, record the originating office code, directing digit number, and local and tandem office codes associated with each incoming trunk. Also in Table A, record whether or not optional wiring is provided in each trunk by placing a check mark in the YES or NO column in Table A, record the BL lead appearance.

Note: Refer to Table A when performing tests to determine if an action covered by a lettered step is required.

Tests H, O

3.02 Obtain the permanent overflow test number from office records.

Test J

3.03 Obtain the free terminating test line number from office records.

Test P

3.04 Obtain the permanently busy number from office records.

Tests K Through Q

3.05 Obtain the ringing test line numbers from office records.

VERIFICATION

Note: Refer to paragraph 1.07 and 1.08.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
</tbody>
</table>

**Tests A Through J**

3. Select ITNP class of test.

4. Have trunk made busy at originating office.

5. At relay rack frame—
   Check that A relay of trunk is not operated, then patch T jack on trunk unit to ITT jack on relay rack frame.

6a. If directing digit or digits are required—
   At MTF—
   Select digits as required for incoming class of trunk under test.

**Tests A Through F, K Through N**

7. Operate TTL key.

8. Select ringing combination 1.

**Tests A, D, E**

9b. If trunk is arranged for tandem completion—
   Select digits as required for tandem outgoing office code.

10b. Select TAN subclass of test.

**Tests K Through N**

11. At MTF—
    Operate TR, TSW keys.

12. Establish a separate talking connection to distant switchboard and request switchboard attendant to check that trunk to be tested is idle.
4. METHOD

INCOMING TRUNKS—AUTOMATIC START OF RINGING

A. Trunk Seizure

Trunks From Step-by-Step Offices—Local and Tandem Completion

11 Operate TLK, LS keys.

Note: Refer to paragraph 1.10.

12c If nonoperate test of A relay is desired—Operate BLA, LLP keys.

13c Momentarily operate ST key.

14c At MTF—Momentarily operate RL key.

15c Restore BLA, LLP keys.

16 Operate SXS, REC keys.

17 Momentarily operate ST key.

18 Operate ANS key; **start timing.**
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<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Restore TLK, SXS, ANS, REC keys.</td>
<td>OGT-CS lamp extinguished. Steady high tone silenced.</td>
</tr>
<tr>
<td>20</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
</tbody>
</table>

**Trunks—Except Revertive Pulsing—From Other Than Step-by-Step Offices—No Ground Shunt on A Relay—Local and Tandem Completion**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>21d</td>
<td>If trunk is arranged for link reseizure delay— At relay rack frame— Ground BL lead on terminal strip associated with trunk in accordance with Table A.</td>
<td>At relay rack frame— At trunk circuit under test— A relay does not operate.</td>
</tr>
<tr>
<td>22</td>
<td>At MTF— Operate HS, LLP, TLK keys.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>23</td>
<td>Operate SLP key.</td>
<td></td>
</tr>
<tr>
<td>24c</td>
<td>If nonoperate test of A relay is desired— Operate BLA key.</td>
<td></td>
</tr>
<tr>
<td>25c</td>
<td>Momentarily operate ST key.</td>
<td></td>
</tr>
<tr>
<td>26c</td>
<td>Momentarily operate RL key.</td>
<td></td>
</tr>
<tr>
<td>27c</td>
<td>Restore BLA key.</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Operate REC key.</td>
<td></td>
</tr>
<tr>
<td>29e</td>
<td>If trunk has resistance shunts on A relay— Restore LLP key.</td>
<td>Trouble record taken. FG_, TP_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C). OGT-CS lamp may be momentarily lighted. If trunk is not arranged for link reseizure delay— SLV lamp lighted.</td>
</tr>
<tr>
<td>30</td>
<td>Momentarily operate ST key.</td>
<td></td>
</tr>
<tr>
<td>31d</td>
<td>If trunk is arranged for link reseizure delay— Remove ground from BL lead.</td>
<td>SLV lamp lighted.</td>
</tr>
<tr>
<td>32</td>
<td>Restore HS, REC keys.</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Operate LS key.</td>
<td>SLV lamp extinguished. If trunk is arranged for local completion— TS lamp lighted.</td>
</tr>
</tbody>
</table>

Page 6
STEP | ACTION | VERIFICATION
--- | --- | ---
34b | If trunk is arranged for tandem completion—Operate ANS key. | R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If trunk is arranged for tandem completion—DIS1, LK2, MRL lamps lighted.
35 | Restore LS key. | OGT-CS lamp lighted. Steady high tone heard.
36e | If trunk has resistance shunts on A relay—Restore SLP key. | OGT-CS or TS lamp remains lighted. If trunk is arranged for local completion—TS lamp extinguished. Steady high tone silenced.
37 | Restore TLK, LLP keys. | OGT-CS lamp extinguished. Steady high tone silenced.
38b | If trunk is arranged for tandem completion—Restore ANS key. | All lamps extinguished.
39 | Momentarily operate RL key. | 

Trunks—Except Revertive Pulsing—From Other Than Step-by-Step Offices—Ground Shunt on A Relay—Local and Tandem Completion

40 | Operate HS, TLK, REC keys. | 

41f | If trunk, when normal, has ground on ring terminal of T test jack—Operate IRV key. | Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C). SLV lamp not lighted.

42 | Momentarily operate ST key. | 

43 | Hold GS key operated for about 3 seconds. | 

44f | If trunk, when normal, has ground on ring terminal of T test jack—Restore IRV key. | SLV lamp lighted. OGT-CS lamp may be momentarily lighted.

45 | Operate SLP key. | 

46 | Restore HS, REC keys. | SLV lamp extinguished. If trunk is arranged for local completion—TS lamp lighted.

47 | Operate LS key. | R- lamp flashes.
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<table>
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</thead>
<tbody>
<tr>
<td>48</td>
<td>Restore SLP key.</td>
<td>Ringing tone heard in unison with R- lamp flashes.</td>
</tr>
<tr>
<td>49g</td>
<td>If trunk has 1000-ohm loop compensation— Operate COMP key.</td>
<td>If trunk is arranged for tandem completion— DIS1, LK2, MRL lamps lighted. SLV lamp lighted.</td>
</tr>
<tr>
<td>50</td>
<td>Operate LLP key.</td>
<td>SLV lamp extinguished.</td>
</tr>
<tr>
<td>51b</td>
<td>If trunk is arranged for tandem completion— Operate ANS key.</td>
<td>OGT-CS lamp lighted. Steady high tone heard.</td>
</tr>
<tr>
<td>52</td>
<td>Restore LS key.</td>
<td>OGT-CS or TS lamp remains lighted.</td>
</tr>
<tr>
<td>53</td>
<td>Restore TLK, LLP keys.</td>
<td>If trunk is arranged for local completion— TS lamp extinguished. Steady high tone silenced.</td>
</tr>
<tr>
<td>54b</td>
<td>If trunk is arranged for tandem completion— Restore ANS key.</td>
<td>OGT-CS lamp extinguished. Steady high tone silenced.</td>
</tr>
<tr>
<td>55</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>56g</td>
<td>If trunk has 1000-ohm loop compensation— Restore COMP key.</td>
<td></td>
</tr>
</tbody>
</table>

Trunks—Revertive Pulsing—From Other Than Step-by-Step Offices—No Ground Shunt on A Relay—Local and Tandem Completion

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>57</td>
<td>Operate TLK, REC keys.</td>
<td>Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C).</td>
</tr>
<tr>
<td>58e</td>
<td>If trunk has resistance shunts on A relay— Operate LS, SLP keys.</td>
<td>SLV, OGT-CS lamps may be momentarily lighted.</td>
</tr>
<tr>
<td>59</td>
<td>Momentarily operate ST key.</td>
<td>If trunk is arranged for local completion— TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.</td>
</tr>
</tbody>
</table>

All lamps extinguished.
**STEP**  | **ACTION** | **VERIFICATION**
--- | --- | ---
60b | If trunk is arranged for tandem completion—Operate ANS key. | OGT-CS lamp lighted.
 |  |  | Steady high tone heard.
61e | If trunk has resistance shunts on A relay—Restore LS key. | OGT-CS or TS lamp remains lighted.
62 | Restore TLK, SLP, REC keys. | If trunk is arranged for local completion—TS, R- lamps extinguished.
 |  |  | Steady high tone silenced.
63b | If trunk is arranged for tandem completion—Restore ANS key. | OGT-CS lamp extinguished.
 |  |  | Steady high tone silenced.
64 | Momentarily operate RL key. | All lamps extinguished.
65 | Operate SLP, HS, TLK keys. | SLV lamp lighted.
66 | Momentarily operate ST key. | OGT-CS lamp may be momentarily lighted.
 |  |  | After approximately 1 second—SLV lamp extinguished.
67 | Momentarily operate RL key. | All lamps extinguished.
68 | Restore SLP, HS, TLK keys. |  

**Trunks—Revertive Pulsing—From Other Than Step-by-Step Offices—Ground Shunt on A Relay—Local and Tandem Completion**

69 | Operate HS, TLK, REC keys. | Trouble record taken.
 |  |  | FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C).
70 | 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).
71 | Hold GS key operated for approximately 3 seconds. | SLV lamp not lighted.
72 | Hold RVP key operated. | SLV lamp lighted.
73 | Restore HS, REC keys. | SLV lamp extinguished.
74 | Operate LS key. | If trunk is arranged for local completion—TS lamp lighted.
 |  |  | R- lamp flashes.
 |  |  | Ringing tone heard in unison with R- lamp
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**STEP** | **ACTION** | **VERIFICATION**
--- | --- | ---
75 | Restore RVP key. | flashes.
76 | If trunk has 1000-ohm loop compensation—
Operate COMP key. | If trunk is arranged for tandem completion—
DIS1, LK2, MRL lamps lighted.
77 | Operate LLP key. | SLV lamp lighted.
78 | If trunk is arranged for tandem completion—
Operate ANS key. | SLV lamp extinguished.
79 | Restore LS key. | OGT-CS lamp lighted.
80 | Restore TLK, LLP keys. | Steady high tone heard.
81b | If trunk is arranged for tandem completion—
Restore ANS key. | OGT-CS lamp extinguished.
82g | If trunk has 1000-ohm loop compensation—
Restore COMP key. | Steady high tone silenced.
83 | Momentarily operate RL key. | All lamps extinguished.

**All Trunks**

84 | Restore all keys and switches not required in next test. |  
85 | At relay rack frame—
Remove patching cord from T, ITT jacks. |  
86 | Have originating office restore trunk to service. |  

**B. Ringing—Local Completion**

9 | Operate TLK, SXS, LS, KRC keys. | TS lamp lighted.
10 | Momentarily operate ST key. | Ringing detection lamp flashes. (Refer to Table B.)
11 | Momentarily operate RL key. | Ringing tone heard in unison with lamp flashes.

All lamps extinguished.

Ringing tone silenced.
STEP | ACTION | VERIFICATION
--- | --- | ---
12 | Repeat Steps 10 and 11 for each ringing combination provided to be applied to ringing test line. (Refer to Table B.) |  
13 | Restore TLK, SXS, LS, KRC keys. |  
14 | Restore all keys and switches not required in next test. |  
15 | At relay rack frame— Remove patching cord from T, ITT jacks. |  
16 | Have originating office restore trunk to service. |  

C. Pretrip and Trip—Local Completion

*Note:* CODE 1 GEN ringing should be used in performing this test.

9 | Operate TLK, SXS, LS, KRC keys. | TS lamp lighted.  
10 | Momentarily operate ST key. | R- lamp flashes.  
| | | Ringing tone heard in unison with R- lamp flashes.  
11 | Hold PTP key operated for 1/2 second during silent interval of ringing cycle. | R- lamp continues to flash at same rate.  
12b | If test circuit has a 1500-ohm test resistance (ZF option)— Hold TRP key operated for 1/2 second during silent interval of ringing cycle. | R- lamp extinguished.  
| | | Ringing tone silenced.  
13c | If test circuit has a 1622-ohm test resistance (ZG option)— Hold TRP key operated for 1 second during silent interval of ringing cycle. | R- lamp extinguished.  
| | | Ringing tone silenced.  
14 | Momentarily operate RL key. | All lamps extinguished.  
15 | Restore TLK, SXS, LS, KRC keys. |  
16d | If office is equipped with range extension for unigauge cabling— Select ringing combination 4. |  
17d | Repeat Steps 10 through 15. |  
18 | Restore all keys and switches not required in next test. |  

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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>At relay rack frame—</td>
<td>• Remove patching cord from T, ITT jacks.</td>
</tr>
<tr>
<td></td>
<td>Have originating office restore trunk to service.</td>
<td>• •</td>
</tr>
</tbody>
</table>

D. Supervision—Originating and Terminating Ends Disconnect

| 11   | Operate TLK, SXS, LS keys.                                           | • Operate TLK, SXS, LS keys.                                               |
| 12   | Momentarily operate ST key.                                          | • Momentarily operate ST key.                                              |
|      | **If trunk is arranged for local completion—**                      | • If trunk is arranged for local completion—                              |
|      | TS lamp lighted.                                                     | • TS lamp lighted.                                                         |
|      | R- lamp flashes.                                                     | • R- lamp lighted.                                                         |
|      | Ringing tone heard in unison with R- lamp flashes.                   | • Ringing tone heard in unison with R- lamp flashes.                       |
|      | **If trunk is arranged for tandem completion—**                     | • If trunk is arranged for tandem completion—                              |
|      | DIS1, LK2, MRL lamps lighted.                                        | • DIS1, LK2, MRL lamps lighted.                                            |
|      | SLV lamp may be momentarily lighted.                                 | • SLV lamp may be momentarily lighted.                                     |
| 13   | Operate ANS key; **start timing.**                                   | • Operate ANS key; **start timing.**                                       |
| 14   | After 6 seconds—                                                    | • After 6 seconds—                                                        |
|      | Restore ANS, TLK keys simultaneously.                                | • Restore ANS, TLK keys simultaneously.                                    |
| 15   | Restore SXS, LS keys.                                                | • Restore SXS, LS keys.                                                   |
| 16   | Momentarily operate RL key.                                          | • Momentarily operate RL key.                                              |
| 17   | Restore all keys and switches not required in next test.             | • Restore all keys and switches not required in next test.                 |
| 18   | At relay rack frame—                                                | • At relay rack frame—                                                    |
|      | Remove patching cord from T, ITT jacks.                             | • Remove patching cord from T, ITT jacks.                                 |
| 19   | Have originating office restore trunk to service.                   | • Have originating office restore trunk to service.                       |

E. Supervision—Terminating End Disconnect

*Note:* Do not make this test until assured that the trunk has been idle for 4 minutes where tube-type RL relay is used and 2 minutes where 235-type RL relay is used.

| 11   | Operate TLK, SXS, LS keys.                                           | • Operate TLK, SXS, LS keys.                                               |
| 12   | Momentarily operate LS key.                                          | • Momentarily operate LS key.                                              |
|      | **If trunk is arranged for local completion—**                      | • If trunk is arranged for local completion—                              |
|      | SLV lamp may be momentarily lighted.                                 | • SLV lamp may be momentarily lighted.                                     |

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STEP ACTION

13 Operate ANS key.

14 Restore ANS key; start timing.

15 At MTF—
   Restore TLK, SXS, LS keys.

16 At MTF—
   Momentarily operate RL key.

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

18 At relay rack frame—
   Remove patching cord from T, ITT jacks and restore MB switch to N position.

19 Have originating office restore trunk to service.

F. Supervision—Originating End Disconnect—Local Completion

Note: Do not make this test until assured that the trunk has been idle for 4 minutes that the trunk has been idle for 4 minutes where tube-type RL relay is used and 2 minutes where 235-type RL relay is used.

9 Operate TLK, SXS keys.

VERIFICATION

TS lamp lighted.
R- lamp flashes.
Ringing tone heard in unison with R- lamp flashes.
If trunk is arranged for tandem completion—
   DIS1, LK2, MRL lamp lighted.

OGT-CS lamp lighted.
Steady high tone heard.
If trunk is arranged for local completion—
   R- lamp extinguished.
   Ringing tone silenced.

OGT-CS lamp extinguished.
Steady high tone silenced.
If trunk is arranged for permanent signal alarm—
   Aisle pilot, main aisle pilot lamps lighted.
   At relay rack frame—
   PS lamp lighted.
   Minor alarm sounds.

TS lamp extinguished, if lighted.
If trunk is arranged for permanent signal alarm—
   Aisle pilot, main aisle pilot lamps extinguished.
   At relay rack frame—
   PS lamp extinguished.
   Minor alarm silenced.

All lamps extinguished.
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**STEP** | **ACTION** | **VERIFICATION**
---|---|---
12 | Restore TLK key; *start timing*. | OGT-CS lamp extinguished. In 13 to 32 seconds— TS lamp extinguished. Steady high tone silenced. |
13 | Momentarily operate RL key. | All lamps extinguished. |
14 | Restore SXS, ANS, LS key. |  |
15 | Restore all keys and switches not required in next test. |  |
16 | At relay rack frame— Remove patching cord from T, ITT jacks. |  |
17 | Have originating office restore trunk to service. |  |

**G. Line-Busy—Local Completion**

7 | Operate BB, TLK, SXS, LS keys. | Line-busy tone heard at 120 ipm. OGT-CS lamp may flash in unison with tone. |
8 | Momentarily operate ST key. | All lamps extinguished. Line-busy tone silenced. |
9 | Momentarily operate RL key. |  |
10 | Restore BB, TLK, SXS, LS keys. |  |
11 | Restore all keys and switches not required in next test. |  |
12 | At relay rack frame— Remove patching cord from T, ITT jacks. |  |
13 | Have originating office restore trunk to service. |  |

**H. Overflow—Local Completion**

7b | If trunk is arranged for local completion only— At MTF— Select digits assigned permanent overflow test number. |  |
STEP | ACTION | VERIFICATION
---|---|---
8c | If trunk is arranged for local and tandem completion— At MTF— Select A_ through G_ digits as required for local completion office code and permanent overflow test number. | 
9 | Operate KY, TLK, SXS, LS keys. | 
10 | Momentarily operate ST key. | Overflow tone heard at 120 ipm. OGT-CS lamp may flash in unison with tone. All lamps extinguished.
11 | Momentarily operate RL key. | 
12 | Restore all keys and switches not required in next test. | 
13 | At relay rack frame— Remove patching cord from T, ITT jacks. | 
14 | Have originating office restore trunk to service. | 

I. **Overflow—Bylink Path Failure**

7 | At relay rack frame of trunk— Insulate contact 6 of R relay. | 
8 | At MTF— Operate TLK, LS, SXS keys. | SLV lamp may be momentarily lighted. Overflow tone heard at 120 ipm. All lamps extinguished.
9 | Momentarily operate ST key. | 
10 | Momentarily operate RL key. | 
11 | Restore all keys and switches not required in next test. | 
12 | At relay rack frame of trunk— Remove insulator from 6 contact of R relay. | 
13 | Remove patching cord from T, ITT jacks. | 
14 | Have originating office restore trunk to service. | 

J. **Free Call—Local Completion**

7b | If trunk is arranged for local completion only— At MTF— Select digits assigned free terminating test line number. | 

SECTION 218-251-501

STEP  ACTION

8c If trunk is arranged for local and tandem completion—
At MTF—
Select A_ through G_ digits as required for local completion office code and free terminating test line number.

9 Operate KRC, TLK, SXS, LS keys.

10 Select ringing combination 1.

11 Momentarily operate ST key.

12 Operate ANS key.

13 Momentarily operate RL key.

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

15 At relay rack frame—
Remove patching cord from T, ITT jacks.

16 Have originating office restore trunk to service.

INCOMING TRUNKS—CONTROLLED RINGING

K. Call to Ringing Test Line

13 Request distant switchboard attendant to originate a call to one of the ringing test line numbers.

14 At MTF—
Hold PTP key operated for 1/2 second during silent interval of ringing cycle.

VERIFICATION

TS lamp lighted.
R- lamp flashes.
Ringing tone heard in unison with R- lamp flashes.

R- lamp extinguished.
OGT-CS lamp not lighted.
Steady high tone heard.
If trunk is arranged to return charge supervision—
OGT-CS lamp lighted.

All lamps extinguished.
Steady high tone silenced.

At MTF—
R-, R+, T-, or T+ lamp flashes. (Refer to Table B.)
If office is arranged for coinless access to operator—
PK lamp lighted.
At distant switchboard—
Cord supervisory lamp lighted.
Ringing tone heard.

R-, R+, T-, or T+ lamp continues to flash.
STEP | ACTION | VERIFICATION
---|---|---
15a | If test circuit has a 1500-ohm test resistance (ZF option)— Hold TRP key operated for 1/2 second during silent interval of ringing cycle. | R-, R+, T-, or T+ lamp extinguished. At distant switchboard— Ringing tone not heard. |
16b | If test circuit has a 1622-ohm circuit test resistance (ZG option)— Hold TRP key operated for 1 second during silent interval of ringing cycle. | R-, R+, T-, or T+ lamp extinguished. At distant switchboard— Ringing tone not heard. |
17 | At MTF— Operate TLK key. | Talking path established between MTF telephone set and distant switchboard. At distant switchboard— Cord supervisory lamp extinguished. |
18 | Request attendant to disconnect from trunk when disconnect signal is received, or proceed to any other test on this trunk. | |
19 | At MTF— Restore TLK key. | At distant switchboard— Cord supervisory lamp lighted. |
20c | If office is equipped with range extension for unigauge cabling— Request distant switchboard attendant to originate a call to ringing test line number arranged for range extension for unigauge cabling (ringing combination 4). | At MTF— R- lamp flashes. (Refer to Table B.) At distant switchboard— Cord supervisory lamp lighted. Ringing tone heard. |
21 | Repeat Steps 14 through 17. | |
22 | Restore all keys and switches not required in next test. | |
23 | Disconnect from separate connection. | |

L. Ringing

13 | Request distant switchboard attendant to originate a call to one of the ringing test line numbers. | R-, R+, T-, or T+ lamp flashes. (Refer to Table B.) |
14 | Operate TLK key. | R-, R+, T-, or T+ lamp extinguished. Talking path established between MTF telephone set and distant switchboard. |
15 | Request attendant to disconnect from trunk when disconnect signal is received and to originate another call over trunk using a different test line number. | |
76 | Restore TLK key. | |
## SECTION 218-251-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Repeat Steps 13 through 16 for each ringing test line number provided in the office.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Request attendant to disconnect from trunk when disconnect signal is received, or proceed to any other test on this trunk.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Restore TLK key.</td>
<td>At distant switchboard—Cord supervisory lamp lighted.</td>
</tr>
<tr>
<td>20</td>
<td>At MTF—Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Disconnect from separate talking connection.</td>
<td></td>
</tr>
</tbody>
</table>

### M. Rering

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Request distant switchboard attendant to originate a call to one of the ringing test line numbers.</td>
<td>R-, R+, T-, or T+ lamp flashes.</td>
</tr>
<tr>
<td>14</td>
<td>Operate TLK key.</td>
<td>R-, R+, T-, or T+ lamp extinguished. Talking path established between MTF telephone set and distant switchboard.</td>
</tr>
<tr>
<td>15</td>
<td>Restore TR key.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Request attendant to rering.</td>
<td>R- lamp momentarily lighted while ringing current is applied.</td>
</tr>
<tr>
<td>17</td>
<td>Request attendant to rering after a disconnect signal is received.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Operate TR key.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Restore TLK key.</td>
<td>R-, R+, T-, or T+ lamp flashes.</td>
</tr>
<tr>
<td>20</td>
<td>Operate TLK key.</td>
<td>R-, R+, T-, or T+ lamp extinguished.</td>
</tr>
<tr>
<td>21</td>
<td>Request attendant to disconnect from trunk when disconnect signal is received, or proceed to any other test on this trunk.</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Restore TLK key.</td>
<td>At distant switchboard—Cord supervisory lamp lighted.</td>
</tr>
<tr>
<td>23</td>
<td>At MTF—Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Disconnect from separate talking connection.</td>
<td></td>
</tr>
</tbody>
</table>
STEP ACTION

N. Coin Control

13 Request distant switchboard attendant to originate a call to one of the ringing test line numbers.

14 Operate TLK key.

15 Restore TR key.

16 Operate CN key.

17 At distant switchboard—
Request attendant to collect coin.

18 Request attendant to collect coin again.

19 At MTF—
Momentarily restore CN key.

20 At distant switchboard—
Request attendant to return coin.

21 Request attendant to return coin again.

22 Request attendant to disconnect from trunk when disconnect signal is received.

23 At MTF—
Restore CN, TLK keys.

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

25 Disconnect from separate talking connection.

O. Overflow

1 Establish separate talking connection to distant switchboard.

VERIFICATION

R-, R+, T-, or T+ lamp flashes.

R-, R+, T-, or T+ lamp extinguished.
Talking path established between MTF telephone set and distant switchboard.

At MTF—
CC lamp momentarily lighted.
CND lamp lighted.
If negative coin collect potential is used—
PK lamp not lighted.
At distant switchboard—
CP lamp momentarily lighted.

CP lamp not lighted.
CND lamp extinguished.

At MTF—
CR lamp momentarily lighted.
CND lamp lighted.
If negative coin potential is used—
PK lamp not lighted.
At distant switchboard—
CP lamp momentarily lighted.

CP lamp not lighted.

CND lamp extinguished.
### SECTION 218-251-501

<table>
<thead>
<tr>
<th>STEP</th>
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<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Request distant switchboard attendant to check that trunk to be tested is idle before proceeding with test.</td>
<td>At distant switchboard—Cord supervisory lamp flashes at overflow rate.</td>
</tr>
<tr>
<td>3</td>
<td>Request attendant to originate call to permanent overflow test number.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Request attendant to disconnect from trunk.</td>
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**P. Call to Busy Line**

<table>
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<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish a separate talking connection to distant switchboard.</td>
<td>At distant switchboard—Busy tone heard and/or cord supervisory lamp flashes at line-busy rate.</td>
</tr>
<tr>
<td>2</td>
<td>Request distant switchboard attendant to check that trunk to be tested is idle before proceeding with test.</td>
<td></td>
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<tr>
<td>3</td>
<td>Request attendant to originate call to permanently busy number.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Request attendant to disconnect from trunk.</td>
<td></td>
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</table>

**Q. Call to Busy Line—No Test**

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<th>STEP</th>
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<tbody>
<tr>
<td>1</td>
<td>Originate call from a telephone station in local office to distant switchboard.</td>
<td>Talking path established between originating telephone station in local office and distant switchboard over no-test trunk.</td>
</tr>
<tr>
<td>2</td>
<td>Request distant switchboard attendant to restore TLK key associated with answering cord.</td>
<td></td>
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<tr>
<td>3</td>
<td>Request attendant to originate verification call to originating telephone station, using no-test trunk to be tested.</td>
<td></td>
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<tr>
<td>4</td>
<td>Request attendant to disconnect from trunk when disconnect signal is received.</td>
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<td>5</td>
<td>At local office—Restore receiver to switchhook of telephone station.</td>
<td></td>
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<tr>
<td>ES INTS</td>
<td>1000-OHM LOOP COMP</td>
<td>GRD ON TERM. R OF TRK (T) JACK WHEN TRK IS NORM</td>
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<td>RINGING COMB.</td>
<td>RINGING SELECTION SWITCH</td>
<td>RINGING DETECTION LAMP LIGHTED</td>
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<td>OTRC, RC, KEYS OR RCTI KEY &amp; RCU-SWITCH</td>
<td>SELECT MAGNETS OPERATED</td>
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</table>

*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.
<table>
<thead>
<tr>
<th>OPTION</th>
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<td>TB</td>
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<td>Supervision, non-discriminating numbers.</td>
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<td>3</td>
<td>FB</td>
<td>Full selector, physical, and theoretical.</td>
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<tr>
<td>WL</td>
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<td>NA</td>
<td>No supervision, non-discriminating numbers.</td>
</tr>
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<td>TT</td>
<td>Toll, theoretical.</td>
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</tr>
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</tbody>
</table>

*Check office wiring lists for option provided.
†Check local records for Incoming trunk class (ITC-) used.