OUTGOING TRUNKS
FOR INTERTOLL COMPLETION
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing outgoing trunks used for intertoll completion, SD-25519-01, SD-25850-01, and SD-25858-01.

1.02 This section is reissued to:

(a) To add Electronic Translation System (ETS) features.

(b) To revise key and switch selection to standard format.

(c) To make minor changes as required.

Since this is a general revision, arrows ordinarily used to indicate changes have been omitted.

This reissue affects Equipment Test Lists.

1.03 The tests covered are:

A. Call to Toll Testboard or Toll Switchboard: The following features are checked: (1) Seizure of trunk (2) Continuity of talking path (3) Transmission of supervisory signals to and from the called office.

B. Trunk Busy: The following features are checked: (1) Seizure by the master test frame after the trunk is made busy (2) Busy condition to service calls when trunk is made busy.

C. Busy Indications—Trunks With Appearances at a Toll Switchboard or Toll Testboard in Same Building: This test checks the ability of the trunk to appear busy when the called operator fails to disconnect.

D. Pad Control Features: This test checks the trunk pad control arrangements.

E. False-Busy and False-Idle Conditions (ETS Not Provided): This test checks the BT, F, and FT leads for continuity and crosses.

1.04 Tests A and C require action and verification at a toll testboard or toll switchboard and the master test frame.

1.05 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.

1.06 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.
1.07 The location statement, At MTF—, is used to refer to all apparatus located on the four basic bays of the MTF.

1.08 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, such as DT, ORIG, ITDO, ITNP, OGT, etc.

1.09 When the office is arranged for ETS, the distributors and scanners associated with the marker and trunk used in the test call must be in service or in a **maintenance-busy** condition - not in an **out-of-service** condition. To change a scanner or distributor from an **out-of-service** to a **maintenance-busy** condition, use the procedure given in the following section for the office arrangement.


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 scanning to be repeated on the FT lamp at the MTF trunk test circuit. As long as the TST bit is set in the trunk register, scanning will continue to be repeated on the lamp, 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.

**2. APPARATUS**

**Tests A, B, and C**

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

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At master test frame— Restore all keys and switches.</td>
</tr>
<tr>
<td>2</td>
<td>Operate RL key momentarily.</td>
</tr>
</tbody>
</table>

**2.02 Master test frame trunk test circuit, SD-25918-01.**

**Tests B and E**

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

**Test D**

2.04 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and two KS-6278 connecting clips or two 624B tools as required (for making test connections to terminal strip terminals).

2.05 67C test set, or equivalent, equipped with one KS-6278 connecting clip (for checking the presence or absence of battery or ground).

**Test E**

2.06 Oscillator J94730B (SD-95616-01), part of 1A fault locator test set, J94730A.

2.07 Testing cord, W1AK cord, 6 feet long, equipped with 1P (P44B, 490) banana plug, one 360B tool, and one 419A tool for testing nonwire-spring type circuits, or one 624B tool for testing wire-spring type circuits.

2.08 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and two KS-6278 connecting clips or one KS-6278 connecting clip and one 624B tool, as required (for connecting high resistance ground (HRG) to terminal strip terminals).

**3. PREPARATION**

Refer to 1.04 through 1.10.

<table>
<thead>
<tr>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>All lamps extinguished.</td>
</tr>
</tbody>
</table>
### 4. METHOD

#### A. Call To Toll Testboard or Toll Switchboard

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
</table>
| 10   | Momentarily operate ST key. | TAS lamp lighted.  
If trunk is arranged to furnish ringing induction tone—  
Audible ringing received in headset until signal is answered.  
If trunk is arranged to furnish call progress tone—  
Audible ringing received (CPT tone 1) in headset until signal is answered.  
If ETS provided—  
FT lamp lighted.  
At toll switchboard, toll testboard—  
Line signal received.  
If trunk is arranged to return supervision on answer—  
When signal is answered—  
OGT-CS lamp lights.  
If trunk is not arranged to return supervision on answer—  
When signal is answered—  
OGT-CS lamp remains extinguished. |
### SECTION 218-269-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Inform attendant of intention to rering, then request attendant to restore TLK key.</td>
<td>Attendant answers.</td>
</tr>
<tr>
<td>12</td>
<td>Dial digit 1.</td>
<td>OGT-CS lamp extinguished.</td>
</tr>
<tr>
<td>13</td>
<td>Request attendant to disconnect.</td>
<td>TAS lamp extinguished.</td>
</tr>
<tr>
<td></td>
<td>If ETS provided—</td>
<td>FT lamp extinguished.</td>
</tr>
<tr>
<td>14</td>
<td>Restore TLK key.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Restore TOL subclass of test.</td>
<td>TOL lamp extinguished.</td>
</tr>
<tr>
<td>16</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>17c</td>
<td>If no further tests are to be performed— Restore all keys, switches.</td>
<td></td>
</tr>
</tbody>
</table>

#### B. Trunk Busy

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>At relay rack location of trunk under test— Operate MB switch to MB position.</td>
<td>MB lamp lighted.</td>
</tr>
<tr>
<td>14</td>
<td>When trunk is idle— Block nonoperated TM, LS relays.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>At MTF— Operate NTTS, NTFS keys.</td>
<td>TAS lamp lighted.</td>
</tr>
<tr>
<td></td>
<td>If ETS provided— FT lamp lighted.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Momentarily operate ST key.</td>
<td>TAS lamp extinguished.</td>
</tr>
<tr>
<td>17</td>
<td>Momentarily operate RL key.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Restore NTTS, NTFS keys.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Operate FS, TS keys.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Momentarily operate ST key.</td>
<td>TB lamp lighted.</td>
</tr>
<tr>
<td>21</td>
<td>Momentarily operate RL key.</td>
<td>TB lamp extinguished.</td>
</tr>
<tr>
<td>22</td>
<td>At relay rack location of trunk under test— Remove blocking tools from TM, LS relays.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Restore MB switch to normal position.</td>
<td>MB lamp extinguished.</td>
</tr>
<tr>
<td></td>
<td>If ETS provided— At MTF— FT lamp extinguished.</td>
<td></td>
</tr>
</tbody>
</table>

Page 4
STEP | ACTION | VERIFICATION
--- | --- | ---
24 | At MTF— Restore TOL subclass of test. | TOL lamp extinguished.
25b | If no further tests are to be performed— Restore all keys, switches. | 

C. Busy Indications—Trunks With Appearances at a Toll Switchboard or Toll Testboard in Same Building

13 | Momentarily operate ST key. | TAS lamp lighted. If ETS provided— FT lamp lighted. Called attendant answers.
14 | Request attendant to hold connection for at least 10 seconds after disconnect signal is received, then proceed to Steps 15 and 16. | 
15 | Momentarily operate RL key. | If ETS provided— FT lamp extinguished. TAS lamp extinguished.
16 | Momentarily operate ST key. | TB lamp lighted.
17 | Restore TOL subclass of test. | TOL lamp extinguished.
18 | Momentarily operate RL key. | All lamps extinguished.
19b | If no further tests are to be performed— Restore all keys, switches. | 

D. Pad Control Features

1 | At relay rack frame— Operate MB switch of trunk under test. | MB lamp will light provided other MB switches on relay rack bay are not operated.
2a | If trunk is equipped with PD relay— When TM relay is nonoperated— Connect battery to terminal 7 of 227-type terminal strip or terminal 14 of D-type terminal strip. | Battery on terminal 1 of 227-type terminal strip or terminal 33 of D-type terminal strip.
3a | Remove battery from terminal 7 or 14. | Ground on terminal 1 of 227-type terminal strip or terminal 33 of D-type terminal strip.
4b | If trunk is not equipped with PD relay— When TM relay is nonoperated— Connect battery to terminal 5 of 227-type terminal strip or terminal 34 of D-type terminal strip. | Battery on terminal 1 of 227-type terminal strip or terminal 33 of D-type terminal strip.
### SECTION 218-269-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5b</td>
<td>Remove battery from terminal 5 or 34.</td>
<td>Ground on terminal 1 of 227-type terminal strip or terminal 33 of D-type terminal strip.</td>
</tr>
<tr>
<td>6</td>
<td>Restore MB switch to normal.</td>
<td>MB lamp will be extinguished provided other MB switches on relay rack bay are not operated.</td>
</tr>
</tbody>
</table>

**E. False-Busy and False-Idle Conditions (ETS Not Provided)**

1. **At relay rack frame—**
   - When trunk under test is idle indicated by BY relay being released—
     - Block nonoperated TM relay, block operated BY relay.

2. Operate MB switches of all other trunks using same route on same trunk link frame.

3. Connect power to 1A fault locator; operate T-W switch to W position, HR-LRT switch to HR position.

4. Connect WT jack of 1A fault locator to terminal 10 of 227-type terminal strip or terminal 45 of D-type terminal strip.

5. Remove blocking tool from BY relay momentarily.

6a. If trunk under test is arranged to appear at No. 1 toll switchboard and LS relay is provided—
   - Block operated LS relay.

7a. Remove blocking tool from BY relay momentarily.

8a. Remove blocking tool from LS relay.

9. Disconnect WT jack from terminal 10, connect it to terminal 11 on 227-type terminal strip or disconnect from terminal 45, connect to terminal 15 of D-type terminal strip.

10. Connect high resistance ground terminal (HRG) to terminal 9 of 227-type terminal strip or terminal 55 of D-type terminal strip.

11. Remove blocking tool from BY relay momentarily.

12b. If LS relay is provided—
   - Block operated LS relay.

**VERIFICATION**

- Ground on terminal 1 of 227-type terminal strip or terminal 33 of D-type terminal strip.
- MB lamp will be extinguished provided other MB switches on relay rack bay are not operated.
- MB lamp will light provided other MB switches on relay rack bay are not operated.
- Whistle heard.
- Whistle not heard while blocking tool is removed.
- Whistle continues.
- Whistle continues while blocking tool is removed.
- Whistle heard.
- Whistle not heard while blocking tool is removed.
- Whistle continues.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>13b</td>
<td>Remove blocking tool from BY relay momentarily.</td>
<td>Whistle continues while blocking tool is removed.</td>
</tr>
<tr>
<td>14</td>
<td>Remove test connection from terminal 9 or 55 of terminal strip.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Disconnect 1A fault locator.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Remove blocking tools from relays.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Restore all MB switches operated in Step 2.</td>
<td>MB lamps will be extinguished provided other MB switches on relay rack bay are not operated.</td>
</tr>
</tbody>
</table>