OUTGOING INTERTOLL TRUNK CIRCUITS
AND
OUTGOING PORTION OF INTRAOFFICE ARRANGEMENTS PER ES-27601-01
FOR DATA SERVICE
TESTS USING TRUNK TEST CIRCUIT SD-25918-01
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing features of outgoing portion of 2-way intertoll trunks, SD-25843-02, SD-27646-01; auxiliary outgoing trunk SD-27541-01, and outgoing portion of intraoffice arrangements per ES-27601-01.

1.02 This section is reissued for the reasons listed below. Arrows are used to indicate the most significant changes. Equipment Test Lists are affected.

(a) To add calling data transmitter (CDT) features to tests A, B, C, E, H and K

1.03 The tests covered are:

A. Seizure: The following features are checked: (1) Seizure of circuit. (2) Continuity and polarity of originating tip and ring leads.

B. Supervision—Originating End Disconnect: The following features are checked: (1) Charge functions. (2) Release of circuit without timed release. (3) Trunk number assignment in call identity indexer and recorder number on AMA operation.

C. Supervision—Terminating End Disconnect: The following features are checked: (1) Charge functions. (2) Ability to hold if extra digits are dialed into circuit. (3) Timed release of circuit within 13 to 32 seconds.

D. Cancel Disconnect Entry—Circuits Arranged for AMA Operation (ETS, CDT, OR LAMA-C not Provided): This test checks the canceling of disconnect entry and release of circuit if disconnect entry is not made within 2 to 5 seconds after disconnect.

E. Overflow: This test checks that trunk under test is set for overflow when a reorder condition is encountered.

F. Seizure—Circuits Arranged for Tandem Operation: The following features are checked: (1) Seizure of circuit on a tandem outgoing call. (2) Continuity and polarity of tip and ring leads.

G. Overflow—Circuits Arranged for Tandem Operation: This test checks that on a tandem outgoing call the circuit is set for overflow when a reorder condition is encountered.

H. Call to Free Line—Intraoffice Arrangement: This test checks that charge is not established on a call to a free line.
I. Call to Test Line: This test checks supervision when supervisory signals are transmitted from a distant office or own office when testing intraoffice arrangement.

J. Call to Switchboard: The following features are checked: (1) Seizure of trunk circuit on a local or tandem call and completion of the connection to the operator. (2) Supervisory and release features of the trunk.

K. Circuit Busy: The following features are checked: (1) Seizure by master test frame (MTF) when circuit is made busy. (2) Busy condition to service calls when circuit is made busy.

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

1.04 Test D requires action and verification at the master test frame and relay rack frame.

1.05 Test J requires action and verification at the TWX switchboard.

1.06 Test K requires that all other trunks in the same trunk group and located on the same trunk link frame as the trunk under test be made busy.

1.07 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.

1.08 When testing trunks SD-25843-02 and SD-27646-01, and Tests H, I, and J are being performed, PC (local) or PC (through) register will operate.

1.09 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.

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

1.11 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.

1.12 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 Fi, CS, and SI lamps at the MTF trunk test circuit. 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.

1.13 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 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 sections for the office arrangement.


1.14 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.

1.15 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

Tests A Through K

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

2.02 Trunk test circuit, SD-25918-01.

Tests B Through D

2.03 KS-3008 stopwatch, or equivalent.

Tests D, K, and L

2.04 322A (make-busy) plugs as required.

STEP ACTION

Tests A Through K

1 At MTF—
   Restore all keys and switches.

2 Momentarily operate RL key.

3a If trunk under test is 2-way—
   At distant office—
   Make busy trunk under test.

4 Select originating class of call and associated translator indication.

5 Select trunk location.

6 Operate GPA/GPB key when trunk under test is in an allotted group.

7 Select route advance, as required.

8 Select completing marker.

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

Test J

2.06 Head telephone set.

Test L

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

2.08 Testing cord, W1AK cord, 6 feet long, equipped with one 296 (banana-type) plug, one 360B tool, and one 419A tool for testing nonwire-spring type circuits, or one 624B tool for testing wire-spring type circuits.

2.09 Testing cord, 893 cord, 6 feet long, equipped with 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 paragraphs 1.04 through 1.15.

VERIFICATION

All lamps extinguished.
SECTION 218-272-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Operate TLK, KY, FS, TS keys.</td>
<td>●</td>
</tr>
<tr>
<td>10b</td>
<td>If CX or SX signaling is provided— Operate E-M key.</td>
<td>●</td>
</tr>
<tr>
<td>11c</td>
<td>If ETS provided— Operate PCS, PTS keys.</td>
<td>●</td>
</tr>
</tbody>
</table>

Tests A Through G, K

| 12   | Select A through L digits as required to select route for trunk under test, any line number. |  ● |
| 13   | Select OGT class of test. |  ● |

Tests A Through E, H Through K

| 14   | Select class of service and rate treatment as required to select trunk under test. |  ● |

Tests A, B, C, E, H and K

| 15d  | If trunk is to be tested for CDT— Operate CDTT key. |  ● |
| 16d  | When trunk is assigned to CDT dual controllers, select controller— Operate CDC 0/1 key. |  ● |
| 17d  | When a trouble record is to be taken from the CDT translator access (TA) circuit— Operate TREC key. |  ● |
| 18D  | 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.
STEP 4. METHOD

A. Seizure

Flat-Rate

19 Momentarily operate ST key.

20 Restore TLK key.

21 Momentarily operate RL key.

AMA Operation (ETS, CDT, or LAMA-C not Provided)

22 Momentarily operate ST key.

23 Restore TLK key.

VERIFICATION

If CDTT key is operated—
- S1 lamp lighted.
- AS lamp lighted.
If ETS provided—
- FT, S1 lamps lighted.
If LAMA-C provided—
- S1 lamp lighted.
If CX or SX signaling is provided—
- E lamp lighted.
If answer and disconnect supervision is provided—
- PK lamp lighted.

If CDTT key is operated—
- S1 lamp extinguished.
- AS lamp extinguished.
If ETS provided—
- FT, S1 lamps extinguished.
If LAMA-C provided—
- S1 lamp extinguished.
If CX or SX signaling is provided—
- E lamp extinguished.
If answer and disconnect supervision is provided—
- PK lamp extinguished.

All lamps extinguished.

AS, IE, RN, T, U lamps lighted.
If CX or SX supervision is provided—
- E lamp lighted.
If answer and disconnect supervision is provided—
- PK lamp lighted.

AS lamp extinguished.
If CX or SX supervision is provided—
- E lamp extinguished.
If answer and disconnect supervision is provided—
- PK lamp extinguished.
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<tbody>
<tr>
<td>24</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
</tbody>
</table>
| 25   | Momentarily operate ST key. | AS lamp lighted.  
 |       | If CX or SX signaling is provided—  
 |       |   E lamp lighted.  
 |       | If answer and disconnect supervision is provided—  
 |       |   PK lamp lighted.  |
| 26   | Restore TLK key. | AS lamp extinguished.  
 |       | If CX or SX signaling is provided—  
 |       |   E lamp extinguished.  
 |       | If answer and disconnect supervision is provided—  
 |       |   PK lamp extinguished.  |
| 27   | Momentarily operate RL key. | All lamps extinguished.  |

**Flat-Rate, AMA, Message Register Operation**

<table>
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<tr>
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<tr>
<td>28</td>
<td>Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
</tbody>
</table>
| 29a  | If trunk under test is 2 way—  
 |       | At distant office—  
 |       | Restore trunk to service. |   |

**B. Supervision — Originating End Disconnect**

**Flat-Rate**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
</table>
| 19   | Momentarily operate ST key. | •If CDTT key is operated—  
 |       |   S1 lamp lighted.  
 |       | AS lamp lighted.  
 |       | If ETS provided—  
 |       |   FT, S1 lamps lighted.  
 |       | If LAMA-C provided—  
 |       |   S1 lamp lighted.  
 |       | If CX or SX signaling is provided—  
 |       |   E lamp lighted.  
 |       | If answer and disconnect supervision is provided—  
 |       |   PK lamp lighted.  |
| 20   | Operate ANS key; **start timing.** | •If CDTT key is operated—  
 |       |   CS lamp lighted.  
 |       | OGT-CS lamp lighted.  
 |       | Steady high tone heard.  
<p>|       | If answer and disconnect supervision is |</p>
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<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
</table>
| 21   | After 6 seconds—  
     | Restore TLK key. | PK lamp extinguished.  
     |                  | If ETS or LAMA-C provided—  
     |                  | CS lamp lighted.  
     |                  | AS, OGT-CS lamps extinguished.  
     |                  | Steady high tone silenced.  
     |                  | If CX or SX signaling is provided—  
     |                  | E lamp extinguished.  
     |                  | If ETS provided—  
     |                  | FT, CS, S1 lamps extinguished.  
     |                  | If LAMA-C provided—  
     |                  | CS, S1 lamps extinguished.  
     |                  | #If CDTT key is operated—  
     |                  | S1, CS lamps extinguished.#  
|      |        | All lamps extinguished. |
| 22   | Momentarily operate RL key. | AS, IE, RN, T, U, lamps lighted.  
     |                  | If CX or SX signaling is provided—  
     |                  | E lamp lighted.  
     |                  | If answer and disconnect supervision is provided—  
     |                  | PK lamp lighted.  
     |                  | OGT-CS lamp lighted.  
     |                  | Steady high tone heard.  
     |                  | If answer and disconnect supervision is provided—  
     |                  | PK lamp extinguished.  
     |                  | In 2 to 5 seconds—  
     |                  | AE lamp lighted.  
     |                  | AS, OGT-CS lamps extinguished.  
     |                  | Steady high tone silenced.  
     |                  | DE lamp lighted.  
     |                  | If CX or SX signaling is provided—  
     |                  | E lamp extinguished.  
     |                  | All lamps extinguished. |
| 23   | Momentarily operate ST key. | AS lamp lighted.  
     |                  | If CX or SX signaling is provided—  
     |                  | E lamp lighted.  
     |                  | If answer and disconnect supervision is |
| 24   | Operate ANS key; *start timing.* | |
| 25   | After 6 seconds—  
     | Restore TLK key. | |
| 26   | Momentarily operate RL key. | |
| 27   | Momentarily operate ST key. | |
SECTION 218-272-501

STEP ACTION VERIFICATION

28 Operate ANS key; *start timing.*

29 After 6 seconds—
   Restore TLK key.

30 Momentarily operate RL key.

Flat-Rate, AMA, Message Register Operation

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

32a If trunk under test is 2 way—
   At distant office—
   Restore trunk to service.

C. Supervision—Terminating End Disconnect

*Note:* Do not proceed with this test until the time shown below has elapsed since the thermal time delay RL relay in the circuit was last energized.

4 minutes where tube-type RL relay is used.
2 minutes where 235-type RL relay is used.

Flat-Rate

STEP ACTION

19 Momentarily operate ST key.

VERIFICATION

If CDTT key is operated—
   S1 lamp lighted.
   AS lamp lighted.
   If ETS provided—
   FT, S1 lamps lighted.
   If LAMA-C provided—
   S1 lamp lighted.
   If CX or SX signaling is provided—
   E lamp lighted.

If answer and disconnect supervision is
<table>
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<tr>
<th>STEP</th>
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</tr>
</thead>
<tbody>
<tr>
<td>21.</td>
<td>Operate ANS key; <em>start timing.</em></td>
</tr>
<tr>
<td>22.</td>
<td>In 6 to 8 seconds—Restore ANS key.</td>
</tr>
<tr>
<td>23.</td>
<td>Momentarily operate RL key.</td>
</tr>
</tbody>
</table>

AMA Operation (ETS, CDT, or LAMA-C not Provided)

<table>
<thead>
<tr>
<th>STEP</th>
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</tr>
</thead>
<tbody>
<tr>
<td>24.</td>
<td>Momentarily operate ST key.</td>
</tr>
<tr>
<td>26.</td>
<td>Operate ANS key; <em>start timing.</em></td>
</tr>
</tbody>
</table>

**VERIFICATION**
- Provided—PK lamp lighted.
- AS lamp remains lighted.
- If CDTT key is operated—CS lamp lighted.
- OGT-CS lamp lighted.
- Steady high tone heard.
- If ETS or LAMA-C provided—CS lamp lighted.
- If answer and disconnect supervision is provided—PK lamp extinguished.
- If CDTT key is operated—CS lamp extinguished.
- OGT-CS lamp extinguished.
- Steady high tone silenced.
- If ETS or LAMA-C provided—CS lamp extinguished.
- In 13 to 32 seconds after ANS key is restored—AS lamp extinguished.
- If CX or SX signaling is provided—E lamp extinguished.
- If ETS provided—FT, S1 lamps extinguished.
- If LAMA-C provided—S1 lamp extinguished.
- If CDTT key is operated—S1 lamp extinguished.
- All lamps extinguished.

AS, IE, RN, T, U lamps lighted.
If CX or SX signaling is provided—E lamp lighted.
If answer and disconnect supervision is provided—PK lamp lighted.

AS lamp remains lighted.
OGT-CS lamp lighted.
Steady high tone heard.
If answer and disconnect supervision is provided—PK lamp extinguished.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>Restore ANS key.</td>
<td>In 2 to 5 seconds—AE lamp lighted. OGT-CS lamp extinguished. Steady high tone silenced. In 13 to 32 seconds—AS lamp extinguished. DE lamp lighted. If CX or SX signaling is provided—E lamp extinguished.</td>
</tr>
<tr>
<td>28</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td><strong>Message Register Operation (ETS, CDT, or LAMA-C not Provided)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Momentarily operate ST key.</td>
<td>AS lamp lighted. If CX or SX signaling is provided—E lamp lighted. If answer and disconnect supervision is provided—PK lamp lighted.</td>
</tr>
<tr>
<td>30</td>
<td>Dial digit 7.</td>
<td>AS lamp remains lighted.</td>
</tr>
<tr>
<td>31</td>
<td>Operate ANS key; <em>start timing.</em></td>
<td>OGT-CS lamp lighted. Steady high tone heard. In 2 to 5 seconds—RP lamp lighted. DR lamp not lighted. If answer and disconnect supervision is provided—PK lamp extinguished.</td>
</tr>
<tr>
<td>32</td>
<td>Restore ANS key.</td>
<td>OGT-CS lamp extinguished. Steady high tone silenced. In 13 to 32 seconds—AS lamp extinguished. If CX or SX signaling is provided—E lamp extinguished.</td>
</tr>
<tr>
<td>33</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td><strong>Flat-Rate, AMA, Message Register Operation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
<tr>
<td>35a</td>
<td>If trunk under test is 2-way—At distant office—Restore trunk to service.</td>
<td></td>
</tr>
</tbody>
</table>
D. Cancel Disconnect Entry—Circuits Arranged for AMA Operation (ETS, CDT, or LAMA-C Not Provided)

*Note:* Do not proceed with this test until the time shown below has elapsed since the thermal time delay TR relay in the circuit was last energized.

3 minutes where tube-type TR relay is used.
2 minutes where 235-type TR relay is used.

**STEP**

**ACTION**

15 Operate NTFS, NTTS keys.

16 At jack, lamp, and key circuit—
Insert make-busy plug into OGT-MB jack of trunk under test.

17 Momentarily operate ST key.

18 Operate ANS key; *start timing.*

19 At relay rack frame—
Insulate 6B of S2 relay in trunk circuit, or auxiliary trunk circuit.

20 At MTF—
Restore TLK, ANS keys simultaneously

21 At relay rack frame—
Remove insulator from S2 relay.

22 At MTF—
Momentarily operate RL key.

**VERIFICATION**

AS, IE, RN_, T_, U_ lamps lighted.
If CX or SX signaling is provided—
  E lamp lighted.
If answer and disconnect supervision is provided—
  PK lamp lighted.
OGT-CS lamp lighted.
Steady high tone heard.
If answer and disconnect supervision is provided—
  PK lamp extinguished.
In 2 to 5 seconds—
  AE lamp lighted.
Steady high tone silenced.
At relay rack frame—
In 2 to 5 seconds—
  MA relay released.
At MTF—
  OGT-CS, AS lamps extinguished.
DE lamp not lighted.
If CX or SX signaling is provided—
  E lamp extinguished.
All lamps extinguished.
## SECTION 218-272-501

### STEP ACTION VERIFICATION

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>Remove plug from OGT-MB jack inserted in Step 16.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
</tbody>
</table>
| 25a  | If trunk under test is 2-way— At distant office—  
Restore trunk to service. |  |

### E. Overflow

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Operate ROT key.</td>
<td></td>
</tr>
</tbody>
</table>
| 20   | Momentarily operate ST key. | • If CDTT key is operated—  
S1 lamp lighted.  
AS lamp lighted.  
Call progress overflow tone (120 ipm) heard.  
If CX or SX signaling is provided—  
E lamp lighted.  
If ETS provided—  
FT, S1 lamps lighted.  
If LAMA-C provided—  
S1 lamp lighted.  
If AMA class of service and ETS or LAMA-C not provided—  
IE, RN, T, U lamps lighted. |
| 21   | Momentarily operate RL key. | All lamps extinguished.  
Overflow tone (120 ipm) silenced. |
| 22   | Restore all keys and switches not required in next test. |  |
| 23a  | If trunk under test is 2-way— At distant office—  
Restore trunk to service. |  |

### F. Seizure—Circuits Arranged for Tandem Operation

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Select TAN subclass of test.</td>
<td>TAN lamp lighted.</td>
</tr>
</tbody>
</table>
| 15   | Momentarily operate ST key. | AS lamp lighted.  
If CX or SX signaling is provided—  
E lamp lighted.  
If ETS provided—  
FT lamp lighted. |
| 16   | Operate ANS key. | OGT-CS lamp lighted.  
Steady high tone heard. |
STEP | ACTION | VERIFICATION
--- | --- | ---
17 | Restore ANS key. | OGT-CS lamp extinguished. Steady high tone silenced.
18 | Restore TLK key. | AS lamp extinguished. If CX or SX signaling is provided—E lamp extinguished. If ETS provided—FT lamp extinguished.
19 | Momentarily operate RL key. | All lamps except TAN extinguished.
20 | Restore all keys and switches not required in next test. | TAN lamp extinguished.
21a | If trunk under test is 2-way—At distant office—Restore trunk to service. | 

G. Overflow—Circuits Arranged for Tandem Operation

14 | Select TAN subclass of test. | TAN lamp lighted.
15 | Operate ROT key. | AS lamp lighted. Call progress overflow tone (120 ipm) heard. If CX or SX signaling is provided—E lamp lighted If ETS provided—FT lamp lighted.
16 | Momentarily operate ST key. | All lamps except TAN extinguished. Overflow tone (120 ipm) silenced.
17 | Momentarily operate RL key. | TAN lamp extinguished.
18 | Restore all keys and switches not required in next test. | 
19a | If trunk under test is 2-way—At distant office—Restore trunk to service. | 

H. Call to Free Line—Intraoffice Arrangement

19 | Select A through L digits as required to select route for trunk under test, and free line number in own office. | 
20 | Select MISC class of test. |
### SECTION 218-272-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Flat-Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Momentarily operate ST key.</td>
<td>If CDTT is operated—&lt;br&gt;S1 lamp lighted.&lt;br&gt;AS lamp lighted.&lt;br&gt;Call progress ringing tone heard.&lt;br&gt;If ETS provided—&lt;br&gt;FT, S1 lamps lighted.&lt;br&gt;If LAMA-C provided—&lt;br&gt;S1 lamp lighted.&lt;br&gt;If CX or SX signaling is provided—&lt;br&gt;E lamp lighted.&lt;br&gt;If answer and disconnect supervision is provided—&lt;br&gt;PK lamp lighted.</td>
</tr>
<tr>
<td>22</td>
<td>At free line number—&lt;br&gt;Answer call.</td>
<td>At MTF—&lt;br&gt;Ringing tone silenced.</td>
</tr>
<tr>
<td>23</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
</tbody>
</table>

### AMA Operation (ETS, CDT, LAMA-C not Provided)

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<td>24</td>
<td>Momentarily operate ST key.</td>
<td>AS lamp lighted.&lt;br&gt;Call progress ringing tone heard.&lt;br&gt;If CX or SX signaling is provided—&lt;br&gt;E lamp lighted.&lt;br&gt;If answer and disconnect supervision is provided—&lt;br&gt;PK lamp lighted.&lt;br&gt;IE, RN, T, U lamps lighted.</td>
</tr>
<tr>
<td>25</td>
<td>At free line number—&lt;br&gt;Answer call.</td>
<td>At MTF—&lt;br&gt;Ringing tone silenced.&lt;br&gt;AЕ lamp not lighted.</td>
</tr>
<tr>
<td>26</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
</tbody>
</table>

### Message Register Operation (ETS, CDT, LAMA-C not Provided)

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
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</tr>
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<tbody>
<tr>
<td>27</td>
<td>Momentarily operate ST key.</td>
<td>AS lamp lighted.&lt;br&gt;Call progress ringing tone heard.&lt;br&gt;If CX or SX signaling is provided—&lt;br&gt;E lamp lighted.&lt;br&gt;If answer and disconnect supervision is provided—&lt;br&gt;PK lamp lighted.</td>
</tr>
</tbody>
</table>
STEP | ACTION | VERIFICATION
--- | --- | ---
28 | At free line number—Answer call. | At MTF—
29 | Momentarily operate RL key. | Ringing tone silenced.
| | | RP lamp not lighted.
| | | All lamps extinguished.

Flat-Rate, AMA, Message Register Operation

30 | Restore all keys and switches not required in next test. | 
31a | If trunk under test is 2-way—At distant office—Restore trunk to service. | 

I. Call to Test Line

15 | Select A through K digits as required to select trunk under test, data test line number in distant office or data test line number in own office when testing intra-office arrangement. | 
16d | If call is to 10X test line in distant office—Operate DL3 or DL6 key to delete digits as required. | 
| | | Note: The last 3 digits are 10X code. |
17 | Select MISC class of test. | 
18 | Momentarily operate ST key. | If ETS provided—
| | | FT lamp lighted. |
| | | AS lamp lighted. |
| | | Call progress ringing tone heard. |
| | | Signals vary depending on type of data test line used. |
| | | Signals received on first test indicate signals that may be expected on successive tests to same office. |
| | | All lamps extinguished. |
19 | Momentarily operate RL key. | 
20 | Restore all keys and switches not required in next test. | 
21a | If trunk under test is 2-way—At distant office—Restore trunk to service. |
STEP | ACTION |
--- | --- |
J. Call to Switchboard | 15 Select A through C digits as required to select route for trunk under test. |
 | 16 Select MISC class of test. |
 | 17 Momentarily operate ST key. |
 | 18 Answer call by inserting rear cord plug into jack associated with trunk under test. |
 | 19 At switchboard—Remove cord from jack. |
 | 20 Restore TLK key. |
 | 21 Momentarily operate RL key. |
 | 22 Operate TLK key. |
 | 23d If trunk is arranged for tandem operation—Select TAN subclass of test. |
 | 24d Momentarily operate ST key. |
 | 25d Answer call by inserting rear cord plug into jack associated with trunk under test. |
 | 26d At switchboard—Remove rear cord plug from jack. |

VERIFICATION

AS lamp lighted. Call progress ringing tone heard. If ETS provided— FT lamp lighted. At switchboard—Line lamp associated with trunk under test lighted.

Line lamp extinguished. At MTF—AS lamp remains lighted. Call progress ringing tone silenced.

AS lamp extinguished. If ETS provided— FT lamp extinguished.

All lamps extinguished.

TAN lamp lighted.

AS lamp lighted. If ETS provided— FT lamp lighted. Call progress ringing tone heard. At switchboard—Line lamp associated with trunk under test lighted.

Line lamp extinguished. At MTF—AS lamp remains lighted. Call progress ringing tone silenced.
STEP | ACTION | VERIFICATION
--- | --- | ---
27d | At MTF—
    Restore TLK key. | AS lamp extinguished.
    If ETS provided—
    FT lamp extinguished.
28d |Momentarily operate RL key. | All lamps extinguished except TAN.
29 | Restore all keys and switches not required in next test. | TAN lamp extinguished, if lighted.
30a | If trunk under test is 2-way—
    At distant office—
    Restore trunk to service. | 

K. Circuit Busy

19 | Momentarily operate ST key. | ♦If CDTT key is operated—
    S1 lamp lighted.♦
    AS lamp lighted.
    If ETS provided—
    FT, S1 lamps lighted.
    If LAMA-C provided—
    S1 lamp lighted.
20 | Momentarily operate RL key. | All lamps extinguished.
21 | Insert make-busy plug into OGT-MB jack of trunk under test. | If ETS provided—
    FT lamp lighted.
22 | Momentarily operate ST key. | TB lamp lighted.
23 | Momentarily operate RL key. | All lamps extinguished.
24 | Operate NTFS, NTTS keys. | If ETS provided—
    FT lamp remains lighted.
25 | Momentarily operate ST key. | ♦If CDTT key is operated—
    S1 lamp lighted.♦
    AS lamp lighted.
    If ETS or LAMA-C provided—
    S1 lamp lighted.
26 | Momentarily operate RL key. | All lamps extinguished.
27 | Remove plug from OGT-MB jack of trunk under test. | If ETS provided—
    FT lamp remains lighted.
28 | Restore all keys and switches not required in next test. | If ETS provided—
    FT lamp extinguished.
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</table>
| 29a  | If trunk under test is 2-way—  
At distant office—  
Restore trunk to service. |  |
| 1a   | If trunk under test is 2-way—  
At distant office—  
Make busy trunk under test. |  |
| 2    | At relay rack frame of intertoll trunk—  
Connect power to 1A fault locator, operate  
W-T switch to W position, HR-LRT switch to  
HR position. | Whistle heard. |
| 3    | Connect WT jack of fault locator to terminal  
(FT lead) of terminal strip on unit as follows:  
227-type terminal strip, use test cord equipped  
with 419A tool, terminal A10.  
D-type terminal strip, use test cord equipped  
with 624B tool, terminal 45. | Whistle not heard. |
| 4b   | If circuit being tested is equipped with MB  
relay—  
Block operated MB relay. | If trunk under test is the only idle trunk or  
the only trunk using same route on same  
trunk link frame—  
Whistle heard. |
| 5c   | If circuit being tested is not equipped with  
MB relay—  
Block operated S1 relay. | If trunk under test is the only idle trunk or  
the only trunk using same route on same  
trunk link frame—  
Whistle heard. |
| 6    | At jack, lamp, and key circuit—  
Insert make-busy plugs into OGT-MB jacks  
of all other circuits using same route on same  
trunk link frame. | At relay rack frame—  
Whistle heard when last trunk made busy. |
| 7    | Remove blocking tool inserted in Step 4b or  
5c. | Whistle not heard while blocking tool was  
removed. |
| 8    | At jack, lamp, and key circuit—  
Remove plugs from OGT-MB jacks. |  |
| 9    | At relay rack frame of intertoll trunk—  
Connect HRG terminal (lead) to terminal of  
terminal strip on unit as follows:  
227-type terminal strip, terminal A9. |  |
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<tr>
<td></td>
<td>D-type terminal strip, terminal 55.</td>
<td></td>
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<tr>
<td>10</td>
<td>Disconnect WT jack of fault locator and connect to terminal (BT lead) as follows:</td>
<td>Whistle heard.</td>
</tr>
<tr>
<td></td>
<td>227-type terminal strip, terminal A11.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D-type terminal strip, terminal 15.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Remove blocking tool from MB or S1 relay.</td>
<td>Whistle not heard.</td>
</tr>
<tr>
<td>12</td>
<td>Remove test connections from terminal strip.</td>
<td></td>
</tr>
<tr>
<td>13a</td>
<td>If trunk under test is 2-way— At distant office— Restore trunk to service.</td>
<td></td>
</tr>
</tbody>
</table>