DIAL PULSE OUTGOING SENDERSD-25579-01 AND SD-26050-01

TESTS

USING AUTOMATIC MONITOR, REGISTER, AND SENDER TEST CIRCUIT

NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 When dial pulse outgoing senders SD-26050-01 are modified to outpulse multi-frequency signals, the sender will no longer be capable of outpulsing dial pulses. After modification, the sender must be tested in accordance with Section 218-156-501. When these senders are also used for line link pulsing, the line link pulsing features must be tested in accordance with Test A, Section 218-150-502.

1.02 The reasons for reissuing this section are listed as follows. Revision arrows are used to emphasize the more significant changes. This reissue affects Equipment Test Lists.

(a) To revise Tests L and P.1 to include information related to the elimination of loud clicks upon completion of battery and ground outpulsing arranged with immediate reorder feature.

(b) To add Test N.1 to include provisions for testing when both stuck sender trunk identification and alarm surveillance and control features are provided.

(c) To add Test P.2 to include checks to detect an open loop condition during outpulsing over metallic facilities to a step-by-step office.

(d) To revise Test Q to include intersender timing for nonwire-spring relay type senders.

(e) To revise Test S to include optional checks for the elimination of sender plant registration when the sender is made busy on MTF test calls and TUR maintenance busy indication in offices equipped with alarm surveillance and control feature.

(f) To make minor changes as required.

1.03 The tests covered are:

A. Regular Call: This test checks that the sender records information from a marker and that it outpulses interoffice calls on an AMA or non-AMA basis. The transmitting of information to the transverter is checked on AMA class calls.

B. Trunk Test—Open Trunk: This test checks that the sender detects an open trunk during trunk test and causes an overflow tone to be sent after definite time-out intervals.

C. Abandoned Call—AMA: This test checks that the sender waits until the initial AMA entry has been made before releasing.

D. Abandoned Call—Non-AMA: This test checks that the sender releases at any stage of a call.

E. Transverter Trouble Release: This test checks that the sender operates its RO relay, sets the trunk to overflow, and releases when the transverter fails on both first and second trial on a detail-billed call.

F. Delay Pulsing of Last Digit—AMA: This test checks
that the sender delays sending the last digit until AMA functions are completed.

G. No-Digits Call—AMA: This test checks that the sender releases without pulsing on a no-digits AMA call. It also checks that, when the sender is set to reorder, it does not release on an abandoned intraoffice call until the transverter releases.

H. Trunk Reversed—Off-Hook to On-Hook: This test checks that the sender recognizes a change in trunk supervision from on-hook to off-hook after the start pulse signal as a reversed trunk; the sender then sets the trunk to overflow.

I. Trunk Reversed—Initial Off-Hook: This test checks that the sender recognizes an off-hook condition on initial closure of a trunk to a step-by-step office as a reversed trunk, and the sender then sets the trunk to overflow.

J. Stop Dial Signal: This test checks that the sender recognizes an off-hook condition, after the first digit has been pulsed, as a stop dial signal.

K. Distant Trunk Reversed or Busy: This test checks that the sender recognizes an off-hook condition after a stop dial signal has been received on a call to a step-by-step office as an all paths busy condition. The sender then sets the trunk to overflow, except for CL2 class calls.

L. Battery and Ground Pulsing: This test checks that the sender supplies battery and ground pulsing.

M. Timing Test: This test checks that the sender releases and sets the trunk to overflow in 20 to 32 seconds if it cannot complete its functions. It also checks when the sender is arranged for reduced timing for transverter operations, that the sender sets the trunk to return overflow and the sender releases if the transverter has not completed its functions within 7 to 11 seconds.

M.1 TM Timer Recycle: This test checks the recycle of the TM timer when a stop-dial signal is received. (Option XS provided.)

N. Cancel Time Release and Alarm Test: This test checks that with the associated CTR key operated, the sender will not release on time out and will operate the stuck sender alarm. It also checks that if the call is abandoned, the sender will not release. When the alarm sending circuit is provided, this test checks that when alarms are transferred the sender cancel timed release feature is disabled.

N.1 Stuck Sender Trunk Identification: This test verifies that when a stuck sender occurs, outgoing trunk detection can be started manually or automatically causing a trouble record to be taken. A check is also made of alarm surveillance and control feature where the interface and control circuit is arranged to control the sender timed released feature.

O. Marker Reorder: This test checks that the sender sets the trunk to overflow and the sender releases when the marker calls for reorder.

P. Antiglare Test: This test checks that when connected to a CX 2-way trunk or a CX intertoll trunk with customer access, the sender will time properly for changes in supervision before pulsing and during interdigital timing. It also checks when supervision changes a second time, the sender will set the trunk to overflow and release.

P.1 Immediate Reorder on Stop Dial Signal: This test checks that immediate reorder is returned when a stop dial signal is received during the
interdigital interval on calls to a step-by-step office not requiring stop-go dialing operation.

P.2 Open Loop Detection Between Digits: This test checks that the sender detects an open loop condition during outpulsing over metallic facilities to a step-by-step office.

Q. Intersender Timing—Wire-Spring and Nonwire-Spring Relay Type Senders: This test checks that when start pulsing polarity is not returned within 4 to 8 seconds and the marker finds that all senders of the group are busy, the trunk is set to overflow and the sender is released.

R. Pulse Conversion Call: This test checks that the sender functions with pulse conversion trunks.

S. Sender Busy: This test checks that the sender appears busy when it is in service or when it is made busy at the associated MB_ jack. Optional checks are also made for elimination of sender plant registration when the sender is made busy on MTF test calls and TUR maintenance busy indication in offices equipped with alarm surveillance and control feature.

T. Directory Assistance Charging: This test checks the ability of the sender to record the called number structure and called number class for directory assistance calls.

1.04 Tests G and M, using reduced timing, should preferably be made during light traffic because other senders must be made busy.

1.05 For Tests A through R and T, charts are furnished with spaces provided for listing specific keys and key units to be operated for each test, depending on local conditions. These charts should be filled out from local records in accordance with instructions provided in Part 5, Preparation of Test Charts.

1.06 Local instructions should be followed for recording and reporting plant register operations for registers associated with sender SS leads.

1.07 Lettered Steps: A letter a, b, c, etc., added to a step number in Part 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 all steps designated by that letter should be omitted.

1.08 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.

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

1.10 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.

2. APPARATUS

All Tests Except M.1, S

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

All Tests Except B, M.1, S

2.02 Automatic monitor, register, and sender test circuit, SD-25680-01.

Test B

2.03 Trunk test circuit, SD-25918-01.
Tests B, G, M, M.1, N, P, Q

2.04 KS-3008 stopwatch or equivalent.

Tests B, M.1, Q, S

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

2.06 322A (make-busy) plugs.

Test S

2.07 67C test set or equivalent (for checking the presence or absence of ground), equipped with two 624B tools (to make test connections to terminals arranged for solderless wrapped connections).

Note: Refer to paragraphs 1.01, 1.08, 1.09.

3. PREPARATION

All Tests Except Tests M.1, S

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At MTF— Restore all keys and switches.</td>
</tr>
<tr>
<td>2</td>
<td>Momentarily operate RL key.</td>
</tr>
<tr>
<td>3</td>
<td>Select sender to be tested.</td>
</tr>
<tr>
<td>4</td>
<td>Select marker.</td>
</tr>
</tbody>
</table>

Note: When a particular line location is to be used, special marker 0 or 1 must be selected.

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Select route advance.</td>
</tr>
<tr>
<td>6a</td>
<td>If office is equipped with stuck sender trunk identifier circuit— Release SSI, ACTR keys.</td>
</tr>
</tbody>
</table>

All Tests Except M.1, N, N.1, S

7b If CTR_ key associated with sender under test is operated (pulled-out)— Release (push-in) CTR_ key.

Tests A, C Through R, Except Test M.1

8 Select SDR class of test.

9 Operate MAC key.

Note: Allow 1 minute for tubes to heat.

10 Operate STT key.
4. METHOD

A. Regular Calls

AMA Calls and DDD AMA or CAMA Calls

11  Operate keys and set switches in accordance with Test Chart Test 1.

12c  If 2-way trunk is used for selected outgoing route—
     At distant office—
     Have trunk removed from service.

13d  If check of transverter leads is not required—
     At MTF—
     Momentarily operate ST key.

14  Momentarily operate RL key.

15e  If trouble record is required to check transverter leads—
     At MTF—
     Operate REC key.

16e  Momentarily operate ST key.

OK lamp lighted.
Two trouble records taken.
FR, CN, S, calling line location, OBS or NOB, CP, MB, RNT0, 1, or 2, RN, LST, L5D, 4DG, or 5DG designations perforated on each record.
SRT, MKR, called number, called number class, TP or RP designations perforated on first record.
TV, 2L or 4L, TPT or RPT, and called number (when test is an observed 2-line entry, or a 4- or 5-line entry call) designation perforated on second record.

17e  Momentarily operate RL key.

18e  Restore REC key.

19c  If 2-way trunk is used for selected outgoing route—
     At distant office—
     Have trunk restored to service.

20  Repeat Steps 11 through 19c, as required for Tests 2 through 44.
### Non-AMA Calls and 2-Way or Intertoll Trunk Calls

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Operate keys and set switches in accordance with Test Chart Test 45.</td>
<td></td>
</tr>
</tbody>
</table>
| 22c  | If 2-way trunk is used for selected outgoing route—  
At distant office—  
Have trunk removed from service. |  |
| 23   | At MTF—  
Momentarily operate ST key. | OK lamp lighted. |
| 24   | Momentarily operate RL key. | OK lamp extinguished. |
| 25c  | If 2-way trunk is used for selected outgoing route—  
At distant office—  
Have trunk restored to service. |  |
| 26   | Repeat Steps 21 through 25c, as required for Tests 46 through 66. |  |

### Coin Zone Trunk Calls

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>Operate keys and set switches in accordance with Test Chart Test 67.</td>
<td></td>
</tr>
</tbody>
</table>
| 28d  | If check of transverter leads is not required—  
At MTF—  
Momentarily operate ST key. | OK lamp lighted. |
| 29d  | Momentarily operate RL key. | OK lamp extinguished. |
| 30e  | If trouble record is required to check transverter leads—  
At MTF—  
Operate REC key. | OK lamp lighted.  
Two trouble records taken. |
| 31e  | Momentarily operate ST key. |  |

FR_, CN_, S_, calling line location, OBS or NOB, CP_, MB_, RNT0, 1, or 2, RN_, and LST, L5D, 4DG, or 5DG designations perforated on each record.  
SRT, MKR, called number, called number class, TP or RP designations perforated on first record.  
TV, 2L or 4L, TPT or RPT, and called number (when test is an observed 2-line entry, or a 4- or 5-line entry call) designations perforated on second record.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>32e</td>
<td>Momentarily operate RL key.</td>
<td>OK lamp extinguished.</td>
</tr>
<tr>
<td>33e</td>
<td>Restore REC key.</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Repeat Steps 27 through 33e, as required for Tests 68 and 69.</td>
<td></td>
</tr>
</tbody>
</table>

**Tandem Trunk Calls—Non AMA**

| 35   | Operate keys and set switches in accordance with Test Chart Test 70. | |
|      | If 2-way trunk is used for selected outgoing route— At distant office— Have trunk removed from service. | OK lamp lighted. |
| 36c  | At MTF— Momentarily operate ST key. | |
| 37   | Momentarily operate RL key. | OK lamp extinguished. |
| 39c  | If 2-way trunk is used for selected outgoing route— At distant office— Have trunk restored to service. | |
| 40   | Repeat Steps 35 through 39c, as required for Test 71. | |

**Tandem Trunk Calls—AMA**

| 41   | Operate keys and set switches in accordance with Test Chart Test 72. | |
|      | If 2-way trunk is used for selected outgoing route— At distant office— Have trunk removed from service. | OK lamp lighted. |
| 42c  | If check of transverter leads is not required— At MTF— Momentarily operate ST key. | |
| 43d  | Momentarily operate RL key. | OK lamp extinguished. |
| 44   | If trouble record is required to check transverter leads— At MTF— Operate REC key. | |
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STEP ACTION VERIFICATION

46e Momentarily operate ST key.

OK lamp lighted.
Two trouble records taken.
FR, CN, S, calling line location, OBS or NOB, CP, MB, RNT0, 1, or 2, RN, and
LST, L5D, 4DG, or 5DG designations perforated
on each record.
SRT, MKR, called number, called number
class, TP or RP designations perforated on
first record.
TV, 2L or 4L, TPT or RPT, and called number
(when test is an observed 2-line entry, or a
4- or 5-line entry call) designations perforated
on second record.

47e Momentarily operate RL key.

48e Restore REC key.

49c If 2-way trunk is used for selected outgoing
route—
At distant office—
Have trunk restored to service.

50 Repeat Steps 41 through 49c, as required for
test 73.

All Calls

51 At MTF—
Restore all keys and switches not required in
next test.

52a *If office is equipped with stuck sender trunk
identifier circuit—
Operate SSI or ACTR key, as required.

53 Operate (pull-out) CTR key associated with
sender under test, if required.*

B. Trunk Test—Open Trunk

8 Operate keys and set switches in accordance
with Test Chart Test 74.

9 Select ITDO class of test.

10 Operate TTL, TLK keys.

11 Insert make-busy plug into MB jack associated
with sender under test.
12  At trunk test circuit—
    Block nonoperated ITDO relay.

13  At MTF—
    Momentarily operate ST key; start timing.

14  Momentarily operate RL key.

15  Operate HTR key.

16  Momentarily operate ST key; start timing.

17  Momentarily operate RL key.

18  Restore HTR key.

19  Repeat Steps 8 through 18, as required for
    Test 75.

20  Remove blocking tool from ITDO relay.

21  Remove make-busy plug from MB_ jack
    associated with sender under test.

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

23a  If office is equipped with stuck sender trunk
    identifier circuit—
    Operate SSI or ACTR key, as required.

24  Operate (pull-out) CTR_ key associated with
    sender under test, if required.

C. Abandoned Call—AMA

11  Operate keys and set switches in accordance
    with Test Chart Test 76.

12c  If 2-way trunk is used for selected outgoing
    route—

With marker on light traffic
In 2.5 to 4.5 seconds—
Overflow tone heard.
Trouble record taken.
TGT, sender, trunk number designations perforated.

Note: If trouble record is not taken within
4.5 seconds, ensure that marker is in light
traffic by making it busy. Repeat test.

Overflow tone silenced.

With marker in heavy traffic
In 20 to 32 seconds—
TO_ lamp momentarily lighted.
Overflow tone heard.

Overflow tone silenced.
### SECTION 218-150-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At distant office— Have trunk removed from service.</td>
<td>OK lamp lighted.</td>
</tr>
<tr>
<td>13</td>
<td>At MTF— Momentarily operate ST key.</td>
<td>OK lamp extinguished.</td>
</tr>
<tr>
<td>14</td>
<td>Momentarily operate RL key.</td>
<td></td>
</tr>
<tr>
<td>15c</td>
<td>If 2-way trunk is used for selected outgoing route— At distant office— Have trunk restored to service.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>At MTF— Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
<tr>
<td>17a</td>
<td>If office is equipped with stuck sender trunk identifier circuit— Operate SSI or ACTR key, as required.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Operate (pull-out) CTR, key associated with sender under test, if required.</td>
<td></td>
</tr>
</tbody>
</table>

### D. Abandoned Call—Non-AMA

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart Test 77.</td>
<td></td>
</tr>
<tr>
<td>12c</td>
<td>If 2-way trunk is used for selected outgoing route— At distant office— Have trunk removed from service.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>At MTF— Momentarily operate ST key.</td>
<td>OK lamp lighted.</td>
</tr>
<tr>
<td>14</td>
<td>Momentarily operate RL key.</td>
<td>OK lamp extinguished.</td>
</tr>
<tr>
<td>15c</td>
<td>If 2-way trunk is used for selected outgoing route— At distant office— Have trunk restored to service.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>At MTF— Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
<tr>
<td>17a</td>
<td>If office is equipped with stuck sender trunk identifier circuit— Operate SSI or ACTR key, as required.</td>
<td></td>
</tr>
</tbody>
</table>
STEP

18 Operate (pull-out) CTR key associated with sender under test, if required.

E. AMA Transverter Trouble Release

11 Operate keys and set switches in accordance with Test Chart Test 78.

12 At MTF—
Momentarily operate ST key.

13 Momentarily operate RL key.

14 Restore TOF key, if operated.

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

16a #If office is equipped with stuck sender trunk identifier circuit—
Operate SSI or ACTR key, as required.

17 Operate (pull-out) CTR key associated with sender under test, if required.

F. Delay Pulsing of Last Digit—AMA Call

11 Operate keys and set switches in accordance with Test Chart Test 79.

12 At MTF—
Momentarily operate ST key.

13 Momentarily operate RL key.

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

15a #If office is equipped with stuck sender trunk identifier circuit—
Operate SSI or ACTR key, as required.

16 Operate (pull-out) CTR key associated with sender under test, if required.

G. No-Digits Call—AMA

11c If sender is not arranged for reduced timing interval and is not arranged to indicate when connected to transverter—
STEP  ACTION  VERIFICATION

Operate keys and set switches in accordance with Test Chart Test 80.

12c  At MTF— Momentarily operate ST key.  OK lamp lighted.
     Momentarily operate RL key.  Overflow tone not heard.

13c  Momentarily operate RL key.  All lamps extinguished.

14d  If sender is arranged to reduce timing interval and is arranged to release if timing circuit functions before connection is made to transverter—
     Operate keys and set switches in accordance with Test Chart Test 81.

15d  At MTF—
     Insert make-busy plugs into MB_ jacks of all senders that use same transverter-connector as sender under test (refer to paragraph 1.06).

16d  Momentarily operate ST key; **start timing.**

17d  Momentarily operate RL key.

18d  Remove make-busy plugs from MB_ jacks of all senders made busy in Step 15d.

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

20a  •If office is equipped with stuck sender trunk identifier circuit—
     Operate SSI or ACTR key, as required.

21  Operate (pull-out) CTR_ key associated with sender under test, if required.

**H. Trunk Reversed—Off-Hook to On-Hook**

11  Operate keys and set switches in accordance with Test Chart Test 82.

12c  If 2-way trunk is used for selected outgoing route—
     At distant office—
     Have trunk removed from service.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
</table>
| 13   | At MTF—  
      | Momentarily operate ST key. |

<table>
<thead>
<tr>
<th>VERIFICATION</th>
</tr>
</thead>
</table>
| If non-wire-spring relay type senders using  
  Fig. A—  
  OK lamp lighted.  
  Overflow tone heard.  
If non-wire-spring-relay type senders using  
  Fig. B or wire-spring-relay type senders—  
  In 20 to 32 seconds—  
  OK lamp lighted.  
  Overflow tone heard. |

| 14   | Momentarily operate RL key. |

| 15c  | If 2-way trunk is used for selected outgoing route—  
      | At distant office—  
      | Have trunk restored to service. |

| 16   | Repeat Steps 11 through 15c, as required for Test 83. |

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

| 18a  | *If office is equipped with stuck sender trunk identifier circuit—  
      | Operate SSI or ACTR key, as required. |

| 19   | Operate (pull-out) CTR_ key associated with sender under test, if required.* |

---

**1. Trunk Reversed—Initial Off-Hook**

| 11   | Operate keys and set switches in accordance with Test Chart Test 84. |

| 12c  | If 2-way trunk is used for selected outgoing route—  
      | At distant office—  
      | Have trunk removed from service. |

| 13   | At MTF—  
      | Momentarily operate ST key. |

| 14   | Momentarily operate RL key. |

| 15c  | If 2-way trunk is used for selected outgoing route—  
      | At distant office—  
      | Have trunk restored to service. |

|  | OK lamp lighted.  
  | Overflow tone heard.  
|  | All lamps extinguished.  
<p>| Overflow tone silenced. |</p>
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Repeat Steps 11 through 15c, as required for Test 85.</td>
<td></td>
</tr>
</tbody>
</table>
| 17   | At MTF—  
      Restore all keys and switches not required in next test. |            |
| 18a  | If office is equipped with stuck sender trunk identifier circuit—  
      Operate SSI or ACTR key, as required. |            |
| 19   | Operate (pull-out) CTR_ key associated with sender under test, if required. |            |

J. Stop Dial Signal

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart Test 86.</td>
<td></td>
</tr>
</tbody>
</table>
| 12c  | If 2-way trunk is used for selected outgoing route—  
      At distant office—  
      Have trunk removed from service. |            |
| 13   | At MTF—  
      Momentarily operate ST key. | OK lamp lighted. |
| 14   | Momentarily operate RL key. | All lamps extinguished. |
| 15c  | If 2-way trunk is used for selected outgoing route—  
      At distant office—  
      Have trunk restored to service. |            |
| 16   | Repeat Steps 11 through 15c, as required for Test 87. |            |
| 17   | At MTF—  
      Restore all keys and switches not required in next test. |            |
| 18a  | If office is equipped with stuck sender trunk identifier circuit—  
      Operate SSI or ACTR key, as required. |            |
| 19   | Operate (pull-out) CTR_ key associated with sender under test, if required. |            |

K. Distant Trunk Reversed or Busy

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart Test 88.</td>
<td></td>
</tr>
</tbody>
</table>
STEP | ACTION | VERIFICATION
--- | --- | ---
12c | If 2-way trunk is used for selected outgoing route— At distant office— Have trunk removed from service. | If nonwire-spring-relay type senders with options XC and XE— OK lamp lighted. Overflow tone heard. If nonwire-spring-relay type senders with options XD and XE, or wire-spring-relay type senders— OK lamp lighted. If sender class relays CL2 and CL6 operated, or if CL2, CL3, and CL6 relays non-operated— Overflow tone heard. If sender class relay CL2 operated— Overflow tone not heard. All lamps extinguished. Overflow tone silenced, if heard. |

13 | At MTF— Momentarily operate ST key. | |

14 | Momentarily operate RL key. | |

15c | If 2-way trunk is used for selected outgoing route— At distant office— Have trunk restored to service. | |

16 | Repeat Steps 11 through 15c, as required for Test 89. | |

17 | At MTF— Restore all keys and switches not required in next test. | |

18a | ◊If office is equipped with stuck sender trunk identifier circuit— Operate SSI or ACTR key, as required. | |

19 | Operate (pull-out) CTR_ key associated with sender under test, if required.◊ | |

L. Battery and Ground Pulsing

11 | Operate keys and set switches in accordance with Test Chart Test 90. | |

12c | If 2-way trunk is used for selected outgoing route— At distant office— Have trunk removed from service. | |
SECTION 218-150-501

STEP | ACTION | VERIFICATION
---|---|---
13 | At MTF—
Momentarily operate ST key. | OK lamp lighted.
| | | Note: Ensure that battery clicks are not heard at end of outpulsing.
14 | Momentarily operate RL key. | All lamps extinguished.
15 | Restore BGO key. | OK lamp lighted.
16 | Momentarily operate ST key. | All lamps extinguished.
17 | Momentarily operate RL key. | 
18c | If 2-way trunk is used for selected outgoing route—
At distant office—
Have trunk restored to service. | 
19 | Repeat Steps 11 through 18c, as required for Test 91. | 
20 | At MTF—
Restore all keys and switches not required in next test. | 
21a | If office is equipped with stuck sender trunk identifier circuit—
Operate SSI or ACTR key, as required. | 
22 | Operate (pull-out) CTR key associated with sender under test, if required. | 

M. Timing Test

11 | Operate keys and set switches in accordance with Test Chart Test 92. | 
12c | If 2-way trunk is used for selected outgoing route—
At distant office—
Have trunk removed from service. | 
13 | At MTF—
Momentarily operate ST key; start timing. | TMT lamp lighted.
| | | In 20 to 32 seconds—
OK lamp lighted.
| | | Overflow tone heard.
14 | Momentarily operate RL key. | All lamps extinguished.
15 | Restore TMT, SDT1 keys. | Overflow tone silenced.
16d If sender is arranged for AMA—Insert make-busy plugs into MB_jacks of all senders that use same transverter-connector as sender being tested (refer to paragraph 1.06).

17d Operate SDT3, STVT keys.

18d Momentarily operate ST key; start timing. TK1 lamp momentarily lighted.
In 7 to 11 seconds—OK lamp lighted.

19d Momentarily operate RL key. OK lamp extinguished.

20d Restore SDT3, STVT keys.

21d Remove make-busy plugs from MB_jacks of all senders made busy in Step 16d.

22c If 2-way trunk is used for selected outgoing route—At distant office—Have trunk restored to service.

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

24a ♦If office is equipped with stuck sender trunk identifier circuit—Operate SSI or ACTR key, as required.

25 Operate (pull-out) CTR_key associated with sender under test, if required♦.

M.1 TM Timer Recycle

1 At MTF—Insert make-busy plug into MB_jack associated with sender under test.

2 At sender frame—At sender under test—Block nonoperated TRL relay.

3 Block operated ON relay, start timing. In 20 to 32 seconds—TM relay operated.

4 Record length of TM timing.

5 Remove blocking tool from ON relay. TM relay released.

6 Block operated TTI relay.
### SECTION 218-150-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Block operated ON relay; <strong>start timing.</strong></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Within 3 seconds prior to the end of TM timing— Manually operate ATC1 relay for 1 second.</td>
<td>In 20 to 32 seconds— TM relay not operated. In 38 to 74 seconds after operation of ON relay— TM relay operated.</td>
</tr>
<tr>
<td>9</td>
<td>Remove blocking tool from ON relay.</td>
<td>TM relay released.</td>
</tr>
<tr>
<td>10</td>
<td>Block operated SG, SG1 relays.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Repeat Steps 7, 8, and 9, as required.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Remove blocking tools from TT1, SG, SG1, TRL relays.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td><strong>At MTF—</strong> Remove make-busy plug from MB_ jack associated with sender under test.</td>
<td></td>
</tr>
</tbody>
</table>

### N. Cancel Time Release and Alarm Test

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart Test 94.</td>
<td></td>
</tr>
<tr>
<td>12b</td>
<td>◆ If office is equipped with alarm surveillance and control feature and the interface and control circuit is arranged to control the sender timed release feature— Advise remote alarm center by telephone to release stuck sender holding feature, if activated.◆</td>
<td></td>
</tr>
<tr>
<td>13c</td>
<td>If 2-way trunk is used for selected outgoing route— At distant office— Have trunk removed from service.</td>
<td></td>
</tr>
<tr>
<td>14d</td>
<td>◆ At MTF— If CTR_ key associated with sender under test is released (pushed-in)— Operate (pull-out) CTR_ key.◆</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Momentarily operate ST key; <strong>start timing.</strong></td>
<td>In 20 to 32 seconds— TO_ lamp lighted. Overflow tone not heard. In 10 to 15 seconds after TO_ lamp lighted— R-S-TOA lamp lighted. Major alarm sounds.</td>
</tr>
</tbody>
</table>
16. Insert make-busy plug into MB_jack associated with sender under test.

17. Restore (push-in) CTR_key associated with sender under test.

18. Momentarily operate RL key.

19. Remove make-busy plug from MB_jack associated with sender under test.

20. Restore DISC key.

21e. If alarm sending circuit is provided—
Operate (pull-out) CTR_key associated with sender under test.

22. Operate transfer key to DB position (if provided) or to TR position.

Note: All alarms will be transferred while key is operated.

23.Momentarily operate ST key; start timing.

24. Operate DISC key.

25. Momentarily operate RL key.

26. Operate transfer key to NTR position.

27. Momentarily operate RL key.

28. Restore DISC key.

29c. If 2-way trunk is used for selected outgoing route—
At distant office—
Have trunk restored to service.

30. Repeat Steps 11 through 29c, as required for Test 95.
31  At MTF—
   Restore all keys and switches not required in
   next test.

32a  If office is equipped with stuck sender trunk
      identifier circuit—
      Operate SSI or ACTR key, as required.

33b  If office is equipped with alarm surveillance
      and control feature and the interface and
      control circuit is arranged to control the sender
      timed release feature—
      Advise remote alarm center by telephone to
      reactivate stuck sender holding feature, if
      required.

34f  If CTR. key associated with sender under
      test is released (pushed-in)—
      Operate (pull-out) CTR. key, if required.

N.1  Stuck Sender Trunk Identification

11b  If office is equipped with alarm surveillance
      and control feature and the interface and
      control circuit is arranged to control the sender
      timed release feature—
      Request remote alarm center by telephone to
      release stuck sender holding feature, if activated.

      Note: The stuck sender trunk identifier
      circuit is disabled when the stuck sender
      holding feature is activated at the remote
      alarm center.

12  Operate keys and set switches in accordance
    with Test Chart Test 96.

13c  If 2-way trunk is used for selected outgoing
    route—
    At distant office—
    Have trunk removed from service.

14d  At MTF—
    If CTR. key associated with sender under
    test is released (pushed-in)—
    Operate (pull-out) CTR. key.

15  Momentarily operate ST key; start timing.

      TMT lamp lighted.
      In 20 to 32 seconds—
      TO. lamp lighted.
      In 10 to 15 seconds—
      R-S-TOA lamp lighted.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Insert make-busy plug into MB_jack associated with sender under test.</td>
<td>Major alarm sounds. R-S-TOA lamp extinguished. Major alarm silenced. SSTI lamp lighted. In 20 to 25 seconds— UH/RH, FT, FU, SWT, SW, VU lamps lighted indicating OSL switch and vertical associated with stuck sender. <strong>Note:</strong> If no sender is stuck, the END lamp will light at the end of the scan cycle and remain lighted until the SSI key is restored. SSTI, LH/RH, FT, FU, SWT, SW, VU lamps extinguished. OK lamp lighted. All lamps extinguished.</td>
</tr>
<tr>
<td>17</td>
<td>Operate SSI key.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Restore SSI key.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Restore (push-in) CTR_key associated with sender under test.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Momentarily operate RL key.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Remove make-busy plug from MB_jack associated with sender under test.</td>
<td></td>
</tr>
<tr>
<td>22e</td>
<td>If automatic tracing feature is provided— Operate ACTR key.</td>
<td></td>
</tr>
<tr>
<td>23e</td>
<td>Momentarily operate ST key; <strong>start timing.</strong></td>
<td>TMT lamp lighted. In 20 to 25 seconds— MN-SSTI lamp lighted. Minor alarm sounded. Trouble record taken. SSTI, OSG, SSA/SSB, OS designsations perforated indicating sender group assignment. LH/RH, FT, FU, SWT, SW, VU designsations perforated indicating OSL switch and vertical associated with stuck sender.</td>
</tr>
<tr>
<td>24e</td>
<td>Restore ACTR key.</td>
<td></td>
</tr>
<tr>
<td>25e</td>
<td>Momentarily operate TRR-AR key.</td>
<td>MN-SSTI lamp extinguished. Minor alarm silenced. All lamps extinguished.</td>
</tr>
<tr>
<td>26e</td>
<td>Momentarily operate RL key.</td>
<td></td>
</tr>
<tr>
<td>27c</td>
<td>If 2-way trunk is used for selected outgoing route—</td>
<td></td>
</tr>
</tbody>
</table>
### SECTION 218-150-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>Repeat Steps 12 through 27c, as required for Test 97.</td>
<td></td>
</tr>
</tbody>
</table>
| 29   | At MTF—  
|      | Restore all keys and switches not required in next test. |  |
| 30   | Operate SSI or ACTR key, as required for manual or automatic stuck sender trunk identification. |  |
| 31   | If office is equipped with alarm surveillance and control feature and the interface and control circuit is arranged to control the sender timed release feature—  
|      | Request remote alarm center by telephone to reactivate stuck sender holding feature, if required. | REM lamp lighted. |
| 32   | Operate (pull-out) CTR_ key associated with sender under test, if required. |  |

### O. Marker Reorder

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart Test 98.</td>
<td></td>
</tr>
</tbody>
</table>
| 12c  | If 2-way trunk is used for selected outgoing route—  
|      | At distant office—  
|      | Have trunk removed from service. |  |
| 13   | At MTF—  
|      | Momentarily operate ST key. | OK lamp lighted.  
|      | Overflow tone heard. |
| 14   | Momentarily operate RL key. | OK lamp extinguished.  
|      | Overflow tone silenced. |
| 15c  | If 2-way trunk is used for selected outgoing route—  
|      | At distant office—  
|      | Have trunk restored to service. |  |
| 16   | Repeat Steps 11 through 15c, as required for Test 99. |  |
| 17   | At MTF—  
|      | Restore all keys and switches not required in next test. |  |
STEP ACTION

18a *If office is equipped with stuck sender trunk identifier circuit—
Operate SSI or ACTR key, as required.

19 Operate (pull-out) CTR key associated with sender under test, if required. *

P. Antiglare Test

11 Operate keys and set switches in accordance with Test Chart Test 100.

12c If 2-way trunk is used for selected outgoing route—
At distant office—
Have trunk removed from service.

13 At MTF—
Momentarily operate ST key.

14 Momentarily operate RL key.

15 Restore SPD key.

16 Operate AGR, MOTL keys.

17 Momentarily operate ST key.

18 Momentarily operate RL key.

19c If 2-way trunk is used for selected outgoing route—
At distant office—
Have trunk restored to service.

20 Repeat Steps 11 through 19c, as required for Test 101.

21 At MTF—
Restore all keys and switches not required in next test.

22a *If office is equipped with stuck sender trunk identifier circuit—
Operate SSI or ACTR key, as required.

23 Operate (pull-out) CTR key associated with sender under test, if required.*
### P.1 Immediate Reorder on Stop Dial Signal

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart Test 102.</td>
<td>OK lamp lighted. Overflow tone heard.</td>
</tr>
<tr>
<td>12c</td>
<td>If 2-way trunk is used for selected outgoing route— At distant office— Have trunk removed from service.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>At MTF— Momentarily operate ST key.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished. Overflow tone silenced.</td>
</tr>
<tr>
<td>15c</td>
<td>If 2-way trunk is used for selected outgoing route— At distant office— Have trunk restored to service.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Repeat Steps 11 through 15c, as required for Test 103.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>At MTF— Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
<tr>
<td>18a</td>
<td>If office is equipped with stuck sender trunk identifier circuit— Operate SSI or ACTR key, as required.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Operate (pull-out) CTR. key associated with sender under test, if required.</td>
<td></td>
</tr>
</tbody>
</table>

### P.2 Open Loop Detection Between Digits

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart Test 104.</td>
<td>OK lamp lighted. Overflow tone heard.</td>
</tr>
<tr>
<td>12c</td>
<td>If 2-way trunk is used for selected outgoing route— At distant office— Have trunk removed from service.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>At MTF— Momentarily operate ST key.</td>
<td></td>
</tr>
</tbody>
</table>
STEP | ACTION | VERIFICATION
---|---|---
14 | Momentarily operate RL key. | All lamps extinguished.  
| | | Overflow tone silenced.
15c | If 2-way trunk is used for selected outgoing route—  
| | At distant office—  
| | Have trunk restored to service. | 
16 | Repeat Steps 11 through 15c, as required for Test 105. | 
17 | At MTF—  
| | Restore all keys and switches not required in next test. | 
18a | •If office is equipped with stuck sender trunk identifier circuit—  
| | Operate SSI or ACTR key, as required. | 
19 | Operate (pull-out) CTR_ key associated with sender under test, if required. • | 

Q. Intersender Timing—Wire-Spring and Nonwire-Spring Relay Type Senders

11 | Operate keys and set switches in accordance with Test Chart Test 106. | 
12c | If 2-way trunk is used for selected outgoing route—  
| | At distant office—  
| | Have trunk removed from service. | 
13 | At relay rack frame—  
| | At outgoing sender group release circuit—  
| | Block operated R_ relay of sender group associated with sender under test. | 
14 | At MTF—  
| | Momentarily operate ST key. | In 4 to 8 seconds—  
| | | Overflow tone heard.  
15 | Momentarily operate RL key. | All lamps extinguished.  
| | | Overflow tone silenced.  
16c | If 2-way trunk is used for selected outgoing route—  
| | At distant office—  
| | Have trunk restored to service. | 
17 | Repeat Steps 11 through 16c, as required for Test 107. |
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
</table>
| 18   | At relay rack frame—  
      At outgoing sender group release circuit—  
      Remove blocking tool from R relay of sender group associated with sender under test. |
| 19   | At MTF—  
      Restore all keys and switches not required in next test. |
| 20a  | ◦If office is equipped with stuck sender trunk identifier circuit—  
      Operate SSI or ACTR key, as required. |
| 21   | Operate (pull-out) CTR key associated with sender under test, if required. ◦ |

**R. Pulse Conversion Call**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart 108.</td>
</tr>
</tbody>
</table>
| 12   | At MTF—  
      Select PCR incoming class of call. |
| 13   | Momentarily operate ST key.  
      OK lamp lighted. |
| 14   | Momentarily operate RL key.  
      All lamps extinguished. |
| 15   | Repeat Steps 11 through 14, as required for Tests 109 through 113. |
| 16   | Restore all keys and switches not required in next test. |
| 17a  | ◦If office is equipped with stuck sender trunk identifier circuit—  
      Operate SSI or ACTR key as required. |
| 18   | Operate (pull-out) CTR key associated with sender under test, if required. ◦ |

**S. Sender Busy**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
</table>
| 1    | At sender frame—  
      When sender to be tested is idle—  
      Block operated SB relay. |
| 2    | At MTF—  
      Insert make-busy plugs into MB jacks of all other senders in subgroup associated with sender under test (refer to paragraph 1.06).  
      At sender frame—  
      **Nonwire-spring-relay type senders**  
      ◦Check for absence of ground on terminal 19 of terminal strip C and terminals 29 and 30 of terminal strip D on sender control unit. ◦ |
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>At MTF— Insert make-busy plug into MB_jack associated with sender under test.</td>
<td><strong>Wire-spring-relay type senders</strong> Check for absence of ground on terminals 16, 26 of terminal strip A and terminal 17 of terminal strip B on sender control unit.</td>
</tr>
<tr>
<td>4</td>
<td>At sender under test— Remove blocking tool from SB relay.</td>
<td>At sender frame— <strong>Nonwire-spring-relay type senders</strong> Check for absence of ground on terminal 19 of terminal strip C and terminals 29 and 30 of terminal strip D on sender control unit. <strong>Wire-spring-relay type senders</strong> Check for absence of ground on terminals 16, 26 of terminal strip A and terminal 17 of terminal strip B on sender control unit.</td>
</tr>
<tr>
<td>5</td>
<td>At MTF— Remove make-busy plug from MB_jack associated with sender under test.</td>
<td></td>
</tr>
<tr>
<td>6a</td>
<td>If option is provided for elimination of stuck sender plant registration on test calls when sender is made busy at MTF— At MTF— Insert make-busy plug into MB_jack of sender under test.</td>
<td><strong>Nonwire-spring-relay type senders</strong> Check for absence of ground on terminal 32 of terminal strip D on sender control unit. <strong>Wire-spring-relay type senders</strong> Check for absence of ground on terminal 36 of terminal strip A on sender control unit.</td>
</tr>
<tr>
<td>7a</td>
<td>At sender under test— Block operated CT, TRL relays.</td>
<td></td>
</tr>
<tr>
<td>8a</td>
<td>At MTF— Remove make-busy plug from MB_jack of sender under test.</td>
<td><strong>Nonwire-spring-relay type senders</strong> Check for presence of ground on terminal 32 of terminal strip D on sender control unit. <strong>Wire-spring-relay type senders</strong> Check for presence of ground on terminal 36 of terminal strip A on sender control unit.</td>
</tr>
<tr>
<td>STEP</td>
<td>ACTION</td>
<td>VERIFICATION</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>--------------</td>
</tr>
<tr>
<td>9a</td>
<td>At sender under test—  Remove blocking tool(s) placed in Step 7a.</td>
<td>At sender frame—  <strong>Nonwire-spring-relay type senders</strong>  Check for presence of ground on terminal 5 of terminal strip D on sender control unit.  <strong>Wire-spring-relay type senders</strong>  Check for presence of ground on terminal 32 of terminal strip A of sender control unit.</td>
</tr>
<tr>
<td>10b</td>
<td>If option is provided for TUR maintenance busy indication in offices equipped with alarm surveillance and control feature—  At MTF—  Insert make-busy plug into MB_jack of sender under test.</td>
<td>At sender frame—  <strong>Nonwire-spring-relay type senders</strong>  Check for absence of ground on terminal 5 of terminal strip D on sender control unit.  <strong>Wire-spring-relay type senders</strong>  Check for absence of ground on terminal 32 of terminal strip A of sender control unit.</td>
</tr>
<tr>
<td>11b</td>
<td>At MTF—  Remove make-busy plug from MB_jack of sender under test.</td>
<td>At MTF—  TO_ lamp lighted.  Major alarm sounded.  At sender frame—  <strong>Nonwire-spring-relay type senders</strong>  Check for presence of ground on terminal 5 of terminal strip D on sender control unit.  <strong>Wire-spring-relay type senders</strong>  Check for presence of ground on terminal 32 of terminal strip A of sender control unit.</td>
</tr>
<tr>
<td>12b</td>
<td>At sender under test—  Block operated TRL relay.</td>
<td>At MTF—  TO_ lamp extinguished.  Major alarm silenced.</td>
</tr>
<tr>
<td>13b</td>
<td>Remove blocking tool placed in Step 12b.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Remove all make-busy plug placed in Step 2.</td>
<td></td>
</tr>
</tbody>
</table>

**T. Directory Assistance Charging**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Operate keys and set switches in accordance with Test Chart Test 114.</td>
<td>OK lamp lighted.  Two trouble records taken.  <strong>Both trouble records</strong>  FR_, CN_, S_ calling line location, OBS or</td>
</tr>
<tr>
<td>12c</td>
<td>If 2-way trunk is used for selected outgoing route—  At distant office—  Have trunk removed from service.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Operate REC key.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Momentarily operate ST key.</td>
<td></td>
</tr>
</tbody>
</table>
15 Momentarily operate RL key.

16c If 2-way trunk is used for selected outgoing route—
   At distant office—
   Have trunk restored to service.

17 Repeat Steps 11 through 16c, as required for Tests 115 through 117.

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

19a If office is equipped with stuck sender trunk identifier circuit—
   Operate SSI or ACTR key as required.

20 Operate (pull-out) CTR_ key associated with sender under test if required.
5. PREPARATION OF TEST CHART

5.01 The Test Chart is used as a particular number chart and provides the priming information required for each test. Information obtained from local office records should be used to fill in the Test Chart in the following manner:

(a) Selection of a Particular Trunk:
When it is desired to use a particular trunk for test, select the trunk as follows:

Note: When 2-way trunks are required to be used for the selected outgoing route, a particular trunk must always be selected.

(1) Consult local office records for location of desired trunk. Whenever possible, avoid the use of 2-way and intertoll trunks.

(2) In the TRUNK SELECTION column, record trunk location.

(3) In the MISCELLANEOUS KEYS AND/OR SWITCHES column, record FS, TS keys.

(4) Record CX key when trunk selected requires CX supervision.

(5) Record C20H key when 2-way or intertoll trunk is selected.

(6) Record GPA or GPB key when the trunks served by the sender are in allotted groups.

(7) Record CC4 when coin zone trunk or junctor arranged for local zone calls are selected.

(8) Record TOL-RB key when trunk is arranged for E-M signaling and reverse battery supervision through the switches.

(b) When it is necessary to simulate a test call from an incoming trunk to reach a desired outgoing tandem or intertoll trunk, select an incoming subclass of test required for the selected route.

(c) For non-DDD calls, record the called A-, B-, and C_ digits for an office code that can be reached by the sender.

(d) For DDD calls, record the called A-, B-, and C_ digits for the area code sent by the sender and the office code D-, E-, and F_ digits.

(e) Record originating class of call and translator indication required by the marker to select a route and sender group.

(f) Record the various classes of service for line locations and routes selected. When office is provided with rate treatment, record various rate treatments.

(g) Record any arbitrary digits, sender class marks, and delete digit marks in appropriate columns of MISCELLANEOUS INFORMATION.

(h) Record the line location if a particular calling line location is required.

(i) Record NTC key in MISCELLANEOUS KEYS AND/OR SWITCHES column when a particular line location (h) is required.

(j) Record the called customer directory number in DIGITS—CODE AND NUMBER (CALLED NUMBER) column.

5.02 Test A:

(1) Determine from local office records the following:

(a) The office code for each office that can be reached by the sender being tested on an AMA or non-AMA basis.

(b) The DDD codes being sent by the sender.

(2) For Tests 1 through 34, apply (a), (c), and (e) through (i) of paragraph 5.01, selecting AMA office codes and classes of services that will check all office code (A-, B-, and C_), class (CL_), and deletion (DL_) leads used for this type of call.

(3) For Tests 35 through 44, apply (a), (d), and (e) through (i) of paragraph 5.01, selecting DDD codes used with AMA or CAMA and classes of service. When call is AMA, record SDTI, REC keys in MISCELLANEOUS KEYS AND/OR SWITCHES column.
(4) For Tests 45 through 62, apply (a) through (i) of paragraph 5.01, selecting office codes and classes of service that do not require AMA.

(5) For Tests 63 through 66, apply (a) through (i) of paragraph 5.01, selecting office codes and classes of service that require 2-way or intertoll routing.

(6) For Tests 67 and 68, apply (a) through (i) of paragraph 5.01, selecting office codes and classes of service that require coin zone trunk or junctor routing.

(7) For Test 69, apply (a) through (i) of paragraph 5.01, selecting office code and class of service that requires local coin zone trunk or junctor routing.

(8) For Tests 70 and 71, apply (a) through (i) of paragraph 5.01, selecting office code and class of service that require tandem trunk routing (non-AMA).

(9) For Tests 72 and 73, apply (a) through (i) of paragraph 5.01, selecting office code and class of service for CCSA AMA tandem trunk routing.

5.03 Test B:

(1) Do not use 2-way, intertoll, or coin zone trunks.

(2) Apply (a) through (i) of paragraph 5.01.

5.04 Test C:

(1) Apply (a) through (i) of paragraph 5.01, selecting an AMA office code, class of service, and a particular trunk.

5.05 Test D:

(1) This test cannot be made on ANI calls.

(2) Apply (a) through (i) of paragraph 5.01, selecting a non-AMA office code, class of service, and a particular trunk.

5.06 Test E:

(1) Do not use 2-way or intertoll trunks.

(2) Apply (a) through (i) of paragraphs 5.01, selecting an office code and class of service for a detail-billed AMA call. When a bulk-billed AMA call must be used, record TOF key in MISCELLANEOUS KEYS AND/OR SWITCHES column.

5.07 Test F:

(1) Do not use 2-way or intertoll trunk.

(2) Apply (a) through (i) of paragraph 5.01, selecting an AMA office code and class of service.

5.08 Test G:

(1) Do not use 2-way or intertoll trunk.

(2) Apply (a) through (i) of paragraph 5.01, selecting an office code using AMA and interoffice trunk requiring AMA routing.

(3) When senders are not arranged for reduced timing interval, perform Test 80.

(4) When senders are arranged for reduced timing interval, perform Test 81.

5.09 Test H:

(1) Select an office code that will operate sender class relay CL3.

(2) Apply (a) through (j) of paragraph 5.01.

5.10 Test I:

(1) Select an office code that will not operate sender class relays CL2, CL3, or CL6.

(2) Apply (a) through (j) of paragraph 5.01.

5.11 Test J:

(1) Select an office code that will operate sender class relay CL2, CL2 and CL6, or a code that will not operate sender class relays CL2, CL3, or CL6.

(2) Apply (a) through (j) of paragraph 5.01.

5.12 Test K:
(1) Select an office code that will operate sender class relay CL2, CL2 and CL6, or a code that will not operate sender class relays CL2, CL3, or CL6.

(2) Apply (a) through (j) of paragraph 5.01.

5.13 Test L:

(1) Select an office code that will operate class relay CL5 of the sender.

(2) Apply (a) through (j) of paragraph 5.01.

5.14 Tests M, N, O, P, P.1, P.2, and Q:

(1) For AMA offices, select an AMA office code and class-of-service.

(2) For non-AMA offices, select a non-AMA office code and class-of-service.

(3) Tests M, N, and O require interoffice codes.

(4) Test P requires an office code that will operate sender class relays CL2 and CL6. Nonwire-spring-relay type senders must be equipped with Fig. 13.

(5) Test P.1 requires an office code that will not operate sender class relays CL2, CL3, or CL6.

(6) Tests M, N, and Q cannot be made on trunks with CX supervision.

(7) Apply (a) through (j) of paragraph 5.01.

5.15 Test R:

(1) For pulse conversion calls, record the PCD or PCD1 key as required under the miscellaneous MASTER TEST CONTROL column.

5.16 Test T:

(1) Apply (a), (e), (f), (h), and (i) of paragraph 5.01, selecting a class of service requiring AMA routing.