PLANT REGISTERS

TESTS

NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes methods of testing the plant registers used in No. 1 crossbar offices.

1.02 This section is reissued to add Tests AK and AL.

This issue affects the Equipment Test List.

1.03 The tests covered are:

A. Incoming Trunk Test Line Group Busy Register: This test checks that a plant register operates when all test lines in the group are busy.

B. Originating Marker Trouble Release Register: This test checks that a plant register operates when an originating marker reaches the trouble release position.

C. Terminating Marker Trouble Release Register: This test checks that a plant register operates when a terminating marker reaches the trouble release position.

D. Stuck Sender Register: This test checks that a plant register operates when one per group or subgroup of subscriber senders, auxiliary senders, key pulsing senders, or number checking senders fails to release within allotted time after registration is completed.

E. Subscriber Sender Partial Dial Register: This test checks that a plant register operates when a timed release subscriber sender fails to complete registration within the allotted time.

F. False Start Register—Subscriber Sender Link, Auxiliary Subscriber Sender Link, and Controller: This test checks that a plant register operates if the tip or ring is open between the line circuit vertical unit and subscriber sender when originating a call or if the customer disconnects just after a sender is seized.

G. False Start Register—“A” Sender Link and Controller and Coin Supervisory Link and Controller: This test checks that a plant register operates if the tip or ring is open between the operator trunk circuit and the “A” sender or between the coin district junctor and the coin supervisory circuit.

H. Controller Trouble Register: This test checks that a plant register operates if there is a delay of more than the allotted time in handling a call through the line link, subscriber sender link, “A” sender link, auxiliary subscriber sender link, or coin supervisory link and controller circuits.

I. Registers of Terminating Sender Test Circuit, Originating Sender Test Circuit, District Junctor Test Circuit, Incoming Trunk Test Circuit, and Zone Registration Test and Timing Circuit: This test

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checks the CT, RST, PB, and ST registers of each test circuit. .................. 10

J. Waiting Assignment Register:  
This test checks that a plant register operates when a subscriber sender in the group fails to advance while waiting assignment. .......................... 11

K. Deleted.

L. Deleted.

M. Mutilated Digit Register: This test checks the MTD register used for recording the number of times TOUCH-TONE® calling signal-to-dial-pulse converter circuit or subscriber sender circuit SD-27310-01 encounters digit registration trouble. .......................... 11

N. TOUCH-TONE Sender Load:  
This test checks the register that records the number of times the TOUCH-TONE calling part of a partially converted subscriber sender group reaches a predetermined load condition. .......................... 12

O. DID OG Sender—Stuck Sender and Trunk Guard Failures:  
This test checks the registers that record the number of stuck sender and trunk guard failures encountered by the DID LLP outgoing senders. .......................... 13

P. DID First Trial Translator Failure: This test checks the register that records the number of failures encountered by the translators on a first trial basis. .......................... 14

AA. Deleted.

AB. Deleted.

AC. Deleted.

AD. Originating Marker and Originating Marker Second Trial Failure: This test checks the registers that record the number of originating marker seizures and the number of originating marker second trial failures. OMPC register records seizures per originating marker. OMC register records seizures per originating marker group. OM2F register records second trial failures per originating marker group. .......................... 14

AE. Terminating Marker and Terminating Marker Second Trial Failure: This test checks the registers that record the number of terminating marker seizures and the number of terminating marker second trial failures. TMPC register records seizures per terminating marker. TMC register records seizures per terminating marker group. TM2F register records second trial failures per terminating marker group. .......................... 14

AF. DP and MF Outgoing Sender Starts—LLP Offices: This test checks the registers that record the DP and MF outgoing sender starts in offices provided with line link pulsing. DPCA and DPCB registers record starts per DP outgoing sender group per terminating marker group. DPC register records starts per terminating marker group. MFCA and MFCB registers record starts per MF outgoing sender group per terminating marker group. MFC register records starts per terminating marker group. .......................... 15

AG. AMA Recorder Seizures: This test checks the registers that record the number of AMA recorder operations. AMPC register records operations per AMA recorder. AMAC register records operations per ten AMA recorders. .......................... 15

AH. Transverter Seizures, Two Line Bulk Billed Calls, Second Trial Failures, and Bulk Billed Free Calls: This test checks the registers that record the number of transverter seizures, two-line entries on bulk billed calls, transverter second trial failures, and bulk billed calls handled free. TVPC and 2LB registers record transverter seizures and two-line bulk
billed calls on a per transverter basis. TVC, 2LBB, TV2F, and BBF registers record transverter seizures, two-line bulk billed calls, second trial failures, and bulk billed free calls on a per transverter group basis.

AI. **Number Identification Request, Number Identification Request Failure, PBX Request, and Failure to Store:** This test checks the registers that record the number of number identification requests, number identification request failures, PBX requests, and failures to store on PBX AIOD calls.

AJ. **MF Outgoing Sender Starts and Trouble Releases—AIS Without LLP:** This test checks the registers that record the number of outgoing sender starts and trouble releases in offices provided with automatic intercept service without line link pulsing.

AK. **Originating Marker Crossed MR Leads, Message Charging System:** This test checks the registers that record the number of originating marker failures caused by two or more MR leads being crossed with each other, or an MR lead being crossed with -48 volt battery.

AL. **Simultaneous Outpulser Seizure Failure and All Outpulsers Busy, ANI-B:** This test checks the registers that record the number of times an outgoing trunk fails to seize an outpulser within 3 to 6.24 seconds because of an all outpulsers busy condition.

### 3. METHOD

#### 1. **Incoming Trunk Test Line Group Busy Register**

1. At incoming trunk test line circuit—Insert 349A plugs into MB jacks of all incoming

### 1.04 The plant register readings should be noted before and after tests in accordance with local instructions.

### 1.05 Where SS and PD registers for auxiliary senders also appear at the traffic register rack, the register readings should be noted before and after the tests are made and forwarded in accordance with local instructions.

### 1.06 The tests of registers required for the service results plan are included in Tests AD through AH, and AJ.

### 1.07 **Lettered Steps:** A letter a, b, c, etc, added to a step number in Part 3 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 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.

#### 2. **APPARATUS**

2.01 349A (make-busy) plugs as required.

2.02 322A (make-busy) plugs as required.

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

Tests F and G

2.04 1011G dial hand test set, equipped with W3AA cord (3W8A cord assembly).

Tests AJ and AL

2.05 1W13A cord equipped with two KS-6278 tools.

#### 3. **METHOD**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At incoming trunk test line circuit—Insert 349A plugs into MB jacks of all incoming</td>
</tr>
</tbody>
</table>

#### VERIFICATION
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#### STEP 216-763-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Remove and reinsert plug into one of the MB jacks.</td>
<td>GB register scores when plug is reinserted into MB jack.</td>
</tr>
<tr>
<td>3</td>
<td>Repeat Step 2 for each test line in group.</td>
<td>GB register scores when plug is reinserted into MB jack.</td>
</tr>
<tr>
<td>4</td>
<td>Remove 349A plugs from MB jacks of all circuits in group.</td>
<td>GB register scores when plug is reinserted into MB jack.</td>
</tr>
</tbody>
</table>

#### B. Originating Marker Trouble Release Register

1. At originating trouble indicator frame—
   Insert a 322A plug into DB jack of originating marker associated with trouble release register under test.

2. At originating marker—
   Momentarily short-circuit 6T, 7T springs of TR relay.

3. At originating trouble indicator frame—
   Remove 322A plug from DB jack.

#### C. Terminating Marker Trouble Release Register

1. At terminating trouble indicator frame—
   Insert a 322A plug into DB jack of terminating marker associated with trouble release register under test.

2. At terminating marker—
   Momentarily short-circuit 10T, 11T springs of TR relay.

3. At terminating trouble indicator frame—
   Remove 322A plug from DB jack.

#### D. Stuck Sender Register

### Subscriber Senders

1. At sender make-busy frame—
   Make certain that there are no stuck subscriber senders in group or subgroup.

2a. If timed release is provided—
   Pull out CTR key associated with subscriber sender under test.
STEP  | ACTION                                                                                                                                                                                                                                                                                                                                                       | VERIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
  3b    | If sender monitoring is provided— Establish a talking connection with monitoring operator and request that stuck sender signals be transferred promptly.                                                                                                                                                                                                                                                                  | At sender make-busy frame— Associated stuck sender lamp lights and stuck sender (SS) register scores within 60 to 80 seconds after test circuit RLS lamp lighted.                                                                                                                                                                                                                                                                                                                                                       |
  4     | At originating sender test frame— Set up a stuck sender timing test call (skip office and full selector code) as outlined in Section 216-251-501.                                                                                                                                                                                                                                               | Stuck sender lamp extinguished.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
  5     | Operate ST key.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Originating sender test circuit advances to next sender.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
  6a    | If timed release is provided— Push in CTR key associated with stuck sender at sender make-busy frame.                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
  7     | At originating sender test frame— Restore TA key. Momentarily operate CA key.                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
  8     | Repeat Steps 1 through 7 for other subscriber senders in group or subgroup.                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
  9     | Restore test circuit to normal.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
Auxiliary Senders                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
  10    | At sender make-busy frame— Make certain that there are no stuck senders in group and that CTR keys associated with subscriber and auxiliary senders are pulled out.                                                                                                                                                                                                                                                      | At sender make-busy frame— Stuck sender lamp associated with auxiliary sender lighted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
  11    | At originating sender test frame— Set up a 10-digit MF call stuck auxiliary sender-primed release test call as outlined in Section 216-251-501.                                                                                                                                                                                                                                                                             | Auxiliary sender stuck sender lamp flashes and auxiliary sender stuck sender (AS-SS) register scores within 6 to 12 seconds after test circuit EP lamp lighted.                                                                                                                                                                                                                                                                                                                                 |
### SECTION 216-763-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Restore ST key.</td>
<td>Test circuit restored to normal.</td>
</tr>
<tr>
<td>15</td>
<td>Momentarily operate CA key.</td>
<td>At sender make-busy frame—Auxiliary sender stuck sender lamp extinguished.</td>
</tr>
<tr>
<td>16</td>
<td>Restore PAS key.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Repeat Steps 10 through 15 for other auxiliary senders in group.</td>
<td></td>
</tr>
</tbody>
</table>

#### Keypulsing Senders

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>At the sender make-busy frame—Make certain that there are no stuck senders in group and that CTR key associated with sender to be tested is pulled out.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>At originating sender test frame—Set up a stuck sender timing test call for keypulsing senders as outlined in Section 216-251-501.</td>
<td>At sender make-busy frame—Stuck sender lamp lights and associated stuck sender (KP-SS) register scores within proper time interval (40 to 60 seconds for short time-out codes and 70 to 90 seconds for long time-out codes).</td>
</tr>
<tr>
<td>20</td>
<td>Operate ST key.</td>
<td>At sender make-busy frame—Stuck sender lamp extinguished.</td>
</tr>
<tr>
<td>21</td>
<td>At sender make-busy frame—Push in associated CTR key.</td>
<td>Test circuit advances to next sender.</td>
</tr>
<tr>
<td>22</td>
<td>At originating sender test frame—Restore TA key.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Momentarily operate CA key.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Repeat Steps 17 through 21 for other keypulsing senders in group.</td>
<td></td>
</tr>
</tbody>
</table>

#### Number Checking Senders

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>At sender make-busy frame—Make sure there are no stuck senders in group.</td>
<td>At sender make-busy frame—Associated stuck sender register scored.</td>
</tr>
<tr>
<td>25</td>
<td>At number checking sender—Manually hold ON relay operated from 30 to 60 seconds.</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Release ON relay.</td>
<td></td>
</tr>
</tbody>
</table>
STEP 27  Repeat Steps 23 through 25 for other number checking senders in group.

E. Subscriber Sender Partial Dial Register

1  At subscriber sender—Manually operate REG relay momentarily (not over 10 seconds).

2  Repeat Step 1 for all other subscriber senders in group.

F. False Start Register—Subscriber Sender Link, Auxiliary Subscriber Sender Link, and Controller

1  Choose a line link frame that prefers the sender link frame associated with false start register under test.

2  At line link frame—Originate a call on a spare line.

   Note: It may be necessary to originate the call a second time in order to select a given sender link frame since the preference of the line link frame for the sender link frame alternates between calls.

3  Disconnect the call immediately after line hold magnet operates. (It is necessary to disconnect at this time in order to open the line before subscriber sender link controller is restored in the normal manner.)

   Note: The false start registers of several sender link frames may be checked from one line link frame by establishing a channel to a given sender link frame by means of 349A plugs inserted into the SS0-9 jacks on the line link frame. A 349A plug inserted into an SS jack prevents the line link controller circuit from selecting that group of districts, and hence the associated sender link frame. After one sender link frame has been checked, the plugs can be shifted to establish a channel to another sender link frame.

4  Repeat Steps 1 through 3 for subscriber sender link frame associated with each false start register to be tested.
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#### ACTION

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>At subscriber sender link frame— Transfer frame to emergency controller circuit.</td>
<td>False start register associated with emergency sender link and controller circuit scored.</td>
</tr>
<tr>
<td>6</td>
<td>Repeat Steps 1 through 3.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>At subscriber sender link frame— Transfer frame from emergency controller circuit.</td>
<td></td>
</tr>
</tbody>
</table>

#### G. False Start Register—"A" Sender Link and Coin Supervisory Link and Controller

**"A" Sender Link and Controller**

1. At "A" sender link and controller circuit associated with register under test— Block nonoperated TS relay.
2. Instruct operator to start a test call through a keypulsing district junctor circuit that appears on this frame. At sender make-busy frame— False start (KSL-LF) register scored after an interval of 0.350 to 1.250 second from the time test call entered link and controller circuit.
3. Instruct operator to release test call.
4. Remove blocking tool from TS relay.

**Coin Supervisory Link and Controller**

5. At coin supervisory link and controller circuit associated with register under test— Block nonoperated TS relay.
6. At district junctor test frame— Originate a test call on a coin district junctor circuit having access to coin supervisory link and controller under test. At sender make-busy frame— False start (CSRL-LF) register scored after an interval of 0.350 to 1.250 second from the time test call entered link and controller circuit.
7. Restore district junctor test circuit to normal.
8. At coin supervisory link and controller circuit— Remove blocking tool from TS relay.

#### H. Controller Trouble Register

**Line Link Controller**

1a. If a controller trouble indicator is not provided— At line link frame associated with register At sender make-busy frame— Controller trouble (LTR) register scored.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2b</td>
<td>Momentarily operate TRL relay.</td>
<td>At sender make-busy frame— Controller trouble (LTR) register scored. At line link frame— AL lamp lighted. Minor alarm sounds.</td>
</tr>
<tr>
<td>3b</td>
<td>If a controller trouble indicator is provided— At line link frame associated with register under test— Block operated TA-1, TA-2 relays.</td>
<td>AL lamp extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>4b</td>
<td>Remove blocking tools from TA-1, TA-2 relays.</td>
<td>At sender make-busy frame— Controller trouble (LTR) register scored. At line link frame— AL lamp lighted. Minor alarm sounds.</td>
</tr>
<tr>
<td>2b</td>
<td>Operate TR key.</td>
<td>AL lamp extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>5b</td>
<td>Block operated TB-1, TB-2 relays.</td>
<td>At sender make-busy frame— Controller trouble (SSL-TR) register scored.</td>
</tr>
<tr>
<td>6b</td>
<td>Remove blocking tools from TB-1, TB-2 relays.</td>
<td>At sender make-busy frame— Trouble register (KSL-TR) scored.</td>
</tr>
<tr>
<td>7b</td>
<td>Operate TR key.</td>
<td>At sender make-busy frame— Trouble register (CSRL-TR) scored.</td>
</tr>
</tbody>
</table>

**Subscriber Sender Link, Auxiliary Subscriber Sender Link and Controller**

8 At subscriber sender link frame associated with trouble register under test— Momentarily short circuit 7B, 8B springs of AL relay.

**"A" Sender Link and Controller**

9 At "A" sender link and controller associated with trouble register under test— Momentarily operate AL relay.

**Coin Supervisory Link and Controller**

10 At coin supervisory link and controller associated with trouble register under test— Momentarily operate AL relay.
SECTION 216-763-501

STEP ACTION VERIFICATION

1. Registers of Terminating Sender Test Circuit, Originating Sender Test Circuit, District Junctor Test Circuit, Incoming Trunk Test Circuit, and Zone Registration Test and Timing Circuit

CT (Circuits Tested) Register

1. At test frame associated with the register under test— Set up test call with repeat key normal.
2. Operate ST key. CT register scored once for each circuit tested.

RST (Repeat Single Test) Register

3. Operate REP key. RST register scored once for each repeat test.
4. Restore REP, ST keys. Test circuit restored when test of circuit completed.

PB (Pass Busy) Register

5. Make busy some of circuits tested by test circuit.
6. Set up a test call on busy circuits and operate APB key. PB register scored each time test circuit passed a busy circuit.
7. Operate ST key. Test circuit restored to normal.
8. Restore APB, ST keys.
9. Momentarily operate CA key.
10. Restore to service circuits made busy for test.

ST (Single Test) Register—District Junctor Test Circuit Only

11. At district junctor test circuit— Set up test call. Operate ST key. ST register scored once for each completed test.
12. Restore ST key.
J. Waiting Assignment Register

1. At sender make-busy frame—
   Make certain that there are no stuck subscriber
   senders in group.

2. Pull out CTR keys associated with subscriber
   senders in group.

3. At sender test frame—
   Block nonoperated ASI relay of test circuit.

4. Operate TA key and the proper class, code,
   and numerical keys for a direct or tandem
   PCI test call.

5. Operate ST key.

6. Push in CTR key associated with sender under
   test.

7. Restore TA key.

8. Momentarily operate CA key.

9. Repeat Steps 1 through 7 for other senders
   in group.

10. Restore TA, ST keys.

11. Momentarily operate CA key.

12. Remove blocking tool from ASI relay.

At sender make-busy frame—
   Waiting assignment (WA) register scored and
   stuck sender lamp lighted within 60 to 80
   seconds after test circuit RLS lamp lighted.

Stuck sender lamp extinguished.

Originating sender test circuit advanced to
   next sender.

Test circuit restored to normal.

Caution: This test is to be performed
during light load periods.

TOUCH-TONE Converter Circuits

1. At sender make-busy frame—
   Insert 322A plug into GB jack of sender
   subgroup associated with dial pulse converter
   group under test.

GB lamp lighted.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>At first TOUCH-TONE converter in group— Block operated ON relay.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Block operated TBL relay.</td>
<td></td>
</tr>
</tbody>
</table>
| 4    | Momentarily operate MTD relay. | At sender make-busy frame— MTD register scored.  
| 5    | Remove blocking tools from ON, TBL relays. |  
| 6    | Repeat Steps 2 through 5 for each TOUCH-TONE converter in subgroup. |  
| 7    | At sender make-busy frame— Remove 322A plug from GB jack. | GB lamp extinguished.  
| 8    | Repeat Steps 1 through 7 for each TOUCH-TONE converter in group. |  

**Subscriber Sender SD-27810-01**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
</table>
| 9    | At sender make-busy frame— Insert 322A plug into GB jack of SD-27810-01 sender subgroup. | GB lamp lighted.  
| 10   | At first sender in subgroup— Block operated ON1 and REG relays. |  
| 11   | Momentarily operate TBL relay. | At sender make-busy frame— MTD register scored.  
| 12   | Remove blocking tools from ON1 and REG relays. |  
| 13   | Repeat Steps 10 through 12 for each sender in subgroup. |  
| 14   | At sender make-busy frame— Remove 322A plug from GB jack. | GB lamp extinguished.  
| 15   | Repeat Steps 9 through 14 for each sender in group. |  

**N. TOUCH-TONE Sender Load**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inform traffic department to disregard lamps and alarms associated with subscriber sender load.</td>
<td></td>
</tr>
</tbody>
</table>
| 2    | At sender make-busy frame— Insert 322A plugs into subscriber sender MB jacks associated with subgroup under test | TSLR register scored.  
|      |        | LR lamp lighted.  
|      |        | Minor alarm sounds.  

Page 12
STEP ACTION

3 Remove make-busy plug from lowest numbered MB jack and insert it into next higher numbered MB jack.

4 Repeat Step 3 until all senders in subgroup have been tested.

5 Remove all make-busy plugs.

6 Momentarily operate AR key.

7 Insert one less 322A plug into MB jack than is required to score register.

8 Repeat Step 7 until all senders in subgroup have been tested.

9 Remove all make-busy plugs.

10 Inform traffic department that testing is complete and to retire lamp signal if provided at "A" switchboard.

11 Repeat Steps 1 through 9 for each sender group serving TOUCH-TONE customers.

O. DID OG Sender—Stuck Sender and Trunk Guard Failures

1 At DID test circuit—
   Insert 322A plug into sender make-busy SMB jack of DP sender.

2 At DP sender—
   Block operated CT relay.

3 Momentarily operate TRL relay.

4 Block operated TG1 relay.

5 Momentarily operate TRL relay.

6 Release TG1 and CT relays.

7 At DID test circuit—
   Release made busy DP sender.

VERIFICATION

TSLR register scored.

LR lamp extinguished.
Minor alarm silenced.

TSLR register did not score.

TG F and SSG registers score.

SSF register scored.
SECTION 216-763-501

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Repeat Steps 1 through 7 for other DP senders in group or subgroup.</td>
<td></td>
</tr>
</tbody>
</table>

P. DID First Trial Translator Failure

<table>
<thead>
<tr>
<th></th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At translator preference control—Momentarily operate TRSA relay.</td>
<td>TRS register scored.</td>
</tr>
<tr>
<td>2</td>
<td>Repeat Step 1 for other TRSA relays.</td>
<td></td>
</tr>
</tbody>
</table>

AA. Deleted

AB. Deleted

AC. Deleted

AD. Originating Marker and Originating Marker Second Trial Failure

<table>
<thead>
<tr>
<th></th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At originating trouble indicator—Make busy originating marker.</td>
<td>OMPC magnetic counter and associated OMC register scored.</td>
</tr>
<tr>
<td>2</td>
<td>At originating marker—Block operated PEG1 relay.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Momentarily operate PEG relay.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Release PEG1 relay.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Block operated ARA relay.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Momentarily operate TR relay.</td>
<td>OM2F register scored.</td>
</tr>
<tr>
<td>7</td>
<td>Release ARA relay.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>At originating trouble indicator—Release originating marker.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Repeat Steps 1 through 8 for other originating markers in originating marker group.</td>
<td></td>
</tr>
</tbody>
</table>

AE. Terminating Marker and Terminating Marker Second Trial Failure

<table>
<thead>
<tr>
<th></th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At terminating trouble indicator—Make terminating marker busy.</td>
<td>TMPC magnetic counter and associated TMC register scored.</td>
</tr>
<tr>
<td>2</td>
<td>At terminating marker—Block operated CK10 relay.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Momentarily operate CK4 relay.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Block operated STF relay.</td>
<td></td>
</tr>
</tbody>
</table>
AF. DP and MF Outgoing Sender Starts—LLP Offices

1. At terminating trouble indicator—Make terminating marker busy.
2. At associated terminating marker applique—Block operated OSK and SKA relays.
3. Momentarily operate OSG0 relay.

4. Repeat Step 3, using OSG1 through OSG5 relays if provided.
5. Release SKA relay.
6. Block operated SKB relay.
7. Momentarily operate OSG0 relay.

AG. AMA Recorder Seizures

1. At district junctor test frame—Select a district junctor associated with particular recorder.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Set up local charge test using LC and STC keys.</td>
<td>AMPC magnetic counter and AMAC register scored twice.</td>
</tr>
<tr>
<td>3</td>
<td>Restore district junctor test frame to normal.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Repeat Steps 1 through 3 for each recorder furnished.</td>
<td></td>
</tr>
</tbody>
</table>

**AH. Transverter Seizures, Two-Line Bulk Billed Calls, Second Trial Failures, and Bulk Billed Free Calls**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At transverter trouble indicator—Make transverter busy.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>At transverter—Strap T2 to T3 spring of SDTA relay.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>At sender test frame—Perform test of transverter as described in Section 216-801-501, using any test which operates CK8 relay and does not result in transverter failure.</td>
<td>TVPC magnetic counter and TVC register scored.</td>
</tr>
<tr>
<td>4</td>
<td>Perform test of transverter, selecting office code and class of service that will cause a message unit billing (2L entry).</td>
<td>2LB magnetic counter and 2LBB register scored.</td>
</tr>
<tr>
<td>5</td>
<td>At transverter—Strap B1 to B2 spring of SDTA relay.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>At sender test frame—Perform test of transverter, simulating a second trial failure.</td>
<td>TV2F register scored.</td>
</tr>
<tr>
<td>7</td>
<td>Perform test of transverter, simulating a bulk-billed failure.</td>
<td>BBF register scored.</td>
</tr>
<tr>
<td>8</td>
<td>At transverter—Remove straps from T2, T3, B1 and B2 springs. of SDTA relay.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>At transverter trouble indicator—Release transverter.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Repeat Steps 1 through 9 for each transverter in group.</td>
<td></td>
</tr>
</tbody>
</table>
A1. Number Identification Request, Number Identification Request Failure, PBX Request, and Failure to Store

1. At translator circuit SD-99319-01—Strap contacts 11B and 11F of TST relay.

2. At central office test facility—Perform a long loop-around test of translator, simulating a number identification request.

3. Perform a long loop-around test of translator, simulating a number identification request failure.

4. At translator—Remove strap from contacts 11B and 11F of TST relay.

5. At SIT circuit—Perform test of PBX-AIOD equipment, simulating a PBX request. See Section 201-831-501.

6. Perform test of station identification store and control circuit, simulating a failure to store condition. See Section 201-831-501. Operate one out of five keys in station number.

A1. MF Outgoing Sender Starts and Trouble Releases—AIS Without LLP

1. Originate a service call to any intercepted number served by AIS frame associated with register sender test.


3. At outgoing sender circuit—Block operated MB relay.

4. Block operated ON and TRL relays.

5. Momentarily release MB relay.

6. Remove blocking tools in sequence from TRL, ON and MB relays.

VERIFICATION

NIR register scored.

NIR and NIRF registers scored.

PBX register scored.

FS register scored.

MFCA register scored.

MFC register scored.

AISS register scored.
**SECTION 216-763-501**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AK.</strong> Originating Marker-Crossed MR Leads-Message Charging System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>At originating trouble indicator— Insert make-busy plug into DB_ jack of marker to be tested.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>At originating marker— Block operated any S_ relay not associated with an operator class of call.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Momentarily operate the XMR1 relay.</td>
<td>At sender make-busy frame— Crossed MR lead register (XMR) scored.</td>
</tr>
<tr>
<td>4</td>
<td>At originating marker— Remove blocking tool from S_ relay.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>At originating trouble indicator— Remove make-busy plug from DB_ jack.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Repeat Steps 1 to 5 for other originating markers in the group.</td>
<td></td>
</tr>
<tr>
<td><strong>AL.</strong> Simultaneous Outpulser Seizure Failure and All Outpulsers Busy ANI-B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>At outgoing trunk circuit— Connect ground to any idle trunk, (A and ON relays normal) at 28 terminal, B terminal strip.</td>
<td></td>
</tr>
<tr>
<td>Note: Connect ground at terminal 30, B terminal strip if trunk is SD-26209-01 or SD-26210-01.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Insulate 3B of TT1 and 1M of SI relays. If trunk is PCI type (SD-26210-01), insulate 1M of CT1 relay instead of the SI relay.</td>
<td></td>
</tr>
<tr>
<td>3a</td>
<td>If trunk is coin type (SD-27814-01)— At outgoing trunk circuit— Block operated CS relay.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Block operated ON and SI relays.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>At trouble ticketer frame— Insert make-busy plugs into OP-B jacks of all outpulsers associated with trunk being tested.</td>
<td>At trouble ticketer frame— In 3 to 6.24 seconds— BSF-register scored.</td>
</tr>
<tr>
<td>6</td>
<td>At outgoing trunk circuit— Manually operate CT1 relay.</td>
<td></td>
</tr>
</tbody>
</table>
7. At outgoing trunk circuit—
   Release CT1 relay.

8. At trouble ticketer frame—
   Remove make-busy plugs from OP-B jacks of
   all outpulsers associated with trunk being
   tested.

9. Remove blocking tools from ON and SI relays.

10a. If trunk is coin type (SD-27814-04)—
    At outgoing trunk circuit—
    Remove blocking tool from CS2 relay.

11. Remove insulators from 1M of SI or CT1 relay
    and 3B of TT1 relay.

12. Remove ground from B terminal strip.

13. Repeat Steps 1 through 12 for other identifier
groups.