1. GENERAL

1.001 This addendum supplements Section 218-170-502, Issue 4.

1.002 This addendum is issued to revise 1.01 to include information relative to translator and translator connector testing when the office is arranged for LAMA-C.

This issue does not affect the Equipment Test Lists.

2. CHANGES TO SECTION

2.001 On Page 1, add the following to 1.01:

When the office is arranged for local automatic message accounting via marker scanning (LAMA-C) and the AIOD translators and translator connectors are not associated with AIOD transverters, the tests for AIOD translator SD-99319-01 and AIOD translator connector SD-99320-01 are to be performed using Section 218-798-501 - PBX=AIOD TESTS.
TRANSLATOR SD-99319-01
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES
ARRANGED FOR AIOD

1. GENERAL

1.01 This section describes a method of testing automatic identified outward dialing (AIOD) translator SD-99319-01 and AIOD translator connector SD-99320-01 circuits in No. 5 crossbar offices arranged for PBX AIOD using the master test frame (MTF).

1.02 This section is reissued for the following reason:

- To revise Test E, Step 7.

This reissue does not affect Equipment Test Lists.

1.03 The tests covered are:

A. Transposition of VF and SW Leads:
   This test checks for transpositions in the vertical file and switch leads to transverter connectors.

B. Vertical File Lead Cross Detection:
   This test checks the ability of the translator to detect on the vertical file leads, crosses, or false grounds causing two or more VF_ relays to operate.

C. Translator Identification:
   This test checks the translator identification information on a trouble recorder card for the translator number and for the vertical group number.

D. Make-Busy and Alternate Treatment:
   The following features are checked: (1) Ability of the translator connector to transmit the translator made-busy indication to each transverter. (2) Ability of the transverter to provide alternate billing treatment. (3) When

E. Transverter Preference Chain Transfer and Alarm:
   This test checks the transfer and alarm features associated with the transverter preference chain in the translator connector.

F. TB Lead Ground Detection:
   This test checks the ability of the translator connector to detect a false ground on the TB (translator busy) lead to the transverters.

G. Overlap:
   This test checks the overlap feature of the translator connector to delay the operation of the connector relays until the connector relays used in a preceding call have released.

H. Long Loop-Around:
   This test checks the translator digit registers and connector leads by using the station identification test circuit.

1.04 Test G requires actions at the MTF, translator, and translator connector frame.

1.05 Test H requires actions at the MTF and station identification test circuit.

1.06 In Tests D and G, while the translator is made busy, the cautions indicated in each test should be observed.

1.07 Lettered Steps: A letter a, b, c, etc, added to a step number in Part 3 or 4 of this section indicates an action which may or may
not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

1.08  The manner of selecting some circuits and test conditions at the MTF and its associated circuits varies depending on the apparatus options furnished with these circuits. Therefore, where variable means of selection are provided, precise instructions for the selection of circuits and test conditions are not given. Precise instructions for the use of these variable means are given in Section 218-106-301.

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

2. APPARATUS

2.01  The apparatus required for each test is listed in Table A. The details of each item are covered in the paragraph indicated by the number in parentheses.

![TABLE A](image)

<table>
<thead>
<tr>
<th>APPARATUS</th>
<th>TESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A, B, C</td>
</tr>
<tr>
<td>Master Test Control Circuit (2.02)</td>
<td>1</td>
</tr>
<tr>
<td>Station Identification Test Circuit (2.03)</td>
<td>1</td>
</tr>
<tr>
<td>Test Set (2.04)</td>
<td>1</td>
</tr>
<tr>
<td>Cord (2.05)</td>
<td>1</td>
</tr>
<tr>
<td>Cord (2.06)</td>
<td>1</td>
</tr>
<tr>
<td>322A (make-busy) Plug</td>
<td>1</td>
</tr>
<tr>
<td>Tools (2.07)</td>
<td>✓</td>
</tr>
</tbody>
</table>

✓ As required.

2.02  Master test control circuit SD-2580-01.

2.03  Station identification test circuit SD-1C005-01, Type A1 or SD-1C235-01, Type A2.

2.04  67C test set, or equivalent, equipped with a KS-6278 connecting clip (for connection to battery or ground test points).

2.05  Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 411A (test pick) tool (for use in applying momentary ground on terminal strip terminals).

2.06  Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 419A tool (for connecting ground to relay contacts).

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

3. PREPARATION

Note: The term, "translated trunk number" used in this section refers to the 4-digit number to which the PBX trunk line location has been converted by the transverter and AIOD translator.

3.01  Test A: Obtain from local records the PBX trunk line locations and associated translated trunk numbers for PBX trunks served by the translator under test. Select trunks that use at least one of each of the vertical files, one of each of the horizontal groups (switches), and one of each of the office indexes.

3.02  Tests B and D: Obtain from local records the trunk line location and the associated translated trunk number for any trunk served by the translator under test.

3.03  Test C: Obtain from local records the PBX trunk line locations and their associated translated trunk numbers for trunks served by the translator under test, selecting a trunk for each vertical group served by the translator.
3.04 **Test D:** Obtain from local records the listed directory number for any PBX trunk served by the translator under test.

3.05 **Test H:** Obtain from local records the test PBX trunk line location and the associated

---

3. **PREPARATION (Cont)**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests A Through D, H</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* Refer to 1.08 and 1.09.

1. At MTF—
   Restore all keys and switches.

2. Momentarily operate RL key. 
   All lamps extinguished.

3. Select transverter.

4a. If office is arranged for LAMA—
    Select TVT (AMA) class of test.

5b. If office is arranged for ANI—
    Select TVT (ANI) class of test.

6b. Operate ATL V key. 
    TLV lamp lighted.

7a. If office is arranged for LAMA—
    Select any recorder.

8a. Operate TLV, 4DG keys. 
    TLV lamp lighted.

9a. Select any message billing index.

10c. If office is arranged for LAMA and two digits are required for local area office code—
    Select TT-CP2.

11d. If office is arranged for LAMA and three digits are required for local area office code—
    Select TT-CP3.

12. Operate TP key.
## SECTION 218-170-502

### STEP 4. METHOD

#### A. Transposition of VF and SW Leads

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Select line location to correspond with trunk line location obtained in 3.01.</td>
<td>MRL, TLVM, TVT lamps lighted.</td>
</tr>
<tr>
<td>14</td>
<td>Select office designation of selected trunk.</td>
<td>MRL, TLVM, TVT lamps extinguished.</td>
</tr>
<tr>
<td>15</td>
<td>Select A_ through D_ digits to correspond with numericals of translated trunk number.</td>
<td></td>
</tr>
<tr>
<td>16e</td>
<td>If TSLT key is provided— Operate TSLT key.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Select office index that corresponds with translated office number.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Momentarily operate ST key.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Momentarily operate RL key.</td>
<td></td>
</tr>
<tr>
<td>20f</td>
<td>If office is equipped with more than one transverter— Repeat Steps 18, 19 for each transverter.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Repeat Steps 13 through 20f for each remaining trunk line location obtained in 3.01.</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Restore all keys and switches not required in next test.</td>
<td></td>
</tr>
</tbody>
</table>

#### B. Vertical File Lead Cross Detection

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Select line location to correspond with trunk line location obtained in 3.02.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Ground contact of KVFL relay on MTF associated with a VF_ lead in Table B, corresponding to a VF_, other than that used in Step 13, which is assigned for PBX AID service.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Select office designation of selected trunk.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Select A_ through D_ digits to correspond with numericals of translated trunk number.</td>
<td></td>
</tr>
<tr>
<td>17e</td>
<td>If TSLT key is provided— Operate TSLT key.</td>
<td></td>
</tr>
</tbody>
</table>
STEP | ACTION | VERIFICATION
---|---|---
**TABLE B**

<table>
<thead>
<tr>
<th>KVF1 CONTACS</th>
<th>VF LEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>5T</td>
<td>0</td>
</tr>
<tr>
<td>7T</td>
<td>1</td>
</tr>
<tr>
<td>9T</td>
<td>2</td>
</tr>
<tr>
<td>7B</td>
<td>3</td>
</tr>
<tr>
<td>5B</td>
<td>4</td>
</tr>
</tbody>
</table>

18 Select office index that corresponds with translated office number.

19 Momentarily operate ST key.

20 Momentarily operate RL, TRR-AR keys.

21f If office is equipped with more than one transverter—Repeat Steps 19, 20 for each transverter.

22 Remove ground from KVF1 relay.

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

C. Translator Identification

13 Operate REC key.

14 Select line location to correspond with one of the trunk line locations obtained in 3.03.

15 Select office designation of selected trunk.

16 Select A through D digits to correspond with numericals of translated trunk number.

17e If TSLT key is provided—Operate TSLT key.

18 Select office index that corresponds with translated office number.

TVT, TRL, TRR, aisle pilot lamps lighted. Minor alarm sounds. Trouble record taken. T1, MTPT, TLV, TV, TVT, two VF, XVF designations perforated.

TVT, TRL, TRR, aisle pilot lamps extinguished. Minor alarm silenced.
### D. Make-Busy and Alternate Treatment

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Select line location to correspond with trunk line location obtained in 3.02.</td>
<td>MRL, TLVM, TVT lamps lighted. Trouble record taken. MTPT, TLV, LVM, TV, DR_, TVT, TLR_ designations corresponding with number of translator being tested, G_, GA/GB relay for trunk location obtained in 3.03, TNK designations perforated.</td>
</tr>
<tr>
<td>14</td>
<td>Select office designation of selected trunk.</td>
<td>MRL, TLVM, TVT lamps extinguished.</td>
</tr>
<tr>
<td>15</td>
<td>Select A_ through D_ digits to correspond with numericals of listed directory number as obtained in 3.04.</td>
<td></td>
</tr>
<tr>
<td>16e</td>
<td>If TSLT key is provided— Operate TSLT key.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Select office index that corresponds with translated office number.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Insert make-busy plug into AIODT-MB jack for translator being tested.</td>
<td></td>
</tr>
</tbody>
</table>

**Caution:** Calls made by PBX stations will be completed by billing to the listed PBX directory number. This test should therefore be made as rapidly as possible to reduce to a minimum the number of calls billed in this manner.

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Momentarily operate ST key.</td>
<td>TVT, TLVM, MRL lamps lighted.</td>
</tr>
<tr>
<td>20</td>
<td>Momentarily operate RL key.</td>
<td>TVT, TLVM, MRL lamps extinguished.</td>
</tr>
<tr>
<td>21f</td>
<td>If office is equipped with more than one transverter— Repeat Steps 19, 20 for each transverter.</td>
<td></td>
</tr>
</tbody>
</table>
22g If transverter is arranged to override a manually made-busy translator—
Operate CTMB key.

23g Select A_ through D_ digits to correspond with numericals of translated trunk number as obtained in 3.02.

24g Momentarily operate ST key.

25g Momentarily operate RL key.

26 Remove make-busy plug from A10DT-MB jack.

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

E. Transverter Preference Chain Transfer and Alarm

1 At translator connector frame—
Restore TR key, if operated.

2 Insulate 8B of TRT relay.

3 Remove insulator from TRT relay.

4 Momentarily operate (push-in) AR key.

5 Insulate 4B of TRT relay.

6 Repeat Steps 3, 4.

7 Insulate 6B of TRT relay.

8 Repeat Steps 3, 4.

9 Operate TR key.

10 Restore TR key.

F. TB Lead Ground Detection

1 At translator connector frame—
When frame is idle—

XTB, aisle pilot lamps lighted.
Minor alarm sounds.
SECTION 218-170-502

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Momentarily connect ground to 12B of TMB0 relay.</td>
<td>XTB, aisle pilot lamps extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>2</td>
<td>Momentarily operate RXTB key.</td>
<td></td>
</tr>
</tbody>
</table>

G. Overlap

1. At MTF—
   Insert make-busy plug into AIODT-MB jack for translator being tested.

   **Caution:** Calls made by PBX stations will be completed by billing to the listed PBX directory number. This test should therefore be made as rapidly as possible to reduce to a minimum the number of calls billed in this manner.

2. At translator frame—
   Momentarily operate CON relay.

3. At translator connector frame—
   Block operated CON0 relay.

4. Remove blocking tool from CON0 relay.

5. At MTF—
   Remove make-busy plug from AIODT-MB jack.

H. Long Loop-Around

13. At station identification test circuit—
   Restore all keys and switches to OFF, O, or NORM as applicable.

14e. If Al-type station identification test circuit is provided—
   Operate NT key to TEST.

15e. Operate key associated with TH1 address register lamp to 0 or 1, as required, for thousands digit of translated trunk number as obtained in 3.05.

16e. Operate keys associated with H_, T_, U_ address register lamps to 1, as required, for translated trunk number hundreds, tens, and units digits using code of Table C.
STEP | ACTION | VERIFICATION
--- | --- | ---
17e | Operate keys associated with TH_, H_, T_, U_ data register lamps to 1, as required, for station numbers TH0, H0, T0, U0 using code of Table C. | Address and data register lamps lighted corresponding to keys operated to 1.
18f | If an even number of keys associated with the data register are operated to 1— Operate key associated with P2 lamp to 1. | 
19f | Momentarily operate CLR key. | 
20f | Momentarily operate LD key. | 
21f | Momentarily operate W0 key. | 
22g | If A2-type station identification test circuit is provided— Operate SW0 key to 1. | 
23g | Set DLN switch to 0. | 
24g | Operate SW1 through SW20 keys associated with TH_, H_, T_, U_, trunk number lamps to 1, as required, on a 2-out-of-5 basis for translated trunk number thousands, hundreds, tens, and units digits. | 
25g | Operate SW21 through SW40 keys associated with TH_, H_, T_, U_ station number lamps to 1, as required, on a 2-out-of-5 basis for station numbers TH0, H0, T0, U0. | 
26g | Momentarily operate CLR key. | PLB lamps lighted. Trunk and station lamps lighted corresponding to keys operated to 1.
27g | Momentarily operate LD key. | 
28g | Operate TST key to ON. | 
29g | Operate PBX key to ON. | 
30 | At MTF— Select line location to correspond with test PBX trunk equipment location as obtained in 3.05. | 
31 | Select office designation of selected trunk. | 
32 | Select office index that corresponds with translated office number. |
SECTION 218-170-502

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Operate TLLT key.</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Select A through D digits for same station number as in Step 17e or 25g, as applicable.</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Momentarily operate ST key.</td>
<td>TVT, TLVM, MRL lamps lighted.</td>
</tr>
<tr>
<td>36</td>
<td>Momentarily operate RL key.</td>
<td>All lamps extinguished.</td>
</tr>
<tr>
<td>37e</td>
<td>If A1-type station identification test circuit is provided— Repeat Steps 17e, 34 through 36 for TH, H, T, U digits 1 through 9.</td>
<td></td>
</tr>
<tr>
<td>38g</td>
<td>If A2-type station identification test circuit is provided— Repeat Steps 25g, 34 through 36 for TH, H, T, U digits 1 through 9.</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>Restore all keys and switches.</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>At station identification test circuit— Restore all keys and switches.</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE C

<table>
<thead>
<tr>
<th>NUMERICAL DIGIT</th>
<th>ABBREVIATED CODE FOR ADDRESS AND DATA REGISTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4, 7</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>1, 2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>1, 4</td>
</tr>
<tr>
<td>6</td>
<td>2, 4</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>1, 7</td>
</tr>
<tr>
<td>9</td>
<td>2, 7</td>
</tr>
</tbody>
</table>