1. GENERAL

1.01 This section describes a method of making miscellaneous tests on the auxiliary sender link circuit in panel offices.

1.02 This section is reissued to correct test procedures in Tests A and D. This reissue does not affect the Equipment Test List.

1.03 The tests covered are:

A. **Make-busy Features**: The following features are checked. (1) That a make-busy plug in an auxiliary sender MB_ jack at the sender MB frame operates the corresponding AB_ relays in all link circuits associated with the same auxiliary sender. (2) That an operated AP_ relay operates the AB_ relays in the other link circuits associated with the same auxiliary sender. (3) That an operated APA_ relay operates the AB_ relays in all link circuits associated with the same auxiliary sender. (4) That an AB_ relay will not release while its link circuit is serving a call.

B. **Timed Release Feature**: This test checks that the link circuit releases itself from a call under trouble conditions and originates a minor alarm.

C. **All Senders Busy Time Alarm**: This test checks that when all auxiliary senders in a group are busy for 15 to 30 seconds, the minor alarm sounds and the ASB lamp for this group of auxiliary senders lights on the sender make-busy frame.

D. **Gate Circuit False Ground Alarm (Where Provided)**: This test checks that if a false ground exists in the GA relay circuit, the GAA relay will operate and originate a minor alarm.

1.04 Test A requires actions and verifications at the sender make-busy frame and at associated auxiliary sender link frames.

1.05 When performing Test A, an auxiliary sender or an auxiliary sender link circuit will be out of service.

1.06 When performing Test B or D, access to the group of auxiliary senders by the subscriber senders will be delayed.

1.07 When performing Test C, a group of auxiliary senders will be out of service for a period of 15 to 30 seconds.

1.08 **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 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.

1.09 Local instructions should be followed with reference to recording any register operations caused by performing these tests.

2. **APPARATUS**

4 Tests A and C

2.01 322A (make-busy) plugs, as required.
SECTION 215-133-501

Tests A and D

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

Test B

2.03 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), a 624B (terminal connector) tool and KS-6278 connecting clip (used for connecting ground to terminal strip punchings).

Test C

2.04 KS-3008 stopwatch, or equivalent.

3. METHOD

STEP ACTION VERIFICATION

A. Make-Busy Features

1 At SMB—Insert make-busy plug into MB_ jack associated with an auxiliary sender.

2 Remove plug from MB_ jack.

3 Repeat Steps 1 and 2 for all other auxiliary senders to be tested.

4 At ASL—Block nonoperated LRA relay on miscellaneous circuit for auxiliary sender link frame.

5a If APA_ relays are provided—Block nonoperated LR relay.

6a ♦ Insulate 2M of APA_ relay.

7 Block operated AP_ relay (corresponding to APA_ relay insulated in Step 6a).

8a If APA_ relays are provided—Remove blocking tool from LR relay.

9a ♦ Remove insulating tool from 2M of APA_ relay.

10 Remove blocking tool from AP_ relay.

At all associated ASL in which this sender appears—Corresponding AB_ relays operated.

All corresponding AB_ relays released.

Corresponding AB_ relay remains normal.

At all other associated ASL—Corresponding AB_ relays operated.

LR relay operated.

Corresponding AB_ relay operated.

AP_ relay released.

If APA_ relays are not provided—At all other associated ASL—Corresponding AB_ relays released.

If APA_ relays are provided—At all associated ASL—Corresponding AB_ relays remain operated.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. All Senders Busy Time Alarm</td>
<td>At SMB— Insert make-busy plugs into MB jacks for all auxiliary senders in group.</td>
<td>After 15 to 30 seconds— Minor alarm sounds. ASB lamp lighted.</td>
</tr>
<tr>
<td>2</td>
<td>Momentarily operate ALM RLS key.</td>
<td>Minor alarm silenced.</td>
</tr>
<tr>
<td>3</td>
<td>Remove plugs from MB jacks.</td>
<td>ASB lamp extinguished upon removal of first MB plug.</td>
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<tr>
<td>D. Gate Circuit False Ground Alarm (Where Provided)</td>
<td>Block nonoperated LR relay.</td>
<td>GAA relay unoperated.</td>
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<tr>
<td>2</td>
<td>Block operated ST0 relay.</td>
<td>GAA relay operated. LR lamp lighted. Minor alarm sounds.</td>
</tr>
<tr>
<td>3</td>
<td>Insulate 10M contact of ST0 relay.</td>
<td>GAA relay released. LR lamp extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>4</td>
<td>Remove insulator from ST0 relay.</td>
<td>GAA relay operated. LR lamp lighted. Minor alarm sounds.</td>
</tr>
<tr>
<td>5</td>
<td>Momentarily operate AR key.</td>
<td>GAA relay released. LR lamp extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>6</td>
<td>Insulate 9M contact of ST0 relay.</td>
<td>GAA relay released. LR lamp extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>7</td>
<td>Remove insulator from ST0 relay.</td>
<td>GAA relay released. LR lamp extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>8</td>
<td>Momentarily operate AR key.</td>
<td>GAA relay released. LR lamp extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>9</td>
<td>Remove blocking tool from ST0 relay.</td>
<td>GAA relay released. LR lamp extinguished. Minor alarm silenced.</td>
</tr>
<tr>
<td>10</td>
<td>Remove blocking tool from LR relay.</td>
<td>GAA relay released. LR lamp extinguished. Minor alarm silenced.</td>
</tr>
</tbody>
</table>
STEP | ACTION | VERIFICATION
---|---|---
11a | If APA_ relays are provided— Momentarily operate AR key. | At all associated ASL— Corresponding AB_ relays released.
12 | Repeat Steps 5a through 11a, as required, for all equipped AP_ relays. | 
13 | Remove blocking tool from LRA relay. | 
14 | Block operated G relay in first link unit. | 
15 | Insulate 10M contact of operated G relay. | 
16 | Operate AB0 relay. | AB0 relay locks operated.
17 | Operate each higher numbered AB_ relay in group. | Operated AB_ relays lock until released by last manually operated AB_ relay in group.
18 | Remove insulating tool and blocking tool from G relay. | G relay released.
19 | Block operated G relay in next link unit. | 
20 | Insulate 10M contact of operated G relay. | 
21 | Operate AB0 RELAY. | AB0 relay locks operated.
22 | Remove insulating tool and blocking tool from G relay. | G and AB0 relays released.
23 | Repeat Steps 19 through 22 for all link units. | 

B. Timed Release Feature

1 | Connect ground to 21 terminal of terminal strip A. | LR relay operated. LR lamp lighted. Minor alarm sounds. Hold magnets H0L and H0R operated.
2 | Remove test connection from terminal strip A. | LR relay released. Hold magnets released.
3 | Momentarily operate AR key. | Minor alarm silenced. LR lamp extinguished.
4 | Repeat Steps 1 through 3 for wired terminals 22 to 30 of terminal strip A. | 
5 | Repeat Steps 1 through 4 for all other link units to be tested. |