CAMA INCOMING TRUNK CIRCUITS
TESTS USING TRUNK TEST CIRCUIT SD-25918-01
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes methods for testing CAMA incoming trunks SD-26100-01, SD-26101-01, SD-26103-01, SD-26104-01 with or without local completion. Trunks may be arranged to repeat dial pulses using bylink operation. Supervision incoming is reverse battery or E and M lead supervision and reverse battery or simplex supervision outgoing. Calling party identification may be arranged for automatic identification or operator identification. Billing may be by CAMA or computerized billing using optional ETS-CAMA. Additionally, with reverse battery supervision, trunks may be made busy to the originating office.

1.02 This section is reissued for the following reasons listed below. Revision arrows are used to emphasize the more significant changes. This reissue does not affect Equipment Tests Lists.

(a) To include test procedures required when the No. 5 Crossbar office is arranged with the Electronic Translation System (ETS) and the CAMA feature is provided.

(b) To correct the type of patching cord specified in paragraph 2.06.

(c) To make minor changes as required.

1.03 The tests covered are:

A. Trunk Seizure: The following features are checked: (1) Seizure of trunk. (2) Selection and seizure of incoming register. (3) Continuity and polarity of tip and ring leads of the originating end of the trunk. (4) Ability to terminate at a CAMA operator position through a CAMA sender, or to transmit outpulsing of the calling customer number by ANI equipment to a CAMA sender.

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

C. Supervision—Terminating End Disconnect: The following features are checked: (1) Charge functions. (2) Timed release of trunk within 13 to 32 seconds.

D. Noncharge Supervision: This test checks that an answer entry is not made when an answered call is held less than 2 seconds.

E. Cancel Disconnect Entry: This test checks the canceling of the disconnect entry and release of the trunk if the disconnect entry is not made within 2 to 5 seconds after disconnect.

F. Overflow: The following features are checked: (1) Overflow tone is returned to the calling customer when the second usage marker is unable to establish the terminating connection. (2) For bylink-type trunks, overflow tone is returned to the calling customer when pulsing occurs before the bylink path is closed.
G. Call to Busy Line: The following features are checked: (1) Charge is not made for call to busy line. (2) Transmission of busy tone.

H. Ringing—Local Completion: The following features are checked: (1) Application of various ringing combinations. (2) Polarity of ringing current on tip and ring leads of terminating end of trunk.

I. Pretrip and Trip—Local Completion: This test checks the operation of the trip relay.

J. Call to Free Line—Local Completion: This test checks that a noncharge condition is set in the trunk by the ringing selection switch on a local free line.

K. Make-Busy and Winkoff: This test is for use when the incoming trunk is associated with a code selector or intramural step-by-step office arranged for operator identification. This test checks that if the MB relay is operated before the end of pulsing, overflow tone is returned to the calling customer and the make-busy condition is maintained toward the originating office.

1.04 Tests E and F require action and verification at the master test frame and relay rack frame.

1.05 If the trunk being tested is arranged for intertoll completion, the route selected by the operated A_ through L_ keys should provide access to outgoing (not 2-way) intertoll trunk circuits.

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

1.07 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.

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

1.09 On Issue 76D of SD-25800-01, a group of 18 "class of test" lamps was replaced by a single "start test" lamp designated STT. Since the designation given to the lamp is not specific, the lamp will not be called out in the section, as well as the 18 discontinued lamps, such as DT, ORIG, ITDO, ITNP, OGT, etc.

1.10 When the office is arranged for ETS, the distributors and scanners associated with the marker and trunk used in the test call must be in service or in a maintenance-busy condition—not in an out-of-service condition. To change a scanner or distributor from out-of-service to a maintenance-busy condition, use the procedure given in the following section for the office arrangement.

218-799-701—Taking ETS Equipment Out-of-Service

1.11 When the trunk under test is arranged for ETS, the first completed test call from the MTF will cause the TST bit to be set in the trunk register associated with the selected trunk, enabling trunk scanning to be repeated on the FT lamp at the MTF trunk test circuit. As long as the TST bit is set in the trunk register, scanning will continue to be repeated on the lamp, even on service calls. The TST bit will remain set in the trunk register until (1) a test call is made from the MTF to another trunk, or (2) the command STOP:TRK TST is entered at the maintenance TTY.
### 2. APPARATUS

#### Tests A Through J

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

2.02 Trunk test circuit, SD-25918-01.

2.03 Test circuit for register and CAMA sender circuits, SD-25988-01.

2.04 Test set circuit for register and CAMA sender circuits (test set), SD-25676-01.

2.05 Testing cord assembly, 20-conductor cord, 6 feet long, equipped with one KS-14460, L3 plug and one KS-14661, L3 plug (W20C cord) or equivalent (for connecting test set to the test circuit for register and CAMA sender circuits).

2.06 Patching cord, P3L cord, 12 feet long, equipped with one 310 plug and one 309 plug (3P16A cord) for connecting trunk test circuit to CAMA incoming trunk circuit.

#### Tests B, C, E, J

2.07 322A (make-busy) plugs as required.

#### Tests E, F

2.08 KS-3008 stopwatch or equivalent.

#### Tests F

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

#### Test K

2.10 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and two KS-6278 connecting clips as required.

2.11 67C test set or equivalent, equipped with a KS-6278 connecting clip (for checking the presence or absence of battery or ground).

### 3. PREPARATION

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Tests Except K</td>
<td></td>
</tr>
<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>Patch IRT jack to IRT connector of register and CAMA sender test set.</td>
</tr>
<tr>
<td>4</td>
<td>At test set— Set L switch to OFF.</td>
</tr>
<tr>
<td>5</td>
<td>At MTF— Set POS switch to 0.</td>
</tr>
<tr>
<td>6</td>
<td>Set MF switch to MIN L.</td>
</tr>
<tr>
<td>7a</td>
<td>If trunk under test is arranged for ANI— Operate AI, AD keys.</td>
</tr>
<tr>
<td>8b</td>
<td>If trunk under test is not arranged for ANI— Operate OD key.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>All lamps extinguished.</td>
</tr>
</tbody>
</table>
INSERT MAKE-BUSY PLUG INTO MB-JACK OF TRUNK UNDER TEST.

CONNECT CAMA/CNTX JACK TO T JACK OF TRUNK UNDER TEST.

IF NO. 5 ETS CAMA IS PROVIDED—
OPERATE PCAM KEY.

4. METHOD

A. Trunk Seizure

BYLINK INCOMING TRUNK CIRCUITS

SELECT A THROUGH L DIGITS FOR TANDEM OR INERTOLL TERMINATING ROUTE. (REFER TO PARAGRAPH 1.04.)

OPERATE KEYS IN ACCORDANCE WITH TABLE A FOR SELECTED ROUTE.

IF TRUNK UNDER TEST IS ARRANGED FOR ANI—
MOMENTARILY OPERATE ST KEY.

IF TRUNK UNDER TEST IS NOT ARRANGED FOR ANI—
AT MTF—
MOMENTARILY OPERATE ST KEY.

AT MTF—
MOMENTARILY OPERATE RL KEY.

IF NO FURTHER TESTS ARE TO BE PERFORMED—
RESTORE ALL KEYS AND SWITCHES

REMOVE PATCH CORD FROM CAMA/CNTX JACK TO T JACK OF TRUNK UNDER TEST.

REMOVE MAKE-BUSY PLUG FROM MB JACK OF TRUNK UNDER TEST.

VERIFICATION

CAMA LAMP LIGHTED.

MRL, CK2, OGT-CS LAMPS LIGHTED.

MRL, POSC, CK2, OGT-CS LAMPS LIGHTED.

HIGH TONE HEARD.

HIGH TONE SILENCED.

ALL LAMPS EXTINGUISHED EXCEPT CAMA.

CAMA LAMP EXTINGUISHED.
STEP ACTION

Nonbylink Incoming Trunks—Ground Shunt on A Relay—Operate Test, One Winding

21 Select A_ through L_ digits for tandem or intertoll terminating route. (Refer to paragraph 1.04).

22 Operate keys in accordance with Table A for selected route.

23 Operate CGS, HS keys.

24 Restore SLP key.

25 Momentarily operate ST key.

26 Operate and hold GS key for approximately 3 seconds.

27 Operate SLP key.

28a If trunk under test is arranged for ANI—Operate LS key.

29 If trunk under test is not arranged for ANI—At MTF—Operate LS key.

30 At MTF—Restore SLP key.

31 Operate LLP key.

VERIFICATION

- CAMA lamp lighted.
- SLV lamp not lighted.
- SLV lamp lighted.
- SLV lamp extinguished.
- MRL, CK2, OGT-CS lamps lighted.
- If No. 5 ETS CAMA is provided—FT, S1 lamps lighted.
- At test set—RR lamp lighted.
- High tone heard.
- SLV lamp extinguished.
- MRL, CK2, OGT-CS lamps lighted.
- If No. 5 ETS CAMA is provided—FT, S1, lamps lighted.
- At test set—P lamp lighted.
- SLV lamp lighted.
- OGT-CS lamp extinguished.
- If No. 5 ETS CAMA is provided—S1 lamp extinguished.
- High tone silenced.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Restore LS, LLP keys.</td>
</tr>
<tr>
<td>33</td>
<td>Momentarily operate RL key.</td>
</tr>
<tr>
<td>34d</td>
<td>If no further tests are to be performed—Restore all keys and switches.</td>
</tr>
<tr>
<td>35d</td>
<td>Remove patch cord from CAMA/CNTX jack to T jack of trunk under test.</td>
</tr>
<tr>
<td>36d</td>
<td>Remove make-busy plug from MB jack or trunk under test.</td>
</tr>
<tr>
<td>37d</td>
<td>Remove patch cord from IRT jack of register and CAMA sender test set.</td>
</tr>
</tbody>
</table>

**Nonbylink Incoming Trunk Circuits—No Ground Shunt or A Relay—Operate Test, Both Windings**

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>Select A through L digits for tandem or intertoll terminating route. (Refer to paragraph 1.04.)</td>
</tr>
<tr>
<td>39</td>
<td>Operate keys in accordance with Table A for selected route.</td>
</tr>
<tr>
<td>40</td>
<td>Operate LLP, CGS, LS keys.</td>
</tr>
<tr>
<td>41a</td>
<td>If trunk under test is arranged for ANI—Momentarily operate ST key.</td>
</tr>
<tr>
<td>42b</td>
<td>If trunk under test is not arranged for ANI—At MTF—Momentarily operate ST key.</td>
</tr>
<tr>
<td>43</td>
<td>At MTF—Restore LLP key.</td>
</tr>
<tr>
<td>44</td>
<td>Momentarily operate RL key.</td>
</tr>
</tbody>
</table>

**VERIFICATION**

- OCT-CS lamp extinguished.
  - If No. 5 ETS CAMA is provided—S1 lamp extinguished.

- All lamps extinguished except CAMA.
  - If No. 5 ETS CAMA is provided—FT lamp remains lighted.

- CAMA lamp extinguished.

- CAMA lamp lighted.

- MRL, CK2, OGT-CS lamps lighted.
  - If No. 5 ETS CAMA is provided—FT, S1 lamps lighted.
  - At test set—RR lamp lighted.
  - High tone heard.
  - MRL, CK2, OGT-CS lamps lighted.
  - If No. 5 ETS CAMA is provided—FT, S1, lamps lighted.
  - At test set—P lamp lighted.

- SLV lamp lighted.
  - If No. 5 ETS CAMA is provided—S1 lamp extinguished.

- All lamps extinguished except CAMA.
  - High tone silenced.
  - If No. 5 ETS CAMA is provided—
STEP  

ACTION

VERIFICATION

45d At MTF—
If no further tests are to be performed—
Restore all keys and switches.

46d Remove patch cord from CAMA/CNTX jack to T jack of trunk under test.

47d Remove make-busy plug from MB jack of trunk under test.

48d Remove patch cord from IRT jack of register and CAMA sender test set.

B. Supervision—Originating and Terminating Ends

Disconnect

12 Select A_ through L_ digits for tandem or intertoll terminating route. (Refer to paragraph 1.04.)

13 Operate keys in accordance with Table A for selected route.

14a If trunk under test is arranged for ANI—
Momentarily operate ST key.

15a Momentarily operate the following keys, in turn: KP, numeral 0 for X digit, calling number, ST.

Note: Keying must be completed in 4.8 seconds to avoid sender timeout.

16 If trunk under test is not arranged for ANI—
At MTF—
Momentarily operate ST key.

17b Key calling number.

FT lamp remains lighted.
At test set—
RR, P lamps extinguished.
CAMA lamp extinguished.

CAMA lamp lighted.
MRL, CK2, OGT-CS lamps lighted.
• If No. 5 ETS CAMA is provided
  FT, S1 lamps lighted.
  At test set—
  RR lamp lighted.

At MTF—
IE, T_, U_, RN_ lamps lighted.
• If No. 5 ETS CAMA is provided—
  IE, T_, U_, RN lamps not lighted.
  If E-M key is operated—
  E lamps lighted.
  At test set—
  When last digit is pulsed—
  RR lamp extinguished.

High tone heard.
MRL, CK2, POSC, OGT-CS lamps lighted.
• If No. 5 ETS CAMA is provided—
  FT, S1, lamps lighted.
  At test set—
  P lamp lighted.

At MTF—
High tone silenced.
STEP | ACTION | VERIFICATION
--- | --- | ---
18 | At MTF—
    Operate ANS key; **start timing.** | IE, T_, U_, RN_ lamps lighted.
    If No. 5 ETS CAMA is provided—
    IE, T_, U_, RN lamps **not** lighted.
    If E-M key is operated—
    E lamp lighted.
    At test set—
    P lamp extinguished.

19 | Restore ANS, TLK keys. | If trunk under test is not arranged for ANI—
    High tone heard.
    In 2 to 5 seconds—
    AE lamp lighted.
    **If No. 5 ETS CAMA is provided**—
    CS lamp lighted.

20 | Momentarily operate RL key. | OGT-CS lamp extinguished.
    If E-M key is operated—
    E lamp extinguished.
    DE lamp lighted.
    **If No. 5 ETS CAMA is provided**—
    S1, CS lamps extinguished.

21c | If no further tests are to be performed—
    Restore all keys and switches. | All lamps extinguished except CAMA.
    High tone silenced.
    **If No. 5 ETS CAMA is provided**—
    FT lamp remains lighted.

22c | Remove patch cord from CAMA/CNTX jack to T jack of trunk under test. | CAMA lamp extinguished.

23c | Remove make-busy plug from MB jack of trunk under test. |CAMA lamp lighted.

24c | Remove patch cord from IRT jack of register and CAMA sender test set.* | MRL, CK2, OGT-CS lamps lighted.
    **If No. 5 ETS CAMA is provided**—
    FT, S1 lamps lighted.

25d | If trunk under test is arranged for local completion—
    Operate keys in accordance with Table A. | At test set—
    RR lamp lighted.

26d | Select A_, B_, C_ digits for local office code. | **If No. 5 ETS CAMA is provided**—

27d | Operate TTL key. | FT, S1 lamps lighted.

28e | If trunk under test is arranged for local completion and ANI—
    Momentarily operate ST key. | At test set—
    RR lamp lighted.
**STEP**

29e  Momentarily operate the following keys, in turn: KP, numeral 0 for X digit, calling number, ST.

**Note:** Keying must be completed in 4.8 seconds to avoid sender timeout.

30f  If trunk under test is arranged for local completion but not arranged for ANI—
     At MTF—
     Momentarily operate ST key.

31f  Key calling number.

32d  If trunk under test is arranged for local completion—
     At MTF—
     Operate ANS key; *start timing.*

33d  Restore ANS, TLK keys.

34d  Momentarily operate RL key.

35c  If no further tests are to be performed—
     Restore all keys and switches.

36c  ♦Remove patch cord from CAMA/CNTX jack to T jack of trunk under test.

**VERIFICATION**

At MTF—
TS, IE, T, U, RN lamps lighted.
♦If No. 5 ETS CAMA is provided—
   IE, T, U, RN lamps *not* lighted.♦
R- lamp flashes.
Ringing tone heard in unison with R- lamp flashes.
At test set—
When last digit is pulsed—
RR lamp extinguished.

High tone heard.
MRL, CK2, POSC, OGT-CS lamps lighted.
♦If No. 5 ETS CAMA is provided—
   FT, S1 lamps lighted.♦
At test set—
P lamp lighted.

R- lamp extinguished.
High tone heard.
In 2 to 5 seconds—
AE lamp lighted.
♦If No. 5 ETS CAMA is provided—
   CS lamp lighted.♦
OGT-CS, TS lamps extinguished.
DE lamp lighted.
High tone silenced.
♦If No. 5 ETS CAMA is provided—
   S1, CS lamps extinguished.♦
All lamps extinguished except CAMA.
♦If No. 5 ETS CAMA is provided—
   FT lamp remains lighted.♦
CAMA lamp extinguished.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>37c</td>
<td>Remove make-busy plug from MB jack of trunk under test.</td>
<td></td>
</tr>
<tr>
<td>38c</td>
<td>Remove patch cord from IRT jack of register and CAMA sender test set.</td>
<td></td>
</tr>
</tbody>
</table>

C. Supervision—Terminating End Disconnect

*Note:* Do not proceed with this test until 2 minutes have elapsed since the thermal time-delay relay (TR) in the trunk under test was last energized.

12 Select A through L digits for tandem or intertoll terminating route. (Refer to paragraph 1.04.)

13 Operate keys in accordance with Table A for selected route.

14a If trunk under test is arranged for ANI—Momentarily operate ST key.

15a Momentarily operate the following keys, in turn: KP, numeral 0 for X digit, calling number, ST.

*Note:* Keying must be completed in 4.8 seconds to avoid sender timeout.

16b If trunk under test is not arranged for ANI—At MTF—Momentarily operate ST key.

17b Key calling number.

Verifications:

- **CAMA lamp lighted.**
- **MRL, CK2, OGT-CS lamps lighted.**
  - If No. 5 ETS CAMA is provided—FT, S1 lamps lighted.
  - At test set—RR lamp lighted.
- At MTF—IE, T, U, RN lamps lighted.
  - If No. 5 ETS CAMA is provided—IE, T, U, RN lamps *not* lighted.
  - If E-M key is operated—E lamp lighted.
  - At test set—When last digit is pulsed—RR lamp extinguished.
- High tone heard.
  - MRL, CK2, POSC, OGT-CS lamps lighted.
  - If No. 5 ETS CAMA is provided—FT, S1, lamps lighted.
  - At test set—P lamp lighted.
  - At MTF—High tone silenced.
  - IE, T, U, RN lamps lighted.
  - If No. 5 ETS CAMA is provided—IE, T, U, RN lamps *not* lighted.
  - If E-M key is operated—E lamp lighted.
STEP | ACTION | VERIFICATION
--- | --- | ---
18 | At MTF—Operate ANS key; **start timing.** | At test set—P lamp extinguished.  
High tone heard.  
In 2 to 5 seconds—AE lamp lighted.  
♦If No. 5 ETS CAMA is provided—CS lamp lighted.♦
19 | Restore ANS key; **start timing.** | High tone silenced.  
In 13 to 32 seconds—DE lamp lighted.  
♦If No. 5 ETS CAMA is provided—CS lamp extinguished.♦
20 | Momentarily operate RL key. | All lamps extinguished except CAMA  
♦If No. 5 ETS CAMA is provided—FT lamp remains lighted.♦
21c | If no further tests are to be performed—Restore all keys and switches. | CAMA lamp extinguished.
22c | ♦Remove patch cord from CAMA/CNTX jack to T jack of trunk under test. |  
23c | Remove make-busy plug from MB jack of trunk under test. |  
24c | Remove patch cord from IRT jack of register and CAMA sender test set.♦ |  
25d | If trunk under test is arranged for local completion—Operate keys in accordance with Table A for local terminating route. |  
26d | Select A, B, C digits for local office code. |  
27d | Operate TTL key. |  
28e | If trunk under test is arranged for local completion and ANI—Momentarily operate ST key. | MRL, CK2, OGT-CS lamps lighted.  
♦If No. 5 ETS CAMA is provided—FT, S1 lamps lighted.♦  
At test set—RR lamp lighted.  
Note: Do not proceed with this test until 2 minutes have elapsed since the thermal time delay relay (TR) in the trunk under test was last energized.
### ACTION

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>29e</td>
<td>Momentarily operate the following keys, in turn: KP, numeral 0 for X digit, calling number, ST.</td>
<td>At MTF—TS, IE, T_, U_, RN_ lamps lighted.</td>
</tr>
<tr>
<td></td>
<td>Note: Keying must be completed in 4.8 seconds to avoid sender timeout.</td>
<td>If No. 5 ETS CAMA is provided—IE, T_, U_, RN lamps <em>not</em> lighted.</td>
</tr>
<tr>
<td>30f</td>
<td>If trunk under test is arranged for local completion but not arranged for ANI—At MTF—Momently operate ST key.</td>
<td>R- lamp flashes.</td>
</tr>
<tr>
<td></td>
<td>Key calling number.</td>
<td>Ringing tone heard in unison with R- lamp flashes.</td>
</tr>
<tr>
<td>31f</td>
<td>If trunk under test is arranged for local completion—At MTF—Operate ANS key; <em>start timing.</em></td>
<td>At test set—When last digit is pulsed—RR lamp extinguished.</td>
</tr>
<tr>
<td>32d</td>
<td>Restore ANS key; <em>start timing.</em></td>
<td>High tone heard.</td>
</tr>
<tr>
<td></td>
<td>Momentarily operate RL key.</td>
<td>MRL, CK2, POSC, OGT-CS lamps lighted.</td>
</tr>
<tr>
<td>33d</td>
<td>If no further tests are to be performed—Restore all keys and switches.</td>
<td>If No. 5 ETS CAMA is provided—FT, S1 lamps lighted.</td>
</tr>
<tr>
<td>34</td>
<td>Remove patch cord from CAMA/CNTX jack to T jack of trunk under test.</td>
<td>At test set—P lamp lighted.</td>
</tr>
<tr>
<td>35c</td>
<td></td>
<td>At MTF—High tone silenced.</td>
</tr>
<tr>
<td>36c</td>
<td></td>
<td>TS, IE, T_, U_, RN_ lamps lighted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If No. 5 ETS CAMA is provided—IE, T_, U_, RN lamps <em>not</em> lighted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R- lamp flashes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ringing tone heard in unison with R- lamp flashes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At test set—P lamp extinguished.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If No. 5 ETS CAMA is provided—CS lamp extinguished.</td>
</tr>
</tbody>
</table>

### VERIFICATION

- **At MTF—** TS, IE, T_, U_, RN_ lamps lighted.
- **If No. 5 ETS CAMA is provided—** IE, T_, U_, RN lamps *not* lighted.
- R- lamp flashes.
- Ringing tone heard in unison with R- lamp flashes.
- At test set—When last digit is pulsed—RR lamp extinguished.
- High tone heard.
- MRL, CK2, POSC, OGT-CS lamps lighted.
- If No. 5 ETS CAMA is provided—FT, S1 lamps lighted.
- At test set—P lamp lighted.
- If No. 5 ETS CAMA is provided—CS lamp extinguished.
- All lamps extinguished except CAMA.
- If No. 5 ETS CAMA is provided—FT lamp remains lighted.
- CAMA lamp extinguished.
**STEP**

- 37c Remove make-busy plug from MB jack of trunk under test.

- 38c Remove patch cord from IRT jack of register and CAMA sender test set.

**D. Noncharge Supervision**

12 Select A_ through L_ digits for tandem or intertoll terminating route. (Refer to paragraph 1.04.)

13 Operate keys in accordance with Table A for selected route.

14a If trunk under test is arranged for ANI—Momentarily operate ST key.

15a Momentarily operate following keys, in turn: KP, numeral 0 for X digit, calling number, ST.

*Note:* Keying must be completed in 4.8 seconds to avoid sender timeout.

16b If trunk under test is not arranged for ANI—At MTF—Momentarily operate ST key.

17b Key calling number.

18 At MTF—Operate ANS key for 2 seconds.

**VERIFICATION**

- CAMA lamp lighted.

- MRL, CK2, OGT-CS lamps lighted.

- At test set—
  - FT, S1 lamps lighted.
  - RR lamp lighted.

- At MTF—
  - IE, T_, U_, RN_ lamps lighted.
  - If No. 5 ETS CAMA is provided—
    - FT, S1 lamps lighted.
  - R- lamp flashes.
  - Ringing tone heard in unison with R- lamp flashes.
  - At test set—
    - When last digit is pulsed—
      - RR lamp extinguished.

- High tone heard.

- MRL, CK2, POSC, OGT-CS lamps lighted.

- At test set—
  - P lamp lighted.

- At MTF—
  - High tone silenced.
  - IE, T_, U_, RN_ lamps lighted.
  - If No. 5 ETS CAMA is provided—
    - FT, S1 lamps lighted.
  - If E-M key is operated—
    - E lamp lighted.
  - At test set—
    - P lamp extinguished.

- AE lamp not lighted.

While ANS key is operated—
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Momentarily operate RL key.</td>
<td>High tone heard.</td>
</tr>
<tr>
<td>20c</td>
<td>If no further tests are to be performed—Restore all keys and switches.</td>
<td>All lamps extinguished except CAMA.</td>
</tr>
<tr>
<td>21c</td>
<td>Remove patch cord from CAMA/CNTX jack to T jack of trunk under test.</td>
<td>CAMA lamp lighted.</td>
</tr>
<tr>
<td>22</td>
<td>Remove make-busy plug from MB jack of trunk under test.</td>
<td></td>
</tr>
<tr>
<td>23c</td>
<td>Remove patch cord from IRT jack of register and CAMA sender test set.</td>
<td></td>
</tr>
<tr>
<td>24d</td>
<td>If trunk under test is arranged for local completion—Operate keys in accordance with Table A for local terminating route.</td>
<td></td>
</tr>
<tr>
<td>25d</td>
<td>Select A_, B_, C_ digits for local office code.</td>
<td></td>
</tr>
<tr>
<td>26d</td>
<td>Operate TTL key.</td>
<td>MRL, CK2, OGT-CS lamps lighted.</td>
</tr>
<tr>
<td>27e</td>
<td>If trunk under test is arranged for local completion and ANI—Momentarily operate ST key.</td>
<td>If No. 5 ETS CAMA is provided—FT, S1 lamps lighted.</td>
</tr>
<tr>
<td>28e</td>
<td>Momentarily operate the following keys, in turn: KP, numeral 0 for X digit, calling number, ST.</td>
<td>At test set—RR lamp lighted.</td>
</tr>
<tr>
<td></td>
<td>Note: Keying must be completed in 4.8 seconds to avoid sender timeout.</td>
<td>At MTF—TS, IE, T_, U_, RN_ lamps lighted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If No. 5 ETS CAMA is provided—IE, T_, U_, RN lamps not lighted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R- lamp flashes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ringing tone heard in unison with R- lamp flashes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At test set—RR lamp extinguished.</td>
</tr>
<tr>
<td>29f</td>
<td>If trunk under test is arranged for local completion but not arranged for ANI—At MTF—Momentarily operate ST key.</td>
<td>High tone heard.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ITNP, MRL, CK2, POSC, OGT-CS lamps lighted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If No. 5 ETS CAMA is provided—FT, S1 lamps lighted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At test set—P lamp lighted.</td>
</tr>
<tr>
<td>STEP</td>
<td>ACTION</td>
<td>VERIFICATION</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 30f  | Key calling number. | At MTF—  
High tone silenced.  
TS, IE, T_, U_, RN_ lamps lighted.  
*If No. 5 ETS CAMA is provided—  
IE, T_, U_, RN lamps not lighted.*  
R- lamp flashes.  
Ringing tone heard in unison with R- lamp flashes.  
At test set—  
P lamp extinguished. |
| 31d  | At MTF—  
Operate ANS key for 2 seconds. | AE lamp not lighted.  
While ANS key is operated—  
High tone heard.  
*If No. 5 ETS CAMA is provided—  
CS lamp not lighted.*  
All lamps extinguished except CAMA.  
*If No. 5 ETS CAMA is provided—  
FT lamp remains lighted.* |
| 32d  | Momentarily operate RL key. | CAMA lamp extinguished. |
| 33c  | If no further tests are to be performed—  
Restore all keys and switches. | |
| 34c  | *Remove patch cord from CAMA/CNTX jack  
to T jack of trunk under test.* | |
| 35c  | Remove make-busy plug from MB jack of  
trunk under test. | |
| 38c  | Remove patch cord from IRT jack of register  
and CAMA sender test set.* | |

E. Cancel Disconnect Entry

*Note 1:* Refer to paragraph 1.03.

*Note 2:* Do not proceed with this test until 2 minutes have elapsed since the thermal time-delay relay (TR) in the circuit under test was last energized.

12 Select A_ through L_ digits for tandem or intertoll terminating route. (Refer to paragraph 1.04.)

13 Operate keys in accordance with Table A for selected route.  
CAMA lamp lighted.

14a If trunk under test is arranged for ANI—  
Momentarily operate ST key.  
MRL_, CK2, OGT-CS lamps lighted.  
*If No. 5 ETS CAMA is provided—  
FT, S1 lamps lighted.*
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<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>15a</td>
<td>Momentarily operate the following keys, in turn: KP, numeral 0 for X digit, calling number, ST.</td>
<td>At test set— RR lamp lighted. At MTF— IE, T-, U-, RN- lamps lighted. If No. 5 ETS CAMA is provided— IE, T-, U-, RN lamps not lighted. If E-M key is operated— E lamp lighted. At test set— When last digit is pulsed— RR lamp extinguished.</td>
</tr>
<tr>
<td>16b</td>
<td>If trunk under test is not arranged for ANI— At MTF— Momentarily operate ST key.</td>
<td>High tone heard. MRL, CK2, POSC, OGT-CS lamps lighted. If No. 5 ETS CAMA is provided— FT, S1 lamps lighted. At test set— P lamp lighted.</td>
</tr>
<tr>
<td>17b</td>
<td>Key calling number.</td>
<td>At MTF— High tone silenced. IE, T-, U-, RN- lamps lighted. If No. 5 ETS CAMA is provided— IE, T-, U-, RN lamps not lighted. If E-M key is operated— E lamp lighted. At test set— P lamp extinguished.</td>
</tr>
<tr>
<td>18</td>
<td>At MTF— Operate ANS key.</td>
<td>High tone heard. AE lamp lighted. If No. 5 ETS CAMA is provided— CS lamps lighted.</td>
</tr>
<tr>
<td>19c</td>
<td>If trunk under test is nonbylink— At relay rack frame— Insulate 7B of D relay.</td>
<td>At relay rack frame— In 2 to 5 seconds— MA relay released. At MTF— DE lamp not lighted. If No. 5 ETS CAMA is provided— S1, CS lamps extinguished.</td>
</tr>
<tr>
<td>20d</td>
<td>If trunk under test is bylink— At relay rack frame— Insulate 6B of D relay.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>At MTF— Restore TLK, ANS keys; start timing.</td>
<td></td>
</tr>
</tbody>
</table>
STEP ACTION

22 At relay rack frame—
Remove insulator from D relay.

23 At MTF—
Momentarily operate RL key.

24 If no further tests are to be performed—
Restore all keys and switches.

25f Remove patch cord from CAMA/CNTX jack to T jack of trunk under test.

26f Remove make-busy plug from MB jack of trunk under test.

27f Remove patch cord from IRT jack of register and CAMA sender test set.

F. Overflow

12 Operate keys in accordance with Table A for tandem or intertoll terminating route.

13 Select A- through G- digits for local office code and permanent overflow number.

14a If trunk under test is arranged for ANI—
Momentarily operate ST key.

15a Momentarily operate the following keys, in turn: KP, numeral 0 for X digit, calling number, ST.

Note: Keying must be completed within 4.8 seconds to avoid sender timeout.

16b If trunk under test is not arranged for ANI—
At MTF—
Momentarily operate ST key.

VERIFICATION

All lamps extinguished except CAMA.

If No. 5 ETS CAMA is provided—
FT lamp remains lighted.

CAMA lamp extinguished.

CAMA lamp lighted.

MRL, CK2, OGT-CS lamps lighted.

If No. 5 ETS CAMA is provided—
FT, S1, lamps lighted.

At test set—
RR lamp lighted.

At MTF—
Overflow tone heard.
IE, T, U, RN lamps lighted.

If No. 5 ETS CAMA is provided—
IE, T, U, RN lamps not lighted.

If trunk under test is equipped with AF100 RV relay—
At relay rack frame—
RV relay operated.
At test set—
When last digit is pulsed—
RR lamp extinguished.

High tone heard.
MRL, CK2, POSC, OGT-CS lamps lighted.

If No. 5 ETS CAMA is provided—
FT, S1, lamps lighted.

At test set—
P lamp lighted.
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
</table>
| 17b  | Key calling number. | At MTF—
High tone silenced.
Overflow tone heard.
IE, T, U, RN lamps lighted.
◊If No. 5 ETS CAMA is provided—
IE, T, U, RN lamps not lighted.◊ |
| 18   | At MTF—
Momentarily operate RL key. | All lamps extinguished except CAMA.
◊If No. 5 ETS CAMA is provided—
FT lamp remains lighted.◊ |
| 19c  | If no further tests are to be performed—
Restore all keys and switches. | CAMA lamp extinguished. |
| 20c  | ◊Remove patch cord from CAMA/CNTX jack
to T jack of trunk under test. |  |
| 21c  | Remove make-busy plug from MB jack of
trunk under test. |  |
| 22c  | Remove patch cord from IRT jack of register
and CAMA sender test set.◊ |  |
| 23d  | If bylink incoming trunk is under test—
At relay rack frame—
Block nonoperated R relay. |  |
| 24d  | Insulate 4M of B relay. |  |
| 25e  | If CLRR key is provided—
At MTF—
Operate CLRR key. | OGT-CS lamps lighted.
◊If No. 5 ETS CAMA is provided
FT, S1, lamps lighted.◊ |
| 26d  | If bylink incoming trunk is under test—
At MTF—
Momentarily operate ST key. | Overflow tone heard.
Minor alarm sounds.
If trunk under test is equipped with AF100
RV relay—
At relay rack frame—
RV relay operated. |
| 27d  | Dial digit 0. | Note: If a nonwire-spring-type relay marker
was selected, a trouble record will be taken. |
STEP ACTION

28d At MTF—
Momentarily operate RL key.

29d Momentarily operate AR key.

30d At relay rack frame—
Remove blocking tool from R relay.

31d Remove insulator from B relay.

32c At MTF—
If no further tests are to be performed—
Restore all keys and switches.

33c •Remove patch cord from CAMA/CNTX jack to T jack of trunk under test.

34c Remove make-busy plug from MB jack of trunk under test.

35c Remove patch cord from IRT jack of register and CAMA sender test set.

G. Call to Busy Line

12 Select A through L digit for tandem or intertoll route to distant busy line. (Refer to paragraph 1.04.)

13 Operate keys in accordance with Table A for selected route.

14 Operate OP key.

15a If trunk under test is arranged for ANI—
Momentarily operate ST key.

16a Momentarily operate the following keys, in turn: KP, numeral 0 for X digit, calling number, ST.

Note: Keying must be completed in 4.8 seconds to avoid sender timeout.

VERIFICATION

If a wire-spring-type relay marker was selected, no trouble record will be taken.

All lamps extinguished except CAMA.

•If No. 5 ETS CAMA is provided—
FT lamp remains lighted.

Minor alarm silenced.

CAMA lamp extinguished.
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<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>17b</td>
<td>If trunk under test is not arranged for ANI—At MTF—Momentarily operate ST key.</td>
<td>High tone heard. MRL, CKT, POSC, OGT-CS lamps lighted. •If No. 5 ETS CAMA is provided—FT, S1 lamps lighted. •At test set—P lamp lighted.</td>
</tr>
<tr>
<td>18b</td>
<td>Key calling number.</td>
<td>At MTF—High tone silenced. Busy tone heard. IE lamp lighted. AE lamp <strong>not</strong> lighted. At test set—P lamp extinguished.</td>
</tr>
<tr>
<td>19</td>
<td>At MTF—Momentarily operate RL key.</td>
<td>All lamps extinguished except CAMA. •If No. 5 ETS CAMA is provided—FT lamp remains lighted. •CAMA lamp extinguished.</td>
</tr>
<tr>
<td>20c</td>
<td>If no further tests are to be performed—Restore all keys and switches.</td>
<td></td>
</tr>
<tr>
<td>21c</td>
<td>•Remove patch cord from CAMA/CNTX jack to T jack of trunk under test.</td>
<td></td>
</tr>
<tr>
<td>22c</td>
<td>Remove make-busy plug from MB jack of trunk under test.</td>
<td></td>
</tr>
<tr>
<td>23c</td>
<td>Remove patch cord from IRT jack of register and CAMA sender test set. •</td>
<td></td>
</tr>
<tr>
<td>24d</td>
<td>If trunk under test is arranged for local completion—Operate keys in accordance with Table A for local terminating route.</td>
<td></td>
</tr>
<tr>
<td>25d</td>
<td>Select A_, B_, C_ digits to select local office code.</td>
<td></td>
</tr>
<tr>
<td>26d</td>
<td>Operate BB key.</td>
<td></td>
</tr>
<tr>
<td>27d</td>
<td>Repeat Steps 14 through 23c.</td>
<td></td>
</tr>
</tbody>
</table>

H. Ringing—Local Completion

12   Operate keys in accordance with Table A for local terminating route. CAMA lamp lighted.

13   Select A_ through L_ digits for local terminating test line for first provided ringing combination. (Refer to Table B.)
If trunk under test is arranged for ANI—
Momentarily operate ST key.

Momentarily operate the following keys, in
turn: KP, numeral 0 for X digit, calling
number, ST.

Note: Keying must be completed in 4.8
seconds to avoid sender timeout.

If trunk under test is not arranged for ANI—
At MTF—
Momentarily operate ST key.

Key calling number.

At MTF—
Momentarily operate RL key.

Repeat Steps 13 through 18 for each ringing
combination provided.

If no further tests are to be performed—
Restore all keys and switches.

Remove patch cord from CAMA/CNTX jack
to T jack of trunk under test.

Remove make-busy plug from MB jack of
trunk under test.
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### STEP 23c ACTION

Remove patch cord from IRT jack of register and CAMA sender test set.

<table>
<thead>
<tr>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMA lamp lighted.</td>
</tr>
</tbody>
</table>

### I. Pretrip and Trip—Local Completion

#### 12
Operate keys in accordance with Table A for local completion.

#### 13
Select A, B, C digits for local office code.

#### 14
Operate TTL key.

#### 15
If trunk under test is arranged for ANI—
Momentarily operate ST key.

- **Note:** Keying must be completed in 4.8 seconds to avoid sender timeout.

#### 16a
Momentarily operate the following keys, in turn: KP, number 0 for X digit, calling number, ST.

- MRL, CK2, OGT-CS lamps lighted.
- **Note:** If No. 5 ETS CAMA is provided—
  - FT, S1 lamps lighted.

#### 17b
If trunk under test is not arranged for ANI—
At MTF—
Momentarily operate ST key.

- High tone heard.
- MRL, CK2, POSC, OGT-CS lamps lighted.
- **Note:** If No. 5 ETS CAMA is provided—
  - FT, S1 lamps lighted.

#### 18b
Key calling number.

- At MTF—
  - High tone silenced.
  - TS, IE, T, U, RN lamps lighted.
- **Note:** If No. 5 ETS CAMA is provided—
  - IE, T, U, RN lamps not lighted.

#### 19
At MTF—
Operate and hold PTP key for 1/2 second during silent interval of ringing.

- R- lamp continues to flash.
- Ringing tone heard in unison with R- lamp flashes.
STEP | ACTION | VERIFICATION
--- | --- | ---
20 | Operate and hold TRP key for 1 second during silent interval of ringing. | R- lamp extinguished. Ringing tone silenced.
21 | Momentarily operate RL key. | All lamps extinguished except CAMA. ◆If No. 5 ETS CAMA is provided— FT lamp remains lighted.◆
22c | Restore all keys and switches not required in next test. | CAMA lamp extinguished.
23c | ◆Remove patch cord from CAMA/CNTX jack to T jack of trunk under test. | 
24c | Remove make-busy plug from MB jack of trunk under test. | 
25c | Remove patch cord from IRT jack of register and CAMA sender test set.◆ | 

J. **Call to Free Line—Local Completion**

12 | Operate keys in accordance with Table A for local completion. | CAMA lamp lighted.
13 | Select A_ through L_ digits for terminating test line. | MRL, CK2, OGT-CS lamps lighted. ◆If No. 5 ETS CAMA is provided— FT, S1 lamps lighted.◆ At test set— RR lamp lighted.
14 | If trunk under test is arranged for ANI— Momentarily operate ST key. | At MTF— IE, T_, U_, RN_ lamps lighted. ◆If No. 5 ETS CAMA is provided— IE, T_, U_, RN lamps not lighted.◆ R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. At test set— When last digit is pulsed— RR lamp extinguished.
15a | Momentarily operate following keys, in turn: KP, numeral 0 for X digit, calling number, ST. | High tone heard. MRL, CK2, POSC, OGT-CS lamps lighted. ◆If No. 5 ETS CAMA is provided— FT, S1 lamps lighted.◆ At test set— P lamp lighted.
16b | If trunk under test is not arranged for ANI— At MTF— Momentarily operate ST key. | 

**Note:** Keying must be completed in 4.8 seconds to avoid sender timeout.
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<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
</table>
| 17b  | Key calling number. | At MTF—
High tone silenced.
IE, T, U, RN lamps lighted.
If No. 5 ETS CAMA is provided—
IE, T, U, RN lamps not lighted.
R- lamp flashes.
Ringing tone heard in unison with R- lamp flashes.
At test set—
P lamp extinguished. |
| 18   | At MTF—
Operate ANS key; \textit{start timing.} | R- lamp extinguished.
Ringing tone silenced.
High tone heard.
In 6 seconds—
AE lamp not lighted.
If No. 5 ETS CAMA is provided—
CS lamp not lighted. |
| 19   | Restore ANS key. | DE lamp not lighted.
High tone silenced. |
| 20   | Momentarily operate RL key. | All lamps extinguished except CAMA.
If No. 5 ETS CAMA is provided—
FT lamp remains lighted. |
| 21c  | If no further tests are to be performed—
Restore all keys and switches. | CAMA lamp extinguished. |
| 22c  | \textbullet Remove patch cord from CAMA/CNTX jack to T jack of trunk under test. | |
| 23c  | Remove make-busy plug from MB jack of trunk under test. | |
| 24c  | Remove patch cord from IRT jack of register and CAMA sender test set. \textbullet | |

K. Make-Busy and Winkoff

1 At MTF—
When trunk under test is idle—
Insert make-busy plug into MB jack associated with trunk under test. If SD-26101-01 is under test—
At relay rack frame—
Ground present on 6 of MB relay. |
<p>| 2   | Connect terminal 48 to terminal 58 of terminal strip A. | |
| 3   | Connect test set to terminal 58 of terminal strip and ground. | Overflow tone heard at test set. |</p>
<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Check for presence of ground on terminal 18 of terminal strip B.</td>
<td>Ground present.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Maintain test set connection to terminal 18 of terminal strip B while performing Step 5.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Remove test connection from terminal 58 of terminal strip A.</td>
<td>Ground momentarily absent on terminal 18 of terminal strip B.</td>
</tr>
<tr>
<td>6</td>
<td>Remove test connections and test sets.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>At MTF—Remove make-busy plug.</td>
<td></td>
</tr>
</tbody>
</table>
**TABLE A**

**MTF KEY OPERATIONS FOR CAMA TRUNK TESTS**

<table>
<thead>
<tr>
<th>CAMA INCOMING TRUNK</th>
<th>TYPE</th>
<th>INC SUPV</th>
<th>TYPE OF COMPLETION</th>
<th>OUTGOING TRUNK O/SUPERVISION</th>
<th>OPERATE KEYS AT MTF</th>
<th>OPERATE KEYS AT TTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonbyl Rev Bat.</td>
<td>Tandem</td>
<td>Trans.</td>
<td>Rev Bat.</td>
<td></td>
<td>ITNP,KY,CAM0</td>
<td>TLK,COGTYSLP</td>
</tr>
<tr>
<td>Nonbyl Rev Bat.</td>
<td>Tandem</td>
<td>Trans.</td>
<td>Rev Bat.</td>
<td></td>
<td>ITNP,KY,CAM1</td>
<td>TLK,COGTYSLP</td>
</tr>
<tr>
<td>Nonbyl Rev Bat.</td>
<td>Intertoll</td>
<td>Trans.</td>
<td>E &amp; M Leads</td>
<td></td>
<td>ITNP,KY,CAM1</td>
<td>TLK,SLP,E-M</td>
</tr>
<tr>
<td>Bylink E &amp; M Leads</td>
<td>Local</td>
<td>Trans.</td>
<td>Tandem</td>
<td></td>
<td>ITNP,KY,CAM0</td>
<td>TLK,COGTCEMI</td>
</tr>
<tr>
<td>Bylink E &amp; M Leads</td>
<td>Intertoll</td>
<td>Trans.</td>
<td>Rev Bat.</td>
<td></td>
<td>ITNP,KY,CAM1</td>
<td>TLK,COGTCEMI</td>
</tr>
<tr>
<td>Bylink E &amp; M Leads</td>
<td>Intertoll</td>
<td>Trans.</td>
<td>E &amp; M Leads</td>
<td></td>
<td>ITNP,KY,CAM1</td>
<td>TLK,E-MCEMI</td>
</tr>
<tr>
<td>Bylink E &amp; M Leads</td>
<td>Local</td>
<td>Trans.</td>
<td>Tandem</td>
<td></td>
<td>ITNP,KY,CAM0</td>
<td>TLK,CEMI</td>
</tr>
<tr>
<td>Bylink Rev Bat.</td>
<td>Tandem</td>
<td>Trans.</td>
<td>Rev Bat.</td>
<td></td>
<td>ITNP,KY,CAM0</td>
<td>TLK,COGTYSIS</td>
</tr>
<tr>
<td>Bylink Rev Bat.</td>
<td>Intertoll</td>
<td>Trans.</td>
<td>Rev Bat.</td>
<td></td>
<td>ITNP,KY,CAM1</td>
<td>TLK,COGTYSIS</td>
</tr>
<tr>
<td>Bylink Rev Bat.</td>
<td>Intertoll</td>
<td>Trans.</td>
<td>E &amp; M Leads</td>
<td></td>
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* Incoming from intramural (local) step-by-step office.
# TABLE B — RINGING CODE CHECK CHART

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<th>RINGING COMB.</th>
<th>RINGING SELECTION SWITCH</th>
<th>RINGING DETECTION LAMP LIGHTED</th>
<th>RINGING TEST LINE NO.</th>
<th>RINGING CODES</th>
<th>RINGING INTERVAL IN SECONDS</th>
<th>REMARKS</th>
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</tbody>
</table>

*These ringing combinations check all equipped crosspoints on the ringing selection switch.
†In offices arranged for marker controlled immediate ring, set RMBR switch to position 1.
‡Ringing combination 10 is listed for information purposes only and should not be used for testing the ringing feature.
§If line link pulsing or direct access to No. 101 ESS is provided, operate RTK key to test silent level.
*No indication.