

TRAFFIC REGISTERS—PART 2
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is Part 2 of a series of sections that describe methods for testing traffic registers.

1.02 This section is reissued for the following reasons:

- (a) To revise title
- (b) To revise all tests to conform with Section 218-106-301
- (c) To add lead designations to Tests A through D.

Since this reissue is a general revision, arrows ordinarily used to indicate changes have been omitted.

This reissue affects Equipment Test Lists.

1.03 The tests covered are:

- A. Peg Count Register for Trunk Link Dial Tone Peg Count (DT Lead):** This test checks that the peg count register operates when a connection is completed from a customer's line to an originating register.
- B. Peg Count Register for Trunk Link Originating Peg Count (TCB Lead):** This test checks that the peg count register operates when a connection is completed from an originating customer's line to a trunk.
- C. Peg Count Register for Trunk Link Incoming Peg Count (INC Lead):** This test checks that the peg count register operates when a connection is completed to a customer's line or when line busy or overflow is encountered.
- D. Overflow Register for Trunk Link Failure to Match (OF Lead):** This test checks

that the overflow register operates when a marker finds a failure to match on channels through the associated trunk link frame.

1.04 Table A indicates the tests that require action and verification at more than one location.

TABLE A

ACTION AND/OR VERIFICATION REQUIRED AT:	TESTS	
	A,B,C	D
Traffic Register Cabinet	✓	✓
Master Test Frame	✓	✓
Marker Circuit	✓	✓
Traffic Register Circuit	✓	✓
Line Link Frame	—	✓

✓ As required.

1.05 Test D requires at least two idle trunks available on trunk link frame selected for test.

1.06 Local instructions should be followed for recording and reporting any register operations caused by performing these tests.

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.

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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 shown in Table B. The details of each item are covered in the paragraph indicated by the number in parentheses. In addition, the following apparatus may also be required.

- (a) Apparatus covered in 2.07 and 2.08 is required when a portable lamp is used to determine register operation.
- (b) Two head telephone sets are required when a portable lamp is not used.
- (c) A 32A test set is required when the master test frame is controlled from a remote point.
- (d) Two 26 cords are required in offices where it is necessary to patch the traffic register to the circuit under test and to patch the traffic register to a battery supply.

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

2.03 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 tool, one 419A (test connector) tool (for use in connecting battery or ground to springs of nonwire-spring-relays), and one 639A (relay contact connector) tool (for use in connecting battery or ground to springs of wire-spring relays).

2.04 The 322A (make-busy) plug has an insulated tip and a common ring and sleeve. It is used with 92- or similar type jacks.

2.05 The 349A plug is a solid brass plug.

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

2.07 Two W2W cords, 10 feet long, each equipped with a 310 plug and two 360-type tools (2W17C cords), two KS-6278 tools, and two 108 cord tips (required when a portable test lamp is used).

2.08 38B lamp socket equipped with a 2Y lamp (required when a portable test lamp is used).

TABLE B

APPARATUS	TESTS	
	A,B,C	D
Test Circuit (2.02)	1	1
Cord (2.03)	1	1
322A (make busy) Plug (2.04)	1	1
349A (make busy) Plug (2.05)	—	1
Tool (2.06)	√	—

√ As required.

3. PREPARATION

STEP	ACTION	VERIFICATION
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All Tests

- | | | |
|----|---|--|
| 1a | If traffic registers are arranged for patching—
At traffic register cabinet—
Insert cord tip of 26 patching cord into P_ jack for circuit associated with register to be tested. | |
| 2a | Insert cord tip on other end of 26 patching cord into black jack associated with register to be tested (black jack is located on mounting plate with register). | |
| 3a | Insert cord tip of 26 cord into red jack on mounting plate with register to be tested. | |
| 4a | Insert cord tip on other end of 26 cord into any S_ jack located at bottom of jack field. | |
| 5b | If traffic registers are arranged for patching and if battery supply for register to be tested is controlled by C toggle switch—
At traffic register cabinet—
If C toggle switch is in OFF position—
Operate to ON position. | |
| 6c | If traffic registers are not arranged for patching—
Determine from local office records, functional designation of peg count BAT key associated with register to be tested. | |
| 7c | At traffic register frame—
Operate BAT key associated with register to be tested. | |
| 8d | If tests are to be performed without portable lamp—
Establish talking circuit between frames where test is to be performed and where observations are to be made. | |
| 9e | If tests are to be performed with portable lamp—
At frame where action is to be taken—
Insert plug of 2W17C cord, equipped with two KS-6278 tools, into SP jack of miscellaneous circuit. | |

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STEP	ACTION	VERIFICATION
10e	Determine from circuit drawing of circuit associated with register to be tested, location of terminal on terminal strip at which common lead to traffic register circuit is connected.	
11e	Connect one lead of 2W17C cord to terminal on terminal strip determined in Step 10e.	
12e	Connect other lead of 2W17C cord to battery.	
13e	Connect leads of 38B lamp socket to leads of another 2W17C cord equipped with two KS-6278 tools.	
14e	Insert plug of this 2W17C cord into any appearance of selected SP jack of miscellaneous circuit close to position where test is to be performed.	
15e	Place lamp so that it can be easily observed.	
16f	If tests are performed with portable lamp, and circuit associated with register to be tested removes ground from common lead to traffic register circuit to operate register— Observe lamp when register operates.	Lamp extinguished.
17g	If tests are performed with portable lamp, and circuit associated with register to be tested applies ground to common lead to traffic register circuit to operate register— Observe lamp when register operates.	Lamp lighted.
18e	If tests are to be performed with portable lamp— To observe scoring of register when using test lamp, proceed as follows: (a) For first observation of scoring of register observe that test lamp indicates proper condition on common lead and that register scores as required. (b) For subsequent observations of scoring of same register, observe lamp indications only.	
	<i>Note:</i> When the register to be tested scores at timed intervals, the test lamp will not flash with the scoring of the register.	
19	At master test frame— Restore all keys.	
20	Operate RL key momentarily.	All lamps extinguished.

STEP	ACTION	VERIFICATION
Test D		
21h	If testing traffic registers in 4-wire offices— At master test frame— Operate 4W key.	
A. Peg Count Register for Trunk Link Dial Tone Peg Count (DT Lead)		
21	Insert make-busy plug into M_MB or M_D_MB jack of dial tone or combined marker associated with register being tested.	
22h	If MT18 relay is provided— At marker frame— Block nonoperated MT18 relay.	
23i	If MT18 relay is not provided— At marker frame— Ground contact 4 top of MT13 relay.	
24	Select DT class of call.	
25	Select any class of service except manual.	
26	Select any line location.	
27	Select trunk link frame associated with register under test.	
28	Operate FS key.	
29	Select marker made busy.	
30	Operate ST key momentarily.	At traffic register cabinet— Register scores once.
31	Operate RL key momentarily.	All lamps extinguished.
32	At marker frame— Remove blocking tool from relay MT18 or ground from relay MT13.	
33	At master test frame— Remove make-busy plug from M_MB or M_D_MB jack.	
34	Repeat Steps 21 through 33 for each dial tone or combined marker associated with register under test.	

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STEP	ACTION	VERIFICATION
35	Restore all keys, remove all patching cords, and set all switches to OFF.	
B. Peg Count Register for Trunk Link Originating Peg Count (TCB Lead)		
21	Insert make-busy plug into M_MB or M_C_MB jack of combined or completing marker associated with register being tested.	
22h	If MT18 relay is provided— At marker frame— Block nonoperated MT18 relay.	
23i	If MT18 relay is not provided— At marker frame— Ground contact 4 top of MT13 relay.	
24	Select ORIG class of test.	
25	Select intraoffice code and any numerals.	
26	Select OR class of call with translator indication for intraoffice route.	
27	Select any class of service except manual.	
28	Select rate treatment.	
29	Select trunk link frame associated with register under test.	
30	Operate FS key.	
31	Select marker made busy.	
32	Operate ST key momentarily.	At traffic register cabinet— Register scores once.
33	Operate RL key momentarily.	All lamps extinguished.
34	At marker frame— Remove blocking tool from relay MT18 or ground from relay MT13.	
35	At master test frame— Remove make-busy plug from M_MB or M_C_MB jack.	
36	Repeat Steps 21 through 35 for each combined or completing maker associated with register under test.	

STEP	ACTION	VERIFICATION
37	Restore all keys, remove all patching cords, and set all switches to OFF.	
C. Peg Count Register for Trunk Link Incoming Peg Count (INC Lead)		
21	Insert make-busy plug into M_MB or M_C_MB jack of combined or completing marker associated with register being tested.	
22h	If relay MT18 is provided— At marker frame— Block nonoperated relay MT18.	
23i	If relay MT18 is not provided— At marker frame— Ground contact 4 top of MT13 relay.	
24	Select INC class of test.	
25	Select A through G digits as required for incoming code and numerals.	
26	Select incoming class of call with translator indication for access to selected number.	
27	Select incoming trunk class.	
28	Select trunk link frame associated with register under test.	
29	Operate FS key.	
30	Select marker made busy.	
31	Operate ST key momentarily.	At traffic register cabinet— Register scores once.
32	Operate RL key momentarily.	All lamps extinguished.
33	Operate LB key.	
34	Operate ST key momentarily.	At traffic register cabinet— Register scores once.
35	Operate RL key momentarily.	All lamps extinguished.
36	Restore LB key.	
37	Select A through G digits as required to select number that is cross-connected to give overflow indication.	

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STEP	ACTION	VERIFICATION
38	Operate ST key momentarily.	At traffic register cabinet— Register scores once.
39	Operate RL key momentarily.	All lamps extinguished.
40	At marker frame— Remove blocking tool from MT18 relay or ground from MT13 relay.	
41	At master test frame— Remove make-busy plug from M_MB or M_C_MB jack.	
42	Repeat Steps 21 through 41 for each combined or completing marker associated with register being tested.	
43	Restore all keys, remove all patching cords, and set all switches to OFF.	

**D. Overflow Register for Trunk Link Failure to Match
(OF Lead)**

- 22 Insert make-busy plugs into M_MB or M_C_MB
jack of combined or completing marker
associated with register being tested.
- 23h If marker is nonwire-spring-relay type—
At marker frame—
Ground contact 2 top of MT13 relay.
- 24i If marker is wire-spring-relay type—
At marker frame—
Ground contact 3 fixed of MT13 relay.
- 25 Select ORIG class of test.
- 26 Select intraoffice code and any numerals.
- 27 Select OR class of call with translator indication
for intraoffice route.
- 28 Select any class of service having access to
intraoffice route.
- 29 Select rate treatment as required for intraoffice
route.
- 30 Select trunk link frame associated with register
under test.
- 31 Operate FS, STP1 keys.

STEP	ACTION	VERIFICATION
32	Select marker made busy.	
33	Select junctor sequence 0.	
34	Select route advance 0.	
35	Select line location on LLF0.	
36	Operate CH0 key.	
37	At line link frame 0— Insert 349A plug into JS0 jack.	At traffic register cabinet— Register scores twice.
38	At master test frame— Operate ST key momentarily.	
39	Operate RL key momentarily.	
40	Remove ground from MT13 relay.	
41	Remove make-busy plug from M_MB or M_C_MB jack.	
42	Repeat Steps 22 through 41 for each combined or completing marker associated with register being tested	
43	Restore all keys and set all switches to OFF.	
44j	If dial tone markers are provided— Insert make-busy plug into M_D_MB jack of dial tone marker associated with register being tested.	
45k	If dial tone marker is wire-spring-relay type— Ground contact 7 fixed of MT13 relay.	
46l	If dial tone marker is nonwire-spring-relay type— At marker frame— Ground contact 2 top of MT13 relay.	
47j	If dial tone markers are provided— Select DT class of test.	
48j	Select line location on LLF0.	
49j	Select trunk link frame associated with register under test.	
50j	Operate FS, STP1 keys.	

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STEP	ACTION	VERIFICATION
51j	Select junctor sequence 0.	
52j	Select route advance 0.	
53j	Select marker made busy.	
54j	Operate CH0 key.	
55j	Operate ST key momentarily.	At traffic register cabinet— Register scores twice.
56j	Operate RL key momentarily.	All lamps extinguished.
57j	At marker frame— Remove ground from MT13 relay.	
58j	At master test frame— Remove make-busy plug from M.D_MB jack.	
59j	Repeat Steps 44j through 58j for each dial tone marker associated with register being tested.	
60	At line link frame 0— Remove 349A plug from JS0 jack.	
61	Restore all keys, remove all patching cords, and set all switches to OFF.	