TRAFFIC REGISTERS—PART 19

TESTS USING MASTER TEST FRAME

NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is Part 19 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 add Test E for testing traffic registers for dynamic overload route transfer peg count

(c) To add lead designations to Tests A through D.

This reissue affects Equipment Test Lists.

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

1.03 The tests covered are:

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,D	C	E
Traffic Register Cabinet	√	√	√
Marker	–	–	√
Line Link Frame	–	√	–
Line Insulation Test Frame	√	√	–
Master Test Control Circuit	–	–	√

√ As required.

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

1.06 *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.

1.07 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.

1.08 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) 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 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and two

TABLE B

APPARATUS	TESTS			
	A,B	C	D	E
Testing Cord (2.02)	—	1	—	—
Test Circuit (2.03)	1	1	1	—
349A (make-busy) Plug (2.04)	—	1	—	√
KS-3008 Stop Watch, or Equivalent (2.05)	—	—	1	—
Tool (2.06)	√	√	—	√
Test Circuit (2.09)	—	—	—	√

√ As required.

419A (test connector) tools (for use in strapping together springs of nonwire-spring relays) or two 639A (relay contact connector) tools (for use in strapping together springs of wire-spring relays).

2.03 Line insulation test control circuit, SD-25796-01.

2.04 The 349A (make-busy) plug is a solid brass plug.

2.05 The KS-3008 stopwatch, or equivalent, should be used when performing tests requiring the observation of intervals of time.

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).

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

3. PREPARATION

STEP	ACTION	VERIFICATION

All Tests

1a   If traffic registers are arranged for patching—
At traffic register cabinet—
Insert cord tip of 26 patching cord to 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 a 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.

Test A

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.

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. *Note:* When the register to be tested scores at timed intervals, the test lamp will not flash with the scoring of the register.	

STEP	ACTION	VERIFICATION

4. METHOD

STEP	ACTION	VERIFICATION

A. Usage Register For Frame Count Of Links Busy (TC Lead)

STEP	ACTION	VERIFICATION
19	At line insulation test frame— Operate all switches to OFF.	
20	Operate RN1 key momentarily.	
21	Operate RGT key momentarily.	RGT lamp lighted.
22	Block operated FC, FU_ relays associated with register being tested.	
23	Operate all LB0 through 9 keys.	
24	Insulate contact 8 top of RGT relay.	
25	Operate RTS key momentarily.	EG lamp lighted. At traffic register cabinet— Register scores ten times.
26	Operate RTR key momentarily.	EG lamp extinguished.
27	Restore LB0 through 4 keys.	
28	Operate RTS key momentarily.	EG lamp lighted. At traffic register cabinet— Register scores five times.
29	Operate RTR key momentarily.	EG lamp extinguished.
30	Restore LB5 through 9 keys.	
31	Operate RTS key momentarily.	EG lamp lighted. At traffic register cabinet— Register does not score.
32	Operate RTR key momentarily.	EG lamp extinguished.
33	Remove blocking tools from FU_, FC relays.	
34	Remove insulator from RGT relay.	
35	Operate RN key momentarily.	All lamps extinguished.
36	Restore all keys and remove all patching cords.	

STEP	ACTION	VERIFICATION

B. Usage Register for Horizontal Group Count of Links Busy (TC Lead)

STEP	ACTION	VERIFICATION
9	At line insulation test frame— Operate all switches to OFF.	
10	Operate RN1 key momentarily.	
11	Operate RGT key momentarily.	RGT lamp lighted.
12	Block operated HGC, HG_ relays associated with register being tested.	
13	Operate all LB0 through 9 keys.	
14	Insulate contact 8 top of RGT relay.	
15	Operate RTS key momentarily.	EG lamp lighted. At traffic register cabinet— Register scores ten times.
16	Operate RTR key momentarily.	EG lamp extinguished.
17	Restore LB0 through 4 keys.	
18	Operate RTS key momentarily.	EG lamp lighted. At traffic register cabinet— Register scores five times.
19	Operate RTR key momentarily.	EG lamp extinguished.
20	Restore LB5 through 9 keys.	
21	Operate RTS key momentarily.	EG lamp lighted. At traffic register cabinet— Register does not score.
22	Operate RTR key momentarily.	EG lamp extinguished.
23	Remove blocking tools from HG_, HGC relays.	
24	Remove insulator from RGT relay.	
25	Operate RN key momentarily.	All lamps extinguished.
26	Restore all keys and remove all patching cords.	

STEP	ACTION	VERIFICATION
C.	**Usage Register for Office Count of Line Links Busy (TC Lead)**	
9	At line insulation test frame— Operate all switches to OFF.	
10	Operate RN1 key momentarily.	
11	Operate OC key momentarily.	OC lamp lighted.
12	Insulate contact 1 top of FU0 relay.	
13	Connect contact 2 top of FU0 relay to contact 2 top of HG0 relay.	
14	At line link frame 0— Insert 349A make-busy plug into same numbered JS_ jack as TC_ register being tested.	
15	At traffic register cabinet— Operate C_ key associated with line insulation test frame momentarily.	TCS lamp lighted. TC_ register being tested scores at least ten times, once for each horizontal group. TCC register scores once at end of cycle.
16	At line link frame 0— Remove make-busy plug from JS_ jack.	
17	At line insulation test frame— Remove insulator from FU0 relay.	
18	Remove test connection from FU0, HG0 relays.	
19	Operate RN key momentarily.	All lamps extinguished.
20	Restore all keys and remove all patch cords.	
D.	**Usage Register for Total Cycle Count (TCC Lead)**	
9	At line insulation test frame— Operate LL_OC key momentarily.	LL_ OC lamp lighted.
10	At traffic register cabinet— Operate C_ key associated with line insulation frame and start timing.	In approximately 3 minutes, TCC register scores once.
11	Restore C_ key.	
12	At line insulation test frame— Operate RN key momentarily.	All lamps extinguished.
13	Restore all keys and remove all patching cords.	

STEP	ACTION	VERIFICATION

E. Dynamic Overload Route Transfer Peg Count (PRT Lead)

STEP	ACTION	VERIFICATION
9	At MTF— Insert make-busy plug into M_C_MB or M_MB jack of marker used in test.	
10	Select marker made busy.	
11	Select ORIG class of test.	
12	Select office code and numericals as required for access to route associated with register.	
13	Select any line location.	
14e	If 4-wire switching route is selected— Operate 4W key	
15f	If multilevel preemption route is selected— Select control digits as required for access to route selected.	
16g	If MT18 relay is provided— At marker made busy— Block nonoperated MT18 relay.	
17	At MTF— Select OR class of call with translator indication for access to route selected.	
18	Select class of service and rate treatment as required for access to route selected.	
19	At marker made busy— Block operated RT_ relay associated with register under test.	
20	At MTF— Momentarily operate ST key.	At traffic register cabinet— Register scored once.
21	Momentarily operate RL key.	All lamps extinguished.
22	At marker made busy— Remove blocking tool from RT_ relay.	
23	Repeat Steps 12 through 22 for each register associated with dynamic overload route transfer.	
24g	If MT18 relay is provided— Remove blocking tool from MT18 relay.	

STEP	ACTION	VERIFICATION
25	At MTF— Remove make-busy plug from M_C_MB or M_MB jack.	
26	Repeat Steps 9 through 25 for each marker.	
27	Restore all keys and switches, and remove all patching cords.	