

PLANT REGISTERS—PART 11
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is Part 11 in a series of sections that describe methods for testing plant registers.

1.02 This section is reissued to amend Test AN to include operation of the RO key. Revision arrows are used to emphasize the more significant changes. This reissue does not affect Equipment Test Lists.

1.03 The tests covered are:

AP. Deleted: -

AQ. Deleted: -

AR. Deleted: -

1.04 Plant registers are located either in a self-contained register cabinet and referred to as the plant register circuit or just above the trouble recorder perforator on the master test frame (MTF) trouble recorder bay.

1.05 Table A indicates the tests requiring action and verification at more than one location.

PAGE

AM. Incoming Register Reorder Request Register (RO Register): This test checks that a plant register operates when a marker encounters a reorder request from an incoming register on service calls.

AN. Transfer Register Link Release Register (TLR Register): This test checks that a plant register operates when a trouble develops in the transfer register link in centrex offices where a separate register is provided to distinguish between transfer register and incoming register link failures. This test also checks that this plant register records a link failure after causing a completing marker to request a trouble card and before a regular disconnect on first or second trial service calls.

AO. Peg Count of Traffic Sampling Failures (TSF Register): This test checks that a plant register operates when a failure occurs in the traffic sampling circuit.

TABLE A

ACTION AND/OR VERIFICATION REQUIRED AT:	TESTS		
	AM	AN	AO
Master Test Frame	✓	✓	
Marker Frame	✓	✓	
Plant Register Circuit	✓	✓	✓
Traffic Sample Monitor and Test Circuit at Miscellaneous Relay Rack Frame			✓

4

5

✓ As required.

6

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 re-

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SECTION 218-233-511

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

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 MTF is controlled from a remote point.

2.02 Master test control circuit SD-25800-01.

2.03 Testing cord, 893 cord, 3 feet long, equipped with two 360A tools (1W13A cord), two 639A (contact connector) tools, and two 651-type (contact connector holder) tools (for making connections to contacts of wire-spring-type relays).

2.04 Testing cord, 893 cord, 3 feet long, equipped with two 360A tools (1W13A cord) and two 419A (test connector) tools (for use in strapping contact springs).

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

2.06 Testing cord, 893 cord, 3 feet long, equipped with two 360A tools, one KS-6278 connecting clip, and one 411A (test pick) tool (for applying battery or ground to test points).

2.07 Two W2W cords, 10 feet long, each equipped with a 310 plug, two 360-type tools (2W17C cords), two KS-6278 connecting clips, 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 When making connections to relays using testing cords listed in this section, use as covered in Section 069-131-811.

TABLE B

APPARATUS	TESTS		
	AM	AN	AO
Test Circuit (2.02)	1	1	
Cord (2.03) (2.09)		1	
Cord (2.04) (2.09)	1		
Tools (2.05)	1	1	
Cord (2.06) (2.09)			1
322A (make-busy) Plug	✓	✓	

✓ As required.

3. PREPARATION**STEP****ACTION****VERIFICATION****All Tests**

Note: Refer to paragraphs 1.08 and 1.09.

- 1a If tests are to be performed without portable test lamp—
Establish talking circuit between frames where test is to be performed and where observations are to be made.
- 2b If tests are to be performed with portable test lamp—
At frame where action is to be taken—
Insert plug of 2W17C cord, equipped with two KS-6278 connecting clips, into SP jack of miscellaneous circuit.
- 3b Determine from circuit drawing of circuit associated with register to be tested location of terminal on terminal strip at which plant register circuit is connected.
- 4b Connect one lead of 2W17C cord to terminal on terminal strip associated with plant register being tested.
- 5b Connect other lead of 2W17C cord to battery.
- 6b Connect leads of 38B lamp socket to leads of another 2W17C cord, equipped with two KS-6278 connecting clips.
- 7b 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.
- 8b Place portable test lamp so that it can be easily observed.
- 9b If tests are to be performed with portable test lamp—
To observe scoring of register when using portable test lamp proceed as follows:
- (a) For first observation of scoring of register, observe that portable test lamp indicates proper condition on lead and that register scores as required.

SECTION 218-233-511

STEP	ACTION	VERIFICATION
	(b) For subsequent observations of scoring of same register, observe portable test lamp indications only.	
	<i>Note:</i> When the register to be tested scores at timed intervals, the portable test lamp will flash with the scoring of the register.	
10	At MTF— Restore all keys and switches.	
11	Momentarily operate RL key.	All lamps extinguished.

Tests AM, AN

- 12c If testing 4-wire switching systems—
Operate 4W key.
- 13c Select control digits.

4. METHOD

STEP	ACTION	VERIFICATION
AM.	Incoming Register Reorder Request Register (RO Register)	
14	Insert make-busy plug into M-D-MB or M-MB jack associated with combined or completing marker.	
15d	If marker is nonwire-spring-relay type and is arranged to prevent scoring of plant registers on test calls (wiring on 4T, 5T of MT14 relay)— At marker frame— Interconnect 4T, 5T of MT14 relay.	
16e	If marker is wire-spring-relay type and is arranged to prevent scoring of plant registers on test calls (wiring on 12 of MT56 relay)— At marker frame— Block nonoperated MT56 relay.	
17	At MTF— Select A_ through D_ digits for any local terminating directory number.	

STEP	ACTION	VERIFICATION
18	Select A or B office designation.	
19	Select INC class of test.	
20	Operate RO key to simulate reorder request condition.	
21	Select trunk link frame.	
22	Select marker made busy.	
23	Momentarily operate ST key.	At plant register circuit— RO plant register scored once.
24	At MTF— Momentarily operate RL key.	
25f	If marker is arranged to prevent scoring of plant registers on test calls— At marker frame— Remove test connection from MT14 relay or blocking tool from MT56 relay.	
26	At MTF— Remove make-busy plug from M-D-MB or M-MB jack.	
27	Repeat Steps 12c through 26 for each combined or completing marker to be tested for plant register operation.	
28	Restore all keys and switches and remove all patching cords not required in next test.	
AN.	Transfer Register Link Release Register (TLR Register)	
14	Insert make-busy plug into M-MB jack associated with completing marker under test.	
15	Operate DTF key to simulate dial transfer call.	
16	Select INC class of test.	
17	Operate LR, RO keys to simulate link release failure.	
18	Select marker made busy.	

SECTION 218-233-511

STEP	ACTION	VERIFICATION
19d	If marker is arranged to prevent scoring of plant registers on test calls (wiring on 11 of MT13 relay)— At marker frame— Block nonoperated MT13 relay.	
20e	If marker is arranged to prevent scoring of plant registers when marker is made busy (wiring on 7 of MB relay)— At marker frame— Interconnect 7 of MB relay, 4 of DISA relay.	
21	At MTF— Momentarily operate ST key.	At plant register circuit— TLR plant register scored once.
22	At MTF— Momentarily operate RL key.	
23e	If marker is arranged to prevent scoring of plant registers when marker is made busy (wiring on 7 of MB relay)— At marker frame— Remove testing cord from MB, DISA relays.	
24d	If marker is arranged to prevent scoring of plant registers on test calls (wiring on 11 of MT13 relay)— At marker frame— Remove blocking tool from MT13 relay.	
25	At MTF— Remove make-busy plug from M-MB jack.	
26	Repeat Steps 12c through 25 for each completing marker to be tested for plant register operation.	
27	Restore all keys and switches and remove all patching cords not required in next test.	
AO. Peg Count of Traffic Sampling Failures (TSF Register)		
12	At relay rack location of traffic sample monitor and test circuit— Momentarily apply ground to 1L of ALM relay.	TSF plant register associated with traffic sampling circuit under test scored once.
AP. Deleted		
AQ. Deleted		
AR. Deleted		