

COMBINED AND COMPLETING MARKER CIRCUITS—PART 29

TESTS USING MASTER TEST FRAME

NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is Part 29 in a series of sections for testing combined and completing markers.

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes. This issue affects the Equipment Test Lists.

- (a) To indicate that Test CZ does not apply in offices equipped with Electronic Translation System (ETS).
- (b) To exclude under verification in all tests, reference to "class of test" lamps.
- (c) To make minor changes as required.

1.03 The test covered is:

PAGE

CZ. Traffic Sampling Feature by Selected Trunk Group—ETS Not Provided

The following features are checked: (1) Traffic sampling circuit used (TGTS key at MTF operated)—tests billed and nonbilled SOG and IAO routes equipped with TGTS features. Sampled and nonsampled test calls are made to trunk groups partially or fully AMA-equipped. (2) MTF simulates traffic sampling circuit (TGTS key normal)—test billed or nonbilled SOG routes equipped with TGTS features. Sampled and nonsampled test calls are made to trunk groups partially or fully AMA-equipped. Cross-connections for 100 percent traffic sampling are also tested. Also see test on **Marker to Distributor and Scanner (DAS) Lead Verification** for testing the NSP and SMP leads to the DAS when LAMA-C is provided.

2

1.04 **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, the steps designated by that letter should be omitted.

1.05 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.

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

1.07 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, DT, ORIG, ITDO, ITNP, OGT, INC, OR, SDR, IR, MISC, IAO, MLV, LT, IMS, PTT, TVT, ATNT, and IMT.

1.08 When the office is arranged for LAMA-C 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 an

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SECTION 218-122-529

out-of-service to a *maintenance-busy* condition, use the procedure given in the following section.

218-798-308—Taking LAMA-C Equipment Out-of-Service.

1.09 Additional test procedures are available for verification of leads between the completing marker and the distributor and scanner (DAS).

Refer to Section 218-122-531 for DAS application to LAMA-C.

2. APPARATUS

All Tests

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

3. METHOD

STEP	ACTION	VERIFICATION
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Note: Refer to ¶paragraph 1.04 through 1.09.¶

CZ. Traffic Sampling Feature by Selected Trunk Group—¶ETS Not Provided¶

Note: A billed route is a route that requires an MBS_ series route relay which in turn provides an AMA record on all calls.

TGTS Key Operated—Billed Route—IAO Route

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|----|--------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 1 | At MTF—
Restore all keys and switches. | |
| 2 | Momentarily operate RL key. | All lamps extinguished. |
| 3 | Select ORIG class of test. | |
| 4 | Select OR class of call with translator indication as required for selected route. | |
| 5 | Select A_ through K_ digits as required to select billed intraoffice route that is provided with trunk group traffic sampling. | |
| 6 | Select line location having access to selected route. | |
| 7 | Select class of service and rate treatment having access to route selected. | |
| 8 | Select route advance as required. | |
| 9 | Select trunk within trunk group. | |
| 10 | Operate GPA/GPB key as required for selected group when trunk is in allotted subgroup. | |
| 11 | Select marker under test. | |

STEP	ACTION	VERIFICATION
12	Set TSS_, TSH_ switches to select traffic sampling circuit.	
13	Operate TGTS, REC keys.	
14	Operate SA key.	
15	Momentarily operate ST key.	RCD, SA, MRL lamps lighted. Trouble record taken. If call terminates to line link pulsing circuit— SOG, SPC designations perforated. If call does not terminate to line link pulsing circuit— ITR, SPC designations perforated. If LAMA-C is not provided— AMA designation perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Restore SA key.	
18	Operate NSA key.	
19	Momentarily operate ST key.	NRD, NSA, MRL lamps lighted. Trouble record taken. If call terminates to line link pulsing circuit— SOG, NSP designations perforated. If call does not terminate to line link pulsing circuit— ITR, NSP designations perforated. If LAMA-C is not provided— AMA designation perforated.
20	Momentarily operate RL key.	All lamps extinguished.
21	Restore NSA key.	
22	Restore all keys and switches.	
TGTS Key Operated—Billed Route—SOG Route		
23	Select ORIG class of test.	
24	Select OR class of call with translator indication as required for selected route.	
25	Select A_ through K_ digits as required to select billed SOG route that is provided with trunk group traffic sampling.	
26	Select line location having access to selected route.	

SECTION 218-122-529

STEP	ACTION	VERIFICATION
27	Select class of service and rate treatment having access to route selected.	
28	Select route advance as required.	
29	Select trunk within trunk group.	
30	Operate GPA/GPB key as required for selected group when trunk is in allotted subgroup.	
31	Select marker under test.	
32	Set TSS_, TSH_ switches to select traffic sampling circuit.	
33	Operate TGTS, REC keys.	
34	Operate SA key.	
35	Momentarily operate ST key.	RCD, SA, MRL lamps lighted. Trouble record taken. SOG, SPC designations perforated. If LAMA-C is not provided— AMA, RN_ designations perforated.
36	Momentarily operate RL key.	All lamps extinguished.
37	Restore SA key.	
38	Operate NSA key.	
39	Momentarily operate ST key.	NRD, NSA, MRL lamps lighted. Trouble record taken. SOG, SPC designations perforated. If LAMA-C is not provided— AMA, RN_ designations perforated.
40	Momentarily operate RL key.	All lamps extinguished.
41	Restore NSA key.	
42	Restore all keys and switches.	

TGTS Key Operated—Nonbilled Route—IAO Route

43	Select ORIG class of test.	
44	Select OR class of call with translator indication as required for selected route.	

STEP	ACTION	VERIFICATION
45	Select A_ through K_ digits as required to select nonbilled intraoffice route that is provided with trunk group traffic sampling.	
46	Select line location having access to selected route.	
47	Select class of service and rate treatment having access to route selected.	
48	Select route advance as required.	
49	Select trunk within trunk group.	
50	Operate GPA/GPB key as required for selected group when trunk is in allotted subgroup.	
51	Select marker under test.	
52	Set TSS_ TSH_ switches to select traffic sampling circuit.	
53	Operate TGTS, REC keys.	
54	Operate SA key.	
55	Momentarily operate ST key.	<p>RCD, SA, MRL lamps lighted. Trouble record taken. If call terminates to line link pulsing circuit— SOG, SPC designations perforated. If call does not terminate to line link pulsing circuit— ITR, SPC designations perforated. If LAMA-C is not provided— AMA designation perforated. If call terminates to line link pulsing circuit and LAMA-C is not provided— RN_ designation perforated.</p>
56	Momentarily operate RL key.	All lamps extinguished.
57	Restore SA key.	
58	Operate NSA key.	
59	Momentarily operate ST key.	<p>NRD, NSA, MRL lamps lighted. Trouble record taken. ITR designation perforated. AMA designation not perforated. If LAMA-C is not provided— RN_ designation perforated.</p>

SECTION 218-122-529

STEP	ACTION	VERIFICATION
60	Momentarily operate RL key.	All lamps extinguished.
61	Restore NSA key.	
62	Operate SA key.	
63a	If selected route contains trunks not equipped with AMA features— Select non-AMA trunk within the selected route.	
64a	Momentarily operate ST key.	RCD, NSA, MRL lamps lighted. Trouble record taken. If call terminates to line link pulsing circuit and LAMA-C is not provided— SOG, AMA, SPC, RN_ designations perforated. If call terminates to line link pulsing circuit and LAMA-C is provided— SOG, SPC designations perforated. If call does not terminate to line link pulsing circuit— ITR designation perforated. If call does not terminate to line link pulsing circuit and LAMA-C is not provided— RN9 or RN19 designations perforated.
65a	Momentarily operate RL key.	All lamps extinguished.
66a	Restore SA key.	
67a	Operate NSA key.	
68a	Momentarily operate ST key.	NRD, NSA, MRL lamps lighted. Trouble record taken. If call terminates to line link pulsing circuit— ITR, LRA designations perforated. If call does not terminate to line link pulsing circuit— ITR designation perforated. AMA designation not perforated. If LAMA-C is not provided— RN9 or RN19 designation perforated.
69a	Momentarily operate RL key.	All lamps extinguished.
70a	Restore NSA key.	
71	Restore all keys and switches.	
TGTS Key Operated—Nonbilled Route—SOG Route		
72	Select ORIG class of test.	

STEP	ACTION	VERIFICATION
73	Select OR class of call with translator indication as required for selected route.	
74	Select A_ through K_ digits as required to select nonbilled SOG route that is provided with trunk group traffic sampling.	
75	Select line location having access to selected route.	
76	Select class of service and rate treatment having access to route selected.	
77	Select route advance as required.	
78	Select trunk within trunk group.	
79	Operate GPA/GPB key as required for selected group when trunk is in allotted subgroup.	
80	Select marker under test.	
81	Set TSS_, TSH_ switches to select traffic sampling circuit.	
82	Operate TGTS, REC keys.	
83	Operate SA key.	
84	Momentarily operate ST key.	RCD, SA, MRL lamps lighted. Trouble record taken. SOG, SPC designations perforated. If LAMA-C is not provided— AMA, RN_ designations perforated.
85	Momentarily operate RL key.	All lamps extinguished.
86	Restore SA key.	
87	Operate NSA key.	
88	Momentarily operate ST key.	NRD, NSA, MRL lamps lighted. Trouble record taken. SOG designation perforated. If LAMA-C is not provided— RN_ designation perforated.
89	Momentarily operate RL key.	All lamps extinguished.
90	Restore NSA key.	
91	Operate SA key.	

SECTION 218-122-529

STEP	ACTION	VERIFICATION
92a	If selected route contains trunks not equipped with AMA features— Select non-AMA trunk within selected route.	
93a	Momentarily operate ST key.	RCD, NSA, MRL lamps lighted. Trouble record taken. SOG, SPC designations perforated. AMA designation not perforated. If LAMA-C is not provided— RN9 or RN19 designations perforated.
94a	Momentarily operate RL key.	All lamps extinguished.
95a	Restore SA key.	
96a	Operate NSA key.	
97a	Momentarily operate ST key.	NRD, NSA, MRL lamps lighted. Trouble record taken. SOG designation perforated. AMA, SPC designations not perforated.
98a	Momentarily operate RL key.	All lamps extinguished.
99a	Restore NSA key.	
100	Restore all keys and switches.	

TGTS Key Normal

- 101 Select ORIG class of test.
- 102 Select OR class of call with translator indication as required for selected route.
- 103b If billed route with trunk group traffic sampling is to be tested—
Select A_ through K_ digits as required to select a billed SOG route that is provided with trunk group traffic sampling.
- 104c If nonbilled route with trunk group traffic sampling is to be tested—
Select A_ through K_ digits as required to select a nonbilled SOG route that is provided with trunk group traffic sampling.
- 105 Select line location having access to selected route.
- 106 Select class of service and rate treatment having access to route selected.

STEP	ACTION	VERIFICATION
107	Select route advance as required.	
108	Select trunk within trunk group.	
109	Operate GPA/GPB key as required for selected group when trunk is in allotted subgroup.	
110	Select marker under test.	
111	Operate REC key.	
112d	If route selected does not provide for 100 percent sampling— Operate SA key.	
113	Momentarily operate ST key.	RCD, MRL lamps lighted. Trouble record taken. SOG, SPC designations perforated. If LAMA-C is not provided— AMA, RN_ designations perforated.
114	Momentarily operate RL key.	All lamps extinguished.
115d	If route selected does not provide for 100 percent sampling— Restore SA key.	
116	Momentarily operate ST key.	NRD, MRL lamps lighted. Trouble record taken. SOG designation perforated. If nonbilled route is selected— AMA designation not perforated. If billed route is selected— NSP designation perforated. If billed route is selected and LAMA-C is not provided— AMA designation perforated.
117	Momentarily operate RL key.	All lamps extinguished.
118e	If route selected does not provide for 100 percent sampling and is a nonbilled route— Operate FG_, FS_, TS_ to select a non-AMA trunk within the selected route.	
119e	Momentarily operate ST key.	NRD, MRL lamps lighted. Trouble record taken. NSP designation perforated. AMA designation not perforated. If LAMA-C is not provided— RN9 or RN19 designation perforated.

SECTION 218-122-529

STEP	ACTION	VERIFICATION
120e	Momentarily operate RL key.	All lamps extinguished.
121e	Operate SA key.	
122e	Momentarily operate ST key.	RCD, MRL lamps lighted. Trouble record taken. SPC designation perforated. AMA designation not perforated. If LAMA-C is not provided— RN9 or RN19 designations perforated.
123e	Momentarily operate RL key.	All lamps extinguished.
124	Restore all keys and switches.	