

COMBINED AND COMPLETING MARKER CIRCUITS—PART 28
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

PAGE

1.01 This section is Part 28 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 does not affect Equipment Test Lists.

- (a) To revise test procedures to include offices arranged with Electronic Translation System (ETS).
- (b) To make minor changes as required.

1.03 The tests covered are:

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CW. Marker-Controlled Immediate Ring Feature: The following features are checked: (1) When code 1 ringing is required, the marker will operate the proper RS_ relay, depending on operated BR_ relays, to cause immediate ringing. (2) When the marker detects a trouble or alarm condition in the marker-controlled immediate ring control circuit, the immediate ring feature is canceled and ringing is applied as cross-connected.

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CX. Calling Line Identification:

The following features are checked:

- (1) The calling line location will be perforated on a trouble recorder card when an intraoffice call is completed to a line arranged for calling line identification.
- (2) The trunk equipment location (trunk link frame location only on INC class of marker test) will be perforated on a trouble recorder card when a terminating

call is completed to a line arranged for calling line identification. (3) The calling line location will be perforated on a trouble recorder card on outgoing calls if: (a) the number called is set up on the called number detector in offices not equipped with ETS, (b) an OCD calling line identification has been set in software in offices equipped with ETS. (4) The calling line location will be perforated on a trouble recorder card on all originating calls in office equipped with ETS if an OE calling line identification is set in software.

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CY. Toll Diversion Features: The following features are checked: (1) The marker will place ground on the RV1 lead to the originating register on calls from customer groups requiring toll diversion and directed to AMA, ANI, or operator routes. (2) The marker will not place ground on the RV1 lead to the originating register on calls from customer groups not requiring toll diversion and directed to AMA, ANI, or operator routes.

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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.

NOTICE

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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 ♦When the office is arranged for LAMA-C or 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 an *out-of-service* to a *maintenance-busy* condition, use the procedure given in the following sections for the office arrangement.

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

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

1.08 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 or Section 218-799-321 for DAS application to ETS.

1.09 When making tests in No. 5 crossbar offices arranged with Electronic Translation System and test verification requires a completing marker trace output (teletype printout or data dump) to determine the data used to process a call, operate the TCPO key at the master test frame (MTF). The data dump received at the maintenance

teletypewriters (TTY) may be in a raw form (binary or hexadecimal numbering system), formatted into decimal and written text, or a combination of both. For additional information on data dumps and formats used, refer to Section 218-799-102.♦

2. APPARATUS

All Tests

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

Tests CW, CX

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

Test CX

2.03 322A (make-busy) plugs as required.

2.04 Testing cord, 893 cord, 3 feet long, equipped with two 360A tools (1W13A cord) and two KS-6278 connecting clips (for making test connections at number group frame).

2.05 Testing cord, 893 cord, 3 feet long, equipped with two 360A tools (1W13A cord) and two 624B (terminal connector) tools (for connecting to terminal strips with wire-wrapped-type terminals) or two 419A (test connector) tools (for connecting to terminal strips with solder-type terminals).

2.06 639A (relay contact connector) tools and 651-type (contact connector holder) tools as required (for making test connections to fixed contacts of wire-spring-type relays).

2.07 419A (test connector) tool (for making test connections to movable contacts on wire-spring-type relays or all contacts of nonwire-spring-type relays).

3. METHOD

STEP

ACTION

VERIFICATION

Note: Refer to ♦paragraphs 1.04 through 1.09.♦

STEP	ACTION	VERIFICATION
CW.	Marker-Controlled Immediate Ring Feature	
1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select INC class of test.	
4	Operate REC key.	
5a	♦If ETS provided and CM dump is required— Operate TCP0 key.	
	Note: See paragraph 1.09.♦	
6	Select any trunk link frame.	
7	Select INC class of call and translator indication as required for office designation of called number.	
8	Select A_ through G_ digits as required for directory number having ringing combination 01.	
9	Select incoming trunk class as required for completion to called line.	
10	Select marker under test.	
11	Set RMBR switch to 1.	
12	Momentarily operate ST key.	RP, DIS1, LK2, MRL lamps lighted. Trouble record taken. FTT_ FUT_ VGT_ HGT_ VFT_ designations perforated indicating location of called line. RS0, RS6 designations perforated.
13	Momentarily operate RL key.	All lamps extinguished.
14	Set RMBR switch to 1-2.	
15	Momentarily operate ST key.	MRL lamp lighted. Trouble record taken. FTT_ FUT_ VGT_ HGT_ VFT_ designations perforated indicating location of called line. RS0, RS2 designations perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Set RMBR switch to 2.	

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STEP	ACTION	VERIFICATION
18	Momentarily operate ST key.	MRL lamp lighted. Trouble record taken. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating location of called line. RS0, RS2 designations perforated.
19	Momentarily operate RL key.	All lamps extinguished.
20	Set RMBR switch to 2-3.	
21	Momentarily operate ST key.	MRL lamp lighted. Trouble record taken. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating location of called line. RS0, RS3 designations perforated.
22	Momentarily operate RL key.	All lamps extinguished.
23	Set RMBR switch to 3.	
24	Momentarily operate ST key.	MRL lamp lighted. Trouble record taken. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating location of called line. RS0, RS3 designations perforated.
25	Momentarily operate RL key.	All lamps extinguished.
26	Set RMBR switch to 3-1.	
27	Momentarily operate ST key.	MRL lamp lighted. Trouble record taken. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating location of called line. RS0, RS6 designations perforated.
28	Momentarily operate RL key.	All lamps extinguished.
29	Set RMBR switch to 1-2-3.	
30	Momentarily operate ST key.	MRL lamp lighted. Trouble record taken. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating location of called line. TGT designation perforated. RS_ designation perforated depending on marker under test as indicated in Table A.
31	Momentarily operate RL key.	All lamps extinguished.
32	Set RMBR switch to 0.	

STEP	ACTION	VERIFICATION
33	Momentarily operate ST key.	MRL lamp lighted. Trouble record taken. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating location of called line. TGT designation perforated. RS_ designation perforated depending on marker under test as indicated in Table A.
34	Momentarily operate RL key.	All lamps extinguished.
35	Set RMBR switch to CIR.	
36	Momentarily operate ST key.	MRL lamp lighted. Trouble record taken. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating location of called line. RS_ designations perforated depending on marker under test as indicated in Table A.
37	Momentarily operate RL key.	All lamps extinguished.
38	Restore all keys and switches.	

CX. Calling Line Identification

Intraoffice Call—ETS Not Provided

- 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 LT translator indication.

TABLE A

MARKER UNDER TEST	RS-DESIGNATIONS PERFORATED	MARKER UNDER TEST	RS-DESIGNATIONS PERFORATED
0	0,6	6	0,6
1	0,2	7	0,2
2	0,3	8	0,3
3	0,6	9	0,6
4	0,2	10	0,2
5	0,3	11	0,3

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STEP	ACTION	VERIFICATION
5	Select line location as required for line identification of line having originating service.	
6	Select class of service and rate treatment as required to complete via intraoffice route.	
7	Select route advance as required.	
8	Select marker under test.	
9	Insert make-busy plug into MMB_ jack of marker under test.	
10a	If wire-spring-relay type marker is under test— At marker under test— Connect ground to 1M of TRST relay.	
11b	If nonwire-spring-relay type marker is under test— At marker under test— Connect 9T, 10T of MT13 relay.	
12c	If number is not connected for calling line identification— At number group frame— Remove F_ to RF_ cross-connection jumper from a test number and replace with test jumpers from F_ to F1 or F2 and RF_ to RF1 or RF2.	
13	At MTF— Select A_ through G_ digits as required to direct call to number arranged for calling line identification.	
14	Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. If office alarms are not transferred to distant office— CLI lamp lighted. Alarm sounds. If office alarms are transferred to distant office— At distant office— Calling line identification alarm received. At MTF— Trouble record taken. ITR, FLG, LVM designations perforated. FT_, FU_, HG_, VG_, VF_ designations perforated indicating line location used in Step 5.

STEP	ACTION	VERIFICATION
		A_ through G_ designations perforated for called number.
15	Momentarily operate RL key.	All lamps extinguished except CLI.
16	Momentarily operate TRR-AR key.	If office alarms are transferred to distant office— At distant office— Calling line identification alarm silenced. If office alarms are not transferred to distant office— At MTF— CLI lamp extinguished. Alarm silenced.
17d	If no further tests are to be performed and number was connected for calling line identification for this test— At number group frame— Remove test jumpers from F_, F1 or F2, RF_, RF1 or RF2 and replace F_ to RF_ cross-connection.	
18	At marker under test— Remove testing cord from TRST or MT13 relay.	
19	At MTF— Remove make-busy plug from MMB_ jack of marker under test.	
20	Restore all keys and switches.	

◆Intraoffice Call—ETS Provided

21	At MTF— Restore all keys and switches.	
22	Momentarily operate RL key.	All lamps extinguished.
23	Select ORIG class of test.	
24	Select OR class of call with LT translator indication.	
25	Select line location as required for line identification of line having originating service.	
26	Select class of service and rate treatment as required.	

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STEP	ACTION	VERIFICATION
27	Select route advance as required.	
28	Operate PCS, PTS keys.	
29	Select marker under test.	
30	Insert make-busy plug into MMB_ jack of marker under test.	
31a	If wire-spring-relay type marker is under test— At marker under test— Connect ground to 1M of TRST relay.	
32b	If nonwire-spring-relay type marker is under test— At marker under test— Connect 9T, 10T of MT13 relay.	
33e	If number is not set for TN calling line identification— At maintenance terminal— Initiate TN calling line identification on a test number.	
	Note: Instructions to initiate a TN calling line identification are given in Section 218-799-302.	
34	At MTF— Select A_ through G_ digits as required to direct call to number arranged for calling line identification.	
35	Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. If office alarms are not transferred to distant office— CLI lamp lighted. Alarm sounds. If office alarms are transferred to distant office— At distant office— Calling line identification alarm received. At MTF— Trouble record taken. ITR, FLG, LVM designations perforated. FT_, FU_, HG_, VG_, VF_ designations perforated indicating line location used in Step 25. A_ through G_ designations perforated for called number.

STEP	ACTION	VERIFICATION
36	Momentarily operate RL key.	All lamps extinguished except CLI.
37	Momentarily operate TRR-AR key.	If office alarms are transferred to distant office— At distant office— Calling line identification alarm silenced. If office alarms are not transferred to distant office— At MTF— CLI lamp extinguished. Alarm silenced.
38f	If no further tests are to be performed and number was set for TN calling line identification for this test— At maintenance terminal— Stop TN calling line identification on number selected in Step 33e.	
	Note: Instructions to stop a TN calling line identification are given in Section 218-799-302.	
39	At marker under test— Remove testing cord from TRST or MT13 relay.	
40	At MTF— Remove make-busy plug from MMB_ jack of marker under test.	
41	Restore all keys and switches.◀	
Terminating Call—▶ETS Not Provided◀		
42	At MTF— Restore all keys and switches.	
43	Momentarily operate RL key.	All lamps extinguished.
44	Select INC class of test.	
45	Select incoming class of call with translator indication as required for completion to called line.	
46	Select any trunk link frame.	
47	Select incoming trunk class as required for completion to called line.	
48	Select marker under test.	

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STEP	ACTION	VERIFICATION
49	Insert make-busy plug into MMB_ jack of marker under test.	
50a	If wire-spring-relay type marker is under test— At marker under test— Connect ground to 1M of TRST relay.	
51b	If nonwire-spring-relay type marker is under test— At marker under test— Connect 9T, 10T of MT13 relay.	
52c	If number is not connected for calling line identification— At number group frame— Remove F_ to RF_ cross-connection jumper from a test number and replace with test jumpers from F_ to F1 ♦ or F2♦ and RF_ to RF1 or RF2.	
53	At MTF— Select A_ through E_ digits as required to direct call to number arranged for calling line identification.	
54	Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. If office alarms are not transferred to distant office— CLI lamp lighted. Alarm sounds. If office alarms are transferred to distant office— At distant office— Calling line identification alarm received. At MTF— Trouble record taken. TER, FLG, ♦LVM♦ designations perforated. ♦FG_, TF_, FBK designations perforated indicating trunk link frame selected.♦ FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of called number.
55	Momentarily operate RL key.	All lamps extinguished ♦except CLI.♦
56	Momentarily operate TRR-AR key.	If office alarms are transferred to distant office— At distant office— Calling line identification alarm silenced. If office alarms are not transferred to distant

STEP	ACTION	VERIFICATION
		office— At MTF— CLI lamp extinguished. Alarm silenced.
57d	If no further tests are to be performed and number was connected for calling line identification for this test— At number group frame— Remove test jumpers from F_, F1 or F2, RF_, RF1 or RF2 and replace F_ to RF_ cross-connection.	
58	At marker under test— Remove testing cord from TRST or MT13 relay.	
59	At MTF— Remove make-busy plug from MMB_ jack of marker under test.	
60	Restore all keys and switches.	
◆Terminating Call—ETS Provided		
61	At MTF— Restore all keys and switches.	
62	Momentarily operate RL key.	All lamps extinguished.
63	Select INC class of test.	
64	Select incoming class of call with translator indication as required for completion to called line.	
65	Select any trunk link frame.	
66	Select incoming trunk class as required for completion to called line.	
67	Select marker under test.	
68	Insert make-busy plug into MMB_ jack of marker under test.	
69a	If wire-spring-relay type marker is under test— At marker under test— Connect ground to 1M of TRST relay.	

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STEP	ACTION	VERIFICATION
70b	If nonwire-spring-relay type marker is under test— At marker under test— Connect 9T, 10T of MT13 relay.	
71e	If number is not set for TN calling line identification— At maintenance terminal— Initiate TN calling line identification on a test number.	
	<p>Note: Instructions to initiate a TN calling line identification are given in Section 218-799-302.</p>	
72	At MTF— Select A_ through G_ digits as required to direct call to number arranged for TN calling line identification.	
73	Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. If office alarms are not transferred to distant office— CLI lamp lighted. Alarm sounds. If office alarms are transferred to distant office— At distant office— Calling line identification alarm received. At MTF— Trouble record taken. TER, FLG, LVM designations perforated. FG_, TF_, FBK designations perforated indicating trunk link frame selected. FTT_, FUT_, VGT_, HGT_, VFT_ designations perforated indicating line location of called number.
74	Momentarily operate RL key.	All lamps extinguished except CLI.
75	Momentarily operate TRR-AR key.	If office alarms are transferred to distant office— At distant office— Calling line identification alarm silenced. If office alarms are not transferred to distant office— At MTF— CLI lamp extinguished. Alarm silenced.

STEP	ACTION	VERIFICATION
76f	If no further tests are to be performed and number was set for TN calling line identification for this test— At maintenance terminal— Stop TN calling line identification on number selected in Step 71e. Note: Instructions to stop a TN calling line identification are given in Section 218-799-302.	
77	At marker under test— Remove testing cord from TRST or MT13 relay.	
78	At MTF— Remove make-busy plug from MMB_ jack of marker under test.	
79	Restore all keys and switches.⚡	

Outgoing Call—Identification of Calling Line on Call to a Number Arranged for Calling Line Identification—ETS not Provided

80	At MTF— Restore all keys and switches.	
81	Momentarily operate RL key.	All lamps extinguished.
82	Select ORIG class of test.	
83	Select OR or FAC class of call with translator indication as required for selected route.	
84	Select line location as required for line identification of line having originating service.	
85	Select class of service and rate treatment as required.	
86	Select route advance as required.	
87	Select marker under test.	
88	Insert make-busy plug into MMB_ jack of marker under test.	
89a	If wire-spring-relay type marker is under test— At marker under test— Connect ground to 1M of TRST relay.	

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STEP	ACTION	VERIFICATION
90b	If nonwire-spring-relay type marker is under test— At marker under test— Connect 9T, 10T of MT13 relay.	
91g	If first called number detector was previously set up to specific called number— At called number detector circuit— Record settings of A1 through K1 switches as required.	
92h	If first called number detector was <i>not</i> previously set up to specific called number— At called number detector circuit— Set A1 through K1 switches as required for number associated with outgoing route.	
93i	If first called number detector was <i>not</i> previously enabled— At MTF— Operate ENA key.	
94	Select A_ through K_ digits as required to direct call to number set up on first called number detector.	
95	Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. If office alarms are not transferred to distant office— CLI lamp lighted. Alarm sounds. If office alarms are transferred to distant office— At distant office— Calling line identification alarm received. At MTF— Trouble record taken. ♦LVM designation perforated.♦ FT_, FU_, VG_, HG_, VF_ designations perforated indicating line location used in Step 84. A_ through K_ designations perforated for called number.
96	Momentarily operate RL key.	All lamps extinguished ♦except CLI.♦
97	Momentarily operate TRR-AR key.	If office alarms are transferred to distant office— At distant office— Calling line identification alarm silenced.

STEP	ACTION	VERIFICATION
		If office alarms are not transferred to distant office— At MTF— CLI lamp extinguished. Alarm silenced.
98	At called number detector circuit— Set A1 through K1 switches to OFF.	
99	At MTF— Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. No trouble record taken.
100	Momentarily operate RL key.	All lamps extinguished.
101j	If first called number detector was previously set up to specific called number— At called number detector circuit— Set A1 through K1 switches as required for settings recorded in Step 91g.	
102j	At MTF— Repeat Steps 95 through 97.	
103i	If first called number detector was <i>not</i> previously enabled— Restore ENA key.	
104	♦Repeat Steps 91g through 103i for second and third called number detectors substituting second, third called number detector for first called number detector; A2, A3 switch for A1 switch; K2, K3 switch for K1 switch; ENB, ENC key for ENA key.♦	
105	At marker under test— Remove testing cord from TRST or MT13 relay.	
106	At MTF— Remove make-busy plug from MMB_ jack of marker under test.	
107	Restore all keys and switches except ENA, ENB, and ENC keys.	
	♦Outgoing Call—Identification of Calling Line on Call to a Number Arranged for OCD Calling Line Identification—ETS Provided	
108	At MTF— Restore all keys and switches.	

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STEP	ACTION	VERIFICATION
109	Momentarily operate RL key.	All lamps extinguished.
110	Select ORIG class of test.	
111	Select OR or FAC class of call with translator indication as required for selected route.	
112	Select line location as required for line identification of line having originating service.	
113	Select class of service and rate treatment as required.	
114	Select route advance as required.	
115	Operate PCS, PTS keys.	
116	Select marker under test.	
117	Insert make-busy plug into MMB_ jack of marker under test.	
118a	If wire-spring-relay type marker is under test— At marker under test— Connect ground to 1M of TRST relay.	
119b	If nonwire-spring-relay type marker is under test— At marker under test— Connect 9T, 10T of MT13 relay.	
120k	If a number is presently set for OCD calling line identification— Record number for future reference.	
121l	If a number is <i>not</i> presently set for OCD calling line identification— At maintenance terminal— Initiate OCD calling line identification as required for number associated with outgoing route.	
Note: Instructions to initiate an OCD calling line identification are given in Section 218-799-302.		
122	At MTF— Select A_ through K_ digits as required to direct call to number set for OCD calling line identification.	

STEP	ACTION	VERIFICATION
123	Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. If office alarms are not transferred to distant office— CLI lamp lighted. Alarm sounds. If office alarms are transferred to distant office— At distant office— Calling line identification alarm received. At MTF— Trouble record taken. LVM designation perforated. FT_, FU_, VG_, HG_, VF_ designations perforated indicating line location used in Step 112. A_ through K_ designations perforated for called number.
124	Momentarily operate RL key.	All lamps extinguished except CLI.
125	Momentarily operate TRR-AR key.	If office alarms are transferred to distant office— At distant office— Calling line identification alarm silenced. If office alarms are not transferred to distant office— At MTF— CLI lamp extinguished. Alarm silenced.
126	At maintenance terminal— Stop OCD calling line identification on number selected in Step 122. Note: Instructions to stop an OCD calling line identification are given in Section 218-799-302.	
127	At MTF— Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. No trouble record taken.
128	Momentarily operate RL key.	All lamps extinguished.
129m	If OCD calling line identification was previously set on a specific called number— At maintenance terminal— Initiate OCD calling line identification as required for number recorded in Step 120K.	
130m	At MTF— Repeat Steps 123 through 125.	

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STEP	ACTION	VERIFICATION
131	At marker under test— Remove testing cord from TRST or MT13 relay.	
132	At MTF— Remove make-busy plug from MMB_ jack of marker under test.	
133	Restore all keys and switches.	

Originating Line Location—Identification of Calling Line on Call From Line Arranged for OE Calling Line Identification—ETS Provided

134	At MTF— Restore all keys and switches.	
135	Momentarily operate RL key.	All lamps extinguished.
136	Select ORIG class of test.	
137	Select OR class of call with translator indication as required for selected route.	
138	Select A_ through G_ digits as required to direct call to any number <i>not</i> arranged for calling line identification.	
139	Select line location as required for any line having originating service.	
140	Select class of service and rate treatment as required.	
141	Select route advance as required.	
142	Operate PCS, PTS keys.	
143	Select marker under test.	
144	Insert make-busy plug into MMB_ jack of marker under test.	
145a	If wire-spring-relay type marker is under test— At marker under test— Connect ground to 1M of TRST relay.	
146b	If nonwire-spring-relay type marker is under test— At marker under test— Connect 9T, 10T of MT13 relay.	

STEP	ACTION	VERIFICATION
147	At maintenance terminal— Initiate OE calling line identification as required on line location selected in Step 139. Note: Instructions to initiate an OE calling line identification are given in Section 218-799-302.	
148	At MTF— Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. If office alarms are not transferred to distant office— CLI lamp lighted. Alarm sounds. If office alarms are transferred to distant office— At distant office— Calling line identification alarm received. At MTF— Trouble record taken. LVM designation perforated. FT_, FU_, VG_, HG_, VF_ designations perforated indicating line location selected in Step 139. A_ through G_ designations perforated for called number selected in Step 138.
149	Momentarily operate RL key.	All lamps extinguished except CLI.
150	Momentarily operate TRR-AR key.	If office alarms are transferred to distant office— At distant office— Calling line identification alarm silenced. If office alarms are not transferred to distant office— At MTF— CLI lamp extinguished. Alarm silenced.
151	At maintenance terminal— Stop OE calling line identification as required on line location selected in Step 139. Note: Instructions to stop an OE calling line identification are given in Section 218-799-302.	
152	At MTF— Momentarily operate ST key.	DIS1, LK2, MRL lamps lighted. No trouble record taken.
153	Momentarily operate RL key.	All lamps extinguished.

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STEP	ACTION	VERIFICATION
154	At marker under test— Remove testing cord from TRST or MT13 relay.	
155	At MTF— Remove make-busy plug from MMB_ jack of marker under test.	
156	Restore all keys and switches.♦	

CY. Toll Diversion Features

AMA Route

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 LT1 translator indication.	
5	Select A_ through K_ digits as required to direct call to AMA route requiring toll diversion.	
6	Select line location having access to AMA route requiring toll diversion.	
7	Select class of service and rate treatment as required for toll diversion.	
8	Select route advance as required.	
9a	♦If ETS provided— Operate PCS, PTS keys.♦	
10	Select marker under test.	
11	Momentarily operate ST key.	MRL, RV lamps lighted.
12	Momentarily operate RL key.	All lamps extinguished.
13	Select class of service and rate treatment not requiring toll diversion.	
14	Momentarily operate ST key.	MRL lamp lighted.
15	Momentarily operate RL key.	All lamps extinguished.
16	Restore all keys and switches.	

STEP	ACTION	VERIFICATION
ANI Route		
17	Select ORIG class of test.	
18	Select OR class of call with LT1 translator indication.	
19	Select A_ through K_ digits as required to direct call to ANI route requiring toll diversion.	
20	Select line location having access to ANI route requiring toll diversion.	
21	Select class of service and rate treatment as required for toll diversion.	
22	Select route advance as required.	
23a	◆If ETS provided— Operate PCS, PTS keys.◆	
24	Select marker under test.	
25	Momentarily operate ST key.	MRL, RV lamps lighted.
26	Momentarily operate RL key.	All lamps extinguished.
27	Select class of service and rate treatment not requiring toll diversion.	
28	Momentarily operate ST key.	MRL lamp lighted.
29	Momentarily operate RL key.	All lamps extinguished.
30	Restore all keys and switches.	
Operator Route		
31	Select ORIG class of test.	
32	Select OR class of call with LT1 translator indication.	
33	Select A0 digit to direct call to operator route requiring toll diversion.	
34	Select line location having access to operator route requiring toll diversion.	
35	Select class of service and rate treatment as required for toll diversion.	

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STEP	ACTION	VERIFICATION
36	Select route advance as required.	
37a	◆If ETS provided— Operate PCS, PTS keys.◆	
38	Select marker under test.	
39	Momentarily operate ST key.	MRL, RV lamps lighted.
40	Momentarily operate RL key.	All lamps extinguished.
41	Select class of service and rate treatment not requiring toll diversion.	
42	Momentarily operate ST key.	MRL lamp lighted.
43	Momentarily operate RL key.	All lamps extinguished.
44	Restore all keys and switches.	

CAMA Route

45	At MTF— Restore all keys and switches.	
46	Momentarily operate RL key.	All lamps extinguished.
47	Select ORIG class of test.	
48	Select OR class of call with LT1 translator indication.	
49	Select A_ through K_ digits as required to direct call to CAMA route requiring toll diversion.	
50	Select line location having access to CAMA route requiring toll diversion.	
51	Select class of service and rate treatment as required for toll diversion.	
52	Select route advance as required.	
53a	◆If ETS provided— Operate PCS, PTS keys.◆	
54	Select marker under test.	
55	Momentarily operate ST key.	MRL, RV lamps lighted.
56	Momentarily operate RL key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
57	Select class of service and rate treatment not requiring toll diversion.	
58	Momentarily operate ST key.	MRL lamp lighted.
59	Momentarily operate RL key.	All lamps extinguished.
60	Restore all keys and switches.	