

OUTGOING TRUNK CIRCUIT FOR INFORMATION SERVICE SD-28080-01

TESTS USING MASTER TEST FRAME

NO. 5 CROSSBAR OFFICES

1. GENERAL

PAGE

1.01 This section describes methods for testing outgoing trunks for directory assistance traffic terminating to ACD or CAMA offices or 23 desks or other switchboards. This circuit is furnished with E and M or loop signaling for local originating coin and noncoin calls. Coin service provides either coin return or coin collect on answered calls and coin return on unanswered calls. Noncoin calls may or may not be arranged for AMA or ANI charging features. Non-ANI charge calls may be arranged for either LAMA or computerized billing using optional LAMA-C or ETS. This circuit may also be equipped to complete through-switched calls using reverse battery supervision for local tandem or simplex supervision for toll tandem calls. When arranged for junctor type operation, this circuit may be used as a coin junctor for coin collect and return without overtime charging. When used as an AMA junctor, either single call charging or with disconnect entry feature, measured rate charging is provided. Additionally, remote make-busy feature is provided for E and M and loop signaling, if the circuit is seized while idle from the distant end.

features are checked: (1) Trunk circuit seizure and supervision of noncoin local originating calls. (2) Supervision of originating end disconnect without timed release of circuit. (3) Supervision of terminating end disconnect with timed release of circuit within 13 to 32 seconds. (4) Ability of S1 relay to hold if extra digits are dialed in circuit. (5) Improved testing of supervisory relays. (6) Trunk supervisory scanning for ETS or LAMA-C. (7) Trunk busy scanning for ETS.

5

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

- (1) To add calling data transmitter (CDT) features to tests A, E, G, I and J.
- (2) To add paragraphs 1.13 and 1.14.

1.03 The tests covered are:

PAGE

A. Local Call—Flat Rate Operation: (ETS, CDT, and LAMA-C Features Included): The following

B. Local Call—AMA Operation: (ETS, CDT, and LAMA-C Features not Included): The following features are checked: (1) Trunk seizure, supervision, initial entry, recorder and trunk number of local-AMA originated calls. (2) Supervision of originating end disconnect without timed release of circuit and AMA disconnect entry (if provided). (3) Supervision of terminating end answered call and timed answer entry. (4) Ability of S1 relay to hold if extra digits are dialed in circuit. (5) Improved testing of supervisory relays. (6) Supervision of terminating end answer call and timed LAMA answer entry. (7) Supervision of terminating end disconnect call with timed LAMA disconnect entry (if provided).

8

C. Coin Operation (ETS Included): The following features are checked: (1) Trunk seizure and supervision, and trunk supervisory and trunk busy scanning for ETS. (2) Coin return on unanswered call, and trunk supervisory and trunk busy scanning for ETS. (3) Ability of

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

S1 relay to hold if extra digits are dialed in circuit. (4) Supervision of terminating end answered call and trunk supervisory scanning for ETS. (5) Supervision of originating end disconnect without timed release and either coin return or coin collect on answered call. Trunk supervisory and trunk busy scanning for ETS. (6) Supervision of terminating end disconnect with timed release and either coin return or coin collect on answered calls and trunk supervisory and trunk busy scanning for ETS.

D. Junctor Call: Coin and AMA Operation (ETS Included):

The following features are checked: if circuit under test is arranged as a coin junctor (1) Seizure and supervision. (2) Tip and ring supervision for coin service improvements and trunk supervisory and trunk busy scanning for ETS. (3) Coin return or coin collect option on answered calls and trunk supervision and trunk busy scanning for ETS. If the circuit under test is arranged as an AMA junctor, (1) seizure and supervision and initial entry indication of recorder and trunk numbers. (2) Supervision of originating end disconnect without timed release and AMA disconnect entry (if provided).

E. Directory Assistance Traffic Termination—AMA or ANI Provided (ETS, CDT, and LAMA-C Included):

The following features are checked: (1) Trunk seizure and supervision, AMA initial and answer entries (if provided). (2) Supervision for coin service improvements (if provided). (3) Call completed to operator, and trunk supervisory scanning for ETS or LAMA-C and trunk busy scanning for ETS. (4) Supervision of originating end disconnect without timed release. (5) Coin return or coin collect or answered call (if provided). (6) AMA disconnect entry (if provided), and trunk supervisory scanning for ETS or LAMA-C and trunk busy scanning for ETS.

F. Directory Assistance Traffic Termination—AMA or ANI not Provided (ETS, CDT, and LAMA-C not Included):

The following features are checked: (1) Trunk seizure and supervision, and supervision for coin service improvements (if provided). (2) Supervision of originating end disconnect without timed release, coin return or coin collect on answered call (if provided).

G. Tandem Call—Local and Toll Operation—(ETS, CDT, and LAMA-C Features Included):

The following features are checked: (1) Seizure and supervision of trunk while simulating terminating end of incoming local tandem trunk. (2) Supervision of terminating end disconnect with timed release. (3) Seizure and supervision of trunk while simulating terminating end of incoming toll tandem trunk. (4) Supervision of terminating end disconnect with timed release.

H. Remote Make-Busy Test (ETS, CDT, and LAMA-C not Included):

This test checks the remote make-busy feature while this circuit is idle.

I. Overflow Test (ETS, CDT, and LAMA-C Included):

The following feature is checked: (1) Trunk seizure and supervision and set up of reorder condition in sender of trunk under test.

J. Trunk or Junctor Circuit Busy (ETS, CDT, and LAMA-C Provided):

The following features are checked: (1) Trunk seizure and supervision of trunk that is maintenance busy.

K. False-Busy and False-Idle Conditions (not Required for ETS):

The following features are checked: Continuity and crosses on the F, FT, and BT leads.

10

12

14

16

17

19

19

20

21

1.04 Tests D, E, F, and H require assistance at the distant attendant facilities.

1.05 Test K requires all trunks of the same route on the same TLF as the trunk under test to be made busy.

1.06 The statement between the asterisks (* *) after ACTION and VERIFICATION statements is added to clarify the function being simulated or the action being taken in the test procedures.

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.

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.

1.10 When the office is arranged for 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 section for the office arrangement.

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

1.11 When the trunk under test is arranged for ETS, the first completed test call from the MTF will cause the TST bit to be set in the trunk register associated with the selected trunk, enabling

trunk scanning to be repeated on the FT lamp at the MTF trunk test circuit. As long as the TST bit is set in the trunk register, scanning will continue to be repeated on the lamp, even on service calls. The TST bit will remain set in the trunk register until (1) a test call is made from the MTF to another trunk, or (2) the command **STOP:TRK TST** is entered at the maintenance TTY.

1.12 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, such as DT, ORIG, ITDO, ITNP, OGT, etc.

1.13 ♦When CDT (calling data transmitter) billing system is provided in the office, this trunk may or may not handle billable calls. When it is arranged for billable calls, supervisory scan points will be assigned and supervision will be repeated from the scan points on test calls to the MTF by CS and S1 lamps.

1.14 When CDT is provided, there may be several configurations in the office - single controller, dual controller with the trunk assigned to one controller, or dual controller and the trunk is assigned to both controllers. When assigned to both controllers in a dual controller configuration, one test must be made to each controller to verify scan points for each controller.♦

2. APPARATUS

All Tests Except K

2.01 Trunk test circuit, SD-25918-01.

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

Test K

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

2.05 322A (make-busy) plugs as required.

2.06 Oscillator J94730B (SD-95616-01), part of 1A fault locator test set J94730A.

SECTION 218-280-502

2.07 Testing cord, W1AK cord, 6 feet long, equipped with one 296 (banana-type) plug, 360B tool, and 624B tool.

KS-6278 connecting clip, and one 624B tool (for connecting high resistance ground [HRG] to terminal strip terminals).

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

3. PREPARATION

STEP

ACTION

VERIFICATION

All Tests Except K

Note: Refer to paragraphs 1.04 through 1.14.

- | | | |
|-----|---|-------------------------|
| 1 | At MTF—
Restore all keys and switches. | |
| 2 | Momentarily operate RL key. | All lamps extinguished. |
| 3 | Select completing marker. | |
| 4 | Select class of call and translator indication as required for directory assistance call. | |
| 5 | Select trunk or junctor circuit under test. | |
| 6a | If trunk or junctor circuit is in an allotted subgroup—
Operate GPA or GPB key as required. | |
| 7 | Operate TLK, KY, FS, TS keys. | |
| 8 | Select A_ through K_ digits as required to direct call to appropriate directory assistance code. | |
| 9 | Select route advance if required. | |
| 10 | Insert plug of head telephone set into TEL jack at voltmeter test panel. | |
| 11b | If E and M or SX supervision is provided—
Operate E-M key.
Permits signaling between offices over two separate leads. | |
| 12c | If reverse battery supervision is provided—
Operate DA key.
Connects proper current flow requirements for CS relay. | |
| 13d | If ETS is provided—
Operate PCS and PTS keys. | |

STEP	ACTION	VERIFICATION
------	--------	--------------

Permits selected class of service and trunk selection to be used.

All Tests Except D, E, F, H

14 Select OGT class of test.

Test G

15 Select OGT-TAN subclass.
Tests tandem features of outgoing trunk.

16 Select OGT-TOL subclass.
Tests toll feature of outgoing trunk.

Tests, A, E, G, I, J

17e ♦If trunk is to be tested for CDT—
Operate CDTT key.

18e When trunk is assigned to CDT dual controllers,
select controller—
Operate CDC 0/1 key.

19e When a trouble record is to be taken from
the CDT translator access (TA) circuit—
Operate TREC key.

20e When the CDT controller operates with both
shared and dedicated translator circuits and a
particular translator circuit is to be used for
the test—
Operate TAD key to select dedicated TA circuit
or operate TAS key to select shared TA
circuit.

Note: When a TA circuit is not selected,
the controller will select the next available
TA circuit.♦

4. METHOD**A. Local Call-Flat Rate Operation (ETS, ♦CDT,♦ and LAMA-C Features Included)**

21 Select flat-class of service, and rate treatment
(if provided) for trunk under test.

22 Momentarily operate ST key.
*Trunk seizure and supervision, and trunk
supervisory scanning for ETS, ♦CDT,♦ or
LAMA-C, and trunk busy scanning for ETS.*

AS, MRL lamps lighted.
If answer and disconnect supervision to local
customer is provided—
PK lamp lighted.

SECTION 218-280-502

STEP	ACTION	VERIFICATION
		If E and M supervision is provided— E lamp lighted. If ETS is provided— FT, S1 lamps lighted. If LAMA-C is provided— S1 lamp lighted. ♦If CDTT key is operated— S1 lamp lighted.♦
23	Dial digit 0. *Checks slow release of S1 relay in trunk under test.*	AS lamp remains lighted.
24f	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate SK key. *Reverse bias (soak current) applied to CS-relay in outgoing trunk.*	
25	Operate ANS key. *Supervision of terminating end answered call and trunk supervisory scanning for ETS, ♦CDT,♦ or LAMA-C.*	High tone heard. If answer and disconnect supervision to local customer is provided— PK lamp extinguished. If reverse battery supervision is provided— OGT-CS lamp lighted. If ETS or LAMA-C is provided— CS lamp lighted. ♦If CDTT key is operated— CS lamp lighted.♦
26f	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate CSR key. *Checks release of CS relay in trunk under test.*	OGT-CS lamp momentarily extinguished. If ETS or LAMA-C is provided— CS lamp momentarily extinguished. ♦If CDTT key operated— CS lamp momentarily extinguished.♦
27	Restore TLK key. *Supervision of originating end disconnect without timed release, trunk supervisory scanning for ETS, ♦CDT,♦ LAMA-C and trunk busy scanning for ETS*	High tone silenced. AS lamp extinguished. If reverse battery supervision is provided— OCT-CS lamp extinguished. If E and M supervision is provided— E lamp extinguished. If ETS is provided— FT, S1, CS lamps extinguished. If LAMA-C is provided— S1, CS lamps extinguished. ♦If CDTT key is operated— S1, CS lamps extinguished.♦
28	Momentarily operate RL key.	All lamps extinguished.
29	Operate TLK key.	

STEP	ACTION	VERIFICATION
	<p>Note: Do not proceed with test until the time has elapsed since the RL relay in the trunk under test was last energized as shown as follows: 4 minutes where tube-type RL relay is used, 2 minutes where 235-type RL relay is used.</p>	
30	<p>Momentarily operate ST key. *Trunk reseizure and supervision, trunk supervisory scanning for ETS, ♦CDT,♦ or LAMA-C, and trunk busy scanning for ETS.*</p>	<p>AS, MRL lamps lighted. If answer and disconnect supervision to local customer is provided— PK lamp lighted. If E and M supervision is provided— E lamp lighted. If ETS is provided— FT, S1 lamps lighted. If LAMA-C is provided— S1 lamp lighted. ♦If CDTT key is operated— S1 lamp lighted.♦</p>
31	<p>Dial digit 7. *Rechecks slow release of S1 relay in trunk under test.*</p>	<p>AS lamp remains lighted.</p>
32f	<p>If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate SK key.</p>	
33	<p>Operate ANS key. *Supervision of terminating end answered call and trunk supervisory scanning for ETS, ♦CDT,♦ or LAMA-C.*</p>	<p>High tone heard. If answer and disconnect supervision to local customer is provided— OGT-CS lamp lighted. If ETS or LAMA-C is provided— CS lamp lighted. ♦If CDTT key is operated— CS lamp lighted.♦</p>
34b	<p>If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate CSR key. *Rechecks release of CS relay in trunk under test.*</p>	<p>OGT-CS lamp momentarily extinguished. If ETS or LAMA-C is provided— CS lamp momentarily extinguished. ♦If CDTT key operated— CS lamp momentarily extinguished.♦</p>
35	<p>Restore ANS key; start timing. *Supervision of terminating end disconnect with timed release, trunk supervisory scanning for ETS, ♦CDT,♦ or LAMA-C, and trunk busy scanning for ETS.*</p>	<p>High tone silenced. If answer and disconnect supervision to local customer is provided— PK lamp lighted. If reverse battery supervision is provided— OGT-CS lamp extinguished. If E and M supervision is provided— E lamp extinguished. If ETS or LAMA-C is provided—</p>

STEP	ACTION	VERIFICATION
		CS lamp extinguished. ♦If CDTT key is operated— CS lamp extinguished.♦ In 13 to 32 seconds— AS lamp extinguished. If ETS is provided— FT, S1 lamps extinguished. If LAMA-C is provided— S1 lamp extinguished. ♦If CDTT key is operated— S1 lamp extinguished.♦
36	Momentarily operate RL key.	All lamps extinguished.
37g	If no further tests are to be made— Restore all keys and switches.	
38	Remove plug of head telephone set from TEL jack at voltmeter test panel.	
B. Local Call—AMA Operation (ETS, ♦CDT,♦ and LAMA-C Features not Included)		
15	Select AMA class of service, and rate treatment (if provided) for trunk under test.	
16	Momentarily operate ST key. *Trunk seizure and supervision, AMA initial entry indicating AMA recorder and trunk number.*	AS, MRL lamps lighted. If answer and disconnect supervision to local customer is provided— PK lamp lighted. If E and M supervision is provided— E lamp lighted IE lamp lighted. RN-, T2/5, U2/5 lamps lighted.
17	Dial digit 0. *Checks slow release of S1 relay in trunk under test.*	AS lamp remains lighted.
18e	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate SK key. *Reverse bias (soak current) applied to CS-relay in outgoing trunk.*	
19	Operate ANS key; <i>start timing</i> . *Supervision of terminating end answered call and timed AMA answer entry.*	High tone heard. If answer and disconnect supervision to local customer is provided— PK lamp extinguished. If reverse battery supervision is provided— OGT-CS lamp lighted.

STEP	ACTION	VERIFICATION
		In 2 to 5 seconds— AE lamp lighted.
20e	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate CSR key. *Checks release of CS relay in trunk under test.*	OGT-CS lamp momentarily extinguished.
21	Restore TLK key. *Supervision of originating end disconnect without timed release and AMA disconnect entry (if provided).*	High tone silenced. AS lamp extinguished. If reverse battery supervision is provided— OGT-CS lamp extinguished. If E and M supervision is provided— E lamp extinguished If disconnect entry is provided— DE lamp lighted.
22	Momentarily operate RL key.	All lamps extinguished.
23	Operate TLK key. Note: Do not proceed with test until the time has elapsed since the RL relay in trunk under test was last energized as shown as follows:	
24	4 minutes where tube-type relay is used. 2 minutes where 235-type relay is used.	
24	Momentarily operate ST key. *Trunk seizure and supervision, and AMA initial entry indicating AMA recorder and trunk number.*	AS, MRL lamps lighted. If answer and disconnect supervision to local customer is provided— PK lamp lighted. IE lamp lighted. RN-, T2/5, U2/5 lamps lighted.
25	Dial digit 7. *Rechecks slow release of S1 relay.*	AS lamp remains lighted.
26e	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate SK key.	
27	Operate ANS key; start timing . *Supervision of terminating end answered call and timed LAMA answer entry.*	High tone heard. If answer and disconnect supervision to local customer is provided— PK lamp extinguished. If reverse battery supervision is provided— OGT-CS lamp lighted. In 2 to 5 seconds— AE lamp lighted.

SECTION 218-280-502

STEP	ACTION	VERIFICATION
28e	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate CSR key. *Rechecks release of CS relay.*	OGT-CS lamp momentarily extinguished.
29	Restore ANS key; <i>start timing</i> . *Supervision of terminating end disconnect with timed release and LAMA disconnect entry (if provided).*	High tone silenced If answer and disconnect supervision to local customer is provided— PK lamp lighted. If reverse battery supervision is provided— OGT-CS lamp extinguished. If E and M supervision is provided— E lamp extinguished. In 13 to 32 seconds— AS lamp extinguished If disconnect entry is provided— DE lamp lighted.
30	Momentarily operate RL key.	All lamps extinguished.
31f	If no further tests are to be made— Restore all keys and switches.	
32	Remove plug of head telephone set from TEL jack at voltmeter test panel.	
C. Coin Operation (ETS Included)		
15	Select coin class of service for trunk under test.	
16	Operate CN key.	
17	Momentarily operate ST key. *Trunk seizure and supervision, and trunk supervisory and trunk busy scanning for ETS.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted. If ETS is provided— FT, S1 lamps lighted.
18	Restore TLK key. *Coin return on unanswered call and trunk supervisory and trunk busy scanning for ETS.*	CR lamp momentarily lighted. CND lamp lighted. AS lamp extinguished. If ETS is provided— FT, S1 lamps extinguished.
19	Momentarily operate RL key.	All lamps extinguished.
20	Operate TLK key.	
21	Momentarily operate ST key. *Trunk seizure and supervision, and trunk supervisory and trunk busy scanning for ETS.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted.

STEP	ACTION	VERIFICATION
		If ETS is provided— FT, S1 lamps lighted.
22	Dial digit 0. *Checks slow release of S1 relay.*	AS lamp remains lighted.
23e	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate SK key. *Reverse bias (soak current) applied to CS-relay in outgoing trunk.*	
24	Operate ANS key. *Supervision of terminating end answered call and trunk supervisory scanning for ETS.*	High tone heard. If reverse battery supervision is provided— OGT-CS lamp lighted. If ETS is provided— CS lamp lighted.
25e	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate CSR key. *Checks release of CS relay.*	OGT-CS lamp momentarily extinguished. If ETS is provided— CS lamp momentarily extinguished.
26	Restore TLK key. *Supervision of originating end disconnect without timed release and either coin return or coin collect on answered call and trunk supervisory and trunk-busy scanning for ETS.*	High tone silenced. AS lamp extinguished. If coin return feature is provided— CR lamp momentarily lighted If coin collect feature is provided— CC lamp momentarily lighted. If reverse battery supervision is provided— OGT-CS lamp extinguished If E and M supervision is provided— E lamp extinguished. If ETS is provided— FT, S1, CS lamps extinguished.
27	Momentarily operate RL key.	All lamps extinguished.
28	Operate TLK key.	
	Note: Do not proceed with test until the time has elapsed since the RL relay in trunk under test was last energized as shown as follows:	
29	4 minutes where tube-type relay is used. 2 minutes where 235-type relay is used.	
29	Momentarily operate ST key. *Trunk seizure and supervision, and trunk supervisory and trunk busy scanning for ETS.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted.

SECTION 218-280-502

STEP	ACTION	VERIFICATION
		If ETS is provided— FT, S1 lamps lighted.
30	Dial digit 7. *Rechecks slow release of S1 relay.*	AS lamp remains lighted.
31e	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate SK relay.	
32	Operate ANS key. *Supervision of terminating end answered call and trunk supervisory scanning for ETS.*	High tone heard. If reverse battery supervision is provided— OGT-CS lamp lighted. If ETS is provided— CS lamp lighted.
33e	If reverse battery supervision and improved testing of CS relay is provided— Momentarily operate CSR key. *Rechecks release of CS relay.*	OGT-CS lamp momentarily extinguished. If ETS is provided— CS lamp momentarily extinguished.
34	Restore ANS key; <i>start timing</i> . *Supervision of terminating end disconnect with timed release and either coin return or coin collect on answered calls and trunk supervisory and trunk busy scanning for ETS.*	High tone silenced. If reverse battery supervision is provided. OGT-CS lamp extinguished If E and M supervision is provided— E lamp extinguished. In 13 to 32 seconds— AS lamp extinguished. If coin return feature is provided— CR lamp momentarily lighted. If coin collect feature is provided— CC lamp momentarily lighted. If ETS is provided— FT, CS, S1 lamps extinguished.
35	Momentarily operate RL key.	All lamps extinguished.
36f	If no further tests are to be made— Restore all keys and switches.	
37	Remove plug of head telephone set from TEL jack at voltmeter test panel.	

D. Junctor Operation Test (ETS Included)

14	Select MISC class of test.
15e	If circuit under test is arranged as a coin junctor— Select coin class of service.
16e	Operate CN key.

STEP	ACTION	VERIFICATION
17f	If office is arranged for coin service improvements (dial-tone-first)— Operate DTNF key.	
18e	If circuit under test is arranged as a coin junctor— Momentarily operate ST key. *Juncture seizure and supervision, tip and ring supervision for coin service improvements, and trunk supervisory and trunk-busy scanning for ETS.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted. If ETS is provided— FT, S1 lamps lighted. If office is arranged for coin service improvements (dial-tone-first)— PK lamp lighted. OLF lamp <i>not</i> lighted. Directory assistance operator answers. If office is arranged for coin service improvements (dial-tone-first)— PK lamp extinguished.
19e	At MTF— Inform directory assistance operator that this is a test call and to remain connected until a disconnect signal is received.	
20a	Restore TLK key. *Checks coin return or coin collect option on answered calls, and trunk supervisory and trunk busy scanning for ETS.*	AS lamp extinguished. If coin return feature is provided— CR lamp momentarily lighted. If coin called feature is provided— CC lamp momentarily lighted. CND lamp lighted. If ETS is provided— FT, S1 lamps extinguished.
21a	Momentarily operate RL key.	All lamps extinguished.
22	Operate TLK key.	
23g	If circuit under test is arranged as an AMA junctor— Select AMA class of service, and rate treatment (if provided).	
24g	Momentarily operate ST key. *Juncture seizure and supervision, and AMA initial entry indicating recorder and trunk numbers.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted. IE lamp lighted. RN-, T-, U- lamps lighted. At distant office— Directory assistance operator answers. AE lamp lighted.
25g	At MTF— Inform directory assistance operator that this	

SECTION 218-280-502

STEP	ACTION	VERIFICATION
	is a test call and to remain connected until a disconnect signal is received.	
26g	Restore TLK key. *Supervision of originating end disconnect without timed release, and AMA disconnect entry (if provided).*	AS lamp extinguished. If E and M supervision is provided— E lamp extinguished. If disconnect entry is provided— DE lamp lighted.
27	Momentarily operate RL key.	All lamps extinguished.
28h	If no other tests are to be performed— Restore all keys and switches.	
29	Remove plug of head telephone set from TEL jack at voltmeter test panel.	
E. Directory Assistance Traffic Termination AMA or ANI Provided (ETS, CDT, and LAMA-C Included)		
<i>Note:</i> Directory assistance traffic is routed from an end office or on a tandem switched basis to a directory assistance operator. When this trunk is located in an AMA office, it may be used only for coin and noncoin locally originated calls or noncoin tandem calls. When used in an ANI office, only locally originated coin or noncoin traffic may be switched through it. In this case, the end office connects either to a CAMA office or directly to an ACD office arranged for charging.		
21	Select MISC class of test.	
22	Select class of service, and rate treatment (if provided) as required.	
23f	If coin class of service is used— Operate CN key.	
24g	If office is arranged for coin service improvements (dial-tone-first)— Operate DTNF key.	
25	Momentarily operate ST key. *Trunk seizure and supervision, AMA initial and answer entries (if provided), supervision for coin service improvements (if provided), call completed to operator, and trunk supervisory scanning for ETS, CDT, or LAMA-C and trunk-busy scanning for ETS.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted. If AMA class of service was selected and office is arranged for LAMA— IE, T, U, RN lamps lighted If coin class of service was selected and office is arranged for coin service improvements

STEP	ACTION	VERIFICATION
		(dial-tone-first)— PK lamp lighted. OLF lamp <i>not</i> lighted If ETS is provided— FT, S1 lamps lighted. If LAMA-C is provided and coin class of service was <i>not</i> selected— S1 lamp lighted. ♦If CDTT key is operated— S1 lamp lighted.♦ At distant office— Directory assistance operator answers. If AMA class of service was selected and office is arranged for LAMA— At MTF— AE lamp lighted ♦If ETS or LAMA-C provided— CS lamp lighted. If CDTT key is operated— CS lamp lighted.♦ If coin class of service was selected and office is arranged for coin service improvements (dial-tone-first) PK lamp extinguished.
26	Inform directory assistance operator that this is a test call and to remain connected until a disconnect signal is received.	
27	Restore TLK key. *Supervision of originating end disconnect without timed release, coin return or coin collect on answered call (if provided), AMA disconnect entry (if provided), and trunk supervisory scanning for ETS, ♦CDT,♦ or LAMA-C and trunk busy scanning for ETS.*	AS lamp extinguished. If E and M supervision is provided— E lamp extinguished. If coin class of service was selected and coin return feature is provided— CR lamp momentarily lighted. If coin class of service was selected and collect feature is provided— CC lamp momentarily lighted. CND lamp lighted. If office is arranged for LAMA and disconnect entry feature is provided— DE lamp lighted If ETS is provided— FT, S1, ♦CS♦ lamps extinguished. If LAMA-C is provided and coin class of service was <i>not</i> selected— S1,♦CS♦ lamps extinguished. ♦If CDTT key is operated— S1, CS lamps extinguished.♦
28f	If coin class of service was used— Restore CN key.	CND lamp extinguished.

SECTION 218-280-502

STEP	ACTION	VERIFICATION
29	Momentarily operate RL key.	All lamps extinguished.
30h	If no other tests are to be performed— Restore all keys and switches.	
31	Remove plug of head telephone set from TEL jack at voltmeter test panel.	
<p>F. Directory Assistance Traffic Termination Test AMA or ANI not Provided (ETS, CDT, and LAMA-C not Included)</p>		
<p><i>Note:</i> This circuit may be used on a temporary basis in offices not arranged for either AMA or ANI. In this case, operator identification is required on all local originating calls and cannot be used to complete tandem calls.</p>		
14	Select MISC class of test.	
15	Select class of service, and rate treatment (if provided) as required.	
16e	If coin class of service is used— Operate CN key.	
17f	If office is arranged for coin service improvement (dial-tone-first)— Operate DTNF key.	
18f	Momentarily operate ST key. *Trunk seizure and supervision, and supervision for coin service improvements (if provided).*	<p>AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted. If coin class of service was selected and office is arranged for coin service improvement (dial-tone-first)— PK lamp lighted. OLF lamp <i>not</i> lighted. At distant office— CAMA operator answers. If coin class of service was selected and office is arranged for coin service improvement (dial-tone-first)— PK lamp extinguished.</p>
19	At MTF— Give CAMA operator directory number associated with originating test line.	At distant office— Directory assistance operator answers.
20	At MTF— Inform directory assistance operator that this	

STEP	ACTION	VERIFICATION
	is a test call and to remain connected until a disconnect signal is received.	
21	Restore TLK key. *Supervision of originating end disconnect without timed release, coin return or coin collect on answered call (if provided).*	AS lamp extinguished. If E and M supervision is provided— E lamp extinguished. If coin class of service was selected and coin return feature is provided— CR lamp momentarily lighted. If coin class of service was selected and coin collect feature is provided— CC lamp momentarily lighted. CND lamp lighted.
22e	If coin class of service was used— Restore CN key.	CND lamp extinguished.
23	Momentarily operate RL key.	All lamps extinguished.
24	Operate TLK key.	
25g	If no other tests are to be performed— Restore all keys and switches.	
26	Remove plug of head telephone set from TEL jack at voltmeter test panel.	

G. Tandem Call—Local and Toll Operation (ETS, CDT, and LAMA-C Features Included)

21f	If trunk under test is arranged for local tandem completion— Restore class of service; and rate treatment (if provided).	
22f	Select TAN subclass of test.	TAN lamp lighted.
23f	Momentarily operate ST key. *Seizure and supervision of trunk while simulating terminating end of an incoming local tandem trunk.*	AS, MRL, lamps lighted. If ETS is provided— FT, S1 lamps lighted. If LAMA-C is provided— S1 lamp lighted. ♦If CDTT key is operated— S1 lamp lighted.♦
24	Operate ANS key.	High tone heard OGT-CS lamp lighted. If ETS or LAMA-C is provided— CS lamp lighted. ♦If CDTT key is operated— CS lamp lighted.♦

SECTION 218-280-502

STEP	ACTION	VERIFICATION
25	Restore answer key: <i>start timing</i> . *Supervision of terminating end disconnect with timed release.*	High tone silenced. OGT-CS lamp extinguished. In 13 to 32 seconds— AS lamp extinguished. If ETS is provided— FT, CS, S1 lamps extinguished. If LAMA-C is provided— CS, S1 lamps extinguished. ◆If CDTT key is operated— S1, CS lamps extinguished.◆
26	Momentarily operate RL key.	All lamps extinguished except TAN.
27	Restore TAN subclass of test.	TAN lamp extinguished.
28g	If trunk under test is arranged for toll tandem completion— Restore class of service, and rate treatment (if provided).	
29g	Select TOL subclass of test.	TOL lamp lighted.
30g	Momentarily operate ST key. *Seizure and supervision of trunk while simulating terminating end of incoming toll tandem trunk.*	TAS, E, MRL lamps lighted. If ETS is provided— FT, S1 lamps lighted. If LAMA-C is provided— S1 lamp lighted. ◆If CDTT key is operated— S1 lamp lighted.◆
31g	Operate answer key.	High tone heard. If ETS or LAMA-C is provided— CS lamp lighted. ◆If CDTT key is operated— CS lamp lighted.◆
32g	Restore ANS key; <i>start timing</i> . *Supervision of terminating end disconnect with timed release.*	High tone silenced. E lamp extinguished. In 13 to 32 seconds. TAS lamp extinguished. If ETS is provided— FT, CS, S1 lamps extinguished. If LAMA-C is provided— CS, S1 lamps extinguished. ◆If CDTT key is operated— S1, CS lamps extinguished.◆
33g	Momentarily operate RL key.	All lamps extinguished except TOL.
34	Restore TOL subclass of test.	TOL lamp extinguished.

STEP	ACTION	VERIFICATION
35h	If no other tests are to be performed— Restore all keys and switches.	
36	Remove plug of head telephone set from TEL jack at voltmeter test panel.	
H. Remote Make-Busy Test (ETS, CDT, and LAMA-C not Included)		
14	Select MISC class of test.	
15	Select flat-rate class of service, and rate treatment (if provided).	
16	Momentarily operate ST key. *Trunk seizure and supervision, and operator answer.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted. At distant office— Directory assistance operator answers.
17	At MTF— Inform directory assistance operator that this is a test call and to remain connected after receiving a disconnect signal.	
18	Restore TLK key.	RMB lamp lighted.
19	In about 10 seconds— Operate TLK key. *Checks remote make busy while circuit is idle.*	RMB lamp extinguished At distant office. Directory assistance operator reanswers.
20	At MTF— Inform directory assistance that this is the end of test.	
21e	If no other tests are to be performed— Restore all keys and switches.	
22	Remove plug of head telephone set from TEL jack at voltmeter test panel.	
I. Overflow Test (ETS, CDT, and LAMA-C Included)		
21	Select class of service, and rate treatment (if provided) as required.	
22b	If coin class of service is used— Operate CN key.	
23	Operate ROT key.	

SECTION 218-280-502

STEP	ACTION	VERIFICATION
24	Momentarily operate ST key. *Trunk seizure and supervision, and sets up reorder in sender of trunk under test.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted. Overflow tone (120 IPM) heard. If ETS is provided— FT, S1 lamps lighted. If LAMA-C is provided and coin class of service was <i>not</i> selected— S1 lamp lighted. ◆If CDTT key is operated— S1 lamp lighted.◆
25	Momentarily operate RL key.	Overflow tone silenced. All lamps extinguished.
26g	If no other tests are to be performed— Restore all keys and switches.	
27	Remove plug of head telephone set from TEL jack at voltmeter test panel.	
J. Trunk or Junctor Circuit Busy (ETS, ◆CDT, LAMA-C◆ Provided)		
21	Select class of service, and rate treatment (if provided) as required.	
22f	If coin class of service is used— Operate CN key.	
16	Insert make-busy plug into OGT-MB jack of trunk or junctor circuit under test.	
24	Momentarily operate ST key. *Indicates trunk is maintenance busy.*	TB lamp lighted.
25	Momentarily operate RL key.	All other lamps extinguished.
26	Operate NTTS, NTFS keys.	
27	Momentarily operate ST key. *Trunk seizure and supervision of trunk that is maintenance busy.*	AS, MRL lamps lighted. If E and M supervision is provided— E lamp lighted. If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted. ◆If CDTT key is operated— S1 lamp lighted.◆ If AMA class of service and office is arranged for LAMA— IE, T, U, RN lamps lighted.

STEP	ACTION	VERIFICATION
28	Momentarily operate RL key.	All lamps extinguished. If ETS is provided— FT lamp remains lighted.
29	Remove make-busy plug from OGT-MB jack of trunk or junctor circuit under test.	If ETS is provided— FT lamp extinguished.
30g	If no other tests are to be performed— Restore all keys and switches.	
31	Remove plug of head telephone set from TEL jack at voltmeter test panel.	
K. False-busy and False-idle Conditions (Not Required for ETS)		
1	At relay rack frame— Connect power to 1A fault locator and operate W-T switch to W position and HR-LRT switch to LRT position.	Whistle heard.
2	Connect WT jack of fault locator to terminal 45 of terminal strip A on unit. *Checks FT lead.*	Whistle not heard.
3	When circuit being tested is idle— Block SD relay operated.	If trunk under test is the only idle trunk or the only trunk using the same route on same trunk link frame— Whistle heard.
4a	If more than one trunk on same trunk link frame using the same route— At master test frame— Insert make-busy plugs into OGT-MB jacks of all other circuits using same route on same trunk link frame.	
5	Remove blocking tool from SD relay momentarily.	Whistle not heard while blocking tool was removed.
6a	If more than one trunk on same trunk link frame using the same route— At master test frame— Remove make-busy plugs inserted in Step 4a.	Whistle not heard if any trunks idle.
7	At relay rack frame— Connect HRG (high resistance ground) terminal to terminal 55 of terminal strip A on unit. *Checks F lead.*	

SECTION 218-280-502

STEP	ACTION	VERIFICATION
8	Disconnect WT jack of fault locator and connect it to terminal 15 of terminal strip A on unit. *Checks BT lead.*	Whistle heard.
9	Remove blocking tool from SD relay.	Whistle not heard.
10	Remove test connections from terminal strip.	
11	Remove power from 1A fault locator.	