TRUNK TESTING PROCEDURES

USING AUTOMATIC RECYCLE FEATURE

OF TRUNK TEST CIRCUIT SD-25918-01

NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing trunks using the automatic recycle feature of the trunk test circuit SD-25918-01.

1.02 This section is reissued for the following reasons:

(a) To revise Tests A, B, D, and E for Electronic Translation System (ETS) features.

This reissue does not affect Equipment Test Lists.

1.03 The tests covered are:

1.04 Automatic testing ceases after 32, 64, 96, 128, or 160 tests are completed, depending upon the setting of the MRCY switch.

1.05 Due to the plug-in selection of trunks in the ITNP class, the same incoming trunk will be seized on each test. Repeated testing of a particular trunk or random selection of any trunk in a route may be directed by the control circuit for OGT, MISC, ITDO, and IAO classes. Random selection does not guarantee that all trunks in a route will be tested.

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 required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

1.07 The manner of selecting some circuits and test conditions at the master test frame (MTF) and it associated circuits varies depending on the apparatus options furnished with these circuits. Therefore, where variable means of selection are provided, precise instructions for the selection of circuits and test conditions are not given. Precise instructions for the use of these variable means are given in Section 218-106-301.

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

1.09 ◆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.

1.10 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.

3. PREPARATION

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

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 supervisory scanning to be repeated on the FT, CS, and S1 lamps at the MTF trunk test circuit. As long as the TST bit is set in the trunk register, supervision will continue to be repeated on the lamps, 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.◆

2. APPARATUS

All Tests

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

2.02 Trunk test circuit, SD-25918-01.

Tests B, D, and E

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

STEP	ACTION	VERIFICATION

All Tests

Note: Refer to 1.07 ◆through 1.11.◆

1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Set MRCY switch for number of tests required. (Refer to 1.04.)	
4	Operate KY, REP, TLK keys.	

Tests A, B, D, and E

| 5 | Select A, B, and C digits required to direct call to route under test. | |

STEP	ACTION	VERIFICATION

6   Select OR class of call and translator indication, as required, for access to selected route.

7   Select marker.

8   Select route advance.

9a   If a particular trunk is under test—
Operate NTFS, NTTS keys.

10a   Select trunk under test.

11a   Operate GPA/GPB key, as required, ◆when selected route is asociated with an allotted trunk group.◀

12   Select a class of service and rate treatment, if required, for access to the route under test.

13b   If route under test is arranged for AMA operation and *does not* terminate in a crossbar tandem or No. 4 crossbar office—
Operate KAMA key if provided.

14c   ◆If ETS provided—
Operate PCS, PTS keys.◀

Tests A, and C

15d   If route under test is not arranged for data service—
Operate TTL key.

16e   If route under test is arranged for data service—
Select numerical digits assigned to data terminating test line.

17e   Operate KRC key.

18f   If TERT switch is provided—
Set TERT switch to KM position.

19   Select ringing combination 1.

4.   METHOD

A.   Intraoffice Trunk (IAO) Testing

20a   If a particular trunk is under test—
At relay rack frame—
Operate MB switch to MB position.

STEP	ACTION	VERIFICATION
21	At MTF— Select IAO class of test.	
22	Momentarily operate ST key.	▶If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted.◀ AS, TS lamps lighted. TS/T_, TS/U_ lamps lighted corresponding to location of trunk under test. If NTFS, NTTS keys are not operated— FS/T_, FS/U_ lamps lighted corresponding to frame on which trunk is located. R- lamp flashes. R- lamp extinguished. ANS, TRMK lamps lighted. ▶If ETS or LAMA-C provided— CS lamp lighted.◀ ANS, TRMK, AS, TS lamps extinguished. ▶If ETS or LAMA-C provided— CS, S1 lamps extinguished.◀ TS/T_, TS/U_ lamps extinguished. If NTFS, NTTS keys are not operated— FS/T_, FS/U_ lamps extinguished. ▶If a particular trunk is under test and if ETS provided— FT lamp remains lighted. If a particular trunk is *not* under test and if ETS provided— FT lamp extinguished.◀ Test recycles.
23	When selected number of test cycles are complete, TAR lamp lighted— Momentarily operate RL key.	All lamps extinguished.
24g	If no further tests are to be made— Restore all keys and switches.	
25a	If particular trunk is under test— At relay rack frame— Operate MB switch to N position.	▶If ETS provided— FT lamp extinguished.◀

B. Outgoing Trunk (OGT) Testing

15a	If a particular trunk is under test— At master test frame jack bay— Insert make-busy plug into OGT-MB jack of trunk.	
16	At MTF— Select OGT class of test.	

STEP	ACTION	VERIFICATION
17	Select additional digits as required for completion to route selected.	
18	Momentarily operate ST key.	▶If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted.◀ AS lamp lighted. TS/T⌐, TS/U_ lamps lighted corresponding to location of trunk under test. If NTFS, NTTS keys are not operated— FS/T⌐, FS/U_ lamps lighted corresponding to frame on which trunk is located. ANS, TRMK, AA, OGT-CS lamps lighted. ▶If ETS or LAMA-C provided— CS lamp lighted.◀ AS, ANS, TRMK, AA, OGT-CS lamps extinguished. ▶If ETS or LAMA-C provided— CS, S1 lamps extinguished.◀ TS/T⌐, TS/U_ lamps extinguished. If NTFS, NTTS keys are not operated— FS/T⌐, FS/U_ lamps extinguished. Test recycles. ▶If a particular trunk is under test and if ETS provided— FT lamp remains lighted, If a particular trunk is *not* under test and if ETS provided— FT lamp extinguished.◀
19	When selected number of test cycles are complete, TAR lamp lighted— Momentarily operate RL key.	All lamps extinguished.
20g	If no further tests are to be made— Restore all keys and switches.	
21a	If particular trunk is under test— At master test frame jack bay— Remove make-busy plug from OGT-MB jack of trunk.	▶If ETS provided— FT lamp extinguished.◀

C. Incoming Trunk (ITNP) Testing

STEP	ACTION	VERIFICATION
20	Have trunk made busy at originating office.	
21	Select ITNP class of test.	
22	Select incoming class of call.	
23	At relay rack frame— Check that A relay of trunk is not operated,	

STEP	ACTION	VERIFICATION
	then patch T jack of trunk circuit to ITT jack of frame.	
24g	If directing digit or digits are required— At MTF— Select digits as required for incoming class of trunk under test.	
25	Operate LS key.	

Trunks From Step-by-Step Office—Local Completion

STEP	ACTION	VERIFICATION
26	Operate SXS key.	
27	Momentarily operate ST key.	TS lamp lighted. R– lamp flashes. OGT-CS lamp momentarily lighted. R– lamp extinguished. ANS, TRMK, OGT-CS lamps lighted. ANS, TRMK, OGT-CS lamps extinguished. TS lamp extinguished. Test recycles.
28	When selected number of test cycles are complete, TAR lamp lighted— Momentarily operate RL key.	All lamps extinguished.
29h	If no further tests are to be made— Restore all keys and switches.	
30h	Restore trunk to service.	

Trunk From Other Than Step-by-Step Offices—Local Completion

STEP	ACTION	VERIFICATION
31	Operate SLP key.	
32	Momentarily operate ST key.	TS lamp lighted. R– lamp flashes. OGT-CS lamp momentarily lighted. R– lamp extinguished. ANS, TRMK, OGT-CS lamps lighted. ANS, TRMK, OGT-CS lamps extinguished. TS lamp extinguished. Test recycles.
33	When a selected number of test cycles are complete, TAR lamp lighted— Momentarily operate RL key.	All lamps extinguished.
34h	If no further tests are to be made— Restore all keys and switches.	

STEP	ACTION	VERIFICATION

35h   Restore trunk to service.

D. Incoming Trunk In the Distant Office (ITDO) Testing

15a   If a particular trunk is under test—
At master test frame jack bay—
Insert make busy plug into OGT-MB jack of trunk.

16   At MTF—
Select ITDO class of test.

17   Select digits to direct call to incoming trunk test line in distant office.

18d   If incoming trunk test line in distant office is a synchronous test line—
Operate SYNC key.

19   Operate MOH switch to select pulses to be counted.
Refer to Table A.

20   Operate ST key.

▶If ETS provided—
  FT, S1 lamps lighted.
If LAMA-C provided—
  S1 lamp lighted.◀
AS lamp lighted.
TS/T_, TS/U_ lamps lighted corresponding to location of trunk under test.
If NTFS, NTTS keys are not operated—
  FS/T_, FS/U_ lamps lighted corresponding to frame on which trunk is located.
OGT-CS lamp flashes.
▶If ETS or LAMA-C provided—
  CS lamp lighted, and follows OGT-CS flashes.◀
OGT-CS, AS lamps extinguished.
▶If ETS or LAMA-C provided—
  CS, S1 lamps extinguished.◀
TS/T_, TS/U_ lamps extinguished.
If NTFS, NTTS keys are not operated—
  FS/T_, FS/U_ lamps extinguished.
Test recycles.
▶If a particular trunk is under test and if ETS provided—
  FT lamp remains lighted.
If a particular trunk is **not** under test and if ETS provided—
  FT lamp extinguished.◀

STEP	ACTION	VERIFICATION
21	When selected number of test cycles are complete, TAR lamp lighted— Momentarily operate RL key.	All lamps extinguished.
22e	If no further tests are to be made— Restore all keys and switches.	
23f	If particular trunk is under test— At master test frame jack bay— Remove make-busy plug from OGT-MB jack.	◆If ETS provided— FT lamp extinguished.◀

TABLE A

MOH SWITCH POSITION	PULSES TO BE COUNTED
2	2 Pulses
3	3 Pulses
4	4 Pulses
Off	6 Pulses

E. Miscellaneous (MISC) Testing

STEP	ACTION	VERIFICATION
15a	If a particular trunk is to be tested— Make trunk busy.	
16	Select MISC class of test.	
17	Select digits required for call to complete.	
18	Operate key(s) in Table B, according to type of test completion expected.	
19	Operate ST key.	◆If ETS provided— FT, S1 lamps lighted. If LAMA-C provided— S1 lamp lighted.◀ AS lamp lighted. TS/T_, TS/U_ lamps lighted corresponding to location of trunk under test. If NTFS, NTTS keys are not operated— FS/T_, FS/U_ lamps lighted corresponding to frame on which trunk is located. AS lamp extinguished. ◆If ETS or LAMA-C provided— CS, S1 lamps extinguished.◀ TS/T_, TS/U_ lamps extinguished. If NTFS, NTTS keys are not operated— FS/T_, FS/U_ lamps extinguished.

STEP	ACTION	VERIFICATION
		Test recycles. ▶If a particular trunk is under test and ETS provided— FT lamp remains lighted. If a particular trunk is *not* under test and ETS provided— FT lamp extinguished.◀
20	When selected number of test cycles are complete, TAR lamp lighted— Momentarily operate RL key.	All lamps extinguished.
21d	If no further tests are to be made— Restore all keys and switches.	
22a	If a particular trunk is under test— Restore trunk to service.	▶If ETS provided— FT lamp extinguished.◀

TABLE B

KEY	TYPE OF TEST
BBY	Block on busy
BRO	Block on reorder
BANN	Block on announcement
BTRD	Block on third ring
PBY	Complete on busy
PRO	Complete on reorder
PANN	Complete on announcement
PTRD	Complete on third ring
MW/B	Complete on 1000-Hz signal