LINE LINK PULSING LINE CIRCUITS SD-27729-01 AND SD-27730-01 TESTS USING TRUNK TEST CIRCUIT SD-25918-01 NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing line link pulsing line circuits SD-27729-01 (reverse battery supervision) and SD-27730-01 (E and M lead supervision) in No. 5 crossbar offices arranged for Automatic Intercept System (AIS). These circuits are used with an MF sender for the purpose of connecting intercept traffic to an Automatic Intercept Center (AIC). For tests of line sleeves that are monitored by software in Electronic Translation System equipped offices, refer to Section 218-799-320.

1.02 This section is reissued for the reasons listed below. Revision arrows are used to emphasize the more significant changes. This reissue does not affect Equipment Test Lists.

(a) To revise test procedures to include offices arranged with Electronic Translation System (ETS).

(b) To add paragraphs 1.09 and 1.10.

(c) To revise test setup for Test G.

(d) To make minor changes as required.

1.03 The tests covered are:

1.04 ***Lettered Steps:*** A letter a, b, c, etc, added to 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, all 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, such as DT, ORIG, ITDO, ITNP, OGT etc.

1.08 When ALT is furnished, an unique maintenance termination is provided to allow distinction between a faulty line condition and a line which has been routed to intercept. The termination consists of three 35.2K ohm resistors, LT1, LT2, and LT3, which are connected between the tip and ring leads, the tip lead and ground, and the ring lead and ground, respectively. The resistors are under control of the F relay which removes the resistors so that the marker is able to make successful false cross and ground test.

1.09 ◗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.

1.10 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

Tests A Through E, G

2.01 Trunk test circuit, SD-25918-01.

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

Test C

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

2.04 67C test set or equivalent, equipped with one KS-6278 connecting clip (for checking the presence of battery).

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

Test G

2.06 Master test frame, voltmeter test circuit, SD-25792-01.

3. PREPARATION

STEP	ACTION	VERIFICATION
Tests A Through E		
	Note: Refer to paragraphs 1.04 through 1.10.	
1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select marker.	
4	Select incoming class of call ▶with LT translator indication.◀	
5	▶Select LLP line circuit under test.◀	
6	▶Select incoming trunk class as required to complete to called number.◀	
7a	If SD-27730-01 is under test— Operate E-M key.	
Tests A Through D		
8	Select OGT class of test.	
9	▶Select A_ through G_ digits as required for a directory number marked for intercept.◀	
10	Operate AIS, LLPT keys as required.	

4. METHOD

STEP	ACTION	VERIFICATION
A. Seizure and Release		
11	Operate TLK key.	
12	Momentarily operate ST key.	If SD-27729-01 is provided— AA lamp lighted. If SD-27730-01 is provided— E lamp lighted.
13	Operate ANS key.	LLS lamp ***not*** lighted. Steady tone heard.
14	Restore ANS key.	Steady tone silenced.

STEP	ACTION	VERIFICATION
15	Restore TLK key.	If SD-27729-01 is provided— AA lamp extinguished. If SD-27730-01 is provided— E lamp extinguished.
16	Momentarily operate RL key.	All lamps extinguished.
17	Restore all keys and switches not required in next test.	

B. Reorder

11	Operate TLK, ROT keys.	
12	Momentarily operate ST key.	Overflow tone heard. If SD-27729-01 is provided— AA lamp ***not*** lighted. If SD-27730-01 is provided— E lamp ***not*** lighted.
13	Restore TLK, ROT keys.	Overflow tone silenced.
14	Momentarily operate RL key.	All lamps extinguished.
15	Restore all keys and switches not required in next test.	

C. Make Busy

11	Insert make-busy plug into MB jack associated with line under test.	
12	Operate TLK key.	
13b	⧫If ETS ***not*** provided— Operate NTLS key.⧫	
14	Momentarily operate ST key.	If SD-27729-01 is provided— AA lamp lighted. If SD-27730-01 is provided— E lamp lighted.
15	Restore TLK key.	
16b	⧫If ETS ***not*** provided— Restore NTLS key.⧫	
17	Momentarily operate RL key.	All lamps extinguished.
18	Operate TLK key.	

STEP	ACTION	VERIFICATION
19	Momentarily operate ST key.	▶If ETS provided and SD-27729-01 is under test— AA lamp lighted. If ETS provided and SD-27730-01 is under test— E lamp lighted. If ETS ***not*** provided— OFL lamp lighted.◀
20	Restore TLK key.	
21	Momentarily operate RL key.	All lamps extinguished.
22	Remove make-busy plug from MB jack.	
23	Restore all keys and switches not required in next test.	
D. MB Diode and Remote Make-Busy		
11	Operate TLK key.	
12	Momentarily operate ST key.	If SD-27729-01 is provided— AA lamp lighted. If SD-27730-01 is provided— E lamp lighted.
13	Operate ANS key.	High tone heard.
14	Operate MTTA key.	
15	Restore TLK key.	MB lamp associated with circuit under test lighted. If SD-27730-01 is provided— E lamp extinguished.
16	Restore ANS key.	MB lamp extinguished.
17	Momentarily operate RL key.	All lamps extinguished.
18	Restore all keys and switches not required in next test.	
E. Call-Through Test		
8	Select MISC class of test.	
9	Operate DL4, LLPT keys as required.	
10	Select A through G digits as required for routing to a 10X automatic intercept center transmission test line.	

STEP	ACTION	VERIFICATION
	Note: E, F, G digits must be 10X code.	
11	Operate TLK key.	
12	Momentarily operate ST key.	1000-Hz tone heard. If SD-27730-01 is provided— E lamp lighted. If SD-27729-01 is provided— AA lamp lighted.
13	Momentarily operate RL key.	All lamps extinguished. Tone silenced.
14	Restore all keys and switches.	
F. Circuit Busy Indication to Number Group ▶or Distributor and Scanner Circuit◀		
1	At relay rack frame— When circuit is idle— Test for battery on terminal 45 of terminal strip A.	Battery present.
2	Block operated B relay.	Ground present on terminal 45 of terminal strip A.
3	Block operated SL relay.	
4	Remove blocking tool from B relay.	Ground present on terminal 45 of terminal strip A.
5	Block operated D relay.	
6	Remove blocking tool from SL relay.	Ground present on terminal 45 of terminal strip A.
7	Remove blocking tool from D relay.	
G. Automated Loop Testing		
	Note: Refer to paragraph 1.08.	
1	▶At MTF— Restore all keys and switches	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select office designation of line circuit under test.	
4	Select A_ through D_ digits as required for directory number of line circuit under test.	

STEP	ACTION	VERIFICATION
5	Select special marker 0 or 1.	
6	Select LT class of test.	
7	Momentarily operate ST key.	LT, MRL lamps lighted. BY lamp ***not*** lighted. S lamp lighted.◀
8	At voltmeter test circuit— Operate VMT1 key.	
9	Operate and restore T1REV key several times.	On 120V scale voltmeter indicates a constant deflection between 80 and 82.
10	Operate 20000, G keys.	On 24V scale voltmeter indicates a reading between 10 and 12.
11	Operate T1REV key.	On 24V scale voltmeter indicates a reading between 10 and 12.
12	Restore T1REV, 20000, G, VMT1 keys.	
13	If no further tests are to be made— At MTF— Restore all keys and switches.	