

**AIS LINE CIRCUITS SD-27892-01 AND SD-27893-01**  
**TESTS USING TRUNK TEST CIRCUIT SD-25918-01**  
**NO. 5 CROSSBAR OFFICES**  
**NOT ARRANGED FOR LINE LINK PULSING**

**1. GENERAL**

**PAGE**

**1.01** This section describes methods for testing supervision) and SD-27893-01 (reverse battery 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 offices equipped with Electronic Translation System (ETS), refer to Section 218-799-320.

intercept center (AIC). (5) The MB diode (SD-27893-01) is checked under forward and reverse bias. . . . . **4**

**1.02** This section is reissued to amend Test F to provide means for connecting the trunk test circuit to the voltmeter test circuit at the master test frame. Revision arrows are used to emphasize the more significant changes this reissue does not affect Equipment Test Lists.

**D. All-Lines-Busy and Circuit-Busy Indication:** The following features are checked: (1) All-lines-busy indication to senders. (2) Idle or busy line indication to senders. . . . . **5**

**1.03** The tests covered are:

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**A. Seizure and Release:** This test checks circuit seizure by sender, answer, and release. . . . . **3**

**B. Reorder:** This test checks for proper response of the circuit to a sender reorder signal. . . . . **3**

**C. Make-Busy and Remote Make-Busy:** The following features are checked: (1) The circuit can be made service-busy from the master test frame (MTF). (2) The circuit can be seized when maintenance-busy. (3) The circuit cannot be seized when service-busy. (4) The circuit cannot be seized when remotely made service-busy by the automatic

**E. AIC Call:** This test checks for proper termination to the AIC. . . . . **6**

**F. Automated Loop Testing (ALT):** This test verifies the LT1, LT2, and LT3 resistors that are added to enable automated loop testing equipment to distinguish between a faulty line and a line routed to intercept. . . . . **6**

**1.04 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.

**1.05** 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

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conditions are not given. Precise instructions for the use of these variable means are given in Section 218-106-301.

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

**1.07** On issue 76D of SD-25800-01, a group of 18 "class of test" lamps was replaced by a single "start test" lamp designated STT. Since the designation given to the lamp is not specific, the lamp will not be called out in the section, as well as the 18 discontinued lamps, DT, ORIG, ITDO, ITNP, OGT, INC, OR, SDR, IR MISC, IAO, MLV, LT, IMS, PTT, TVT, ATNT, and IMT.

**1.08** When ALT is furnished, a 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 tests.

**2. APPARATUS**

**All Tests**

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

STEP	ACTION	VERIFICATION
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**Tests A, B, C, E, F**

- |    |   |                         |
|----|---|-------------------------|
| 1  | At MTF—<br>Restore all keys and switches.                           |                         |
| 2  | Momentarily operate RL key.   | All lamps extinguished. |
| 3  | Select marker.  |                         |
| 4  | Select incoming class of call and associated translator indication. |                         |
| 5a | If SD-27892-01 is under test—<br>Operate E-M key.                   |                         |
| 6  | Operate AIRI key.   |                         |

**2.02** Trunk test circuit, SD-25918-01.

**Test C**

**2.03** 322A (make-busy) plug.

**Test D**

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

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

**2.06** Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and one KS-6278 connecting clip (for connecting battery to terminal strip terminals).

**Test F**

**2.07** Master test frame, voltmeter test circuit, SD-25972-01.

**2.08** ♦Patching cord, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord).♦

**3. PREPARATION**

**Note:** Refer to paragraphs 1.05 through 1.07.

STEP	ACTION	VERIFICATION
7	Operate ND key.	
Tests A, B, C, F		
8	Select LT class of test.	
9	Select digits of any directory number.	

#### 4. METHOD

STEP	ACTION	VERIFICATION
<b>A. Seizure and Release</b>		
10b	If a particular sender is required— Set AIS_ switch to select sender.	
11	Set AIL_ switch to select line for test.	
12	Operate TLK, SIL, AIS keys.	
13	Momentarily operate ST key.	MBF lamp lighted. If SD-27892-01 is under test— E lamp lighted. If SD-27893-01 is under test— AA lamp lighted.
14	Operate ANS key.	High tone heard.
15	Restore ANS key.	High tone silenced.
16	Restore TLK key.	If SD-27892-01 is under test— E lamp extinguished. If SD-27893-01 is under test— AA lamp extinguished.
17	Momentarily operate RL key.	All lamps extinguished.
18	Restore all keys and switches not required in next test.	

#### B. Reorder

10	Set AIL_ switch to select line for test.	
11	Operate TLK, ROT, SIL, AIS keys.	
12	Momentarily operate ST key.	MBF, CK, lamps lighted. Overflow tone heard. If SD-27892-01 is under test— E lamp <i>not</i> lighted.

STEP	ACTION	VERIFICATION
		If SD-27893-01 is under test— AA lamp <b>not</b> 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.	
<b>C. Make-Busy and Remote Make-Busy</b>		
10	Set AIL_ switch to select line for test.	
11	Insert make-busy plug into MB_ jack associated with line under test.	
12	Operate TLK, NTIL, AIS keys.	
13	Momentarily operate ST key.	MBF lamp flashes once. If SD-27892-01 is under test— E lamp lighted. If SD-27893-01 is under test— AA lamp lighted.
14	Operate ANS key.	High tone heard.
15	Restore TLK, NTIL, ANS keys.	High tone silenced.
16	Momentarily operate RL key.	All lamps extinguished.
17	Operate TLK, SIL keys.	
18	Momentarily operate ST key.	OFL lamp lighted. If SD-27892-01 is under test— E lamp <b>not</b> lighted. If SD-27893-01 is under test— AA lamp <b>not</b> lighted.
19	Momentarily operate RL key.	All lamps extinguished.
20	Remove make-busy plug from MB- jack associated with line under test.	
21	Momentarily operate ST key.	MBF lamp lighted. If SD-27892-01 is under test— E lamp lighted. If SD-27893-01 is under test— A lamp lighted.
22	Operate ANS key.	High tone heard.

STEP	ACTION	VERIFICATION
23	Operate LTH key.	
24	Restore TLK key.	High tone silenced. MBF lamp extinguished. MB_ lamp associated with line under test lighted.
25	Restore ANS key.	MBF lamp lighted. MB_ lamp associated with line under test extinguished. If SD-27893-01 is under test— AA lamp extinguished.
26	Restore LTH key.	
27	Momentarily operate RL key.	All lamps extinguished.
28	Restore all keys and switches not required in next test.	

#### D. All-Lines-Busy and Circuit-Busy Indication

1	At relay rack frame— When circuit is idle— Block operated SLI relay.	Ground absent on terminal 45.
2a	If circuit under test is first circuit— Connect battery to terminal 44.	Battery present on terminal 54 of circuit under test.
3b	If circuit under test is other than first circuit— Connect battery to terminal 54 of preceding circuit.	Battery present on terminal 54 of circuit under test.
4	Block operated D relay.	
5	Remove blocking tool from SLI relay.	Battery present on terminal 54. Ground absent on terminal 45.
6	Block operated B relay.	
7	Remove blocking tool from D relay.	Battery present on terminal 54. Ground absent on terminal 45.
8	Remove blocking tool from B relay.	When circuit is idle— Ground present on terminal 45.
9	Remove battery connection from terminal 44 or 54.	

STEP	ACTION	VERIFICATION
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**E. AIC Call**

**Note:** Test will not work if idle *AIC* trunk is not available.

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|----|---|---|
| 8  | Set AIL_ switch to select line for test.  |   |
| 9  | Select LT class of test.  |   |
| 10 | Restore ND key.   |   |
| 11 | Operate DL4, SIL, LTNO keys.  |   |
| 12 | Select A through G digits as required for routing to a 10X automatic intercept test line. |   |
| 13 | Operate TLK key.  |   |
| 14 | Momentarily operate ST key.   | MBF lamp lighted.<br>1000-Hz tone heard.  |
| 15 | Momentarily operate RL key.   | All lamps extinguished.<br>Tone silenced. |
| 16 | Restore all keys and switches not required in next test.                                  |   |

**F. Automated Loop Testing**

**Note; Refer to paragraph 1.08.**

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|-----|---|--|
| 10b | ◆If the master test frame trunk test circuit is arranged with TM jack (O option)—<br>Using P3E patching cord, insert one plug into TM jack and other plug into T1 jack. |  |
| 11c | If the mater test frame trunk test circuit is arranged with TM1 jack(P) option—<br>Using P3E patching cord, insert one plug into TM1 jack and other plug into T1 jack.  |  |
| 12c | Operate TM1 key.◆   |  |
| 13  | Set AIL_ switch to select line for test.  |  |
| 14  | Operate SIL, AIS key.   |  |
| 15  | Momentarily operate ST key.   | MBF lamp lighted.<br>If SD-27892-01 is under test—<br>E lamp lighted.<br>If SD-27893-01 is under test—<br>AA lamp lighted. |

STEP	ACTION	VERIFICATION
16	At voltmeter test circuit— Operate VMT1 key.	
17	Operate and restore T1REV key several times.	On 120V scale, voltmeter indicates a constant deflection between 78 and 80.
18	Operate 20000, G key.	On 24V scale, voltmeter indicates a reading between 8 and 10.
19	Operate T1REV key.	On 24V scale, voltmeter indicates a reading between 8 and 10.
20	Restore T1REV, 20000, G, VMT1 keys.	
21d	If no further tests are to be made— At MTF— Restore all keys and switches.	
22d	◆Remove P3E patching cord from TM/TM1 and T1 jacks.◆	