

SUPPLEMENTARY TEST INSTRUCTION
 ORIGINATING SUBSCRIBER SENDER

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1. GENERAL INFORMATION

1.1 This section describes a method of verifying the modification for the Dial Tone First Feature, Apparatus Figure 22 and "MB" wiring of the Originating Subscriber Sender, SD-25012-01.

1.2 When performing the tests of this section, that relay operation listed in the results column of Paragraph 3 is of primary importance. However, any additional relay operation which appears to be false should be investigated.

1.3 After performing the tests of Paragraph 3 and before returning the sender to service, operational tests of existing features are required. See Paragraph 4.

3.3 Test Operations

NOTE: Note 23 of DCS-25012-113 specifies that connection of optional wiring on relays CS- be covered by a separate Work Item in the Job Specification. This wiring is required for the performance of Step 1 and 2 of this paragraph. If information is not available at this time, optional wiring should be connected temporarily.

2. TEST EQUIPMENT

2.1 Cords and Accessories

AMT	CODE	DESCRIPTION	WITH
1	R-9572	Test Receiver	ITE-4023
As Req.	508A	Tool,Blocking	"
As Req.	KS-16887- L1	Tool,Blocking (Wedge)	"
As Req.	ITE-9404	Cord, 1 Con- or Equiv. ductor	"

3. SUPPLEMENTARY TEST

3.1 Verify that the sender is made busy at the SMB Frame. Block relay MB operated and relay Tm1 normal.

3.2 Verify the Fuse "L" is installed.

STEP	BLOCK RELAY (O) Operated (N) Normal	ACTION	RESULTS
1.	ON1(O)	Manually operate and re- lease Relays CS- for classes of service other than Dial Tone First.	Relay CN does not operate.
2.		Manually operate and re- lease Relays CS- for Dial Tone First class of service.	Relays CN and ECT operate when CS- Relays are operated.
3.	CN(O)		Relay ECT operates.
4.		Manually operate and re- lease, one at a time, Relays CP, CA1 and CA.	Relay ECT releases and reoperates when relays are operated and released respectively.
5.	AV4A(O)	Manually operate Relay SCT.	Relay SCT locks operated. ECT releases.
6.		Manually operate and re- lease Relay SG5.	Relay SCT releases, Relay ECT operates.
7.		Reoperate Relay SCT.	Relay SCT locks operated. ECT released.
8.		Remove blocking tool from Relay AV4A.	Relays AV4A and SCT release, ETC reoperates.
9.	ECT, STL and CA(O), AV1(N)		Relays CA1 and SCT operate.
10.		Manually operate and re- lease Relay LR1.	Relay SCT releases and reoperates.
11.	DRL(O)	Manually operate and re- lease Relay CP.	Relay CA1 releases when CP is operated.
12.		If App. Fig. 20 is fur- nished, operate relay EDT.	Relay SCT releases.

STEP	BLOCK RELAY (O) Operated (N) Normal	ACTION	RESULTS
13.		Remove blocking tools from Relays ON1, CN, ECT, STL, DRL, AV1 and CA.	All relays restore to normal.
14.		Manually operate and release Relays CA1 and AV4A.	Relay SCT operates.
15.	DRL and DST(O)	Apply ground through a test receiver to T.S. SB Pch. 03.	Relay SG5 operates and locks.
16.		Remove blocking tools from Relays DST and DRL.	Relay SG5 releases.
17.	ON1 and SR1(O)	If Opt. G is furnished insulate Contacts 4 and 5B, Relay ON3. Manually operate and release Relay SCT.	Relays L1 and SR operate.
18.		Remove blocking tools from Relays ON1 and SR1. Remove insulator from ON3 Contacts.	Relays restore to normal.
19.	CN(O)	Manually operate and release Relay AV1.	Relays AV4 and AV4A operate and release.
20.		Remove blocking tool from Relay CN.	
21.		Verify absence of ground on SA T.S. pchs. 00, 01 and 30 to 33.	
22.		Connect ground to SA T.S. pchs. 01 and 30.	Verify ground present on Dial Register Switch Vertical A, Contact 0 and Vertical B, Level 0, Contacts 0-3.
23.	CA1(O)		Verify ground is present on SA T.S. pchs. 31, 32, 33 and 00. Verify absence of ground on Dial Register Switch Vertical A, Contacts 0-3 and Vertical B, Level 0, Contacts 0-3.
24.		Remove ground connections, remove blocking tool from Relay CA1.	
25.		Verify absence of ground on Contacts 8B, Relay SA and 5B, Relay DPT.	
26.		Insulate Contacts 8 and 9B, Relay SA and 4 and 5B, Relay DPT. Connect ground to SA T.S. pch. 24.	Verify ground is present on Contact 8B, Relay SA, ground is absent, Contact 5B, Relay DPT.
27.		Manually operate Relay CA1.	Verify ground is present on Contact 5B, Relay DPT, ground is absent on Contact 8B, Relay SA.
28.		Remove ground connection from SA T.S. pch. 24, remove insulators from Relays DPT and SA and release Relay CA1.	
29.	ON3(O) (Opt. G)		Verify resistance ground present on Contact 2B, Relay AV4.
30.		Manually operate and release, one at a time, Relays SCT and AV4A.	Verify absence of resistance ground on Contact 2B, Relay AV4 when relays are operated.
31.		Connect ground to Contact 7 or 4B, Relay ON1 (L or M opt.).	Verify ground is present on Relay AV4, Contact 4T (EB opt.) or Contact 7T (EC opt.).
32.		Manually operate Relay SCT.	Verify absence of ground on Relay AV4, Contact 4T (EB opt.) or Contact 7T (EC opt.).
33.		Remove ground connection from Relay ON1, remove blocking tool from Relay ON3.	

STEP	BLOCK RELAY (O) Operated (N) Normal	ACTION	RESULTS
34.	CA(N)	Connect ground to Contact 2, Relay ECT. Manually operate and release Relays AV4A and SCT.	Relay CP operates when Relays AV4A and SCT are operated. (Verifies operation of 316 type relay GT).
35.		Remove ground connection from Relay ECT. Remove blocking tool from Relay CA.	
36.	ON1 and S6'(O)	Manually operate and release Relay CA.	Relay SO operates and releases.
37.	CA1(N) CL2 and TG1(O)	(If App. Fig. J is furnished, Relay AV2 must also be blocked normal.)	Relay AV1 operates.
38.		Manually operate and release Relay CA.	Relay TR1 operates and releases.
39.		Remove blocking tools from Relays ON1, S6', CL2, TG1 and AV2.	
40.	SCT(O)	Connect ground to 2B, Relay ON3.	
41.	AV1(O)		Relay CA operates.
42.	CP(O)	Operate and release, one at a time, Relays TP2, TP1, CN and ECT.	Relay CA releases when relays are operated.
43.		Manually operate Relay ON1.	Relay ON1 locks through contacts of Relay AV1.
44.		Remove blocking tools from Relays SCT, AV1 and CP. Remove ground connection from 2B, Relay ON3.	Relays CA, AV1 and ON1 release.
45.	CN(O)		Verify ground is present on Contact 2B, Relay CA.
46.		Manually operate and release, one a time, Relays CP, SG5, LR1, CL4 and CA.	Verify absence of ground on Contact 2B, Relay CA when relays are operated.
47.	CL4(O)		Verify ground is present on 4B, Relay DC.
48.	CA(O)	(If App. Fig. R is furnished, Relay SO must also be blocked operated.) BQ Opt. - Insulate Contacts 1 and 3T, Relay STL. BR " - " " " 1 and 3B, " " .	Relay TR1 operates. Verify absence of ground on 4B, Relay DC.
49.		Remove blocking tools from Relays CN, CL4, CA, CA1 and SO. Remove insulator from Relay STL.	
50.	CN and CA1(O)		Verify ground present on Relay AV1, Contact 11B (Z opt.), 3B (J opt.).
51.	CA1(N)	Manually operate Relay CA.	Relay CA locks operated.
52.		Manually operate Relay CP.	Relay CA releases, Relay CP locks operated.
53.		Remove blocking tools from Relay CN and CA1.	All relays restore to normal.
54.	SR1, 1-2, 3-4(O)		Relays PT and PR operate.
55.		Manually operate and release Relay CA.	Relays PT and PR release and reoperate.
56.		Remove blocking tools from Relays SR1, 1-2 and 3-4.	
57.	SP(O), AV1(N)	Connect ground on Contact 1T (S opt.) or 1B (T opt.) Relay STB'.	Verify ground is present on Contact 1T, Relay IA.
58.		Manually operate and release Relay CA.	Relay AV2 operates and ground is absent on Relay IA when Relay CA is operated.
59.		Remove blocking tool from Relays SP and AV1 and disconnect ground.	

STEP	(BLOCK RELAY) (O) Operated (N) Normal	ACTION	RESULTS
60.		Verify continuity from Relay SR1, 10T, to Relay FS2, 4B (App. Fig. R) or Relay 1', Contact 1 (App. Fig. S).	
61.		Verify continuity from Relay TR2, 4T, to Relay TR1, 1B or 1T (AP or AQ opt.)	
62.	CA(O)	Verify absence of continuity on paths of Steps 60 and 61.	
63.		Remove all blocking tools and test apparatus.	
64.	CN(N)*		

* Relay CN should be blocked normal until Dial Tone First Feature is placed in service.

4. OPERATIONAL TESTS

4.1 Prior to returning the sender to service, tests should be performed from the Originating Sender Test Frame, SD-25221-01, as follows:

A. HANDBOOK 61, SECTION 162.1

- (a) Routine 2720 A, Paragraphs 3.201, 3.203, 3.205 and 3.206.
- (b) Routine 2720 B, Paragraphs 3.31 and 3.32

(c) Stuck Sender, Paragraph 4.0922, and

B. HANDBOOK 61, SECTION 169

- (a) 10 Digit Recycle, Paragraph 12.5.
- (b) 7 Digit Skip 2, Paragraph 12.7.
- (c) 7 Digit Skip 3. (See Routine Test Chart)

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