TEST OF B SWITCHBOARD, DP, MF AND KP TYPE "NO TEST" INCOMING TRUNKS

CONTENTS

1. GENERAL INFORMATION

1.1 Description of Tests

1.11 Refer to Section 207, Paragraph 3 for the common tests to be applied to the circuits covered by this section.

1.12 The following circuits are tested by this method:

SD NO.	Sdr. Class	Supp. Test Para.
25202	B	4
25202	DP	5
25432	DP or MF	7
25436	B	6
25877	MFKP	8

1.2 Combined Tests

These tests may be made at the same time as the test of the No Test Connector, Section 303, Handbook 63.

1.3 Manload

For recommended manload refer to Section 0.1 HB 62.

1.4 TSL Crosspoint Test

1.41 The crosspoint test described in Paragraph 3 is made to test the TSL crosspoint referred to in Paragraph 12, Section 212 of this Handbook.

2. TEST EQUIPMENT

2.1 Equipment Required for Testing SD-25202 (B Service)

2.11 Test Sets and Accessories

Amt	ITE	Description	With ITE
1	4010	Term. Equip. Test Set	
1	4042	Hand Telephone Set	4023
1	4052	Contact Fixture	4010

2.12 Cords

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
1	9598	12'	2	310 Plug	310 Plug	4010
1	9601	12'	3	310 Plug	310 Plug	4023
1	9639	12'	3	310 Plug	ITE-2455	4023
1	9650	6'	4	289A Plug	Tel. Set	4023

2.2 Equipment Required for Testing SD-25202 (DP Service)

2.21 Test Sets and Accessories

Amt	ITE	Description	With ITE
1	4042	Hand Telephone Set	4023

2.22 Cords

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
1	9650	6'	4	289A Plug	Tel. Set	4023

2.3 Equipment Required for Testing SD-25436

2.31 Test Sets and Accessories

Amt	ITE	Description	With ITE
1	4011	Misc. Trunk Test Set	
1	4042	Hand Telephone Set	4023
1	4052	Contact Fixture	4010

2.32 Cords

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
1	9547	12'	1	ITE-2455	ITE-2455	4011
13	9548	9"	1	ITE-2455	ITE-2455	4011
1	9601	12'	3	110 Plug	310 Plug	4023
2	9650	6'	4	289A Plug	Tel. Set.	4023

2.4 Equipment Required for Testing SD-25432

2.41 Test Sets and Accessories

Amt	ITE	Description	With ITE
1	4011	Misc. Trunk Test Set	
1	4015	Continuity Test Set	4023
1	4042	Hand Telephone Set	4023
1	4052	Contact Fixture	4010
★1	4283	Toll Incoming TRK TEST SET	

NOTE: ★Required for MF trunk applications only.

2.42 Cords

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
17	9548	9"	1	ITE-2455	ITE-2455	4011
1	9598	12'	2	310 Plug	310 Plug	4011
1	9639	12'	3	310 Plug	ITE-2455	4023
1	9650	6'	4	289A Plug	Oper. Tel. Set	4023

2.5 Equipment Required For Testing SD-25877

2.51 Test Sets and Accessories

Amt	ITE	Description	With ITE
1	4011	Misc. Trunk Test Set	
1	4042	Hand Telephone Set	4023
1	R-1824	Pencil Lamp	4023

2.52 Cords

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
1	9650	6'	4	289A Plug	Tel. Set	4023
1	9637	12'	3	110 Plug	325A Plug	4010

3. TSL CROSSPOINT TEST

NOTE: See Paragraph 4.94, 5.94, 6.27 & 7.217.

3.1 Complete three idle line test calls over each trunk by routing one call through each sender subgroup. Busy out, the sender subgroups not used. One tester originates the call while the other tester observes that the proper sender is selected. The sender selected is indicated by a momentary flash of an associated S lamp located on the terminating trouble indicator frame.

4. B TRUNK FROM A BOARD, NO TEST - SD-25202

4.1 Setup for Test

4.11 Locate the ITE-4010 test set at the incoming trunk frame. Patch an operator's telephone set into the TEL jacks. Patch an ITE-9598 cord into the test set and trunk frame A jacks. Patch an ITE-9639 cord into the test set T-1 jack. Equip the other end of the cord with an ITE-4052 fixture so that the T, R and S leads will connect to the T, R and S terminals of the trunk. Attach the fixture to the trunk T, R and S terminals.

4.12 Connect a handset ITE-4042 to a cross-connected individual subscriber line.

4.2 Idle Line (Individual)

4.21 Operate keys BG and LRS. Lamp SL lights. When order tone is heard, pass the line number to the "B" operator.

4.22 When the subscriber line hold magnet operates, operate the handset key. Lamps T and R light. Check talking between the test set and handset.

4.23 Release keys BG, LRS and the handset key. Lamps T, R and SL are extinguished. The equipment restores to normal.

4.3 Idle Line (Tip Party)

4.31 Connect the handset to a cross-connected tip party subscriber line.

4.32 Operate keys BG and LRS. Lamp SL lights. When order tone is heard, pass the line number to the operator.

4.33 Observe that the trunk RV relay and the line hold magnet operate.

4.34 Connect ground through a test receiver to the line tip. Lamp R lights. Remove the connection. Lamp R is extinguished. Connect battery through the receiver to the line ring. Lamp T lights. It is extinguished when battery is removed.

4.35 Operate the handset key. Lamps T and R light. Check talking between the test set and the handset.

4.36 Release the call as on an individual line call.

4.4 Overflow

4.41 Originate a call and pass to the operator the overflow test line number. Lamp R flashes at 120 I.P.M. Lamp T does not light.

4.42 Release the call as before.

4.5 Busy Line

4.51 The handset is to be connected to a cross-connected subscriber line.

4.52 Operate the handset C key and when dial tone is heard dial zero operator. When the assistant at the A board answers, hold the connection. Check talking over the connection.

4.53 Operate keys BG and LRS and give the operator the number of subscriber line now being held busy.

4.54 A double connection will be made to the handset line. Lamps T and R will light only when X wiring is provided. Check talking between the test set and the handset.

4.55 Release the first call from the originating end. (With X wiring provided lamps T and R will be extinguished) Talking will not be possible between the test set and the handset.

4.56 Release keys BG, LRS and the handset key to restore the equipment to normal.

4.6 No Test Vertical Busy (Overflow)

4.61 Set up a busy line as described in 4.51 and 4.52.

4.62 Connect ground to the NT lead of the no test connector associated with the switch of the subscriber line used for test. This operates the no test hold magnets and makes them test busy.

4.63 Operate keys BG and LRS and give the operator the number of the subscriber line now being held busy.

4.64 Lamp R will flash at 120 I.P.M. Talking between the test set and the handset is not possible.

4.65 Release keys BG and LRS to restore the equipment. Release the original call making the subscriber line busy. Release the handset key and remove the handset. Remove ground from the NT lead.

4.7 False Busy (Y Wiring Only)

4.71 Insert a switch make busy plug in the vertical of the subscriber line just used. The hold magnet operates.

4.72 Operate keys BG and LRS and give the operator the number of the subscriber line used for test.

4.73 Lamp R flashes at 60 I.P.M.

4.74 Release keys BG and LRS. The equipment restores.

4.8 Premature Disconnect

4.81 Operate keys BG and LRS. When order tone is heard, release keys BG and LRS. Observe that the equipment restores to normal.

4.9 Miscellaneous Tests

4.91 All Paths Busy Register: Block operated the SL relay of each trunk. Release and reoperate each relay in turn and observe that the associated PB register scores each time.

4.92 Peg Count Register: Operate the BAT key (traffic register rack) associated with the peg count registers. Operate and release the F1 relay of each trunk and observe that the peg count register scores each time.

4.93 Test of JC Leads: The JC leads are tested in conjunction with the test of the no test connector circuit described in Section 303.

4.94 Crosspoint: (See Paragraph 3.)

5. DP TRUNK FROM A BOARD, NO TEST-SD-25202

5.1 Setup for test

5.11 Calls over the trunks to be tested are originated at the A board by inserting the plug of the calling cord into the trunk OGT jack. With a telephone set plugged into the position telephone jacks and the talking key operated, dial tone is heard in the telephone set. Dial the number of the line used for test and operate the dial disconnect key.

5.12 Connect a handset ITE-4042 to a cross-connected individual subscriber line.

5.2 Idle Line (Individual)

5.21 Originate a call to the line used for test.

5.22 When the line hold magnet operates operate the handset key. Check talking between the position and handset.

5.23 Release the call at both ends.

5.3 Idle Line (Tip Party)

5.31 Connect the handset to a cross-connected tip party subscriber line.

5.32 Originate a call from the A board to this line as on an individual line call. Check talking.

5.33 Observe that the trunk RV relay and the line hold magnet are operated.

5.34 Restore the equipment to normal.

5.4 Overflow

5.41 Originate a call from the A board to the overflow test line. The switchboard supervisory lamp flashes at 120 I.P.M.

5.42 Release the call.

5.5 Busy Line

5.51 The handset is to be connected to a cross-connected subscriber line.

5.52 Operate the handset C key and when dial tone is heard dial zero operator. When the assistant at the A board answers, hold the connection. Check talking over the connection.

5.53 Originate a call from the A board to the subscriber line now being held busy.

5.54 A double connection will be made to the handset line. The cord supervisory lamp will remain lighted. (With X wiring provided the cord Supervisory lamp will be extinguished.) Check talking between the originating A board and the handset.

5.55 Release the first call from the originating end. (With X wiring provided, the cord supervisory lamp will light.) Talking will not be possible between the originating A board and the handset.

5.56 Restore all equipment to normal.

5.6 No Test Vertical Busy (Overflow)

5.61 Set up a busy line as described in 5.51 and 5.52.

5.62 Connect ground to the NT lead of the no test connector associated with the switch of the subscriber line used for test. This operates the no test hold magnets and makes them test busy.

5.63 Originate a call from the A board to the subscriber line now being held busy.

5.64 The cord supervisory lamp will flash at 120 I.P.M. Talking between the A board and the handset is not possible.

5.65 Restore the equipment to normal.

5.7 False Busy (Y Wiring Only)

5.71 Insert a switch make busy plug in the vertical of the subscriber line just used. The hold magnet operates.

5.72 Originate a call from the A board to the subscriber line used for test.

5.73 The cord supervisory lamp flashes at 60 I.P.M.

5.74 Restore the equipment to normal.

5.8 Premature Disconnect

5.81 Start to originate a call from the A board. When dial tone is heard disconnect the call. Observe that the equipment restores to normal.

5.9 Miscellaneous Tests

5.91 All Paths Busy Register: Block operated the SL relay of each trunk. Release and reoperate each relay in turn and observe that the associated PB register scores each time.

5.92 Peg Count Register: Operate the BAT key (traffic register rack) associated with the peg count registers. Operate and release the F1 relay of each trunk and observe that the peg count register scores each time.

5.93 Test of JC Leads: The JC leads are tested in conjunction with the test of the no test connector circuit described in Section 303.

5.94 Crosspoint: (See Paragraph 3.)

6. TRUNKS FROM L.T.D. - SD-25436 (WITH OR WITHOUT NO TEST)

6.1 Setup for Test

6.11 Locate an ITE-4011 test set adjacent to the trunk to be tested. Using an ITE-9601 cord patch the A jack of the test set to the A jack of the trunk frame.

6.12 Using ITE-9548 cords patch the following jacks on the test set.

(POL)+	to	(GRD) G1
(POL)-	to	(REV1)T1
(REV1) R1	to	(BG LP) R
(REV1) T	to	(O JK) T
(REV1) R	to	(O JK) R
(CW) T	to	(OR) T1
(CW) R	to	(OR) R1
(OR) T2	to	(REV) T1
(OR) R2	to	(REV) R1
(REV) T	to	(MTA) T
(REV) R	to	(MTA) R
(RES) 1	to	(BAT) B1
(RES) 2	to	(T JK) T

6.13 Place an ITE-4052 contact fixture on the T,R and S terminals (terminals 0, 1 and 2) at the vertical unit terminal strip of the trunk under test. Using ITE-9547 cords patch T,R, and S of the contact fixture to the (OR) T and R and the (TM) T jacks of the test set respectively.

6.14 Operate the BG, DD-CW and MR keys on the test set. Set the RES1 key on 500 and the RES switch on 2.

6.15 Connect an ITE-9650 cord to the test set TEL jacks.

6.16 Ground the 2M terminal of the S relay if Y wiring is furnished.

6.17 Calls are originated by operating the STT and STO keys. The POL lamp on the test set lights and order tone is heard.

6.2 Trunks With or Without "No Test"

6.21 Idle Line (Individual)

6.211 Insert the handset into an individual assigned line link vertical having a directory number in the regular number series.

6.212 Originate a call on the trunk and pass the directory number of the line to which the handset is connected.

6.213 When the connection is set up the POL lamp on the test set is extinguished.

6.214 The tester at the trunk then instructs the assistant at the line links to operate the handset C key. The test set POL and BG1 lamps light. The testers make a talking test.

6.215 Release the handset C key. The BG1 and POL lamps are extinguished.

6.216 Release the STO, MR, STT and DD-CW keys on the test set. Operate the REV key. The MG lamp on the test set lights. checking the battery on the ring from the trunk which is the ring party indication.

6.217 Release the REV key and reoperate the MR, STT and DD-CW keys. Set the RES switch on 1 and the trunk disconnects.

6.218 Release the STT key and reset the RES switch on 2.

6.22 Idle Line Individual (Extra Numbers, Figure B Furnished)

6.221 Repeat the tests outlined in Paragraph 6.21 using an individual line in the extra number series. Operate the REV1 key before operating the STO key and release the REV1 key when the POL and BG1 lamps light.

6.23 Idle Line Test (Tip Party)

6.231 Insert the handset into a line link vertical assigned to a tip party line in the regular number series.

6.232 Originate a call on the trunk and pass the directory number of the line to which the handset is connected. When the connection is set up the POL lamp is extinguished.

6.233 The tester at the trunk instructs the assistant at the line links to operate the handset C key. The POL and

BG1 lamps light and the testers make a talking test.

6.234 Release the STO, MR and STT keys on the test set. The POL and BG1 lamps are extinguished and the MG lamp lights checking the battery on the tip from the trunk which is the tip party indication.

6.235 Reoperate the STO, MR and STT keys. The POL and BG1 lamps relight.

6.236 Instruct the assistant at the line links to release the handset C key. The POL and BG1 lamps are extinguished.

6.237 Release the STO key and set the RES switch on 1. The trunk disconnects.

6.238 Release the STT key and reset the RES switch on 2.

6.24 Idle Line Test (Hunt Line)

6.241 Insert the handset into a line link vertical assigned to a hunt line of a PBX group in the regular number series.

6.242 Originate a call on the trunk and pass the number of the line to which the handset is connected. When the connection is set up the POL lamp is extinguished.

6.243 The tester at the trunk instructs the assistant at the line link to operate the handset C key. The POL and BG1 lamps light. The testers make a talking test.

6.244 Release the handset key and the BG1 and POL lamps are extinguished.

6.245 Release the STO, MR and STT keys. The MB lamp lights checking the ground on the ring from the trunk indicating a hunt line in a terminal hunting group.

6.246 Reoperate the MR and STT key. Set the RES switch on 1 and the trunk disconnects.

6.247 Release the STT key and reset the RES switch on 2.

6.25 Overflow

6.251 Originate a call on the trunk and pass the overflow test line number. The POL and BG1 lamps light.

6.252 Release the MR and operate the MA key. The A meter reading is to the right. The meter needle flashes to the right at 120 IPM and low tone interrupted at 120 IPM is heard in the receiver.

6.253 Release the STO and MA keys. Operate the MR key and set the RES switch on 1. The trunk disconnects.

6.254 Release the STT key and set the RES switch on 2.

6.26 Premature Disconnect

Originate a call and when order tone is heard release the STO key and set the RES switch on 1. The POL lamp is extinguished. Observe that the equipment restores to normal.

6.27 Crosspoints: (See Paragraph 3.)

6.3 Trunks Arranged for "No Test"

6.31 Busy Line (Regular Numbers)

6.311 Connect the handset to a cross-connected individual subscribers line. Operate the handset C key and dial zero operator. The assistant at the A board answers. Make a talking test and hold the connections.

6.312 Originate a call over the trunk and pass the number of the subscribers line now held busy.

6.313 A connection will be set up to the busy line over the no test connector. The POL and BG1 lamps light. Check talking between the test set, handset and A board.

6.314 Release the STT key. The POL and BG1 lamps are extinguished. Observe that high tone is heard in the receiver indicating the connection is set up over the no test connector. Reoperate the STT key and the POL and BG1 lamps light.

6.315 Release the STO key. The POL and BG1 lamps are extinguished. Release the handset C key and remove the cord from the zero operator's trunk at the A board. Reoperate the STO key. The POL and BG1 lamps light.

6.316 Release the MR key and operate the MA key. The A meter needle flashes to the right at 60 IPM and alternate high and low tone is heard in the receiver indicating the line has disconnected.

6.317 Release the MA and STO keys and operate the MR key. The POL and BG1 lamps are extinguished. Set the RES switch on 1. The trunk disconnects.

6.318 Release the STT key and set the RES switch on 2.

6.32 Busy Line (Extra Numbers Fig. B Furnished)

6.321 Repeat the test outlined in Paragraph 6.31 using an assigned line in the extra number series. Operate the REV 1 key before operating the STO key and release the REV 1 key when the POL and BG1 lamps light.

6.33 "No Test" Vertical Busy

6.331 Set up a busy line as per Paragraph 6.311.

6.332 Connect ground to the NT lead of the no test connector associated with the switch of the subscribers line used. This operates the "no test" hold magnets and make them test busy.

6.333 Originate a call over the trunk and pass the directory number of the line held busy. The POL and BG1 lamps light.

6.334 Release the MR and operate the MA key. The A meter reads to the right. The meter needle flashes to the right at 120 IPM and low tone interrupted at 120 IPM is heard in the receiver.

6.335 Release the STO and MA keys, operate the MR key and set the RES switch on 1 and the trunk disconnects.

6.336 Release the STT key and set the RES switch on 2.

6.337 Remove the ground from the no test connector NT lead, remove the handset from the line link vertical and remove the cord from the zero operator jack at the A board.

6.34 False Busy

6.341 Insert a switch make busy plug into the vertical of the subscriber line just used. The hold magnet operates.

6.342 Originate a call from the test set and pass the number of the line made busy.

6.343 The POL and BG1 lamps light.

6.344 Release the MR and operate the MA keys. The A meter reading is to the right. The meter needle flashes at 60 IPM and low tone interrupted at 60 IPM is heard in the receiver.

6.345 Release the STO and MA keys and operate the MR key. Set the RES switch on 1 and the trunk disconnects.

6.346 Remove the switch make busy tool from the line link vertical, release the STT key and set the RES switch on 2.

6.4 Trunks Not Arranged For No Test (NN Feature)

6.41 Busy Line

6.411 Insert a switch make busy tool into a line link vertical assigned to an intermediate line in a PBX in the regular number series.

6.412 Originate a call over the trunk and pass the number of the line made busy. The POL and BG1 lamps light.

6.413 Check that the call was terminated on the idle line immediately following the line made busy. Using a handset, ITE-4042, answer the call and check talking between the test box and the handset.

7. TRUNK FROM L.T.T., DP or MF Operation. SD-25432 (WITH OR WITHOUT NO TEST)

7.1 Test Setup

NOTE: When convenient, test calls may be originated from the local test desk instead of using setups indicated in following paragraphs.

7.11 DP Operation

7.111 Locate ITE-4011 convenient to trunk under test. Patch A jack of test set to frame A jack usingITE-9598 cord.

7.112 Using ITE-9548 cords, patch test set jacks as follows:

(OR) R	to	(BG LP) T
(OR) T	to	(TD) T
(POL) -	to	(BG LP) R
(OJK) T	to	(REV) T
(OJK) R	to	(REV) R
(MTA) T	to	(REV) T1
(MTA) R	to	(REV) R1
(RES) 1	to	(BAT) B1
(RES) 2	to	(TM) T
(OJK) S	to	(TJK) T
(OR) T3	to	(CW) T
(OR) R3	to	(CW) R
(TM) R2	to	(CW) R1
(TM) R1	to	(TD) R
(TM) R	to	(POL)+

7.113 For line tests to extra number series (Par. 7.212 and 7.222) patch 1T and 1R jacks of an ITE-4015 Continuity Test Set to ITE-4011 (GRD) G1 and (OR) R1 jacks respectively.

7.114 Place an ITE-4052 contact fixture on T, R and S terminals at trunk unit vertical terminal strip. Using an ITE-9639 cord, patch T, R and S of contact fixture to test set O jack.

7.115 Connect operators telephone set to test set TEL jacks. Connect an ITE-4042 handset to line link verticals as directed in test operation paragraphs.

7.116 When this circuit is connected to test trunk circuit SD-90018 and cross connections are installed, insulate contact 4B of D relay in test trunk.

7.117 When Y wiring is specified in circuit under test connect ground to terminal 2M of S relay.

7.118 Operate keys MR, LP and STT. Set RES switch on 1 and operate RES1 key to 500.

7.119 Calls are originated by operating test set STO key. Lamps BG and BG1 light. Lamp POL lights momentarily until sender is ready to receive dial pulses. Dial tone may or may not be heard.

7.12 MF Operation

7.121 Locate ITE-4011 and ITE-4283 test sets convenient to trunk under test.

7.122 Using ITE-9548 cords, patch ITE-4011 set jacks as follows:

(O) T	to	(REV-1) T
(O) R	to	(REV-1) R
(O) S	to	(T) T
(OR) R1	to	(BG-LP) T
(OR) T1	to	(CW) R1
(OR) T3	to	(REV) T1
(BG-LP) R	to	(POL) -
(POL) +	to	(REV) T
(REV) R1	to	(CW) T
(MTA) T	to	(REV-1) T1
(MTA) R	to	(REV-1) R1

7.123 Patch tip and ring of T jack ITE-4283 to (OR) T & R jacks of ITE-40M. Patch MF1 and MF2 jacks to frame MF supply jacks.

7.124 Patch A jacks of both test sets to frame A jack 48V battery and ground supply.

7.125 Place an ITE-4052 contact fixture on T, R and S terminals at trunk unit vertical terminal strip. Using an ITE-9639 cord, patch T, R and S of fixture to O jack of ITE-4011.

7.126 Patch and operators telephone set into test set TEL jacks. Connect an ITE-4042 handset to line link verticals as directed in test operation paragraphs.

7.127 When this circuit connects to test trunk circuit, SD-90018, insulate contact 4B of D relay in test trunk. When Y wiring is specified in circuit under test, connect ground to terminal 2M of S relay.

7.128 Operate ITE-4283 keys MFP and TRB. Operate ITE-4011 keys MR, LP and STT. Set RES switch on 1 and operate RES1 key to 500.

7.129 Calls are originated by operating test set STO key. Lamps BG, BG1 and POL light.

7.130 After lamp POL is extinguished, (start pulsing signal) momentarily operate ITE-4283 TST key and then release ITE-4011 LP key.

7.131 Pulse directory number of subscriber line used for test and after sending ST signal operate LP key of ITE-4011 and DISC key of ITE-4283. Disregard lamp indications of ITE-4283 set.

7.2 Test Operations

7.21 Trunks With or Without No Test

7.211 Idle Line Individual

7.2111 Connect handset to an individual assigned line link vertical having a directory number in regular number series.

7.2112 Originate a call on trunk and dial or MF pulse directory number of line. Lamp POL lights when selections are completed. Operate key DD-CW.

7.2113 Set RES switch on 2. Lamps POL, BG and BG1 are extinguished. Release key LP and operate BG (and REV for MF operation). Operate handset C key at line link location. Lamps POL, BG and BG1 relight. Make a talking test.

7.2114 Release handset C key. Lamps POL, BG and BG1 are extinguished. Release keys STT, STO, BG, DD-CW MR and REV. Operate key REV-1. Test set MG lamp lights checking battery on ring which is ring party indication.

7.2115 Release key REV-1 and reoperate STT and MR keys. Set RES switch on 1.Trunk disconnects.

7.2116 Operate key LP.

7.212 Idle Line Individual (Extra Numbers, Figure B Furnished).

7.2121 Repeat tests described in Paragraph 7.211 using an individual assigned line in extra number series. Make additional test setup described in Paragraph 7.113 for DP operation.

7.2122 For MF operation, temporarily remove patching cord between jacks (MTA) R and (REV-1) R1. In addition to this setup change. Calls should be originated as follows.

7.2123 Operate keys REV-1 and LP. Release key MR and operate STO to seize trunk. Reoperate MR key when MG lamp lights.

7.2124 After lamp POL is extinguished momentarily operate ITE-4283 TST key and then release ITE-4011 LP key. Pulse directory number of assigned line in extra number series and then operate LP key of ITE-4011 and DISC key of ITE-4283.

7.2125 When tests have been completed, replace patching cord between jacks (MTA) R and (REV-1) R1.

7.213 Idle Line (Tip Party)

7.2131 Connect handset to line link vertical assigned to a tip party line in regular number series.

7.2132 Originate a call on trunk and dial or MF pulse directory number of line. Lamp POL lights when selections are completed. Operate key DD-CW.

7.2133 Release key STT and set RES on 2. Reoperate STT key. Lamps POL, BG and BG1 are extinguished. Release key LP and operate key BG. Instruct assistant at line link frame to operate handset C key. Lamps POl, BG and BG1 relight. Make a talking test.

7.2134 Release keys STT, STO, BG and MR. Lamps POL, BG and BG1 are extinguished and lamp MG lights checking battery on tip which is tip party indication.

7.2135 Reoperate keys STT, STO and MR. Operate key BG. Lamps POL, BG and BG1 relight. Release handset key C. Lamps are extinguished.

7.2136 Release keys BG and DD-CW. Set RES switch on 1. Trunk disconnects.

7.2137 Release key STO and operate key LP.

7.214 Idle Line Test (Hunt Line)

7.2141 Connect handset to line link vertical assigned to hunt line of a PBX group in regular number series.

7.2142 Originate a call on trunk and dial or MF pulse number of test line. Lamp POL lights when selections are completed. Operate key DD-CW.

7.2143 Release key STT and set RES switch on 2. Reoperate STT key. Lamps POL, BG and BG1 are extinguished. Release key LP and operate BG. Operate handset C key at line link. Lamps POL, BG and BG1 light. Make a talking test.

7.2144 Release handset key. Lamps POL, BG and BG1 are extinguished. Release keys STT, STO, BG and MR. Lamp MB lights checking ground on ring indicating a hunt line in a terminal hunting group.

7.2145 Reoperate keys STT and MR and release key DD-CW. Set RES switch on 1. Trunk disconnects. Operate LP key.

7.215 Overflow

7.2151 Originate a call on trunk and dial or MF pulse number of overflow test line. Lamp POL lights. Operate DD-CW key.

7.2157 Release key STT and set RES switch on 2. Reoperate STT. Lamps POL, BG and BG1 are extinguished. Release key LP and operate key BG. Release key MR and operate MA key - Lamps POL, BG and BG1 relight. Meter A deflects to the left and oscillates at 120 IPM rate. Check for interrupted low tone.

7.2153 Release keys MA, DD-CW and STO. Operate key MR and set RES switch on 1. Trunk disconnects. Operate LP key.

7.216 Premature Disconnect

7.2161 Originate a call and then release STO key when dialing or start pulsing indication is received.

7.2162 Check that trunk circuit restores to normal.

7.217 Crosspoints (See Paragraph 3)

7.22 Trunks Arranged for "No Test"

7.221 Busy Line (Regular Numbers)

7.2211 Connect handset to a cross-connected individual subscriber line. Operate handset C key and dial or MF pulse zero operator. The assistant at A board answers. Make a talking test and hold connection.

7.2212 Originate a call over trunk and dial or MF pulse number of subscriber line now held busy. Lamp POL lights. Operate key DD-CW.

7.2213 Release key STT and set RES switch on 2. Reoperate STT key. Connection is cut through no test connector to busy line. Check talking between test set, handset and A board.

7.2214 Release STT key. Lamps POL, BG and BG1 are extinguished. Observe that high tone is heard in test set telephone set indicating that connection is set up over no test connector. Reoperate STT key. Lamps POL, BG and BG1 relight.

7.2215 Release the handset key and remove the cord from the zero operators trunk at the A board. Lamp POL is extinguished. Release key LP, lamps BG and BG1 are extinguished.

7.2216 Release the MR key and operate keys MA and BG. Lamps POL, BG and BG1 light. The A meter needle flashes to the left at 60 IPM and alternate high and low tone is heard in the receiver indicating the line has disconnected.

7.2217 Release keys BG, STO, DD-CW and MA. The POL, BG and BG1 lamps are extinguished. Operate key MR and set the RES switch on 1. The trunk disconnects.

7.318 Operate key LP.

7.222 Busy Line (Extra Numbers, Fig. B Furnished)

7.2221 Repeat tests described in Paragraph 7.221 extra number series. Make additional test setup described in Paragraph 7.212.

7.223 "No Test" Vertical Busy

7.2231 Set up a busy line as described in Paragraph 7.221.

7.2232 Connect ground to NT lead of no test connector associated with switch of subscriber line used. This operates "no test" hold magnets and makes them test busy.

7.2233 Originate a call over trunk and dial or MF pulse number of line held busy. Lamp POL lights. Operate key DD-CW.

7.2234 Release key STT and set RES switch on 2. Reoperate key STT. Lamps POL, BG and BG1 are extinguished. Release key LP and operate key BG. Release key MR and operate key MA. Lamps POL, BG and BG1 relight. The A meter reading is to the left and needle flashes at 120 IPM. Low tone interrupted at 120 IPM is heard in telephone set.

7.2235 Release keys MA, DD-CW, BG and STO. Operate key MR and set RES switch on 1. Trunk disconnects.

7.2236 Operate key LP. Remove ground from no test connector NT lead, remove handset from the line link vertical and remove cord from zero operator jack at A board.

7.224 False Busy

7.2241 Insert a switch make busy plug into vertical of the subscriber line just used. The hold magnet operates.

7.12242 Originate a call from test set and dial or MF pulse the number of line made busy. Lamp POL lights. Operate key DD-CW.

7.2243 Release key STT and set RES swith on 2. Reoperate key STT. Lamps POL, BG and BG1 are extinguished. Release keys MR and LP and operate the MA and BG keys. The POL, BG and BG1 lamps relight. The A meter flashes to the left at 60 IPM and low tone interrupted at 60 IPM is heard in telephone set.

7.2244 Release keys BG, STO, MA and DD-CW. Operate key MR and set RES switch on 1. Trunk disconnects.

7.2245 Operate key LP. Remove switch make busy tool from line link vertical.

7.23 Trunks Not Arranged for No Test (NN Feature)

7.231 Busy Line

7.2311 Insert a switch make busy tool into a line link vertical assigned to an intermediate line in a PBX group in regular number series.

7.2312 Originate call over trunk. and dial or MF pulse number of line made busy. Lamp POL lights. Operate key DD-CW.

7.2313 Release key STT and set RES switch on 2. Reoperate STT key. Lamps POL, BG and BG1 are extinguished. Release key LP and operate key BG.

7.2314 Check that call is terminated on idle line immediately following line made busy. Using a handset, ITE-4042, answer the call. Test set POL, BG and BG1 lamps light when handset C key is operated. Check talking between test set and handset.

7.2315 Release handset C key. Lamps POL, BG and BG1 are extinguished. Release keys DD-CW, STO and BG. Set RES switch on 1. Circuit restores to normal.

8. KP TRUNK FROM A BOARD, NO TEST - SD-25877-01

8.1 Setup for Test

8.11 Calls over the trunks to be tested are originated at the A board as follows: With a telephone set plugged into the position telephone jacks and the TALK key of a calling cord operated, insert the plug of the cord into the trunk OGT jack. Operate position KP key momentarily. As soon as the position S lamp lights indicating that a sender is attached and ready for pulsing key up number, of the line used for test, on the position keyset.

8.12 Connect an ITE-4042 handset to a cross connected individual subscriber line. Handset key should be in MON position.

8.2 Idle Line (Individual)

8.21 Originate a call to the line used for test. After keying the number momentarily operate the cord circuit ringing key to start machine ringing. Ringing induction is heard at the position and ringing will be heard at the ITE-4042 handset. HOLD HANDSET WELL AWAY FROM THE EAR. Operate the handset key to TALK position to trip ringing. Check talking between handset and switchboard position.

8.22 Release the call at both ends.

8.3 Idle Line (Tip Party)

8.31 Connect the handset to a cross connected tip party subscriber line.

8.32 Originate a call to this line as described in Paragraoh 8.1 but omit ringing key operation.

8.33 When the line hold magnet operates, operate handset key to TALK and check talking between position and handset. Observe that the trunk RV relay is operated.

8.34 Release call at both ends to restore equipment to normal.

8.4 Overflow

8.41 Originate a call from the A board to the overflow test line. The cord supervisory lamp flashes at 120 I.P.M.

8.42 Release the call.

8.5 Busy Line

8.51 Connect the handset to a cross connected subscriber line. Operate the handset key to TALK and when dial tone is heard dial the zero operator. When the assistant at the A board answers, hold the connection. Check talking over the connection.

8.52 With the subscriber line held busy, originate a call to the subscriber line over the trunk under test. A double connection will be made to the handset line. The cord supervisory lamp is extinguished. Check talking between the A board and the handset.

8.53 Release the first call from the originating end. The cord supervisory lamp lights and talking will no longer be possible between the A board and the handset.

8.6 No Test Vertical Busy (Overflow)

8.61 Set up a busy line as described in Paragraph 8.51.

8.62 Connect ground to the NT lead of the no test connector associated with the subscriber line used for test. This operates the no test hold magnets and makes them test busy.

8.63 Originate a call from the A board to the subscriber line now being held busy.

8.64 The cord supervisory lamp flashes at 120 I.P.M. Talking between the A board and the handset is not possible.

8.65 Restore the equipment to normal.

8.7 False Busy

8.71 Insert a switch make busy plug in the vertical of the subscriber line just used. The hold magnet operates.

8.72 Originate a call from the A board to this subscriber line. The cord supervisory lamp flashes at 60 I.P.M.

8.73 Restore the equipment to normal.

8.8 Ringing

8.801 For a test line select a four party line other than a coin line which has all four parties assigned.

If such a line is not available select four lines which will meet the following conditions or cross-connect a temporary four party line:

Full Selective Party	Full Selective Ringing	Relays Operated in Inc. Trunk	Semi-Selective
1st	MR SUP- on Ring	RC	MR1 on Ring
2nd	MR SUP- on Tip	RC RV	MR1 on Tip
3rd	MR SUP+ on Ring	RC RP	MR2 on Ring
4th	MR SUP+ on Tip	RC RV RP	MR2 on Tip

8.82 Patch the jacks of ITE-4011 as follows:

(BGLP) T and R to (OR) T1 and R1
(MTB) T to (RES) 1
(MTB) R to (OR) R
(RES) 2 to (OR) T
(CW) T and R to (OR) T2 and R2

Set the RES switch on No. 4 terminal and operate RES1 key to (500) operate DD-CW and STO keys.

8.803 Using ITE-9637 patch the O jack of ITE-4011 to the vertical of the test line. Connect 48 volt battery and ground to the A jack. Plug a telephone set into the TEL jacks.

8.804 Make a call to the first party line number (see Chart in Paragraph 5.101) and momentarily operate the ring forward key. Note that ringing induction is heard at the A board.

8.805 Full Selective: Observe that the needle of the B meter vibrates with the greater swing to the right while ringing current is applied.

8.806 Semi-Selective: Observe that the needle vibrates while ringing current is applied. Note that only one ring is received during each ringing interval.

8.807 Operate the LP key and note that ringing is tripped. Check talking between the A board and the test set.

8.808 Make a call to the second party line number and observe the same results as in Paragraph 8.806, except that for full selector the needle has the greater swing to the left.

8.809 Operate the LP key and note that ringing is tripped. Check talking.

8.810 Make calls to the third and fourth party line numbers and observe the following:

(a) Full Selective: The operation is the same as given in Paragraphs 8.806 to 8.809 for the first and second parties except that the needle swings to the left for the third party and to the right for the fourth party. Check talking on each test.

(b) Semi-Selective: Check for two complete rings in the first ringing interval. This is to check the "pick up" lead. Make this check on both the third and fourth party tests. Otherwise the test operations are as given in Paragraph 8.806 to 8.809.

8.811 With 4 party semi-selective ringing furnished, perform the following additional test on the pickup lead: Connect an R-1824 pencil lamp to 48 volt battery and to miscellaneous punching 58 (PU lead) of vertical terminal strip on trunk unit. The lamp lights periodically; approximately 3 seconds lighted and 3 seconds extinguished. With a grounded test receiver HELD WELL AWAY FROM THE EAR, check that 2 one second intervals of ringing separate by a silent interval of one second are received at miscellaneous punching 56 (MRR2 lead) of vertical terminal strip on trunk unit during the interval in which the pencil lamp is extinguished. Any reception of ringing during the interval in which the lamp is lighted indicates that either the incorrect PU or MRR2 lead from the ringing machine has been used.

→ Arrowed lines indicate new or changed information.

R. E. RAHMES

Engineer of Installation

Reason for Reissue:
To provide test information for MF applications of SD-25432-01 in Paragraph 7.

Replaces Section 207.2 of 1-19-50.