

SUPPLEMENTARY TEST OF INCOMING AND AUXILIARY TRUNKS EQUIPPED WITH
 TEST JACKS USING TEST SET SD-25187 (J24751A)

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1. GENERAL INFORMATION

1.1 Description of Tests: This section describes the supplementary tests using the Incoming Trunk Test Set SD-25187 to be applied to the following circuits:

1.11 Incoming Trunks

Impedance Transmission, Immediate Ringing

	1-2Pty.Man.	Pan.	or	XB	Lcl.	or	Tan.
SD-25875	4Pty.S.S."	"	"	"	"	"	"
&SD-26204	4Pty.Sel."	"	"	"	"	"	"

Repeat Coil Transmission, Immediate Ringing

SD-25259,	1-2Pty.	Pan.Sdr.	Tan.,	Man.	Tan.,	Toll
SD-25295,	4Pty.S.S."	"	"	"	"	"
SD-25305,	4Pty.Sel."	"	"	"	"	"

Repeat Coil Transmission, Delayed Ringing

SD-25302,	4	Pty.S.S.	Toll	or	Central	A.,	Coin
SD-25307,	4	Pty.Sel.	"	"	"	"	"
SD-25314,	1-2	Pty.	"	"	"	"	"

1.12 Miscellaneous Circuits

SD-25025 Auxiliary Trunk from Man. Lcl.

2. RECORDS AND REQUIREMENTS

2.1 Records: Forms ID-1313 and ID-1315 are required for recording the results of these tests. For further information on records see Handbook 50 Section 3.

2.2 Requirements: As indicated in Section 0.1 of this handbook the tests outlined herein are considered supplementary tests.

3. TESTING EQUIPMENT

3.1 Test Sets and Accessories

Amt	Code	Description	With ITE
1	SD-25187 (J24751A)	Incoming Trunk Test Set	
10	298A	Make Busy Plugs	4023
1	ITE-2260	Call Wire Tel. Set	4023
1	D-81762	Dial Hand Set	+
2	ITE-2331	Extension Jack Box	4023

3.2 Cords

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
1	9598	12'	2	310 Plug	310 Plug	4023
5	9601	12'	3	310 Plug	310 Plug	4023
1	9627	12'	3	310 Plug	508A Key	4010
3	9650	6'	4	289 Plug	Tel. Set	4023
1	9957	8'	15	Jones Plug	Jones Plug	4010
or						
1	M15B	8'	15	Jones Plug	Jones Plug	+

+ Telephone Company Equipment.

4. SETUP FOR TEST

4.1 Locate the test set at the incoming trunk frame mounting the trunks to be tested. Restore all keys to normal.

4.2 Patch the test set jacks to the incoming trunk frame jacks as follows:

Cord	Test Set	Trunk Frm.	See Note
ITE-9598	BAT	A	1
ITE-9601	INT	INT	
ITE-9601	RTL	TST	
ITE-9601	AC	RC	
ITE-9601	+	E	2
ITE-9601	TST	T	3
ITE-9627	RC		
ITE-9650	TEL		
ITE-9957	15 Pt.JCK.	15 Pt.JCK.	4
or			
M-15B			

NOTE 1: To avoid possible grounding of the battery supply lead, connect the cord to the test set first and when disconnecting remove the cord from the test set last.

NOTE 2: This cord is used only when testing delayed ringing trunks.

NOTE 3: Patch to the T jack of the trunk to be tested.

NOTE 4: This cord is used only when testing MFKP trunk.

4.3 When testing (SD-25302, 25307 or 25314) toll incoming trunks arranged for coin operation, plug the D-81762 dial hand set into the frame line circuit D jack on the incoming trunk frame and establish a connection to the special service operator, located at the position at which the coin key appears, or to the supervisor. (See Paragraph 6.6.)

4.4 Test Lines: Assignments should be obtained from the telephone company for the return test line or lines, coin box line and the incoming trunk test line. Verify that the proper cross-connections and equipment are in working order.

4.5 Operate the test set keys as shown in TABLE A.

4.6 If lamp NOR is not lighted, operate and release key DSC. Verify that the OCTTF key RC is normal.

5. TEST PROCEDURE

5.1 Full Select Trunks

NOTE: When testing trunks common to two office units operate key HF to direct the test call to a line in the second office unit.

5.11 Set up on the numerical (TH, H, T and U) keys the desired test line number.

5.12 (Refer to the particular test to be made as described in Paragraph 6 before starting a test call.) Operate and release key ST or the white button on the remote control cord to start the test call.

5.13 On delayed ringing trunks, when lamp SUPV lights, operate key RST to prevent false operation of the trunk ringing relay. Operate key R±BR to start ringing. Lamp SUPV is extinguished while the ringing key is operated. (Refer to Rering Test paragraph for early and late ringing tests.)

5.2 B Switchboard Trunks

NOTE: When testing trunks that are common to both offices the office designation as well as the called line number must be passed to the operator. (In this case single order tone is heard.) Double order tone indicates that the trunk serves an individual office and only the line number need be passed to the operator.

5.21 (Refer to the particular test to be made as described in Paragraph 6 before starting a test call.) Operate and release key ST or the white button on the remote control cord to start the test call.

5.22 When order tone is heard in the test set telephone set, pass the desired test line number to the B operator.

5.23 On delayed ringing trunks, when lamp SUPV lights operate key RST to prevent false operation of the trunk ringing relay. Operate key R±BR to start ringing. Lamp SUPV is extinguished while the ringing key is operated. (Refer to Rering Test paragraph for early and late ringing tests.)

5.24 When testing delayed ringing trunks, incoming from B Toll Board which are not equipped with outgoing trunk circuits, the test set SUPV lamp operation will be in reverse order to that described in test method.

5.3 Dial Tone Trunks

5.31 The tests are made in the same manner as described for full select trunks except that the line number is not set up on the numerical keys. Key ST is operated and released. After dial tone is heard the line number is dialed.

5.32 When testing incoming trunks that are common to two office units, low dial tone is heard when four digit numbers are to be dialed. High dial tone is heard when five digit numbers are to be dialed.

5.33 Keys No. 1 TOLL and NO A SH must be normal during this test.

5.34 The following chart is provided to assist the tester in originating test calls.

Dial Tone	Inc. Trunk	Digits Req.	First Digit	Office Unit
High	Common	5	Odd	A
High	Common	5	Even	B
High	Ind.	5	Any	One
Low	Ind.	4	¢	One

¢ Only four digits (the subscriber line number) are required.

5.4 Dial Pulsing or MFKP Trunks (Stop-Go or Wink)

NOTE 1: Where the MFKP supply is furnished over conductors from another building, it is advisable to make the test on the incoming trunks at a time when the MFKP senders are not being tested. Since the senders and incoming trunks both use the same supply, tests conducted on both these circuits at the same time may result in delaying the testing operations. Do not use two test sets simultaneously.

NOTE 2: When testing incoming trunks that are common to two office units an office digit must be keyed or dialed immediately before the directory number is registered.

NOTE 3: If battery is on the lip when the trunk is normal key RS is normal. Operate key RS before operating key ST when battery is initially on the ring.

NOTE 4: If the start pulsing or dialing signal is Stop-Go key W is normal. When the start pulsing or dialing signal is Wink key W is operated before operating key ST.

TABLE A

TRUNK CIRCUIT	CLASS OF TRUNK					TRUNK CIRCUIT OPTIONS				TEST SET, KEYS OPERATED
						A RELAY			T & R	
	RP	BSFD	DP(DT)	DP	MF	OPTION	TYPE	SHUNT		
25295	X					Y	B	T	A	IRM
	X					Z	S	T	A	AOS, IRB
		X				Y	B	T	A	IRB
		X				Z	S	T	A	AOS, IRB
			X			Y	B	T OR -	A	IRB, DIAL
			X			Z	S	T	A	AOS, IRB, DIAL
				X		Y	B	-	A OR ZA	IRB, ★
					X	Y	B	-	ZA	IRKP, ★
25302	X					U	B	Z OR F	ZJ	DRM
	X					F	S	Z OR F	ZJ	AOS, DRM
		X				U	B	Z OR F	ZJ	DRB
		X				F	S	Z OR F	ZJ	AOS, DRB
			X			U	B	Z. FOR -	ZJ	DRB, DIAL
			X			F	S	Z OR F	ZJ	AOS, DRB, DIAL
				X		U	B	-	ZJ OR ZK	DRB★
					X	U	B	-	ZK	DRKP, ★
25875 OR 26204	X					NONE	UA OR AJ	X	Y OR Z	AOUA, IRM
		X				NONE	UA OR AJ	X OR -	Y OR Z	AOUA, IRB
			X			NONE	UA OR AJ	X OR -	Y OR Z	AOUA, IRB, DIAL
				X		NONE	UA OR AJ	X OR -	Y OR Z	AOUA, DIAL, IRKP, ★
					X	NONE	UA OR AJ	X OR -	Z OR Y	AOUA, DIAL, IRKP, RS, ★
					X	NONE	UA OR AJ	X OR -	Y OR Z	AOUA, IRKP, ★
					X	NONE	UA OR AJ	X OR -	Z OR Y	AOUA, IRKP, RS, ★

NOTE★ Operate key No. 1 Toll for trunks from Toll Switchboard No. 1 not equipped with outgoing trunks. Key NO A SH should also be operated when trunk A relay is not shunted.

5.41 MFKP

5.411 Refer to the particular test to be made as described in Paragraph 6 before starting a test call. Operate and release key ST or the white button on the remote control cord to start the test call.

5.412 Lamp KN lights indicating that the line number may be keyed.

5.413 Operate key KP for a period of at least 1/4 second.

5.414 Key the desired line number (See Note 2) on the MFKP numerical key strip making sure to fully depress each key sufficiently to allow for the proper operations of the circuit.

5.415 Operate key AV at the completion of keying and observe that lamp KN is extinguished and lamp SUPV lights.

5.416 The remainder of the test parallels the operations described for full select trunks.

5.42 Dial Pulsing

5.421 Refer to the particular test to be made as described in Paragraph 6 before starting a test call. Operate and release key ST or the white button on the remote control cord to start the test call.

5.422 Lamp KN lights indicating that the line number may be dialed.

5.423 Dial the line number. See Note 2 and Paragraph 5.34.

5.424 Operate key AV at the completion of dialing. Observe that lamp KN is extinguished and lamp SUPV lights.

5.425 The remainder of the test parallels the operations described for full select trunks.

6. TEST CALL OPERATIONS

6.1 Party Lines (Return Test Lines) and Free Line Ringing Tests

6.11 Make tests to all of the return test lines provided.

6.12 Start a call by momentarily operating key ST or the white button on the remote control cord.

6.13 The test line is seized and ringing current is returned to the test set and one of the ringing indication lamps is lighted while ringing current is being received. (See the following chart for the proper lamp indications.)

Type of Service	Ringings	Party	Lamp
4 Pty.S.S.	1R Code	R	R-1
"	1R "	T	T-1
"	2R "	R	R-2
"	2R "	T	T-2
4 Pty.F.S.	+ -	R	R-
"	+ -	T	T-
"	+ +	R	R+
"	+ +	T	T+
2 Pty.	+ -	R	R-
"	+ -	T	T-
Free	+ -	Free	R-
No Pty.	+ -	Ind.	R-
No Free	+ -	Ind.	R-
Ind. Only	+ -	Ind.	R-

NOTE 1: When testing to four party semi-selective return test lines, observe that the proper ringing code is received and that for two ring code both ringing periods have a full ring.

NOTE 2: When a free line, return test line is provided the test operations are the same as for a non-free line except that the operation of key TMR does not extinguish the SUPV (supervisory) lamp.

6.14 When the trunk is connected to the test line the SUPV lamp lights and will remain lighted until the TMR key is operated to trip ringing, (except on calls to a free line when the SUPV lamp remains lighted after ringing is tripped). Lamp TMR lights. Release key TMR. Lamp TMR remains lighted.

6.15 Operate and release the DSC key or the red button on the remote control cord to disconnect the call and cause the test circuit to return to normal.

6.2 Time Measure Release

NOTE: Make this test once for each incoming trunk group for which the incoming trunk timing circuit is provided.

6.21 Make a return test line test (except a free line test). Observe that the proper ringing indication lamp lights.

6.22 Operate key TMR and leave it operated. Operate and release key AR or the white button on the remote control cord. The SUPV and TST COMP lamps light when the AR key is released. Then operate and release the DSC key or the red button on the remote control cord. The trunk timing circuit functions and the trunk is released in two to four minutes (verify) and lamp TMR is extinguished. Lamp NOR then lights. Release key TMR.

6.3 Reselection Test

6.31 Originate a tip or ring party (RTL) call.

6.32 After ringing is tripped and before the TMR key is released, operate and release the DSC key or the red button on the remote control cord to cause the test circuit to disconnect. Operate the RST key and start a new call on the same incoming trunk. (The incoming trunk test line may be called.) Lamp TMR remains lighted until the trunk is released by the operation of its F relay. The second call is completed to the incoming trunk test line. Observe that lamp SUPV lights between calls and until the trunk S and T relays are operated on the second call.

6.33 Operate and release key DSC to restore the equipment to normal. Release key TMR. Lamp NOR lights.

6.4 Condenser Test (Trunks SD-25875 & SD-26204)

6.41 Originate a tip or ring party (RTL) call.

6.42 Trip ringing by operating TMR key. Release TMR key. Operate CTT key. The CT lamp lights. Release CTT key. Lamp CT is extinguished. Operate key CTR. Lamp CT lights. Release CTR key. The CT lamp is extinguished.

6.43 Operate and release key DSC to restore the equipment to normal.

6.5 Rering Test (Trunks SD-25302, 25307 and 25314 Only)

6.51 Originate a tip party (RTL) call.

6.52 Operate TMR key to trip ringing. After ringing is tripped but before the TMR key is released operate the +BR key. The R+ or R- lamp lights indicating a satisfactory test. The ringing indication lamp is extinguished when the ringing key is released.

6.53 Repeat 6.52 using key R+BR.

6.54 Repeat 6.52 using key RNO. Lamp RNO lights. A ringing indication R+ or R- lamp does not light.

6.55 Operate and release key AR. When TST COMP lamp lights release key TMR. Lamp TMR is extinguished. Operate and release key DSC to restore the equipment to normal.

6.56 Originate a tip party (RTL) call and as soon as the trunk is seized operate and release the +BR key to start ringing. Verify that the proper ringing indication lamp is lighted. Operate key DSC to restore the equipment to normal.

6.6 Coin Test (Trunks SD-25302, 25307 and 25314 Only)

6.61 Originate a call to the associated coin box test line.

6.62 When the bell of the coin box rings answer the call, deposit a coin and using the line to the special service operator, set up in accordance with Paragraph 4.3, request the special service operator to return the coin. High tone is heard in the test set telephone set when the coin is returned. Deposit the coin again and ask the operator to collect the coin. Low tone is heard.

6.63 Operate and release key DSC to restore the equipment to normal.

6.7 Test of CDB Auxiliary Trunks (SD-25025)

6.71 Use the setup for test described in Paragraph 4 except that the test set is located at the relay rack near the trunks to be tested. Class key AUX is operated.

6.72 Test Line Test

6.721 Operate and release key ST. When order tone is heard, pass the test line number to the operator. Verify that the proper ringing and test tones are heard. Lamp SUPV flashes six times. (Reverse supervision is received.)

6.722 Operate key AR. Lamp SG may light momentarily while the sleeve ground test is being made. Lamp AR lights while the L relay release test is being made. When lamp TST COMP lights, operate key DSC to restore the equipment to normal. Release AUX key.

7. TEST SET LAMP SIGNALS

NOTE: The significance of the test set lamps follows:

NOR-----Indicates that the test circuit is normal.
 SUPV-----Lights when the tip and ring are closed. The "on" and "off" periods are reversed on B auxiliary trunks.
 SDR-----Lights when ST key is released and is extinguished when number called is transmitted to the terminating sender.
 TT-----Indicates a telltale condition on a full selector test call.
 TST COMP----Indicates a satisfactorily completed test.
 TC-----Indicates that a trunk continuity test is being made.
 ANO-----Indicates that a non-operate is being applied to the A relay. The lamp is extinguished when the test is satisfactorily completed.

RNO-----	Indicates that a non-operate test is being applied to a DR trunk ringing relay.	CT-----	Indicates a satisfactory series condenser test.
TMR-----	Lights when machine ringing is tripped. It also indicates a failure of the time measure re-lease test.	SG-----	Indicates a satisfactory sleeve ground test.
AR-----	Indicates that the sleeve of the trunk under test is grounded and when extinguished in the course of the test, it indicates a satisfactory A relay release test.	T-,T+,R-,---	Indicate the type of ringing and the side of the line (T or R) over which ringing current is being received.
		R+	
		KN-----	Indicates that the test circuit is ready for the keying of an MF key pulsing number.

→ Arrowed lines indicate new or changed information.

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Reason for Reissue:
Add SD-26204-01 and change Figure 1 to Table A.

Replaces Section 205.1 dated 4-19-56.