ORIGINATING REGISTERS SD-26040-01 AND SD-25551-01 DIAL PULSE OR "TOUCH-TONE®" CALLING TESTS USING TEST SET SD-25676-01 (J24756B) NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing nonwire-spring-relay type and wire-spring-relay type dial pulse or TOUCH-TONE calling originating register circuits in No. 5 crossbar offices using the test set circuit for register and CAMA sender circuits (test set) and the master test frame (MTF).

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes. Equipment Test Lists are affected.

(a) To add test BC.

(b) To make minor changes as required.

1.03 The tests covered are:

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1.04 Test Charts are provided which show priming information required for Tests A through V, X, AA through BA. Spaces are provided on the charts for listing specific priming information depending on local conditions. These charts should be filled out from local records in accordance with the instructions provided in Part 5, Preparation of Test Chart.

1.05 An interchangeable code is a code that represents both a working office code in the home area and a working foreign area code. In some offices where interchangeable codes are provided, timing after the 7th digit is not required on toll calls. Therefore, a prefix digit of 0 or 1 must be dialed as an indication to the originating register (OR) that 10 digits are required to complete the call. In other offices a prefix digit of 0 may indicate to the OR that 7 or 10 digits may be dialed. These offices require timing after the 7th digit. A prefix digit of 1 indicates that the call requires 10 digits for completion. In either type of office if no prefix digit is dialed, the OR can expect 7 digits or in some cases less than 7 digits. Where pretranslators are provided, the dialing of an interchangeable code will result in the pretranslator grounding the CMB lead to the originating register.

1.06 If the office is equipped with both automatic monitor and circuit and test set circuit for register and CAMA sender circuits and the STT-STM key of the automatic monitor is operated while a test is being made using the test set, the circuit will release as if the RL key had been operated.

1.07 Test I requires verifications at the traffic register cabinet. While performing Test I, the traffic register associated with the APD lead will operate once for each abandoned regular call. The traffic registers associated with the APD and FAPD leads will operate once for each abandoned DDD call. The reporting of these register operations should be in accordance with local instructions.

1.08 When the register is arranged for coin-first ground-start and coin service improvement (dial-tone-first), the coin features will be tested as coin service improvement (dial-tone-first).

1.09 In marker groups with four, five, or six dial tone markers, markers 0 and 1 will always have full access to all line link frames, trunk link frames and associated originating registers. In marker groups with five dial tone markers, markers other than 0 and 1 may have full or limited (graded) access to line link and trunk link frames and associated originating registers. In marker groups with six dial tone markers, markers other than 0 and 1 have only limited access to line link and trunk link frames and associated originating registers. It may be desirable to test a particular originating register with a particular marker, where limited access is provided, therefore the no-test (NT) connector should be used when selecting a line location appropriate for the required association between the particular marker and originating register group. The association of dial tone markers having limited access to certain frames shall be determined from office records.

1.10 ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Part 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.

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

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

1.13 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.

2. APPARATUS

All Tests Except W

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

2.02 Trunk test circuit, SD-25918-01.

2.03 Test circuit for register and CAMA sender circuits, SD-25988-01.

2.04 Test set circuit for register and CAMA sender circuits (test set), SD-25676-01.

2.05 Testing cord, 20-conductor cord, 6 feet long, equipped with one KS-13875 plug and one KS-13895 plug (W20C cord) (for connecting the test set to the test circuit for register and CAMA sender circuits).

2.06 Two patching cords, P3K cord, 6 feet long, equipped with two 310 plugs (3P15A cord) for patching ORT and RC jacks).

2.07 1014A dial hand test set (handset) or equivalent, equipped with a 2W38A cord assembly consisting of W2CK cord, 310 plug, and 471A jack (to listen for dial and busy tones).

2.08 Patching cord, P3D cord, 8 feet long, equipped with two 309 plugs (3P3B cord).

Tests J, T, U, W, X, Y, AA, BB

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

Tests M, T Through V, X Through AA, AH, AS

2.10 KS-3008 stopwatch or equivalent.

Tests J, W, X, Z Through AC, BB

2.11 322A (make-busy) plugs as required.

Tests AD, AN Through AQ, AD.1, AN.1 Through AQ.1

2.12 Patching cord, P3E cord, 8 feet long, equipped with two 310 plugs (3P6E cord) for connecting test circuit for register and CAMA sender circuit to 3A pulse generating test set or 4A signaling test set.

Tests AD, AN Through AQ, BB

2.13 3A pulse generating test set J94732A, 3A digit control test set and power supply unit J94732B (SD-95686-01).

Tests AD.1, AN.1 Through AQ.1, BB

2.14 4A signaling test set J94743A and loop unit J9473AB (SD-1C244-01)

Test AY

2.15 Patching cord, P3F cord, 4 feet long, equipped with one 309 plug and one 310 plug (3P12A cord).

3. PREPARATION

3.01 Under nonoverload condition, begin dialing or keying digits shown on Test Chart within 20 seconds after operating STT key or the register may time out. Under overload condition, begin dialing or keying digits shown on Test Chart within 10 seconds after operating STT key or register may time out.

3. PREPARATION (Cont)

Note: Refer to 1.05, 1.06, 1.09, 1.11, and 1.12.

STEP	ACTION	TEST															
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	N.1	N.2
1	At MTF — Restore all keys and switches.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	Momentarily operate RL key.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	Select dial tone marker having access to originating register under test (refer to 1.09).	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	Select OR class of test.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	Select route advance 0.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	Select originating register group.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7	Select originating register to be tested.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
8	Operate TRR key.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
9	Operate FS, TS keys.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10	Patch RC jack on test set to RC jack on MTF or to RC jack on originating register frame.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11a	If performing dial pulsing tests — Patch ORT jack on test set to ORT jack on MTF or to ORT jack on originating register frame.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12a	Patch handset to PLS jack of test set.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13b	If performing TOUCH-TONE dialing tests — Patch IRT connector on test set to IRT jack on MTF or to IRT jack on originating register frame.	X		X		X	X	X	X					X	X	X	X
14b	Patch handset to ORT jack of test set.	X		X		X	X	X	X					X	X	X	X

3. PREPARATION

Note: Refer to 1.05, 1.06, 1.09, 1.11, and 1.12.

STEP	ACTION	TEST														
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	N.1	N.2
15	Prepare 3A pulse generating test set as outlined in the section titled 3A Pulse Generating Test Set Description and Operation.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨
16	Patch PLS jack on test set to OUTPUT CP jack on 3A pulse generating test set.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨
17	Patch MF jack on test set to OUTPUT NCP jack on 3A pulse generating test set.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨
18	Prepare 4A signaling test set equipped with loop interface unit as outlined in the section titled 4A Signaling Test Set Description and Operation.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨
19	Patch PLS jack on test set to SR jack on 4A signaling test set loop interface unit.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨
20	Patch MF jack on test set to SR jack on 4A signaling test set loop interface unit.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨
21c	If TM jack access is provided — Patch T1 jack of voltmeter test circuit to TM jack of trunk test circuit.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨
22c	At trunk test circuit — Block ST relay operated.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	—
23d	If TM1 and TM2 jack access is provided — Patch T1 jack of voltmeter test circuit to TM1 jack of jack, lamp, and key circuit.	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨

— Omit Step

▨ Proceed to METHOD

3. PREPARATION (Cont)

Note: Refer to 1.05, 1.06, 1.09, 1.11, and 1.12.

STEP	ACTION	TEST															
		O	P	Q	Q.1	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	At MTF — Restore all keys and switches.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
2	Momentarily operate RL key.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
3	Select dial tone marker having access to originating register under test (refer to 1.09).	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
4	Select OR class of test.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
5	Select route advance 0.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
6	Select originating register group.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
7	Select originating register to be tested.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
8	Operate TRR key.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
9	Operate FS, TS keys.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
10	Patch RC jack on test set to RC jack on MTF or to RC jack on originating register frame.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
11a	If performing dial pulsing tests — Patch ORT jack on test set to ORT jack on MTF or to ORT jack on originating register frame.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
12a	Patch handset to PLS jack of test set.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
13b	If performing TOUCH-TONE dialing tests — Patch IRT connector on test set to IRT jack on MTF or to IRT jack on originating register frame.								X								
14b	Patch handset to ORT jack of test set.	X	X	X	X				X								

3. PREPARATION

Note: Refer to 1.05, 1.06, 1.09, 1.11, and 1.12.

STEP	ACTION	TEST														
		O	P	Q	Q.1	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
15	Prepare 3A pulse generating test set as outlined in the section titled 3A Pulse Generating Test Set Description and Operation.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒
16	Patch PLS jack on test set to OUTPUT CP jack on 3A pulse generating test set.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒
17	Patch MF jack on test set to OUTPUT NCP jack on 3A pulse generating test set.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒
18	Prepare 4A signaling test set equipped with loop interface unit as outlined in the section titled 4A Signaling Test Set Description and Operation.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒
19	Patch PLS jack on test set to SR jack on 4A signaling test set loop interface unit.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒
20	Patch MF jack on test set to SR jack on 4A signaling test set loop interface unit.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒
21c	If TM jack access is provided — Patch T1 jack of voltmeter test circuit to TM jack of trunk test circuit.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒
22c	At trunk test circuit — Block ST relay operated.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒
23d	If TM1 and TM2 jack access is provided — Patch T1 jack of voltmeter test circuit to TM1 jack of jack, lamp, and key circuit.	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒	▒

— Omit Step

▒ Proceed to METHOD

3. PREPARATION (Cont)

Note: Refer to 1.05, 1.06, 1.09, 1.11, and 1.12.

STEP	ACTION	TEST															
		AD	AD.1	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AN.1	AO	AO.1	AP
1	At MTF — Restore all keys and switches.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
2	Momentarily operate RL key.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
3	Select dial tone marker having access to originating register under test (refer to 1.09).	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
4	Select OR class of test.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
5	Select route advance 0.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
6	Select originating register group.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
7	Select originating register to be tested.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
8	Operate TRR key.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
9	Operate FS, TS keys.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
10	Patch RC jack on test set to RC jack on MTF or to RC jack on originating register frame.	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
11a	If performing dial pulsing tests — Patch ORT jack on test set to ORT jack on MTF or to ORT jack on originating register frame.	X	X	X	X	X	X		—	—	—	—	—	—	—	—	—
12a	Patch handset to PLS jack of test set.	—	—	X	X	X	X		—	—	—	—	—	—	—	—	—
13b	If performing TOUCH-TONE dialing tests — Patch IRT connector on test set to IRT jack on MTF or to IRT jack on originating register frame.						X		X	X	X	X	X	X	X	X	X
14b	Patch handset to ORT jack of test set.	—	—				X		X	X	X	X	X	X	X	X	X

3. PREPARATION

Note: Refer to 1.05, 1.06, 1.09, 1.11, and 1.12.

STEP	ACTION	TEST														
		AD	AD.1	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AN.1	AO	AO.1	AP
15	Prepare 3A pulse generating test set as outlined in the section titled 3A Pulse Generating Test Set Description and Operation.	X	—										X	—	X	—	X
16	Patch PLS jack on test set to OUTPUT CP jack on 3A pulse generating test set.	X	—										—	—	—	—	—
17	Patch MF jack on test set to OUTPUT NCP jack on 3A pulse generating test set.												X		X		X
18	Prepare 4A signaling test set equipped with loop interface unit as outlined in the section titled 4A Signaling Test Set Description and Operation.		X											X		X	
19	Patch PLS jack on test set to SR jack on 4A signaling test set loop interface unit.		X											—		—	
20	Patch MF jack on test set to SR jack on 4A signaling test set loop interface unit.													X		X	
21c	If TM jack access is provided — Patch T1 jack of voltmeter test circuit to TM jack of trunk test circuit.																
22c	At trunk test circuit — Block ST relay operated.																
23d	If TM1 and TM2 jack access is provided — Patch T1 jack of voltmeter test circuit to TM1 jack of jack, lamp, and key circuit.																

— Omit Step

▒ Proceed to METHOD

3. PREPARATION (Cont)

Note: Refer to 1.05, 1.06, 1.09, 1.11, and 1.12.

STEP	ACTION	TEST															
		AP.1	AQ	AQ.1	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	
1	At MTF — Restore all keys and switches.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	Momentarily operate RL key.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	Select dial tone marker having access to originating register under test (refer to 1.09).	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4	Select OR class of test.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	Select route advance 0.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
6	Select originating register group.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
7	Select originating register to be tested.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
8	Operate TRR key.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
9	Operate FS, TS keys.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
10	Patch RC jack on test set to RC jack on MTF or to RC jack on originating register frame.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
11a	If performing dial pulsing tests — Patch ORT jack on test set to ORT jack on MTF or to ORT jack on originating register frame.	—	—	—	X	X	X	X	X	X	X	X	—	X	X	X	
12a	Patch handset to PLS jack of test set.	—	—	—	X	X	X	X	X	X	X	X	—	X	X	X	
13b	If performing TOUCH-TONE dialing tests — Patch IRT connector on test set to IRT jack on MTF or to IRT jack on originating register frame.	X	X	X	X			X		X	X	X	X	X	X	X	
14b	Patch handset to ORT jack of test set.	X	X	X	X			X		X	X	X	X	X	X	X	

3. PREPARATION

Note: Refer to 1.05, 1.06, 1.09, 1.11, and 1.12.

STEP	ACTION	TEST													
		AP.1	AQ	AQ.1	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC
15	Prepare 3A pulse generating test set as outlined in the section titled 3A Pulse Generating Test Set Description and Operation.	—	X	—								—			X	
16	Patch PLS jack on test set to OUTPUT CP jack on 3A pulse generating test set.	—	—	—								—			X	
17	Patch MF jack on test set to OUTPUT NCP jack on 3A pulse generating test set.	—	X	—								—			X	
18	Prepare 4A signaling test set equipped with loop interface unit as outlined in the section titled 4A Signaling Test Set Description and Operation.	X		X								—			X	
19	Patch PLS jack on test set to SR jack on 4A signaling test set loop interface unit.	—		—								—			X	
20	Patch MF jack on test set to SR jack on 4A signaling test set loop interface unit.	X		X								—			X	
21c	If TM jack access is provided — Patch T1 jack of voltmeter test circuit to TM jack of trunk test circuit.											X			X	
22c	At trunk test circuit — Block ST relay operated.											X			X	
23d	If TM1 and TM2 jack access is provided — Patch T1 jack of voltmeter test circuit to TM1 jack of jack, lamp, and key circuit.											X			X	

— Omit Step

▨ Proceed to METHOD

4. METHOD

STEP	ACTION	VERIFICATION
A. Regular Call		
15	Operate keys and set switches in accordance with Test Chart Test 1.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, number dialed, class of service, RP if ring party, TP if tip party designations perforated. For Tests 1 through 16— LT designation perforated. For Tests 17 through 22, 25 through 30— FAC, LT designations perforated. For Tests 23, 24, 31, 32— FAC, LT3 designations perforated. If office is arranged for both 2-wire and 4-wire originating registers— 2W designation perforated. For Tests 7, 8, 15, 16, 19, 25— On coin service improvement (dial-tone-first)— CPT lamp momentarily lighted. OLF lamp ***not*** lighted.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 2 through 32.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
B. Marker Coin Return		
13	Operate keys and set switches in accordance with Test Chart Test 33.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. At MTF— CR, CND lamps lighted. Two trouble records taken. PK, SCK, CNR, CNS, DIS1 designations

STEP	ACTION	VERIFICATION
		perforated on first card. PK, CR, CNS designations perforated on second card.
16	At test set— Momentarily operate RL key.	All lamps extinguished.
17	Restore all keys and switches and remove all patching cords not required in next test.	
C. Preliminary Pulse—Register not Arranged for Centrex		
15	Operate keys and set switches in accordance with Test Chart Test 34.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17c	If register prefix counter is not provided— At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone heard after each digit 1. Register AS relay remains operated.
18d	If register prefix counter is provided— At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Register AS relay remains operated. If register is equipped to remove dial tone after a single prefix digit 1— Dial tone silenced after first digit 1. If register is equipped to remove dial tone after prefix digits 11— Dial tone removed after second digit 1. If register is not equipped to remove dial tone after prefix digit 1 or prefix digits 11— Dial tone heard after each digit 1.
19	Momentarily operate RL key.	All lamps extinguished.
20	Repeat Steps 15 through 19, as required for Test 35.	
21	Restore all keys and switches and remove all patching cords not required in next test.	
D. Manual Call—Coin or Noncoin		
13	Operate keys and set switches in accordance with Test Chart Test 36.	
14	At test set— Momentarily operate STT key.	Dial tone ***not*** heard. At MTF— AS lamp lighted.

STEP	ACTION	VERIFICATION
		Trouble record taken. A4, 7 designations perforated. On coin calls— At MTF— CR lamp momentarily lighted. CND lamp lighted. CNS designation perforated.
15	At test set— Momentarily operate RL key.	All lamps extinguished.
16	Repeat Steps 13 through 15, as required for Test 37.	
17	Restore all keys and switches and remove all patching cords not required in next test.	
E. 11 Prefix Foreign Area Directing Code		
15	Operate keys and set switches in accordance with Test Chart Test 38.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, 11, and digits dialed designations perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 39 through 41.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
F. 11X Service Codes		
15	Operate keys and set switches in accordance with Test Chart Test 42.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Touble record taken. PK, SCK, 11, A_digit dialed designations perforated.

STEP	ACTION	VERIFICATION
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 43 through 45.	
20	Restore all keys and switches and remove all patching cords not required in next test.	

G. X11 Service Codes and DDD Information Codes

15	Operate keys and set switches in accordance with Test Chart Test 46.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, and digits dialed designations perforated. For Tests 46, 49— LT, OR designations perforated. For Tests 47, 50— LT1, OR designations perforated. For Tests 48, 51— X11, FAC designations perforated. ***Note:*** For Tests 48, 51, if NPA code selected is an interchangeable code, a trouble record will be taken in 3 to 5 seconds.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 47 through 51.	
20	Restore all keys and switches and remove all patching cords not required in next test.	

H. Prefix Digit 1

15	Operate keys and set switches in accordance with Test Chart Test 52.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, LT1, and digits dialed designations

STEP	ACTION	VERIFICATION
		perforated. For Tests 52, 53, 55, 56— OR designation perforated. For Tests 54, 57— FAC designation perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 53 through 57.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
I. Abandoned Call—Coin, Noncoin, DDD, or Centrex		
13	Operate keys and set switches in accordance with Test Chart Test 58.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	
16	Operate DIS key.	Register released without selecting marker. No trouble record taken. APD or FAPD (DDD call) traffic register scored. On coin calls other than coin service improvement (dial-tone-first) calls— At MTF— CR lamp momentarily lighted. CND lamp lighted. On coin service improvement (dial-tone-first) calls— CR, CPT lamps momentarily lighted. CND lamp lighted. OLF lamp ***not*** lighted.
17	At test set— Momentarily operate RL key.	All lamps extinguished.
18	Restore DIS key.	
19	Repeat Steps 13 through 18, as required for Tests 59 through 61.	
20	Restore all keys and switches and remove all patching cords not required in next test.	

STEP	ACTION	VERIFICATION
J. Abandoned Call During Coin Test		
13	Insert make-busy plug into ORMB_ jack associated with register under test.	
14	At register frame— Block nonoperated GT1 relay.	
15b	If registers are arranged for coin-first operation— Operate keys and set switches in accordance with Test Chart Test 62.	
16b	At test set— Momentarily operate STT key.	Dial tone ***not*** heard. At MTF— AS lamp lighted.
17b	At test set— Operate DIS key.	Register released without selecting marker. No trouble record taken.
18b	At test set— Momentarily operate RL key.	All lamps extinguished.
19b	Restore DIS key.	
20c	If registers are arranged for dial-tone-first— Operate keys and set switches in accordance with Test Chart Test 63.	
21c	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced.
22c	Operate DIS key.	Register released without selecting marker. No trouble record taken.
23c	Momentarily operate RL key.	All lamps extinguished.
24c	Restore DIS key.	
25	At register frame— Remove blocking tool from GT1 relay.	
26	At MTF— Remove make-busy plug from ORMB_ jack.	
27	Restore all keys and switches and remove all patching cords not required in next test.	
K. Two-Party Test		
13	Operate keys and set switches in accordance with Test Chart Test 64.	

STEP	ACTION	VERIFICATION
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, TP if tip party; RP if ring party designations perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Repeat Steps 13 through 16, as required for Tests 65 through 67.	
18	Restore all keys and switches and remove all patching cords not required in next test.	
L. Start Pulse Signal		
13	Operate keys and set switches in accordance with Test Chart Test 68.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At register frame— RV relay operated.
15	At test set— Momentarily operate RL key.	Dial tone silenced. All lamps extinguished.
16	Restore all keys and switches and remove all patching cords not required in next test.	
M. Zero Operator		
15	Operate keys and set switches in accordance with Test Chart Test 69.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17c	If register is not arranged for person-to-person collect special calls— At test set— Dial digit 0 (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. A4, 7; B7 designations perforated. On coin calls other than coin service improvement (dial-tone-first) calls— When register is arranged for coin return on calls to operator trunks— At MTF— CR lamp momentarily lighted. CND lamp lighted. On coin service improvement (dial-tone-first)

STEP	ACTION	VERIFICATION
		calls— SCK designation perforated.
18d	If register is arranged for person-to-person collect special calls— At test set— Dial digit 0 (refer to paragraph 3.01); ***start timing.***	If register is equipped with transistor digit timer— In 3 to 4 seconds— Trouble record taken. If register is equipped with cold-cathode tube digit timer— In 3 to 5 seconds— Trouble record taken. A4, 7; B7 designations perforated. On coin calls other than coin service improvement (dial-tone-first) calls— When register is arranged for coin return on calls to operator trunks— At MTF— CR lamp momentarily lighted. CND lamp lighted. On coin service improvement (dial-tone-first) calls— SCK designation perforated.
19	At test set— Momentarily operate RL key.	All lamps extinguished.
20	Repeat Steps 15 through 19, as required for Tests 70 through 74.	
21	Restore all keys and switches and remove all patching cords not required in next test.	
N. Prefix Digits 0+		
15	Operate keys and set switches in accordance with Test Chart Test 75.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01). ***Note:*** Begin dialing digits within 3 seconds after dialing 0 prefix digit.	Dial tone silenced. Trouble record taken. LT2, digits dialed designations perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 19, as required for Tests 76 through 80.	

STEP	ACTION	VERIFICATION
20	Restore all keys and switches and remove all patching cords not required in next test.	
N.1	**Prefix Digits 01+**	
15	Operate keys and set switches in accordance with Test Chart Test 81.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01). ***Note:*** Begin dialing digits within 3 seconds after dialing 01 prefix digits.	Dial tone silenced. Trouble record taken. FAC, FVD, digits dialed designations perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18 as required for Tests 82 through 100.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
N.2	**Prefix Digits 011+**	
15	Operate keys and set switches in accordance with Test Chart Test 101.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01). ***Note:*** Begin dialing digits within 3 seconds after dialing 011 prefix digits.	Dial tone silenced. For Tests 101 through 130. Trouble record taken. FAC, 11, digits dialed designations perforated. For Tests 131 through 135. Overflow tone heard.
18	Momentarily operate RL key.	All lamps extinguished. Overflow tone silenced.
19	Repeat Steps 15 through 18, as required for Tests 102 through 135.	
20	Restore all keys and switches and remove all patching cords not required in next test.	

STEP	ACTION	VERIFICATION
O. A_ Digit Translation		
15	Operate keys and set switches in accordance with Test Chart Test 136.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, digits dialed designations perforated. LT1 designation perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 137 through 157.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
P. Combination A_ and B_ Digit Translation		
15	Operate keys and set switches in accordance with Test Chart Test 158.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, digits dialed designations perforated. LT1 designation perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 159 through 179.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
Q. Pretranslation (SD-25568-01 Provided)		
15	Operate keys and set switches in accordance with Test Chart Test 180.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.

STEP	ACTION	VERIFICATION
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, digits dialed designations perforated. If digit 0, 1, or 8 was prefixed to number dialed— LT2, LT1, or LT3 designation perforated, respectively.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 181 through 237.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
Q.1 Pretranslation for IDDD (SD-27849-01 Provided)		
15	Operate keys and set switches in accordance with Test Chart Test 238.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, digits dialed designations perforated. If 01 or 011 was prefixed to number dialed— FVD or 11 designation perforated, respectively.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 239 through 254.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
R. Stuck Coin		
13	Operate keys and set switches in accordance with Test Chart Test 255.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. At MTF— CND lamp lighted. If register is ***not*** arranged for person-to-person

STEP	ACTION	VERIFICATION
		collect special calls— Trouble record taken. SCN, CNS designations perforated. If register is arranged for person-to-person collect special calls— In 3 to 4 seconds— Trouble record taken. SCN, CNS designations perforated.
16	At test set— Momentarily operate RL key.	All lamps extinguished.
17	Restore all keys and switches and remove all patching cords not required in next test.	
S. Straightforward Call to Manual Office		
13	Operate keys and set switches in accordance with Test Chart Test 256.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, and digits dialed designations perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Restore all keys and switches and remove all patching cords not required in next test.	
T. Permanent Signal Timing—Coin or Noncoin		
13	Operate keys and set switches in accordance with Test Chart Test 257.	
14	Insert make-busy plug into ORMB_ jack associated with register under test.	
15	At test set— Momentarily operate STT key; ***start timing.***	Dial tone heard. At MTF— AS lamp lighted. In 20 to 32 seconds— AS lamp extinguished. Trouble record taken. PS designation perforated. On coin calls other than coin service improvement (dial-tone-first) calls— CR lamp momentarily lighted.

STEP	ACTION	VERIFICATION
		CND lamp lighted. On coin service improvement (dial-tone-first) calls— CR, CPT lamps momentarily lighted. CND lamp lighted. OLF lamp ***not*** lighted.
16	At test set— Momentarily operate RL key.	All lamps extinguished. Dial tone silenced.
17	Momentarily restore CN key if operated.	
18	At group-busy circuit— Block operated RB2 relay in group-busy circuit associated with register to be tested.	
19	At test set— Momentarily operate STT key; ***start timing.***	Dial tone heard. At MTF— AS lamp lighted. In 10 to 16 seconds— AS lamp extinguished. Trouble record taken. On coin calls other than coin service improvement (dial-tone-first) calls— CR lamp momentarily lighted. CND lamp lighted. On coin service improvement (dial-tone-first) calls— CR, CPT lamps momentarily lighted. CND lamp lighted. OLF lamp ***not*** lighted.
20	At test set— Momentarily operate RL key.	All lamps extinguished. Dial tone silenced.
21	At group-busy circuit— Remove blocking tool from RB2 relay.	
22	At test set— Restore CN key if operated.	
23	Repeat Steps 13 through 22, as required for Test 258.	
24	At MTF— Remove make-busy plug from ORMB_ jack.	
25	Restore all keys and switches and remove all patching cords not required in next test.	

STEP	ACTION	VERIFICATION
	U. Partial Dial Timing—Coin, Noncoin, or Overload Condition	
15	Operate keys and set switches in accordance with Test Chart Test 259.	
16	Insert make-busy plug in ORMB_jack associated with register under test.	
	For Tests 259, 260, 262 Through 267	
17	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
18	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01); ***start timing.***	Dial tone silenced. For Tests 259, 260, 262 through 267— In 20 to 32 seconds— Trouble record taken. PD, and digits dialed designations perforated. On coin service improvement (dial-tone-first) calls— SCK designation perforated. For Tests 266 and 267— If register is equipped with transistor digit timer— In 3 to 4 seconds— Trouble record taken. If register is equipped with cold-cathode tube digit timer— In 3 to 5 seconds— Trouble record taken. PD, and digits dialed designations perforated.
19	Momentarily operate RL key.	All lamps extinguished.
20	Momentarily restore CN key if operated.	
21	At group-busy circuit— Block operated RB2 relay in group-busy circuit associated with register to be tested.	
22	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
23	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01); ***start timing.***	Dial tone silenced. In 5 to 8 seconds— Trouble record taken. PD and digits dialed designations perforated.

STEP	ACTION	VERIFICATION
24	At group-busy circuit— Remove blocking tool from RB2 relay.	
25	At test set— Momentarily operate RL key.	All lamps extinguished.
26	Restore CN key if operated.	
For Test 261		
27	At register frame— Block operated OVL relay.	
28	Block nonoperated DT relay.	
29	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
30	At test set— Dial digits as shown on Test Chart (refer to paragraph 3.01); ***start timing.***	Dial tone silenced. In 4.6 to 7.2 seconds Trouble record taken. PD designation perforated.
31	Momentarily operate RL key.	All lamps extinguished.
32	At register frame— Remove blocking tools from OVL, DT relays.	
33	Repeat Steps 15 through 32, as required for Tests 260 through 267.	
34	At MTF— Remove make-busy plug from ORMB_ jack.	
35	Restore all keys and switches and remove all patching cords not required in next test.	
V. Register Timeout After Marker Sets Busy Tone		
13	Operate keys and set switches in accordance with Test Chart Test 268.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01); ***start timing.***	Dial tone silenced. Busy tone heard.

STEP	ACTION	VERIFICATION
16	At MTF— Restore RLT key; operate HLD key.	In 20 to 32 seconds— TO_ lamp lighted. AS lamp extinguished. Busy tone silenced. After 10 to 15 seconds— R-S-TOA lamp lighted. Major alarm sounds.
17	At test set— Momentarily operate RL key.	All lamps extinguished. Major alarm silenced.
18	Restore all keys and switches and remove all patching cords not required in next test.	
W. Tip Party—Manual Test		
1	At MTF— Insert make-busy plug into ORMB_ jack for originating register to be tested.	
2	At register frame— Block operated 2P relay.	
3	Block nonoperated TP1 relay.	
4	Manually operate ON1 relay.	ON1 relay locked operated. ON, RL relays operated.
5	Remove blocking tool from TP1 relay.	ON1, ON, RL relays released.
6	Momentarily operate ON1 relay manually.	TP1 relay operated while ON1 relay operated.
7	Remove blocking tool from 2P relay.	
8	At MTF— Remove make-busy plug from ORMB_ jack.	
X. Timing During Pretranslation		
13	Operate keys and set switches in accordance with Test Chart Test 269.	
14	Insert make-busy plug into ORMB_ jack of originating register to be tested.	
15	At group-busy circuit— Block operated RB2 relay in group-busy circuit associated with register to be tested.	
16b	If nonwire-spring-relay type circuits are used— At register frame— Insulate 1-3B, 3-4B of PRL relay.	

STEP	ACTION	VERIFICATION
17c	If wire-spring-relay type circuits are used— At register frame— Insulate 7B, 9B of PRL relay.	
18	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
19	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01); ***start timing.***	Dial tone silenced. At register frame— PST relay operated. OVL relay released. In 20 to 32 seconds— TM relay operated.
20	At test set— Momentarily operate RL key.	All lamps extinguished.
21	At group-busy circuit— Remove blocking tool from RB2 relay.	
22	Remove insulators from PRL relay.	
23	Repeat Steps 13 through 22, as required for Test 270.	
24	At MTF— Remove plug from ORMB_ jack.	
25	Restore all keys and switches and remove all patching cords not required in next test.	

Y. Timing During Coin Test—Dial-Tone-First

13	Operate keys and set switches in accordance with Test Chart Test 271.	
14	Insert make-busy plug into ORMB_ jack associated with register under test.	
15	At register frame— Block nonoperated OVL relay.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01); ***start timing.***	Dial tone silenced. In 10 to 16 seconds— No-such-number tone heard. In 20 to 32 seconds— No-such-number tone silenced.

STEP	ACTION	VERIFICATION
18	Momentarily operate RL key.	All lamps extinguished.
19	At register frame— Remove blocking tool from OVL relay.	
20	At MTF— Remove make-busy plug from ORMB_ jack.	
21	Restore all keys and switches and remove all patching cords not required in next test.	
Z. Common Alarm Timing		
13	Operate keys and set switches in accordance with Test Chart Test 272.	
14	At test set— Momentarily operate STT key; ***start timing.***	Dial tone heard. At MTF— AS lamp lighted. In 20 to 32 seconds— Dial tone silenced. After 20 to 32 seconds— TO_ lamp lighted. After 10 to 15 seconds— R-S-TOA lamp lighted. Major alarm sounds.
15	Insert make-busy plug into ORMB_ jack associated with originating register under test.	R-S-TOA lamp extinguished. Major alarm silenced.
16	At test set— Momentarily operate RL key.	All lamps extinguished.
17	At MTF— Remove make-busy plug from ORMB_ jack.	
18	Restore all keys and switches and remove all patching cords not required in next test.	
AA. Recycle of Timing		
13	Operate keys and set switches in accordance with Test Chart Test 273.	
14	Insert make-busy plug into ORMB_ jack associated with originating register under test.	
15	At test set— Observe register TMA, TMB, TMC relays; momentarily operate STT key (refer to paragraph 3.01).	At register frame— ***Register Arranged for Coin Test Before Dial Tone*** Register TMA, TMB relays operate, release, reoperate when coin test is satisfied to recycle

STEP	ACTION	VERIFICATION
		timing for permanent signal timing. ***Register Arranged for Coin Test After Dialing, Arranged for Coin Service Without Coin Test, or not Arranged for Coin Service*** Register TMA, TMB relays operated to start permanent signal timing. If TOUCH-TONE pulsing is provided— TMC relay operated.
16	Dial digit A_ shown on Test Chart (refer to paragraph 3.01).	At register frame— Register TMA relay released, then reoperated to recycle timing circuit for partial dial timing. If TOUCH-TONE pulsing is provided— TMC relay released, then reoperated.
17	Dial remaining digits shown on Test Chart (refer to 3.01).	At register frame— Register TMA, TMB relays released, operated for each digit. If TOUCH-TONE pulsing is provided— TMC relay released then reoperated for each digit. At completion of dialing— TMA relay operated. TMB relay nonoperated. If TOUCH-TONE pulsing is provided— TMC relay operated.
18	At test set— Momentarily operate RL key.	All lamps extinguished.
19b	If register is arranged to make coin test after completion of dialing— At register frame— Block nonoperated GT1 relay.	
20b	At test set— Momentarily operate STT key.	
21b	Dial digits shown on Test Chart to advance register to coin test (refer to paragraph 3.01); ***start timing*** after last digit.	At register frame— CNT3 relay operated.
22b	At test set— Momentarily operate RL key.	All lamps extinguished.
23b	At register frame— Remove blocking tool from GT1 relay.	
24c	If register is arranged for coin service without coin test or if register is arranged for coin test before dial tone—	

STEP	ACTION	VERIFICATION
	At register frame— Block nonoperated CR1 relay.	
25c	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
26c	At register frame— Momentarily operate TM relay.	TMA relay released, reoperated. TMB relay nonoperated.
27c	Remove blocking tool from CR1 relay.	Register advanced through coin return cycle.
28c	At test set— Momentarily operate RL key.	All lamps extinguished.
29	Repeat Steps 13 through 23b or 28c, as required for Test 274.	
30	At MTF— Remove make-busy plug from ORMB_ jack.	
31	Restore all keys and switches and remove all patching cords not required in next test.	

AB. Dial Tone Removal

13	Operate keys and set switches in accordance with Test Chart Test 275.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	For Tests 275, 276, 277, 279— Dial tone removed. For Test 278— If register is arranged for centrex and dial tone is removed after directing digit 9— Dial tone silenced after digit 9 is dialed. If register is arranged for centrex and dial tone is returned after directing digit 9— Dial tone still heard after digit 9 is dialed.
16	Momentarily operate RL key.	All lamps extinguished.
17	Repeat Steps 13 through 16, as required for Tests 276 through 279.	
18	Restore all keys and switches and remove all patching cords not required in next test.	

STEP	ACTION	VERIFICATION
AC.	**Line Location, Class of Service, Observed Call, Storing, and Verification of Trouble Recorder Leads**	
13	Operate keys and set switches in accordance with Test Chart Test 280. ***Note:*** Do not select a line location used for a long-loop customer with range extension for unigauge cabling.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digit 0 (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, FR_, CN_, RG_, NOB or OBS CT_, CU_, CGA or CGB CR, FT_, FU_, VG_, HG_, VF_, CNS, and RP or TP designations perforated. If dial pulsing is provided— DT designation perforated. If TOUCH-TONE pulsing is provided— MF designation perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Repeat Steps 13 through 16, as required for Tests 281 through 292.	
18	Restore all keys and switches and remove all patching cords not required in next test.	
AD.	**Precision Pulsing Test (3A Pulse Generating Test Set)**	
17	Operate keys and set switches in accordance with Test Chart Test 293.	
18	At pulse generating test set— Adjust settings so interdigital time is 185 milliseconds; pulses per second and percent break correspond to information on Test Chart with LOOP key in CLOSED position.	
19	Set PULSE SEL switch to CONTINUOUS and set PULSES PER TRAIN switch to agree with number of pulses for digit A on Test Chart.	

STEP	ACTION	VERIFICATION
20	At test set (register)— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
21	At pulse generating test set— Operate TRAIN CONTROL key to PULSE (refer to paragraph 3.01).	
22	Observe number of digits pulsed with counter tube.	At test set (register)— Dial tone silenced. At MTF— Trouble record taken. Digits on Test Chart match designations perforated. ***Note:*** Designations perforated may indicate a 3- digit vacant code or a 7-digit local area code.
23	Operate TRAIN CONTROL key to NOR.	
24	Momentarily operate RL key.	All lamps extinguished.
25	Repeat Steps 17 through 24, as required for Tests 294 through 298.	
26	Restore all keys and switches and remove all patching cords not required in next test.	

AD.1 Precision Pulsing Test (4A Signaling Test Set)

20	Operate keys and set switches in accordance with Test Chart Test 299.	
21	At signaling test set—main module— Adjust settings so pulses per second and percent break correspond to information on Test Chart.	OPERATE-CLEAR lamp lighted.
22	At signaling test set—loop interface unit— Set FUNCTION switch to SR.	
23	At test set (register)— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
24	At signaling test set—main module— Momentarily operate keyset # key to allow a repeated discrete train of pulses with an interdigital time of 185 ms.	

STEP	ACTION	VERIFICATION
25	Momentarily operate a keyset key to agree with number of pulses for digit A_ on Test Chart (refer to paragraph 3.01).	WAIT TO DIAL lamp lighted. At test set (register)— Dial tone silenced. At MTF— Trouble record taken. Digits on Test Chart match designations perforated. ***Note:*** Designations perforated may indicate a 3-digit vacant code or a 7-digit local area code.
26	At signaling test set—main module— Operate OPERATE-CLEAR key to CLEAR.	OPERATE-CLEAR lamp extinguished. WAIT TO DIAL lamp extinguished.
27	At test set (register)— Momentarily operate RL key.	All lamps extinguished.
28	Repeat Steps 20 through 27, as required for Tests 300 through 304.	
29	Restore all keys and switches and remove all patching cords not required in next test.	

AE. Intracentrex Call

13	Operate keys and set switches in accordance with Test Chart Test 305.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— paragraph 3.01).	Dial tone is silenced. Trouble record taken. PK, SCK, number dialed, class of service designations perforated. If 4-digit call— X11 designation perforated. If 5-digit call— FVD designation perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Repeat Steps 13 through 16, as required for Test 306.	
18	Restore all keys and switches and remove all patching cords not required in next test.	

STEP	ACTION	VERIFICATION
AF.	**11X Special Codes—(Nonservice Codes) Originating Register Equipped for Centrex Service Only**	
13	Operate keys and set switches in accordance with Test Chart Test 307.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, 11, A_ digit dialed designations perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Repeat Steps 13 through 16, as required for Test 308.	
18	Restore all keys and switches and remove all patching cords not required in next test.	
AG.	**Zero Operator Calls for Centrex Service**	
13	Operate keys and set switches in accordance with Test Chart Test 309.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digit 0 (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. A4, 7; X11 or FVD class of service designations perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Restore all keys and switches and remove all patching cords not required in next test.	
AH.	**1XX Special Codes for Centrex Service**	
15	Operate keys and set switches in accordance with Test Chart Test 310.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.

STEP	ACTION	VERIFICATION
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01); ***start timing.***	Dial tone silenced. If a translator is used to determine exact number of digits to be registered— Trouble record taken. PK, SCK, 2DT, A_ and B_ digits dialed designations perforated. If repetitive digit timing is provided or if A_ translator is used to determine minimum number of digits to be registered with timing for a possible additional digit and register is equipped with transistor digit timer— In 3 to 4 seconds— Trouble record taken. PK, SCK, 2DT, digits dialed designations perforated. If register is equipped with cold cathode tube timer— In 3 to 5 seconds— Trouble record taken. PK, SCK, 2DT, digits dialed designations perforated. For Test 320— Trouble record immediately taken. PK, SCK, 2DT, and digits dialed designations perforated. For Tests 321, 322, and 323— Overflow tone heard.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 311 through 323.	
20	Restore all keys and switches and remove all patching cords not required in next test.	

AI. Deleted

AJ. Low- and High-Level Signal Test

15	Operate keys and set switches in accordance with Test Chart Test 324.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Key digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. Digits keyed designations perforated.
18	Momentarily operate RL key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
19	Repeat Steps 15 through 18, as required for Test 325.	
20	Restore all keys and switches and remove all patching cords not required in next test.	

AK. Maximum and Minimum Frequency Test

15	Operate keys and set switches in accordance with Test Chart Test 326.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Key digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. Digits keyed designations perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Test 327.	
20	Restore all keys and switches and remove all patching cords not required in next test.	

AL. Single-Frequency Test

15	Operate keys and set switches in accordance with Test Chart Test 328.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Momentarily operate SF-IA key.	Dial tone still heard. At MTF— AS lamp remains lighted.
18	At test set— Key digits shown on Test Chart (refer to paragraph 3.01).	Trouble record taken. Digits keyed designations perforated.
19	Momentarily operate RL key.	All lamps extinguished.
20	Repeat Steps 15 through 19, as required for Tests 329 through 335.	
21	Restore all keys and switches and remove all patching cords not required in next test.	

STEP	ACTION	VERIFICATION
AM.	**Special Three-Frequency Test**	
15	Operate keys and set switches in accordance with Test Chart Test 336.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Momentarily operate SF-IA key.	Dial tone still heard. At MTF— AS lamp remains lighted.
18	At test set— Key digits shown on Test Chart (refer to paragraph 3.01).	Trouble record taken. Digits keyed designations perforated.
19	Momentarily operate RL key.	All lamps extinguished.
20	Repeat Steps 15 through 19, as required for Tests 337 through 339.	
21	Restore all keys and switches and remove all patching cords not required in next test.	
AN.	**Regular Precision Pulsing Test—TOUCH-TONE Calling (3A Pulse Generating Test Set)**	
18	Operate keys and set switches in accordance with Test Chart Test 340.	
19	At pulse generating test set— Adjust settings for 11 pulses per second at 56 percent break with LOOP key in OPEN position.	
20	Set PULSE SEL switch to SINGLE TRAIN.	
21	Set PULSE PER TRAIN switch to 3.	
22	Operate LOOP key to CLOSED.	
23	At test set (register)— Set L switch to OFF.	
24	Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
25	At test set (register)— Key A_, B_, C_ digits in accordance with Test Chart (refer to paragraph 3.01).	

STEP	ACTION	VERIFICATION
26	At pulse generating test set— Operate LOOP key to OPEN.	
27	At test set (register)— Depress and hold key in accordance with DEPRESS and HOLD KEY column on Test Chart.	
28	At pulse generating test set— Operate TRAIN CONTROL key to PULSE.	At test set (register)— Dial tone silenced. At MTF— Trouble record taken. A_, B_, C_ digits designations perforated. D_, E_, F_, G_ digits designations perforated corresponding to key held in Step 27.
29	At test set register— Release key held in Step 27.	
30	Momentarily operate RL key.	All lamps extinguished.
31	At pulse generating test set— Operate TRAIN CONTROL key to NOR.	
32	Repeat Steps 18 through 31, as required for Tests 341 through 343.	
33	Restore all keys and switches and remove all patching cords not required in next test.	
AN. 1	**Regular Precision Pulsing Test—TOUCH-TONE Calling (4A Signaling Test Set)**	
21	Operate keys and set switches in accordance with Test Chart Test 344.	
22	At signaling test set—main module— Adjust settings for 11 pulses per second at 56 percent break.	
23	Operate GEN SUPV key to ON HK.	
24	At signaling test set-loop interface unit— Set FUNCTION switch to SR.	
25	At test set (register)— Set L switch to OFF.	Dial tone heard. At MTF— AS lamp lighted.
27	At test set (register)— Key A_, B_, C_ digits in accordance with Test Chart (refer to paragraph 3.01).	

STEP	ACTION	VERIFICATION
28	At signaling test set—main module— Operate GEN SUPV key to OFF HK.	
29	At test set (register)— Depress and hold key in accordance with DEPRESS AND HOLD KEY column on Test Chart.	
30	At signaling test set—main module— Momentarily operate keyset * key.	
31	Momentarily operate keyset 1 key.	WAIT TO DIAL lamp lighted. At test set (register)— Dial tone silenced. At MTF— Trouble record taken. A_, B_, C_ digits designations perforated. D_, E_, F_, G_ digits designations perforated corresponding to key held in Step 29.
32	At signaling test set—main module— Operate OPERATE-CLEAR key to CLEAR.	OPERATE-CLEAR lamp extinguished. WAIT TO DIAL lamp extinguished.
33	At test set (register)— Momentarily operate RL key.	All lamps extinguished.
34	Repeat Steps 21 through 33, as required for Tests 345 through 347.	
35	Restore all keys and switches and remove all patching cords not required in next test.	

AO. Low Level Precision Pulsing Test (3A Pulse Generating Test Set)

18	Operate keys and set switches in accordance with Test Chart Test 348.	
19	At pulse generating test set— Adjust settings for 11 pulse per second at 56 percent break with LOOP key in OPEN position.	
20	Set PULSE SEL switch to SINGLE TRAIN.	
21	Set PULSES PER TRAIN switch to 3.	
22	Operate LOOP key to CLOSED.	
23	At test set (register)— Set L switch to OFF.	

STEP	ACTION	VERIFICATION
24	Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
25	At test set (register)— Key A_, B_, C_ digits in accordance with Test Chart (refer to paragraph 3.01).	
26	At pulse generating test set— Operate LOOP key to OPEN.	
27	At test set (register)— Depress and hold key in accordance with DEPRESS AND HOLD KEY column on Test Chart.	
28	At pulse generating test set— Operate TRAIN CONTROL key to PULSE.	At test set (register)— Dial tone silenced. At MTF— Trouble record taken. A_, B_, C_ digits designations perforated. D_, E_, F_, G_ digits designations perforated corresponding to key held in Step 27.
29	At test set (register)— Release key held in Step 27.	
30	Momentarily operate RL key.	All lamps extinguished.
31	At pulse generating test set— Operate TRAIN CONTROL key to NOR.	
32	Repeat Steps 18 through 31, as required for Tests 349 through 351.	
33	Restore all keys and switches and remove all patching cords not required in next test.	
AO. 1	**Low-Level Precision Pulsing Test (4A Signaling Test Set)**	
21	Operate keys and set switches in accordance with Test Chart Test 352.	
22	At signaling test set—main module— Adjust settings for 11 pulses per second at 56 percent break.	
23	Operate GEN SUPV key to ON HK.	
24	At signaling test set—loop interface unit— Set FUNCTION switch to SR.	

STEP	ACTION	VERIFICATION
25	At test set (register)— Set L switch to OFF.	
26	Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
27	At test set (register)— Key A_, B_, C_ digits in accordance with Test Chart (refer to paragraph 3.01).	
28	At signaling test set—main module— Operate GEN SUPV key to OFF HK.	
29	At test set (register)— Depress and hold key in accordance with DEPRESS AND HOLD KEY column on Test Chart.	
30	At signaling test set—main module— Momentarily operate keyset * key.	
31	Momentarily operate keyset 1 key.	WAIT TO DIAL lamp lighted. At test set (register)— Dial tone silenced. At MTF— Trouble record taken. A_, B_, C_ digits designations perforated. D_, E_, F_, G_ digits designations perforated corresponding to key held in Step 29.
32	At signaling test set—main module— Operate OPERATE-CLEAR key to CLEAR.	OPERATE-CLEAR lamp extinguished. WAIT TO DIAL lamp extinguished.
33	At test set (register)— Momentarily operate RL key.	
34	Repeat Steps 21 through 33, as required for Tests 353 through 355.	
35	Restore all keys and switches and remove all patching cords not required in next test.	
AP.	**Maximum and Minimum Frequency Precision Pulsing Test (3A Pulse Generating Test Set)**	
18	Operate keys and set switches in accordance with Test Chart Test 356.	
19	At pulse generating test set— Adjust settings for 11 pulses per second at	

STEP	ACTION	VERIFICATION
	56 percent break with LOOP key in OPEN position.	
20	Set PULSE SEL switch to SINGLE TRAIN.	
21	Set PULSES PER TRAIN switch to 4.	
22	Operate LOOP key to CLOSED.	
23	At test set (register)— Set L switch to OFF.	
24	Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
25	At test set (register)— Key A_, B_, C_ digits in accordance with Test Chart (refer to paragraph 3.01).	
26	At pulse generating test set— Operate LOOP key to OPEN.	
27	At test set (register)— Depress and hold key in accordance with DEPRESS AND HOLD KEY column on Test Chart.	
28	At pulse generating test set— Operate TRAIN CONTROL key to PULSE.	At test set (register)— Dial tone silenced. At MTF— Trouble record taken. A_, B_, C_ digits designations perforated. D_, E_, F_, G_ digit designations perforated corresponding to key held in Step 27.
29	At test set (register)— Release key held in Step 27.	
30	Momentarily operate RL key.	All lamps extinguished.
31	At pulse generating test set— Operate TRAIN CONTROL key to NOR.	
32	Repeat Steps 18 through 31, as required for Tests 357 through 363.	
33	Restore all keys and switches and remove all patching cords not required in next test.	

STEP	ACTION	VERIFICATION
AP.1 Maximum and Minimum Frequency Precision Pulsing Test (4A Signaling Test Set)		
21	Operate keys and set switches in accordance with Test Chart Test 364.	
22	At signaling test set—main module— Adjust settings for 11 pulses per second at 56 percent break.	
23	Operate GEN SUPV key to ON HK.	
24	At signaling test set—loop interface unit— Set FUNCTION switch to SR.	
25	At test set (register)— Set L switch to OFF.	
26	Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
27	At test set (register)— Key A_, B_, C_ digits in accordance with Test Chart (refer to paragraph 3.01).	
28	At signaling test set—main module— Operate GEN SUPV key to OFF HK.	
29	At test set (register)— Depress and hold key in accordance with DEPRESS AND HOLD KEY column on Test Chart.	
30	At signaling test set—main module— Momentarily operate keyset * key.	
31	Momentarily operate keyset 1 key.	WAIT TO DIAL lamp lighted. At test set (register)— Dial tone silenced. At MTF— Trouble record taken. A_, B_, C_ digits designations perforated. D_, E_, F_, G_ digit designations perforated corresponding to key held in Step 29.
32	At signaling test set—main module— Operate OPERATE-CLEAR key to CLEAR.	OPERATE-CLEAR lamp extinguished. WAIT TO DIAL lamp extinguished.
33	At test set (register)— Momentarily operate RL key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
34	Repeat Steps 21 through 33, as required for Tests 365 through 371.	
35	Restore all keys and switches and remove all patching cords not required in next test.	
AQ.	**Long Pulse Precision Pulsing Test (3A Pulse Generating Test Set)**	
18	Operate keys and set switches in accordance with Test Chart Test 372.	
19	At pulse generating test set— Adjust settings for 11 pulses per second at 44 percent break with LOOP key in OPEN position.	
20	Set PULSE SEL switch to SINGLE TRAIN.	
21	Set PULSES PER TRAIN switch to 4.	
22	Operate LOOP key to CLOSED.	
23	At test set (register)— Set L switch to OFF.	
24	Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
25	At test set (register)— Key A_, B_, C_ digits in accordance with Test Chart (refer to paragraph 3.01).	
26	At pulse generating test set— Operate LOOP key to OPEN.	
27	At test set (register)— Depress and hold key in accordance with DEPRESS AND HOLD KEY column on Test Chart.	
28	At pulse generating test set— Operate TRAIN CONTROL key to PULSE.	At test set (register)— Dial tone silenced. At MTF— Trouble record taken. A_, B_, C_ digits designations perforated. D_, E_, F_, G_ digits designations perforated corresponding to key held in Step 27.
29	At test set (register)— Release key held in Step 27.	

STEP	ACTION	VERIFICATION
30	Momentarily operate RL key.	All lamps extinguished.
31	At pulse generating test set— Operate TRAIN CONTROL key to NOR.	
32	Repeat Steps 18 through 31, as required for Tests 373 through 375.	
33	Restore all keys and switches and remove all patching cords not required in next test.	
AQ.1 Long Pulse Precision Pulsing Test (4A Signaling Test Set)		
21	Operate keys and set switches in accordance with Test Chart Test 376.	
22	At signaling test set—main module— Adjust settings for 11 pulses per second at 44 percent break.	
23	Operate GEN SUPV key to ON HK.	
24	At signaling test set—loop interface unit— Set FUNCTION switch to SR.	
25	At test set (register)— Set L switch to OFF.	
26	Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
27	At test set (register)— Key A_, B_, C_ digits in accordance with Test Chart (refer to paragraph 3.01).	
28	At signaling test set—main module— Operate GEN SUPV key to OFF HK.	
29	At test set (register)— Depress and hold key in accordance with DEPRESS AND HOLD column on Test Chart.	
30	At signaling test set—main module— Momentarily operate keyset * key.	
31	Momentarily operate keyset 1 key.	WAIT TO DIAL lamp lighted. At test set (register)— Dial tone silenced. At MTF— Trouble record taken.

STEP	ACTION	VERIFICATION
		A_, B_, C_ digits designations perforated. D_, E_, F_, G_ digit designations perforated corresponding to key held in Step 29.
32	At signaling test set—main module— Operate OPERATE-CLEAR key to CLEAR.	OPERATE-CLEAR lamp extinguished. WAIT TO DIAL lamp extinguished.
33	At test set (register)— Momentarily operate RL key.	All lamps extinguished.
34	Repeat Steps 21 through 33, as required for Tests 377 through 379.	
35	Restore all keys and switches and remove all patching cords not required in next test.	
AR.	**CCSA Call—Prefix Digit 8**	
15	Operate keys and set switches in accordance with Test Chart Test 380.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. LT and digits dialed designations perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 381 through 383.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
AS.	**Interchangeable Codes and/or NPA-411 Information Codes**	
13	Operate keys and set switches in accordance with Test Chart Test 384.	
14	Insert make-busy plug into ORMB_ jack associated with register under test.	
15	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.

STEP	ACTION	VERIFICATION
16	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken (refer to Table A).
17	Momentarily operate RL key.	All lamps extinguished.
18	Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
19	At register frame— Block nonoperated OVL relay.	
20	At test set— Dial 1, A_ through H_ digits for Test 386 (refer to paragraph 3.01); ***start timing.***	Dial tone silenced.
21	In 10 seconds— Dial J_, K_ digits.	Trouble record taken. LT1, FAC designations perforated.
22	Momentarily operate RL key.	All lamps extinguished.
23	At register frame— Remove blocking tool from OVL relay.	
24	Repeat Steps 13 through 23, as required for Tests 385 through 388.	
25	At MTF— Remove make-busy plug from ORMB_ jack.	
26	Restore all keys and switches and remove all patching cords not required in next test.	

TABLE A

TEST NO.	TIME INTERVAL BEFORE TROUBLE RECORD TAKEN	TROUBLE RECORDER CARD PERFORATIONS
384	3 to 4 Seconds	LT1, OR
385	3 to 4 Seconds	X11, FAC
386	—	LT1, FAC
387	—	LT, OR

AT. C_ Digit Translation

13	Operate keys and set switches in accordance with Test Chart Test 388.	

STEP	ACTION	VERIFICATION
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
15	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. For Test 388— FAC, X11 designations perforated. For Test 389— FAC, LT1 designations perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Repeat Steps 13 through 16, as required for Test 389.	
18	Restore all keys and switches and remove all patching cords not required in next test.	
AU.	**Range Extension for Unigauge Cabling**	
15	Operate keys and set switches in accordance with Test Chart Test 390.	
16	At test set— Momentarily operate STT key.	For Tests 390 and 392— Dial tone heard. At MTF— AS lamp lighted. For Tests 391 and 393— Dial tone ***not*** heard. At MTF— AS lamp ***not*** lighted.
17	At test set— Momentarily operate RL key.	All lamps extinguished.
18	Repeat Steps 15 through 17, as required for Tests 391 through 393.	
19	Restore all keys and switches and remove all patching cords not required in next test.	
AV.	**Unused Frequency Combinations**	
13	Operate keys and set switches in accordance with Test Chart Test 394.	
14	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.

STEP	ACTION	VERIFICATION
15	At test set— Key digits in accordance with Test Chart (refer to paragraph 3.01).	
16	Momentarily operate RL key.	Overflow tone silenced. All lamps extinguished.
17	Repeat Steps 13 through 16, as required for Test 395.	
18	Restore all keys and switches and remove all patching cords not required in next test.	

AW. B_ Digit Translation

15	Operate keys and set switches in accordance with Test Chart Test 396.	
16	At test Set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. PK, SCK, and digits dialed designations perforated. If digit 0, 1, or 8 was prefixed to number dialed— LT2, LT1, or LT3 designations perforated, respectively.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 397 through 409.	
20	Restore all keys and switches and remove all patching cords not required in next test.	

AX. CCSA Call—Access Digit 8

15	Operate keys and set switches in accordance with Test Chart Test 410.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. LT3 designation perforated.

STEP	ACTION	VERIFICATION
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Test 411.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
AY.	**Toll Diversion**	
24	Operate keys and set switches in accordance with Test Chart Test 412.	
25	At MTF— Operate VMT1, T1 REV keys.	
26	At test set— Momentarily operate STT key.	Dial tone heard At MTF— As lamp lighted
27	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. No trouble record taken. Voltmeter reading of approximately 105-volts when register was seized and during outpulsing from test set and a momentary increase to 120-volts at end of pulsing from test set indicates correct tip and ring polarity. ***Note:*** If the tip and ring are reversed, voltmeter reading will be 120-volts on seizure and outpulsing and 105-volts at end of pulsing.
28	Momentarily operate RL key.	All lamps extinguished.
29	Repeat Steps 24 through 28, as required for Test 413.	
30	Restore all keys and switches and remove all patching cords not required in next test.	
AZ.	**Wideband Service**	
15	Operate keys and set switches in accordance with Test Chart Test 414.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. For Test 414—

STEP	ACTION	VERIFICATION
		PK and keyed digits designations perforated. For Test 415— PK1 and keyed digits designations perforated. For Tests 416, 417— Overflow tone heard.
18	Momentarily operate RL key.	All lamps extinguished. For Tests 416, 417— Overflow tone silenced.
19	Repeat Steps 15 through 18, as required for Tests 415 through 417.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
BA.	**No Coin Present**	
15	Operate keys and set switches in accordance with Test Chart Test 418.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— AS lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to 3.01).	Dial tone silenced. Trouble record taken. SCN and keyed digits designations perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18, as required for Tests 419 through 421.	
20	Restore all keys and switches and remove all patching cords not required in next test.	
BB.	**Lead Tests Between Originating Registers and Completing Markers**	
15	Operate keys and set switches in accordance with Test Chart Test 422.	
16	At the master test control circuit (MTC)— Ground (7T) of MFC1 relay.	KCH relay operates.
17	In office without the AMRST— In ***each*** completing marker block non-operated the RTST relay, or in office with the AMRST— At the AMRST frame— Insulate (5-6T) of DOR1 relay.	Either action will cause a trouble record to be taken on any outgoing OR test call.

STEP	ACTION	VERIFICATION
18	At test set— Momentarily operate SST relay.	Dial tone heard. At MTF— AS lamp lighted.
19	At test set— Dial digits shown on test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble Record taken. PK, SCK, number dialed, class of service, RP if ring party, TP if tip party designations perforated. For tests 422 through 426— LT designation perforated. For tests 425 and 431— OBS designation perforated. For tests 428 through 432— FAC, LT designation perforated. For test 427 and 433— FAC, LT3 designations perforated.
20	Momentarily operate RL key.	All lamps extinguished.
21	Repeat Steps 15 through 20, as required for Tests 423 through 433.	
22	Remove all applied ground cords, insulating and blocking tools, patching cords, and restore all keys and switches.	

BC. ▶Digit 8 Access Call to Enhanced Private Communications System (EPSCS) No. 1 ESS

15	Operate keys and set switches in accordance with Test Chart Test 434.	
16	At test set— Momentarily operate STT key.	Dial tone heard. At MTF— As lamp lighted.
17	At test set— Dial digits shown on Test Chart (refer to paragraph 3.01).	Dial tone silenced. Trouble record taken. A4, 7; LT3 designations perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	Repeat Steps 15 through 18 as required for Test 435.	
20	Restore all keys and switches and remove all patching cords not required in next test.◀	

5. PREPARATION OF TEST CHART

5.01 The Test Chart is used as a particular number chart and provides the priming information required for each test. Information obtained from local office records should be used to fill in the Test Chart in the following manner:

(a) Record the required class of service in the CLASS OF SERVICE columns. Do not use a manual or CCSA class of service unless specified.

(b) When office is arranged for rate treatment, record the required rate treatment in the RATE TREATMENT column.

(c) When required to simulate a tip-party ground, record the CN key in the MTF MISCELLANEOUS KEYS AND/OR SWITCHES column.

(d) ***For Coin Class***

TYPE OF REGISTER	RECORD CN KEY OF TRUNK TEST CKT IN MISC COLUMN OF MTF	RECORD CN KEY OF TEST SET IN MISC COLUMN OF TEST SET
Coin First — Grd Start	√	√
Coin First — Loop Start	√	
Dial-Tone-First — Loop Start	√	
Dial-Tone-First — Loop Start and Coin First — Grd Start	√	√

When coin service improvement (dial-tone-first) is provided, record CN, DTNF keys in the MTF MISCELLANEOUS KEYS AND/OR SWITCHES column.

(e) When centrex class of service is selected, record prefix digit 9 in PREFIX DIGIT column.

(f) Record the A through F digits, as required for NPA and/or office codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns. The selection of codes should be made so that each usable numerical is employed for each dialable or TOUCH-TONE digit. When selecting an office code for a 7-digit call do not select a 0, 1, or any numerical that will be recognized as a code or treated as an unused digit for the B_ digit.

(g) When dial pulse calling, record dial speed loop condition under associated PULSING CONT columns.

(h) When TOUCH-TONE calling, record PB, RP keys in TEST SET MISC KEYS columns.

5.02 ***Test A***

(1) For Tests 5, 6, 13, and 14, apply (a), (b), (c), and (f) of paragraph 5.01 using a centrex class of service.

(2) For Tests 7, 8, 15, 16, 19, and 25, apply (a), (d), and (f) of paragraph 5.01 using a coin class of service.

(3) For all other Tests, apply (a) through (f) of paragraph 5.01, as required using various classes of service.

5.03 ***Test B***

(1) Apply (a) and (d) of paragraph 5.01 using a coin class of service other than manual.

(2) Record the A through C digits, as required for a free call in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.04 ***Test C***

- For Tests 34 and 35, apply (a) through (d) of paragraph 5.01, as required using a noncentrex class of service.

5.05 ***Test D***

- For Tests 36 and 37, apply (a), (b), (d), and (g) or (h) of paragraph 5.01, as required using a coin or noncoin manual class of service.

5.06 ***Test E***

- For Tests 38 through 41, apply (a), (b), (c), and (f) of paragraph 5.01, as required for a foreign area code using a noncoin class of service.

5.07 ***Test F***

(1) For Tests 42 and 44, apply (a), (b), and (c) of paragraph 5.01, as required using a centrex class of service.

(2) For Tests 43 and 45, apply (a), (b), and (c) of paragraph 5.01, as required using a centrex class of service.

(3) For Tests 42 through 45, record the A digit, as required for a 11X service code in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) column.

5.08 ***Test G***

(1) For Tests 46 through 51, apply (a) through (d) of paragraph 5.01, as required using various classes of service.

(2) For Tests 46 and 49, record the A digit, as required for a X11 service code in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) column.

(3) For Tests 48 and 51, record the A through C digits, as required for an assigned NPA code in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) column.

5.09 ***Test H***

(1) For Tests 52, 54, 55 and 57, apply (a), (c), and (f) of paragraph 5.01 using a noncentrex class of service.

(2) For Tests 53 and 56, apply (a), (b), (c), and (f) of paragraph 5.01 using a centrex class of service.

5.10 ***Test I***

(1) For Tests 58 and 60, apply (a) and (b) of paragraph 5.01, as required using a noncoin class of service.

(2) For Test 59, apply (a) and (d) of paragraph 5.01 using a coin class of service.

(3) For Test 60, record the A through F digits, as required for an assigned NPA and office code in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

(4) For Test 61, apply (a) and (b) of paragraph 5.01 using a centrex class of service.

5.11 ***Test J***

(1) For Test 62 apply (a) and (d) of paragraph 5.01 using a coin class of service other than manual as required for coin-first service.

(2) For Test 63 apply (a) and (d) of paragraph 5.01 using a coin class of service other than manual as required for dial-tone-first coin service (earlier version).

(3) For Test 63, record the A through G digits, as required for an assigned office code and number in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.12 ***Test K***

- For Tests 64 through 67, apply (a), (b), and (g) of paragraph 5.01 using a 2-party class of service requiring party test.

5.13 ***Test L***

- Apply (a), (b), (e), and (g) or (h) of paragraph 5.01, as required using a class of service and rate treatment for reversal of tip and ring leads for centrex attendant trunks or tie lines.

5.14 ***Test M***

(1) For Test 69 and 72, apply (a) and (d) of paragraph 5.01 using a coin class of service.

(2) For Tests 70 and 73, apply (a) and (b) of paragraph 5.01 using a noncoin class of service.

(3) For Tests 71 and 74, apply (a) and (b) of paragraph 5.01 using a centrex class of service.

5.15 ***Test N***

(1) For Tests 75, 77, 78, and 80, apply (a), (b), and (f) of paragraph 5.01 using a noncoin class of service.

(2) For Tests 76 and 79, apply (a), (b), and (f) of paragraph 5.01 using a centrex class of service.

5.16 ***Test N.1***

(1) For Tests 81 through 100, apply (a) and (b) of paragraph 5.01 using a class of service having access to the IDDD route selected.

(2) Record country codes and national numbers, as required in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns as follows:

(a) For Tests 82, 83, 84, 90, 91, and 92, record the A through J digits for country codes and national numbers, when the register is arranged for time for additional digits after 7, 8, or 9 digits.

(b) For Tests 85 through 88 and 93 through 96, record the A through M digits for country codes and national numbers, when the register is arranged for marker start after 9, 10, 11, or 12 digits.

(c) For Tests 97 through 100, record the A through L digits for country codes and national numbers, when the register is arranged to require an end-of-dial signal after 8, 9, 10, or 11 digits or recognize an end-of-dial signal after the register has begun timing for additional digits.

5.17 ***Test N.2***

(1) For Tests 101 through 135, apply (a) and (b) of paragraph 5.01 using a class of service having access to the IDDD route selected.

(2) Record country codes and national numbers, as required in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns as follows:

(a) For Tests 101 through 106 and 114 through 119, record the A, B, and C digits for country codes, when the register is arranged to record the maximum number of digits (11 or 12 digits).

(b) For Tests 107, 108, 109, 120, 121, and 122, record the A through J digits for country codes and national numbers, when the register is arranged to time for additional digits after 7, 8, or 9 digits.

(c) For Tests 110 through 113 and 123 through 126, record the A through J digits for country codes and national numbers, when the register is arranged for marker start after 9, 10, 11, or 12 digits.

(d) For Tests 127 through 130, record the A through L digits for country codes and national numbers, when the register is arranged to require an end-of-dial signal after 8, 9, 10, or 11 digits or recognize an end-of-dial signal after the register has begun timing for additional digits.

5.18 ***Test O***

(1) For Tests 147, 153, 156, and 157, apply (a) and (b) of paragraph 5.01 using a centrex class of service.

(2) For all other Tests, apply (a) of paragraph 5.01 using a class of service having access to the route selected.

(3) Record miscellaneous codes and any additional digits, as required in the DIAL OR KEY DIGITS TEST SET (CALLED NUMBER) columns as follows:

(a) For Tests 136 through 141, record all unused A digits and any additional digits required for the register to engage a marker.

(b) For Tests 142 through 147, 154, and 157, record all unused A digits and any additional digits required for the register to engage the marker for 1X-type codes.

(c) For Tests 148 through 153, 155, and 156, record all used A digits and any additional digits required for the register to engage the marker for 11- and 11X-type codes.

5.19 ***Test P***

(1) For Tests 169, 175, 178, and 179, apply (a) and (b) of paragraph 5.01 using a centrex class of service.

(2) For all other Tests apply (a) of paragraph 5.01 using a class of service having access to route selected.

(3) Record miscellaneous codes and any additional digits, as required in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns as follows:

(a) For Tests 158 through 163, record unused A digits and/or used A digits and unused B digits and any additional digits required for the register to engage the marker.

(b) For Tests 164 through 169, 176, and 178, record all used A and B digits and any additional digits required for the register to engage the marker for 1XX--type codes.

(c) For Tests 170 through 175, 177, and 179, record all used A and B digits and any additional digits required for the register to engage the marker for 11- and 11XX-type codes.

5.20 ***Test Q***

(1) For Tests 180 through 219 and 224 through 236 apply (a) through (d) of paragraph 5.01 using various classes of service.

(2) For Tests 220 through 223 and 227 apply (a) through (c) of paragraph 5.01 using a class of service having access to the CCSA network.

(3) Record NPA codes, office codes, miscellaneous codes, and any additional digits, as required in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns as follows:

(a) For Tests 180 through 186, record the A and B or A, B, and C digits for assigned noninterchangeable local office codes required for the register to engage the pretranslator and any additional digits required for the register to engage the marker.

(b) For Test 188, record the A, B, and C digits for an assigned NPA code required for the register to engage the pretranslator.

(c) For Tests 189 through 199, record the A or A and B digits for 1X- or 1XX type codes required for the register to engage the pretranslator and any additional digits required for the register to engage the marker.

(d) For Tests 200 through 208, record the A or A and B digits for 11X- or 11XX-type codes required for the register to engage the pretranslator and any additional digits required for the register to engage the marker.

(e) For Tests 209 through 223, and 230 through 237, record the A and C, A and B, or A, B, and C digits for assigned N0N-, N1N-, and NN0-type NPA and/or office codes required for the register to engage the pretranslator and any additional digits required for the register to engage the marker.

Note: When the register is arranged for interchangeable codes, record the A, B, and C digits for an interchangeable area code for Tests 210, 214, 220, 230, and 231.

(f) For Test 224, record the A, B, and C digits for a 11 foreign area directing code required for the register to engage the pretranslator and any additional digits required for the register to engage the marker.

(g) For Tests 225 and 227, record the A, B, and C digits for a vacant code required for the register to engage the pretranslator and any additional digits required for the register to engage the marker.

(h) For Tests 226 and 228, record the A, B, and C digits for an assigned noninterchangeable office code required for the register to engage the pretranslator and any additional digits required for the register to engage the marker.

(i) For Tests 229 record the A, B, and C digits for an assigned noninterchangeable NPA code required for the register to engage the pretranslator and any additional digits required for the register to engage the marker.

5.21 ***Test Q.1***

(1) For Tests 238 through 254, apply (a) and (b) of paragraph 5.01 using a class of service having access to the IDDD route selected.

(2) When an end-of-dial signal is required, record KP in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) column and 4W in the TEST SET MISC KEYS column.

(3) Record country codes and national numbers as required, in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns as follows:

(a) For Tests 238, 239, and 240, record the A through L digits for country codes and national numbers as required, when the pretranslator indicates to the register to engage a marker after 9 or 10 digits.

(b) For Tests 241, 242, and 243, record the A through J digits for country codes and national numbers as required, when the pretranslator indicates to the register to time for additional digits after 7, 8, or 9 digits.

(c) For Test 244, record the A, B, and C digits for a vacant code required for the regiter to engage the pretranslator.

(d) For Tests 245 through 254, record the A through M for country codes and national numbers and required, when the pretranslator indicates to the register to engage a marker after 9, 10, 11, or 12 digits.

5.22 *Test R*

- Apply (a) and (d) of paragraph 5.01 using a coin class of service.

5.23 *Test S*

(1) Apply (a) and (b) of paragraph 5.01 using a class of service having access to a manual office.

(2) Record the A through C digits as required for a code to a manual office in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.24 *Test T*

(1) For Tests 257, apply (a), (d), and (g) or (h) of paragraph 5.01 using a coin class of service.

(2) For Test 258, apply (a), (b), and (g) or (h) of paragraph 5.01 using a noncoin class of service.

5.25 *Test U*

(1) For Test 259, apply (a) and (b) of paragraph 5.01 using a noncoin class of service.

(2) For Test 260, apply (a) and (d) of paragraph 5.01 using a coin class of service.

(3) For Test 261, apply (a) and (b) of paragraph 5.01 using a centrex class of service.

(4) For Test 261, record the A and B digits as required for repetitive digit timing for 11X special PBX and tie line codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

(5) For Tests 262 through 267, apply (a) and (b) of paragraph 5.01 using a class of service having access to the IDDD route selected.

(6) For Tests 262 through 267, record A through L digits, as required for partial digits for country code and national number in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.26 *Test V*

- Apply (a), (b), and (f) of paragraph 5.01 usng a noncoin class of service.

5.27 *Test W*

- No Test Chart preparation required.

5.28 *Test X*

(1) For Test 269, apply (a), (b), and (g) or (h) of paragraph 5.01 using a noncoin class of service.

(2) For Test 269, record the A digit using any numeral other than 0, 1, 8, or 9 and the B and C digits using any numeral in the DIAL

OR KEY DIGITS ON TEST SET (CALLED NUMBER) column.

(3) For Test 270, apply (a), (b), and (g) or (h) of paragraph 5.01 using a class of service having access to the IDDD route selected.

(4) For Test 270, record the A through M digits, as required for country codes and national numbers in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.29 ***Test Y***

- Apply (a), (d), and (f) of paragraph 5.01 using a coin class of service other than manual.

5.30 ***Test Z***

- Apply (a), (b), and (g) or (h) of paragraph 5.01 using a noncoin class of service.

5.31 ***Test AA***

(1) For Test 273, apply (a), (b), and (f) of paragraph 5.01 using a noncoin class of service.

(2) For Test 274, apply (a), (b), and (f) of paragraph 5.01 using a coin class of service.

5.32 ***Test AB***

(1) For Test 275, 276, 277, and 279, apply (a) of paragraph 5.01 using a centrex class of service.

5.33 ***Test AC***

(1) For Tests 280 through 287, apply (a) through (e) and (g) of paragraph 5.01, as required using classes of services to operate each equipped class of service tens and units register relay.

(2) For Tests 288 through 292, apply (a) through (e) of paragraph 5.01, as required using classes of services to operate each equipped class of service tens and units register relay.

5.34 ***Test AD***

(1) For Tests 293 through 298, apply (a) and (b) of paragraph 5.01 using a noncoin class of service.

(2) Record numerals 9, 8, or 7 for each A through C digit in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns. If for example, the numerals 999 are recorded for the A through C digits, determine from office records whether these numerals are translated as a local office code or a vacant code. If translation indicates a local office codes, then the numeral 9 shall also be recorded for the D through G digits. However, if translation indicates a vacant code, only the numerals for the A through C digits are recorded.

5.35 ***Test AD.1***

(1) For Tests 299 through 304, apply (a) and (b) of paragraph 5.01 using a noncoin class of service.

(2) Record numerals 9, 8, or 7 for each A through C digit in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns. If for example, the numerals 999 are recorded for the A through C digits, determine from office records whether these numerals are translated as a local office code or a vacant code. If translation indicates a local office code, then the numeral 9 shall also be recorded for the D through G digits. However, if translation indicates a vacant code, only the numerals for the A through C digits are recorded.

5.36 ***Test AE***

- For Tests 305 and 306, apply (a), (b), and (g) or (h) of paragraph 5.01 using a centrex class of service.

5.37 ***Test AF***

(1) For Tests 307 and 308, apply (a), (b), and (g) or (h) of paragraph 5.01 using a centrex class of service.

(2) Record the A digit for a 11X signal service code in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.38 ***Test AG***

- Apply (a), (b), and (g) or (h) of paragraph 5.01 using a centrex class of service.

5.39 ***Test AH***

(1) For Tests 310 through 19, apply (a), (b), (e), and (g) or (h) of paragraph 5.01 using a centrex class of service.

(2) For Tests 320 through 323, apply (a) and (b) of paragraph 5.01 using a centrex class of service.

(3) Record 1XX special codes and any additional digits, as required in the DIAL OR KEY DIGITS TEST SET (CALLED NUMBER) columns as follows:

(a) For Test 310, record the A and B digits for an assigned 1XX special code, using a "1" for the A digit (if provided) and any additional digits required to start repetitive digit timing.

(b) For Tests 311 through 316, record the A and B digits for assigned 1XX special codes, using a "1" for the A digit (if provided) and any additional digits required by an A-digit translator and when a timing interval is ***not*** required for an additional digit.

(c) For Tests 317 through 319, record the A and B digits for assigned 1XX special codes, using a "1" for the A digit (if provided) and any additional digits required by an A-digit translator and when a timing interval is required for an additional digit.

5.40 ***Test AJ***

- For Tests 324 and 325, apply (a) through (c), (e) and (f) as required using a noncoin class of service.

5.41 ***Test AK***

- For Tests 326 and 327, apply (a) through (c), (e) and (f) of paragraph 5.01, as required using a noncoin class of service.

5.42 ***Test AL***

- For Tests 328 through 335, apply (a) through (c), (e) and (f) of paragraph 5.01, as required using a noncoin class of service.

5.43 ***Test AM***

- For Tests 336 through 339, apply (a) through (c), (e) and (F) of paragraph 5.01, as required using a noncoin class of service.

5.44 ***Test AN***

(1) For Tests 340 through 343, apply (a) through (c), and (e) of paragraph 5.01 using a noncoin class of service.

(2) Record the A through C digits, as required for assigned office codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.45 ***Test AN.1***

(1) For Tests 344 through 347, apply (a) through (c), and (e) of paragraph 5.01 using a noncoin class of service.

(2) Record the A through C digits, as required for assigned office codes in the DIAL OR KEY DIGITS ON TEST SET ((CALLED NUMBER) columns.

5.46 ***Test AO***

(1) For Tests 348 through 351, apply (a) through (c), and (e) of paragraph 5.01 using a noncoin class of service.

(2) Record the A through C digits, as required for assigned office codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.47 ***Test AO.1***

(1) For Tests 352 through 355, apply (a) through (c), and (e) of paragraph 5.01 using a noncoin class of service.

(2) Record the A through C digits, as required for assigned office codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.48 ***Test AP***

(1) For Tests 356 through 363, apply (a) though (c), and (e) of paragraph 5.01 using a noncoin class of service.

(2) Record the A through C digits, as required for assigned office codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.49 ***Test AP.1***

(1) For Tests 364 through 371, apply (a) through (c), and (e) of paragraph 5.01 using a noncoin class of service.

(2) Record the A through C digits, as required for assigned office codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.50 ***Test AQ***

(1) For Tests 372 through 375, apply (a) through (c), and (e) of paragraph 5.01 using a noncoin class of service.

(2) Record the A through C digits, as required for assigned codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.51 ***Test AQ.1***

(1) For Tests 376 through 379, apply (a) through (c), and (e) of paragraph 5.01 using a noncoin class of service.

(2) Record the A through C digits, as required for assigned office codes in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.52 ***Test AR***

- For Tests 380 through 383, apply (a), (c), (e), and (f), as required using a class of service having access to the CCSA network.

5.53 ***Test AS***

- For Tests 384 through 387, apply (a), (b), (c), (e), (f), and (g) or (h) of paragraph 5.01 using interchangeable codes and a noncoin class of service.

5.54 ***Test AT***

(1) For Tests 388 and 389, apply (a), (b), (c), (e), and (g) or (h) of paragraph 5.01 using a noncoin class of service.

(2) Record the A and B digits for an assigned NN0 code and any additional digits, as required in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.55 ***Test AU***

(1) For Tests 390 through 393, apply (a) through (f) of paragraph 5.01 using a noncoin class of service.

(2) For Tests 390 and 392, record the line location of a line arranged for range extension for unigauge cabling in the LINE LOCATION columns.

(3) For Tests 391 and 393, record the line location of a line ***not*** arranged for range extension for unigauge cabling in the LINE LOCATION columns.

5.56 ***Test AV***

- For Tests 394 and 395, apply (a) of paragraph 5.01 using a noncoin class of service.

5.57 ***Test AW***

(1) For Tests 396 through 401 and 403 through 408, apply (a), (c), and (d) of paragraph 5.01 as required using a noncentrex class of service.

(2) For Tests 402 and 409, apply (a) and (b) of paragraph 5.01 using a centrex class of service.

(3) For Tests 396 and 403 record the A, B, and C digits of an assigned office code in the DIAL OR KEY DIGITS TEST SET (CALLED NUMBER) columns.

(4) For Tests 397, 398, 404, and 405, record the A and C digits of an assigned office code or interchangeable code in the DIAL OR

KEY DIGITS TEST SET (CALLED NUMBER) columns.

(5) For Tests 399 and 406, record the A through F digits of an assigned NPA and office code in the DIAL OR KEY DIGITS TEST SET (CALLED NUMBER) columns.

(6) For Tests 400, 401, 402, 407, 408, and 409, record the A and C, D through F digits of an assigned NPA or interchangeable code and an office code in the DIAL OR KEY DIGITS TEST SET (CALLED NUMBER) columns.

5.58 ***Test AX***

(1) For Tests 410 and 411, apply (a) and (b) of paragraph 5.01 using a class of service having access to the CCSA network.

(2) For Test 410, record the A through C digits for an assigned office code for the route of the CCSA network in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

(3) For Test 411, record the A through F digits for an assigned NPA and office code for the route of the CCSA network in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.59 ***Test AY***

(1) For Tests 412 and 413, apply (a), (b), and (g) or (h) of paragraph 5.01 using a class of service requiring toll diversion for certain codes.

(2) For Test 412, record the A through C digits for an assigned office code for the route requiring toll diversion in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

(3) For Test 413, record the A through F digits for an assigned NPA and office codes for the route requiring toll diversion in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

5.60 ***Test AZ***

(1) For Test 414, record the line location of a PBX trunk arranged for wideband service in the LINE LOCATION columns.

(2) For Tests 414 through 417, record the A through C digits, as required for an assigned wideband office code in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) columns.

(3) For Tests 415 through 417, apply (a) and (b) of paragraph 5.01 using a wideband class of service.

5.61 ***Test BA***

(1) For Tests 418 through 421 apply (a) and (d) of paragraph 5.01 using a coin class of service as required for coin service improvement (DTF).

(2) For Tests 418 and 419, record the A through C digits, as required for an assigned office code in the DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) colums.

5.62 ***Test BB***

(1) For Tests 422 through 433 apply (a) through (f) of paragraph 5.01, as required using various classes of service.

5.63 ***Test BC***

(1) For tests 434 and 435 apply (a) and (b) of paragraph 5.01 using a class of service having access to EPSCS No. 1 ESS.

TEST CHART

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION													TEST SET																					TEST NO.	TEST
			LINE LOCATION						CLASS OF SERVICE		RATE TREAT.		FREQ CONT (TOUCH-TONE CALLING)		MISCELLANEOUS KEYS AND/OR SWITCHES	DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER)													DE-PRESS AND HOLD KEY	PULSING CONT		MISC KEYS			PRECISION PULSE GENERATOR			
			FRAME NO.		VERT GR		HOR GR	VERT FILE								PREFIX DIGITS	A	B	C	D	E	F	G	H	J	K	L	M		SPEED	LOOP COND				PULSING SPEED	% BREAK		
			TENS	UNITS	TENS	UNITS			TENS	UNITS	TENS	UNITS	FCA	FCB																PPS DIAL	L SWITCH							
A	Regular Call	1																		1	3	6	0							10	0						1	A
		2																		3	6	0	7							10	0						2	
		3																		6	0	7	1							10	0						3	
	Dial Pulse	4																		0	7	1	3							10	0						4	
		5														9	9	9	9	7	1	3	6							10	0						5	
		6														9	8	8	8	1	2	3	4							10	0						6	
		7																		1	2	3	4							10	1						7	
	7-Digit	8																		1	2	3	4							10	2						8	
		9																		1	3	5	0									PB	RP				9	
		10																		3	5	0	7									PB	RP				10	
		11																		5	0	7	1									PB	RP				11	
	TOUCH-TONE	12																		0	7	1	3									PB	RP				12	
		13														9	9	9	9	7	1	3	5									PB	RP				13	
		14														9	8	8	8	1	2	3	4									PB	RP				14	
		15																		1	2	3	4									PB	RP				15	
		16																		1	2	3	4									PB	RP				16	
		17																					1	3	6	0				10	3						17	
		18																					3	6	0	7				10	4						18	
		19																					6	0	7	1				10	5						19	
	Dial Pulse	20																					0	7	1	3				20	6						20	
		21																					7	1	3	6				10	0						21	
		22																					1	2	3	4				10	0						22	
		23														8	9	9	9	1	2	3	1	2	3	4				10	0						23	
	10-Digit	24														8	8	8	8	1	2	3	1	2	3	4				10	0						24	
		25																					1	3	5	0						PB	RP				25	
		26																					3	5	0	7						PB	RP				26	
		27																					5	0	7	1						PB	RP				27	
	TOUCH-TONE	28																					0	7	1	3						PB	RP				28	
		29																					7	1	3	5						PB	RP				29	
		30																					1	2	3	4						PB	RP				30	
		31														8	9	9	9	1	2	3	1	2	3	4						PB	RP				31	
		32														8	8	8	8	1	2	3	1	2	3	4						PB	RP				32	

TEST CHART

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION: LINE LOCATION: FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT. TENS	RATE TREAT. UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FCB	MISCELLANEOUS KEYS AND/OR SWITCHES	TEST SET: DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER): PREFIX DIGITS			A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT: SPEED PPS DIAL	LOOP COND L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR: PULSING SPEED	% BREAK	TEST NO.	TEST
B	Marker Coin Return	33																				1	2	3	4							10	0						33	B
C	Preliminary Pulse — Register Dial Pulse	34															1	1	1	1												10	0						34	C
	Not Arranged for Centrex TOUCH-TONE	35															1	1	1	1														PB	RP				35	
D	Manual Call Coin	36																																					36	D
	Noncoin	37																																					37	
E	11 Prefix Foreign Area Dial Pulse	38															1	1				1	2	3	4							10	0						38	E
	Directing Code	39														9	1	1				1	2	3	4							10	0						39	
	TOUCH-TONE	40															1	1				1	2	3	4									PB	RP				40	
		41														9	1	1				1	2	3	4									PB	RP				41	
F	11X Service Codes Dial Pulse	42															1	1														10	0						42	F
		43														9	1	1														10	0						43	
	TOUCH-TONE	44															1	1																PB	RP				44	
		45														9	1	1																PB	RP				45	
G	X11 Service Codes and DDD	46																		1	1											10	0						46	G
	Information Codes Dial Pulse	47																1	4	1	1											10	0						47	
		48																1				4	1	1								10	0						48	
		49																		1	1													PB	RP				49	
	TOUCH-TONE	50																1	4	1	1													PB	RP				50	
		51																1				4	1	1										PB	RP				51	
H	Prefix Digit 1	52																1							1	2	3	4				10	0						52	H
	Dial Pulse	53															9	1							1	2	3	4				10	0						53	
		54																1				1	2	3	4							10	0						54	
		55																1							1	2	3	4						PB	RP				55	
	TOUCH-TONE	56															9	1							1	2	3	4						PB	RP				56	
		57																1				1	2	3	4									PB	RP				57	
I	Abandoned Call Noncoin	58																	4													10	0						58	I
	Coin	59																	4													10	0						59	
	DDD	60																							1	2						10	0						60	
	Centrex	61																9	4													10	0						61	

Test Chart (Cont)

TEST CHART

MASTER TEST FRAME PRIMING INFORMATION

TEST	TEST TITLE		TEST NO.	LINE LOCATION: FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT. TENS	RATE TREAT. UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FCB	MISCELLANEOUS KEYS AND/OR SWITCHES					
J	Abandoned Call	Coin First	62													NTFS	NTTS				
	During Coin Test	Dial Tone First	63													NTFS	NTTS				
K	Two-Party Test	Ring	64																		
			65																		
		Tip	66													CN					
			67													CN					
L	Start Pulse Signal		68													TLK					
M	Zero Operator	Coin	69																		
	Dial Pulse	Noncoin	70																		
		Centrex	71																		
		Coin	72																		
	TOUCH-TONE	Noncoin	73																		
		Centrex	74																		
N	Prefix Digit 0+		75																		
		Dial Pulse	76																		
			77																		
			78																		
		TOUCH-TONE	79																		
			80																		
N.1	Prefix Digits 01+		81																		
			82																		
			83																		
		Dial Pulse	84																		
			85																		
			86																		
			87																		
			88																		
			89																		
			90																		
		TOUCH-TONE	91																		
			92																		
			93																		
			94																		

TEST SET

TEST NO.	DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER): PREFIX DIGITS			A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT SPEED PPS DIAL	LOOP COND L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR PULSING SPEED	% BREAK	TEST NO.	TEST
62																								62	J
63																	10	0						63	
64							1	2	3	4							10	0						64	K
65							1	2	3	4							10	0						65	
66							1	2	3	4							10	0						66	
67							1	2	3	4							10	0						67	
68																								68	L
69				0													10	0						69	M
70				0													10	0						70	
71			9	0													10	0						71	
72				0															PB	RP				72	
73				0															PB	RP				73	
74			9	0															PB	RP				74	
75			0							1	2	3	4				10	0						75	N
76		9	0							1	2	3	4				10	0						76	
77			0				1	2	3	4							10	0						77	
78			0							1	2	3	4						PB	RP				78	
79		9	0							1	2	3	4						PB	RP				79	
80			0				1	2	3	4									PB	RP				80	
81		0	1	0													10	0						81	N.1
82		0	1														10	0						82	
83		0	1														10	0						83	
84		0	1														10	0						84	
85		0	1														10	0						85	
86		0	1														10	0						86	
87		0	1														10	0						87	
88		0	1														10	0						88	
89		0	1	0															PB	RP				89	
90		0	1																PB	RP				90	
91		0	1																PB	RP				91	
92		0	1																PB	RP				92	
93		0	1																PB	RP				93	
94		0	1																PB	RP				94	

Test Chart (Cont)

TEST CHART

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION														TEST SET																						TEST NO.	TEST
			LINE LOCATION						CLASS OF SERVICE		RATE TREAT.		FREQ CONT (TOUCH-TONE CALLING)		MISCELLANEOUS KEYS AND/OR SWITCHES		DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER)													DE-PRESS AND HOLD KEY	PULSING CONT		MISC KEYS			PRECISION PULSE GENERATOR					
			FRAME NO.		VERT GR		HOR GR	VERT FILE									PREFIX DIGITS		A	B	C	D	E	F	G	H	J	K	L	M		SPEED	LOOP COND				PULSING SPEED	% BREAK			
			TENS	UNITS	TENS	UNITS			TENS	UNITS	TENS	UNITS	FCA	FCB																	PPS DIAL	L SWITCH								
N.1 (Cont)	TOUCH-TONE	95																0	1															PB	RP	4W			95	N.1 (Cont)
		96																0	1															PB	RP	4W			96	
		97																0	1								KP							PB	RP	4W			97	
		98																0	1									KP						PB	RP	4W			98	
		99																0	1										KP					PB	RP				99	
		100																0	1											KP				PB	RP				100	
N.2	Prefix Digits 011+	101															0	1	1			1	3	6	0	7	1	3	6	0		10	0							101	N.2
	Dial Pulse	102															0	1	1			3	6	0	7	1	3	6	0	7		10	1							102	
		103															0	1	1			6	0	7	1	3	6	0	7	1		10	2							103	
		104															0	1	1			0	7	1	3	6	0	7	1	3		10	3							104	
		105															0	1	1			7	1	3	6	0	7	1	3	6		10	4							105	
		106															0	1	1			1	2	3	4	1	2	3	4	1		10	5							106	
		107															0	1	1													10	0							107	
		108															0	1	1													10	0							108	
		109															0	1	1													10	0							109	
		110															0	1	1													10	0							110	
		111															0	1	1													10	0							111	
		112															0	1	1													10	0							112	
		113															0	1	1													10	0							113	
	TOUCH-TONE	114															0	1	1			1	3	5	0	7	1	3	5	0				PB	RP				114	
		115															0	1	1			3	5	0	7	1	3	5	0	7				PB	RP				115	
		116															0	1	1			5	0	7	1	3	5	0	7	1				PB	RP				116	
		117															0	1	1			0	7	1	3	5	0	7	1	3				PB	RP				117	
		118															0	1	1			7	1	3	5	0	7	1	3	0				PB	RP				118	
		119															0	1	1			1	2	3	4	1	2	3	4	1				PB	RP				119	
		120															0	1	1															PB	RP				120	
		121															0	1	1															PB	RP				121	
		122															0	1	1															PB	RP				122	
		123															0	1	1															PB	RP				123	
		124															0	1	1															PB	RP				124	
		125															0	1	1															PB	RP				125	
		126															0	1	1															PB	RP				126	

Test Chart (Cont)

TEST CHART

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION: LINE LOCATION: FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT. TENS	RATE TREAT. UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FCB	MISCELLANEOUS KEYS AND/OR SWITCHES	TEST SET: DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER): PREFIX DIGITS			A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT: SPEED PPS DIAL	LOOP COND L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR: PULSING SPEED	% BREAK	TEST NO.	TEST
N.2 (Cont)	Prefix Digits 011+ — TOUCH-TONE	127														0	1	1									KP							PB	RP	4W			127	N.2 (Cont)
		128														0	1	1										KP						PB	RP	4W			128	
		129														0	1	1											KP					PB	RP	4W			129	
		130														0	1	1												KP				PB	RP	4W			130	
	Invalid Combination and Sequence — Dial Pulse	131														0	1	1	0													10	0						131	
		132														0	1	1	1													10	0						132	
	Invalid Combination and Sequence — TOUCH-TONE	133														0	1	1	0															PB	RP				133	
		134														0	1	1	1															PB	RP				134	
		135														0	1	1	2	KP														PB	RP	4W			135	
O	A_ Digit Translation — Dial Pulse	136																														10	0						136	O
		137																														10	0						137	
		138																														10	0						138	
		139																														10	0						139	
		140																														10	0						140	
		141																														10	0						141	
	Dial Pulse — 1X-Type Code	142																1														10	0						142	
		143																1														10	0						143	
		144																1														10	0						144	
		145																1														10	0						145	
		146																1														10	0						146	
		147															9	1														10	0						147	
	Dial Pulse — 11X-Type Code	148															1	1														10	0						148	
		149															1	1														10	0						149	
		150															1	1														10	0						150	
		151															1	1														10	0						151	
		152															1	1														10	0						152	
		153															9	1														10	0						153	
	TOUCH-TONE — 1X-Type Code	154																1																PB	RP				154	
	TOUCH-TONE — 11- or 11X-Type Code	155															1	1																PB	RP				155	
	TOUCH-TONE — 11X-Type Code	156															9	1																PB	RP				156	
	TOUCH-TONE — 1X-Type Code	157															9	1																PB	RP				157	

Test Chart (Cont)

TEST CHART

TEST	TEST TITLE		TEST NO.	MASTER TEST FRAME PRIMING INFORMATION: LINE LOCATION FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT. TENS	RATE TREAT. UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FREQ CONT (TOUCH-TONE CALLING) FCB	MISCELLANEOUS KEYS AND/OR SWITCHES	TEST SET: DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) PREFIX DIGITS	A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT SPEED PPS DIAL	PULSING CONT LOOP COND L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR PULSING SPEED	PRECISION PULSE GENERATOR % BREAK	TEST NO.	TEST
P	Combination A_ and B_ Digit Translation		158																										10	0						158	P
			159																										10	0						159	
			160																										10	0						160	
			161																										10	0						161	
			162																										10	0						162	
			163																										10	0						163	
		1XX-Type Code	164															1											10	0						164	
			165															1											10	0						165	
	Dial Pulse		166															1											10	0						166	
			167															1											10	0						167	
			168															1											10	0						168	
			169														9	1											10	0						169	
		11XX-Type Code	170														1	1											10	0						170	
			171														1	1											10	0						171	
			172														1	1											10	0						172	
			173														1	1											10	0						173	
			174														1	1											10	0						174	
			175														9	1											10	0						175	
		1XX-Type Code	176															1													PB	RP				176	
	TOUCH-TONE	11- or 11XX-Type Code	177														1	1													PB	RP				177	
		1XX-Type Code	178														9	1													PB	RP				178	
		11XX-Type Code	179														9	1													PB	RP				179	
Q	Pretranslation		180																										10	0						180	Q
			181																										10	0						181	
			182																										10	0						182	
			183																										10	0						183	
			184																										10	0						184	
	Dial Pulse		185																										10	0						185	
			186																										10	0						186	
			187															1	4	1	1								10	0						187	
			188															1				4	1	1					10	0						188	
		1X- or 1XX-Type Codes	189															1											10	0						189	

Test Chart (Cont)

TEST CHART

MASTER TEST FRAME PRIMING INFORMATION — TEST SET

Test	Test Title	Test No.	Line Location Frame No. Tens	Line Location Frame No. Units	Line Location Vert Gr Tens	Line Location Vert Gr Units	Line Location Hor Gr	Line Location Vert File	Class of Service Tens	Class of Service Units	Rate Treat. Tens	Rate Treat. Units	Freq Cont (Touch-Tone Calling) FCA	Freq Cont (Touch-Tone Calling) FCB	Miscellaneous Keys and/or Switches						Dial or Key Digits on Test Set (Called Number) Prefix Digits			A	B	C	D	E	F	G	H	J	K	L	M	De-press and Hold Key	Pulsing Cont Speed PPS Dial	Pulsing Cont Loop Cond L Switch	Misc Keys			Precision Pulse Generator Pulsing Speed	Precision Pulse Generator % Break	Test No.	Test
Q		190																					1														10	0						190	Q
(Cont)	1X-, 1XX-Type Codes	191																					1														10	0						191	(Cont)
		192																					1														10	0						192	
		193																					1														10	0						193	
		194																					1														10	0						194	
		195																					1														10	0						195	
		196																					1														10	0						196	
		197																					1														10	0						197	
		198																					1														10	0						198	
		199																				9	1														10	0						199	
	11X- and/or 11XX-Type Codes	200																				1	1														10	0						200	
		201																				1	1														10	0						201	
		202																				1	1														10	0						202	
		203																				1	1														10	0						203	
		204																				1	1														10	0						204	
		205																				1	1														10	0						205	
		206																				1	1														10	0						206	
		207																				1	1														10	0						207	
		208																				1	1														10	0						208	
	Dial Pulse	209																					1														10	0						209	
		210																					0														10	0						210	
		211																									1	2	3	4							10	0						211	
		212																					0		0												10	0						212	
		213																					0		1												10	0						213	
	N0N-, N1N-, NN0-Type Codes	214																					0			0											10	0						214	
		215																					1														10	0						215	
		216																					1		0												10	0						216	
		217																					1		1												10	0						217	
		218																					1			0											10	0						218	
		219																				1	1				1	2	3	4							10	0						219	

Test Chart (Cont)

♦ TEST CHART ♦

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION: LINE LOCATION FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT. TENS	RATE TREAT. UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FREQ CONT (TOUCH-TONE CALLING) FCB	MISCELLANEOUS KEYS AND/OR SWITCHES	TEST SET: DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) PREFIX DIGITS	A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT SPEED PPS DIAL	PULSING CONT LOOP COND L SWITCH	MISC KEYS				PRECISION PULSE GENERATOR PULSING SPEED	PRECISION PULSE GENERATOR % BREAK	TEST NO.	TEST
Q (Cont)	Dial Pulse — N0N-, N1N-, NN0-Type Codes	220														8				1	2	3	4						10	0						220	Q (Cont)
		221														8		0											10	0						221	
		222														8		1											10	0						222	
		223														8			0										10	0						223	
	11 Foreign Area Directing Code	224														1	1			1	2	3	4						10	0						224	
		225															0												10	0						225	
	Vacant and Invalid Prefixed Codes	226															0												10	0						226	
		227															1												10	0						227	
		228															1												10	0						228	
		229																											10	0						229	
	TOUCH-TONE	230															0														PB	RP				230	
		231															1														PB	RP				231	
		232														1	1				1	2	3	4							PB	RP				232	
		233																			1	2	3	4							PB	RP				233	
		234															0														PB	RP				234	
		235															1														PB	RP				235	
		236														1	1				1	2	3	4							PB	RP				236	
		237															8														PB	RP				237	
Q.1	Pretranslation for IDDD	238														0	1																			238	Q.1
		239														0	1																			239	
		240														0	1																			240	
		241														0	1							*												241	
		242														0	1								*											242	
		243														0	1									*										243	
		244														0	1																			244	
		245														0	1																			245	
		246														0	1																			246	
		247														0	1																			247	
		248														0	1																			248	
		249														0	1																			249	

* End-of-dial signal when required.

TEST CHART

TEST	TEST TITLE		TEST NO.	MASTER TEST FRAME PRIMING INFORMATION: LINE LOCATION FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT. TENS	RATE TREAT. UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FREQ CONT (TOUCH-TONE CALLING) FCB	MISCELLANEOUS KEYS AND/OR SWITCHES						TEST SET: DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) PREFIX DIGITS		A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT SPEED PPS DIAL	PULSING CONT LOOP COND I SWITCH	MISC KEYS			PRECISION PULSE GENERATOR PULSING SPEED	PRECISION PULSE GENERATOR % BREAK	TEST NO.	TEST
Q.1 (Cont)			250																			0	1	1																				250	Q.1
			251																			0	1	1																				251	(Cont)
			252																			0	1	1																				252	
			253																			0	1	1																				253	
			254																			0	1	1																				254	
R	Stuck Coin		255													STK CN									0														10	0						255	R
S	Straightforward Call to Manual Office		256																																			10	0						256	S
T	Permanent Signal Timing	Coin	257													NTFS	NTTS																												257	T
		Noncoin	258													NTFS	NTTS																												258	
U	Partial Dial Timing	Noncoin	259													NTFS	NTTS								2														10	2						259	U
		Coin	260													NTFS	NTTS								2														10	2						260	
		Centrex	261													NTFS	NTTS									1													10	2						261	
		IDDD Dial Pulse	262																				0	1													10	0						262	
		IDDD TOUCH-TONE	263																			0	1	1																PB	RP				263	
			264																				0	1															PB	RP				264	
			265																			0	1	1															PB	RP				265	
			266																				0	1															PB	RP				266	
			267																			0	1	1															PB	RP				267	
V	Register Timeout After Marker Sets Busy Tone		268													RBT	RLT														1	2	3	4				10	0						268	V
X	Timing During Pretranslation		269													NTFS	NTTS												5																269	X
			270													NTFS	NTTS					0	1	1																						270	
Y	Timing During Coin Test — Dial Tone First		271													HLD	NTTS												1	2	3	4						10	0						271	Y
Z	Common Alarm Timing		272													HLD																													272	Z
AA	Recycle of Timing	Noncoin	273													HLD	NTFS	NTTS											1	2	3	4						10	0						273	AA
		Coin	274													HLD	NTFS	NTTS											1	2	3	4						10							274	
AB	Dial Tone Removal		275																						2													10	0						275	AB
			276																							1											10	0						276	
			277																					1	1													10	0						277	
			278																						9													10	0						278	
			279																						0													10	0						279	
AC	Line Location, Class of Service, Observed Call, Storing, and Verification of Trouble Recorder Leads	Dial Pulse	280	0	0	0	0	0	0							NTC										0																			280	AC
			281	1*	1	0	1	1	1							NTC										0																			281	
			282	2*	2*	0	2	2	2							NTC										0																			282	

* If not equipped, use 0.

TEST CHART

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION — LINE LOCATION — FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT. TENS	RATE TREAT. UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FCB	MISCELLANEOUS KEYS AND/OR SWITCHES
AC		283	3*	3*	0	3	3	3							NTC
(Cont)		284	4*	4*	0	4*	4	4							NTC
	Dial Pulse	285	5*	5*	0	5*	5	0							NTC
		286	0	6*	0	6*	6	1							NTC
		287	1*	7*	0	7*	7	2							NTC
	TOUCH-TONE	288	2*	8*	0	8*	8	3							NTC
		289	3*	9*	0	9*	9	4							NTC
		290	4*	0	1*	0	0	0							NTC
		291	5*	1	1*	1	1	1							NTC
		292	0	2*	0	2	2	2							NTC
AD	Precision Pulsing Tests (3A Pulse Generating Test Set)	293													
		294													
		295													
		296													
		297													
		298													
AD.1	Precision Pulsing Tests (4A Signaling Test Set)	299													
		300													
		301													
		302													
		303													
		304													
AE	Intracentrex Call	305													
		306													
AF	11X Special Codes (Nonservice Codes) —	307													
	Originating Register Equipped for Centrex Service Only	308													
AG	Zero Operator Calls for Centrex Service	309													
AH	1XX Special Codes for Centrex Service	310													
		311													
		312													
		313													
		314													

TEST SET — DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) — PREFIX DIGITS			A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT SPEED — PPS DIAL	LOOP COND — L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR PULSING SPEED	% BREAK	TEST NO.	TEST
			0																				283	AC
			0																				284	(Cont)
			0																				285	
			0																				286	
			0																				287	
			0															PB	RP				288	
			0															PB	RP				289	
			0															PB	RP				290	
			0															PB	RP				291	
			0															PB	RP				292	
			‡														1				7	50	293	AD
			‡														1				7	80	294	
			‡														2				15	65	295	
			‡														3				15	65	296	
			‡														4†				24	55	297	
			‡														5				24	70	298	
			§														1				7	50	299	AD.1
			§														1				7	80	300	
			§														2				15	65	301	
			§														3				15	65	302	
			§														4†				24	55	303	
			§														5				24	70	304	
			3	2	4	5																	305	AE
			3	2	4	5	6																306	
	1	1																					307	AF
	1	1																					308	
			0																				309	AG
		1																					310	AH
		1																					311	
		1																					312	
		1																					313	
		1																					314	

* If not equipped use 0.
† If office is equipped with both wire-spring-relay and non-wire-spring-relay type dial pulse originating registers and all incoming dial pulse registers in the office are wire-spring-relay type, use L switch setting 9.
‡ A– through C– or A– through G– digits generated by 3A pulsing test set.
§ A– through C– or A– through G– digits generated by 4A signaling test set.

Test Chart (Cont)

TEST CHART

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION																		TEST SET														
			LINE LOCATION						CLASS OF SERVICE		RATE TREAT.		FREQ CONT (TOUCH-TONE CALLING)		MISCELLANEOUS KEYS AND/OR SWITCHES						DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER)														
			FRAME NO.		VERT GR		HOR GR	VERT FILE													PREFIX DIGITS		A	B	C	D	E	F	G	H	J	K			
			TENS	UNITS	TENS	UNITS			TENS	UNITS	TENS	UNITS	FCA	FCB																					
AH (Cont)	Invalid Combination and Sequence	315																				1												
		316																				1												
		317																				1												
		318																				1												
		319																				1												
		320																				1	3	3	KP									
		321																				1	3	KP										
		322																				1	3	RS										
		323																				1	3	3	3	RS								
AJ	Low- and High-Level Signal Test	324													LLV											3	5	7	0					
		325													HLV											3	5	7	0					
AK	Maximum and Minimum Frequency Test	326												MXF	LLV											3	5	7	0					
		327												MNF	LLV											3	5	7	0					
AL	Single-Frequency Test	328											1	SFH												3	5	7	0					
		329											2	SFH												3	5	7	0					
		330											3	SFH												3	5	7	0					
		331											4	SFH												3	5	7	0					
		332											1	SFL												3	5	7	0					
		333											2	SFL												3	5	7	0					
		334											3	SFL												3	5	7	0					
		335											4	SFL												3	5	7	0					
AM	Special 3-Frequency Test	336											1	3FS												3	5	7	0					
		337											2	3FS												3	5	7	0					
		338											3	3FS												3	5	7	0					
		339											4	3FS												3	5	7	0					
AN	Regular Precision Pulsing Test — TOUCH-TONE Calling (3A Pulse Generating Test Set)	340																																
		341																																
		342																																
		343																																
AN.1	Regular Precision Pulsing Test — TOUCH-TONE Calling (4A Signaling Test Set)	344																																
		345																																
		346																																
		347																																

L	M	DE-PRESS AND HOLD KEY	PULSING CONT SPEED PPS DIAL	PULSING CONT LOOP COND L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR PULSING SPEED	PRECISION PULSE GENERATOR % BREAK	TEST NO.	TEST
										315	AH
										316	(Cont)
										317	
										318	
										319	
					PB	RP	4W			320	
					PB	RP	4W			321	
					PB	RP	4W			322	
					PB	RP	4W			323	
					PB	RP				324	AJ
					PB	RP				325	
					PB	RP				326	AK
					PB	RP				327	
					PB	RP				328	AL
					PB	RP				329	
					PB	RP				330	
					PB	RP				331	
					PB	RP				332	
					PB	RP				333	
					PB	RP				334	
					PB	RP				335	
					PB	RP				336	AM
					PB	RP				337	
					PB	RP				338	
					PB	RP				339	
		3			PB	RP				340	AN
		5			PB	RP				341	
		7			PB	RP				342	
		0			PB	RP				343	
		3			PB	RP				344	AN.1
		5			PB	RP				345	
		7			PB	RP				346	
		0			PB	RP				347	

Test Chart (Cont)

TEST CHART

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION: LINE LOCATION FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT. TENS	RATE TREAT. UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FCB	MISCELLANEOUS KEYS AND/OR SWITCHES	TEST SET: DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) PREFIX DIGITS	A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT SPEED PPS DIAL	LOOP COND L SWITCH	MISC KEYS	MISC KEYS	PRECISION PULSE GENERATOR PULSING SPEED	% BREAK	TEST NO.	TEST
AO	Low-Level Precision Pulsing Test (3A Pulse Generating Test Set)	348													LLV														3			PB	RP			348	AO
		349													LLV														5			PB	RP			349	
		350													LLV														7			PB	RP			350	
		351													LLV														0			PB	RP			351	
AO.1	Low-Level Precision Pulsing Test (4A Signaling Test Set)	352													LLV														3			PB	RP			352	AO.1
		353													LLV														5			PB	RP			353	
		354													LLV														7			PB	RP			354	
		355													LLV														0			PB	RP			355	
AP	Maximum and Minimum Frequency Pulsing Test (3A Pulse Generating Test Set)	356												MXF	LLV														3			PB	RP			356	AP
		357												MXF	LLV														5			PB	RP			357	
		358												MXF	LLV														7			PB	RP			358	
		359												MXF	LLV														0			PB	RP			359	
		360												MNF	LLV														3			PB	RP			360	
		361												MNF	LLV														5			PB	RP			361	
		362												MNF	LLV														7			PB	RP			362	
		363												MNF	LLV														0			PB	RP			363	
AP.1	Maximum and Minimum Frequency Pulsing Test (4A Signaling Test Set)	364												MXF	LLV														3			PB	RP			364	AP.1
		365												MXF	LLV														5			PB	RP			365	
		366												MXF	LLV														7			PB	RP			366	
		367												MXF	LLV														0			PB	RP			367	
		368												MNF	LLV														3			PB	RP			368	
		369												MNF	LLV														5			PB	RP			369	
		370												MNF	LLV														7			PB	RP			370	
		371												MNF	LLV														0			PB	RP			371	
AQ	Long Pulse Precision Pulsing Test (3A Pulse Generating Test Set)	372																											3			PB	RP			372	AQ
		373																											5			PB	RP			373	
		374																											7			PB	RP			374	
		375																											0			PB	RP			375	
AQ.1	Long Pulse Precision Pulsing Test (4A Signaling Test Set)	376																											3			PB	RP			376	AQ.1
		377																											5			PB	RP			377	
		378																											7			PB	RP			378	
		379																											0			PB	RP			379	

Test Chart (Cont)

TEST CHART

TEST	TEST TITLE		TEST NO.	MASTER TEST FRAME PRIMING INFORMATION: LINE LOCATION – FRAME NO. – TENS	FRAME NO. – UNITS	VERT GR – TENS	VERT GR – UNITS	HOR GR	VERT FILE	CLASS OF SERVICE – TENS	CLASS OF SERVICE – UNITS	RATE TREAT. – TENS	RATE TREAT. – UNITS	FREQ CONT (TOUCH-TONE CALLING) – FCA	FCB	MISCELLANEOUS KEYS AND/OR SWITCHES		TEST SET: DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) – PREFIX DIGITS			A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT – SPEED – PPS DIAL	LOOP COND – L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR – PULSING SPEED	% BREAK	TEST NO.	TEST
AR	CCSA Call — Prefix Digit 8	Dial Pulse	380																	8				1	2	3	4							10	0						380	AR
			381																	8							1	2	3	4				10	0						381	
		TOUCH-TONE	382																	8				1	2	3	4									PB	RP				382	
			383																	8							1	2	3	4						PB	RP				383	
AS	Interchangeable Codes and/or NPA-411 Information Codes		384													NTFS	NTTS			1				4	1	1	2														384	AS
			385													NTFS	NTTS			1				4	1	1															385	
			386													NTFS	NTTS			1							1	3	5	7											386	
			387													NTFS	NTTS							1	3	5	7														387	
AT	C-Digit Translation		388																				0	4	1	1															388	AT
			389																	1			0				1	3	5	7											389	
AU	Range Extension for Unigauge Cabling	Dial Pulse	390													NTC								1	3	5	7							10	0	LOLPT					390	AU
			391													NTC								1	3	5	7							10	0	LOLPT					391	
		TOUCH-TONE	392													NTC								1	3	5	7									LOLPT	PB	RP			392	
			393													NTC								1	3	5	7									LOLPT	PB	RP			393	
AV	Unused Frequency Combinations		394													4W				RS															0						394	AV
			395													4W				KP															0						395	
AW	B-Digit Translation	Dial Pulse	396																					1	2	3	4							10	0						396	AW
			397																	0		0		1	2	3	4							10	0						397	
			398																	1		1		1	2	3	4							10	0						398	
			399																								1	2	3	4				10	0						399	
			400																	0		1					1	2	3	4				10	0						400	
			401																	1		0					1	2	3	4				10	0						401	
			402																9	1		1					1	2	3	4				10	0						402	
		TOUCH-TONE	403																					1	2	3	4									PB	RP				403	
			404																	0		0		1	2	3	4									PB	RP				404	
			405																	1		1		1	2	3	4									PB	RP				405	
			406																								1	2	3	4						PB	RP				406	
			407																	0		1					1	2	3	4						PB	RP				407	
			408																	1		0					1	2	3	4						PB	RP				408	
			409																9	1		1					1	2	3	4						PB	RP				409	
AX	CSSA Call — Access Digit 8	Dial Pulse	410																	8				1	2	3	4							10	0						410	AX
		TOUCH-TONE	411																	8							1	2	3	4						PB	RP				411	

Test Chart (Cont)

TEST CHART

TEST	TEST TITLE	TEST NO.	MASTER TEST FRAME PRIMING INFORMATION – LINE LOCATION – FRAME NO. TENS	FRAME NO. UNITS	VERT GR TENS	VERT GR UNITS	HOR GR	VERT FILE	CLASS OF SERVICE TENS	CLASS OF SERVICE UNITS	RATE TREAT TENS	RATE TREAT UNITS	FREQ CONT (TOUCH-TONE CALLING) FCA	FCB	MISCELLANEOUS KEYS AND/OR SWITCHES						TEST SET – DIAL OR KEY DIGITS ON TEST SET (CALLED NUMBER) – PREFIX DIGITS			A	B	C	D	E	F	G	H	J	K	L	M	DE-PRESS AND HOLD KEY	PULSING CONT SPEED – PPS DIAL	LOOP COND – L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR – PULSING SPEED	% BREAK	TEST NO.	TEST
AY	Toll Diversion	412													TDV							9					1	2	3	4														412	AY
		413													TDV						9	1								1	2	3	4											413	
AZ	Wideband Service	414													NTC												1	3	5	7									PB	RP	4W			414	AZ
		415																				KP					1	3	5	7									PB	RP	4W			415	
		416																			KP	KP																	PB	RP	4W			416	
		417										-										RS																	PB	RP	4W			417	
BA	No Coin Present	418																									1	2	3	4							10	2						418	BA
		419																									1	2	3	4									PB	RP				419	
		420																					0														10	2						420	
		421																					0																PB	RP				421	
BB	OR to CM Lead Tests – 7 Digit Regular Call	422																									1	3	6	0							10	0						422	BB
	with ARMST	423													CHO-9												3	6	0	7							10	0						423	
	without ARMST	424																									6	0	7	1							10	0						424	
	OBS Call DP	425													NTC	OBS											0	7	1	3							10	0						425	
	Non OBS Call	426													NTC												7	1	3	0							10	0						426	
	10-Digit Call	427																					9	9	9	9	7	1	3	6	1	2	3				10	0						427	
	7-Digit Regular Call	428																									1	3	5	0									PB	RP				428	
	with ARMST	429																									3	5	0	7									PB	RP				429	
	without ARMST TT	430																									5	0	7	1									PB	RP				430	
	Observed Call	431													NTC	OBS											0	7	1	3									PB	RP				431	
	Non Observed Call	432													NTC												7	1	3	5									PB	RP				432	
	10-Digit Call	433																					8	9	9	9	1	2	3	1	2	3	4						PB	RP				433	
BC	Digit 8 Access Call to Enhanced Private Communications System (EPSCS) No. 1 ESS – Dial Pulse	434																					8														10	0						434	BC
	TOUCH-TONE	435																					8																PB	RP				435	