INCOMING REGISTER PRETRANSLATOR SD-27969-01
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is reissued for the following reasons:

(a) To revise Tests E, F, and G for improved testing.

(b) To make minor changes, as required.

This revision does not affect Equipment Test Lists.

1.02 The tests covered are:

1.02 Tests F, I, J, K, and L require actions and/or verifications at master test frame (MTF) and pretranslator.

1.03 All tests in this section should be made during periods of light traffic.

1.04 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.

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

2. APPARATUS

2.01 The apparatus required for each test is listed in Table A. The details of each item are covered in the paragraph indicated by the number in parentheses.

2.02 Master test control circuit SD-25800-01.

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

2.04 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one 419A (test connector) tool, and one KS-6278 connecting clip (for making test connections to terminal strips and relay contact springs).

2.05 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 411A (test pick) tool (for making test connections to fuse alarm bar).

2.06 ◗Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), and two KS-6278 connecting clips (for making test connections to terminal strips).◖

TABLE A

APPARATUS	TESTS							
	A,B,C,D	EF	G	H	I	J	K	L
Test Circuit (2.02)	1	1	1	1				
322A (make-busy) Plug		√		√	√	√	√	√
Blocking and Insulating Tools (2.03)							√	√
KS-3008 Stopwatch or Equivalent					1			
Cord (2.04)						1		
Cord (2.05)							1	
Cord (2.06)			1					

√ As Required

3. PREPARATION

STEP	ACTION	VERIFICATION
Tests A, C, D, E, F		
1	From office records, for each of the transmitting leads listed in Table C, record an associated code which, when translated, will cause that transmitting lead(s) to be grounded.	
2	From office records, for each of the incompleted codes listed in Table D, record a code and the designation of the transmitting lead(s) grounded.	

4. METHOD

A. Translation Feature

3	At MTF— Restore all keys and switches.	
4	Momentarily operate RL key.	All lamps extinguished.
5	Select IRPT class of test.	
6	Select pretranslator under test.	
7	Select A_, B_, C_ digits for first code listed in Table C.	
8	Momentarily operate ST key.	PRL lamp lighted. Lamp(s) lighted designating transmitting lead(s) grounded. CM_, CMC lamps lighted when a transmitting lead is grounded.
9	Momentarily operate RL key.	All lamps extinguished.
10	Repeat Steps 7 through 9 for the remaining codes in Table C, and D respectively.	
11	Restore all keys and switches.	

B. Open Receiving Lead Check Feature

1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select IRPT class of test.	

STEP	ACTION	VERIFICATION
4	Select pretranslator under test.	
5	Momentarily operate ST key.	PTR lamp lighted. Trouble record taken. A_, B_, C_ digit designations ***not*** perforated.
6	Momentarily operate RL key.	All lamps extinguished.
7	Operate TR2 key.	
8	Momentarily operate ST key.	PTR lamp lighted. Trouble record taken. TR2 designation perforated. A_, B_, C_ digit designations ***not*** perforated.
9	Momentarily operate RL key.	All lamps extinguished.
10	Restore all keys and switches.	
C.	**Open Release Lead Check Feature**	
3	At MTF— Restore all keys and switches.	
4	Momentarily operate RL key.	All lamps extinguished.
5	Select IRPT class of test.	
6	Select pretranslator under test.	
7	Operate PRL key.	
8	Select A_, B_, C_ digits for code which, when translated, grounds only the CM3, CMA, or CMB transmitting lead. (Refer to Table C or D.)	
9	Momentarily operate ST key.	CM_, CMC, IRL lamps lighted. ◗PTR◖, PRL lamps ***not*** lighted. Trouble record taken. CM_, CMK, CMC, PRL designations perforated.
10	Momentarily operate RL key.	All lamps extinguished.
D.	**Open Transmitting Lead Check Feature**	
3	At MTF— Restore all keys and switches.	
4	Momentarily operate RL key.	All lamps extinguished.
5	Select IRPT class of test.	

STEP	ACTION	VERIFICATION
6	Select pretranslator under test.	
7	Operate OT key.	
8	Select A_, B_, C_ digits for code which, when translated, grounds only the CM3 transmitting lead. (Refer to Table C or D.)	
9	Momentarily operate ST key.	PTR lamp lighted. CM3 lamp ***not*** lighted. Trouble record taken. A_, B_, C_ digits designations perforated. CMK, PRL designations ***not*** perforated.
10	Momentarily operate RL key.	All lamps extinguished.
11	▶Repeat Steps 8, 9, and 10 for CMA, CMB transmitting leads.◀	
12	Operate TR2 key.	
13	Select A_, B_, C_ digits for code which, when translated grounds only the CMA transmitting lead. (Refer to Table C or D.)	
14	Momentarily operate ST key.	PTR lamp lighted. CM_ lamp ***not*** lighted. Trouble record taken. TR2, A_, B_, C_ digit designations perforated. CMK, PRL designations ***not*** perforated.
15	Momentarily operate RL key.	All lamps extinguished.
16	Repeat Steps ▶13◀ through ▶15◀ for CMB, ▶CM3◀ transmitting leads.	
17	Restore all keys and switches.	

E. No Locking Ground on Transmitting Lead Check Feature

3	At MTF— Restore all keys and switches.	
4	Momentarily operate RL key.	All lamps extinguished.
5	Select IRPT class of test.	
6	Select pretranslator under test.	
7	Operate LK, ▶IRLK◀ keys.	

STEP	ACTION	VERIFICATION
8	Select A_, B_, C_ digits for code which, when translated, grounds only the CM3, CMA or CMB transmitting lead. (Refer to Table C or D.)	
9	Momentarily operate ST key.	▶CM_, PTR lamps lighted. HD lamp ***not*** lighted.◀ Trouble record taken. A_, B_, C_ digits, CMC, CMK, CM_ designations perforated. PRL designation ***not*** perforated.
10	Momentarily operate RL key.	All lamps extinguished.
11	Restore LK, ▶IRLK◀ keys.	
12	Operate RLK key.	
13	Momentarily operate ST key.	IRL, CMC lamps lighted. CM_, PRL lamps ***not*** lighted. Trouble record taken. CMK, CMC designations perforated. CM_, PRL designations ***not*** perforated.
14	Momentarily operate RL key.	All lamps extinguished.
15	▶Repeat Steps 7, 13, and 15 for each CM_ transmitting lead.◀	
16	Restore all keys and switches.	

F. Open Trouble Release Lead Check Feature

3	At MTF— Restore all keys and switches.	
4	Momentarily operate RL key.	All lamps extinguished.
5	Select IRPT class of test.	
6	Select pretranslator under test.	
7	Operate OT, PTR, ▶RLO◀ keys.	
8	Select A_, B_, C_ digits for code which, when translated, grounds only the CM3, CMA or CMB transmitting lead. (Refer to Table C or D.)	
9	Momentarily operate ST key.	▶PRL lamp lighted.◀ Trouble record taken. PRL designation ***not*** perforated.

STEP	ACTION	VERIFICATION
		Major alarm sounds. At pretranslator— TRT lamp lighted.
10	Momentarily operate AR key.	Major alarm silenced. TRT lamp extinguished.
11	At MTF— Momentarily operate RL key.	All lamps not extinguished.
12	▶Restore OT, RLO keys.	
13	Operate PRL, LK, IRLK keys.	
14	Momentarily operate ST key.	HD lamp momentarily lighted. IRL lamp lighted. PRL lamp ***not*** lighted. Trouble record taken. PRL designation ***not*** perforated. Major alarm sounds. At pretranslator— TRT lamp lighted.
15	Momentarily operate AR key.	Major alarm silenced. TRT lamp extinguished.
16	At MTF— Momentarily operate RL key.	All lamps extinguished.
17	Operate RLO key.	
18	Restore LK, IRLK keys.◀	
19	Momentarily operate ST key.	CM_, CMC, HD lamps lighted. PRL lamp ***not*** lighted. Trouble record taken. PRL designation perforated. Major alarm sounds At pretranslator— TRT lamp lighted.
20	Momentarily operate AR key.	Major alarm silenced. TRT lamp extinguished.
21	At MTF— Momentarily operate RL key.	All lamps extinguished.
22	Remove blocking tool from IRL relay.	
23	Restore all keys and switches.	

STEP	ACTION	VERIFICATION
G. Transfer Start Feature		
1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select IRPT class of test.	
4	Select pretranslator.	
5	Operate TRS key.	
6	Select A_, B_, C_ digits for any code.	
7	Momentarily operate ST key.	PRL lamp lighted. Trouble record taken. TRS designation perforated.
8	Momentarily operate RL key.	All lamps extinguished.
9	▶Select A_, B_, C_ digits for code which, when translated, grounds only CMA transmitting lead. (Refer to Table C or D.)	
10	At pretranslator— At terminal strip DA, connect terminals 10 and 11.	
11	At MTF— Momentarily operate ST key.	Trouble record taken. TRS, XX designations perforated.
12	Momentarily operate RL key.	All lamps extinguished.
13	At pretranslator— Remove connection placed in Step 10.	
14	At MTF— Select A_, B_ digits for any 3-digit code.	
15	Momentarily operate ST key.	PTR lamp lighted. Trouble record taken. TRS designation perforated.
16	Momentarily operate RL key.	All lamps extinguished.
17	Restore all keys and switches.◀	

STEP	ACTION	VERIFICATION
H. Display Lost Feature		
1	At MTF— Insert make-busy plug into TRMB PRT_ jack associated with pretranslator under test.	
2	Restore all keys and switches.	
3	Momentarily operate RL key.	All lamps extinguished.
4	Select IRPT class of test.	
5	Select pretranslator under test.	
6	Operate OT key.	
7	Select A_, B_, C_ digits for any code.	
8	Momentarily operate ST key.	◗PTR lamp lighted.◖ DL_ lamp lighted associated with pretranslator under test.
9	Momentarily operate TRR AR key.	DL_ lamp extinguished.
10	Momentarily operate RL key.	All lamps extinguished.
11	Restore all keys and switches.	
12	Remove make-busy plug from TRMB PRT_ jack.	
I. Work Timer and Trouble Recorder Timer Features		
1	At MTF— Insert make-busy plug into TRMB PRT_ jack associated with pretranslator under test.	
2	Insert make-busy plug into PRTMB jack of pretranslator under test.	
3	At pretranslator frame— Block nonoperated TR relay.	
4	Manually operate TM relay; ***start timing.***	In 230 to 290 milliseconds— WT relay operated.
5	Release TM relay.	
6	Remove blocking tool from TR relay.	

STEP	ACTION	VERIFICATION
7	Block operated TR relay; ***start timing.***	In 2.0 to 2.5 seconds— Major alarm sounds. TRT lamp lighted.
8	Remove blocking tool from TR relay.	
9	Momentarily operate AR key.	Major alarm silenced. TRT lamp extinguished.
10	Remove make-busy plugs from TRMB PRT_ and PRTMB jacks.	

J. Trouble Detection Feature for False Ground or Crosses

1	At MTF— Insert make-busy plug into PRTMB jack associated with pretranslator under test.	
2	At pretranslator frame— For first lead listed in Table B, momentarily ground the indicated relay contact.	At MTF— Trouble record taken. XX designation perforated.
3	Repeat Step 2 for each lead listed in Table B.	
4	At MTF— Remove make-busy plug from PRTMB jack.	

TABLE B

LEAD UNDER TEST	GROUND RELAY CONTACTS
CMK	4F of ATC
CM3	8F of CMD
CMA	8F of CMC
CMB	6F of CMD
TR	4F of FA1
TR1	8F of TRT
PRL	4F of TRT

K. Make-Busy Feature

1	At MTF— Insert make-busy plug into PRTMB jack associated with pretranslator under test.	At pretranslator frame— MB relay operated.

STEP ACTION VERIFICATION

TABLE C

TRANSMITTING LEADS GROUNDED	CODE*		
	A	B	C
None	—	—	—
CMA	—	—	—
CMB	—	—	—
CM3	—	—	—
CMB & CMA	—	—	—
CM3 & CMB	—	—	—

* Pretranslators arranged for translation of 3-digit service codes, 3-digit local office codes and 3-digit NPA codes on TOL, TAN and CAMA trunk classes.

TABLE D

CODE*			TRANSMITTING LEADS GROUNDED	CODE†			TRANSMITTING LEADS GROUNDED	CODE‡			TRANSMITTING LEADS GROUNDED
A	B	C		A	B	C		A	B	C	
0	—	—	_____	—	0	—	_____	—	—	0	_____
1	—	—	_____	—	1	—	_____	—	—	1	_____
					1	1§	_____	—	—	2	_____
2	—	—	_____	—		—	_____	—	—	3	_____
3	—	—	_____	—	2	—	_____	—	—	4	_____
4	—	—	_____	—	3	—	_____	—	—	5	_____
5	—	—	_____	—	4	—	_____	—	—	6	_____
6	—	—	_____	—	5	—	_____	—	—	7	_____
7	—	—	_____	—	6	—	_____	—	—	8	_____
8	—	—	_____	—	7	—	_____	—	—	9	_____
9	—	—	_____	—	8	—	_____				
				—	9	—					

* List 3-digit codes which require A-, A-B-, or A-B-C- digit(s) for translation.

† List 3-digit codes which require A-B- or A-B-C- digits for translation.

‡ List codes which require A-B-C- digits for translation.

§ Record this code only when the code is an X11 code.

2 Momentarily connect battery to fuse alarm bar associated with pretranslator under test. FA1 relay operated.

3 At MTF—
Remove make-busy plug from PRTMB jack of pretranslator under test. At pretranslator frame—
FA1, MB relays remain operated.

STEP	ACTION	VERIFICATION
4	Insulate 3M and 5M of TR relay.	
5	Block operated TR relay.	
6	Momentarily operate AR key.	FA1 relay released. MB relay remains operated.
7	Block operated TRL relay.	
8	Remove blocking tool then insulators from TR relay.	MB relay remains operated.
9	Insulate 11M of TM relay.	
10	Block operated TM relay.	
11	Remove blocking tool from TRL relay.	MB relay remains operated.
12	Block operated the first pretranslator connector PF_ relay associated with pretranslator under test.	
13	Remove blocking tool then insulator from TM relay.	MB relay remains operated.
14	Block operated the second pretranslator connector PF_ relay associated with pretranslator under test.	
15	Remove blocking tool from first PF_ relay.	MB relay remains operated.
16	Block operated the third pretranslator connector PF_ relay associated with pretranslator under test.	
17	Remove blocking tool from second PF_ relay.	MB relay remains operated.
18	Remove blocking tool from third PF_ relay.	MB relay released.
L. TM Relay Operate Path		
1	At MTF— Insert make-busy plug into PRTMB jack associated with pretranslator under test.	
2	At pretranslator under test— Block nonoperated WT relay.	
3	Block nonoperated CH1 relay.	TM relay operated.
4	Block nonoperated CH2 relay; remove blocking tool from CH1 relay.	TM relay remains operated.

STEP	ACTION	VERIFICATION
5	At first connector associated with pretranslator under test— Block operated PC_ relay.	
6	At pretranslator under test— Remove blocking tool from CH2 relay.	TM relay remains operated.
7	At second connector associated with pretranslator under test— Block operated PC_ relay.	
6	At first connector associated with pretranslator under test— Remove blocking tool from PC_ relay.	At pretranslator under test— TM relay remains operated.
7a	If three connectors are provided— At third connector associated with pretranslator under test— Block operated PC_ relay.	
8	At second connector associated with pretranslator under test— Remove blocking tool from PC_ relay.	If three connectors are ***not*** provided— At pretranslator under test— TM relay released. If three connectors are provided— At pretranslator under test— TM relay remains operated.
9a	If three connectors are provided— At third connector associated with pretranslator under test— Remove blocking tool from PC_ relay.	At pretranslator under test— TM relay released.
10	Remove blocking tool from WT relay.	
11	At MTF— Remove make-busy plug from PRTMB jack associated with pretranslator under test.	