REGULAR PRETRANSLATOR SD-25568-01
TESTS USING OFFICE TEST FRAME
TEST CIRCUIT SD-27633-01 (J23260)
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing regular pretranslators SD-25568-01 used for translating two and three digit codes as recorded by the originating register with respect to the number of digits to be dialed or keyed.

1.02 The reason for reissuing this section are listed as follows. Revision arrows are used to emphasize the more significant changes. This reissue does not affect Equipment Test Lists.

(a) To revise all tests to permit the selection of pretranslators made busy at the office test frame.

(b) To make minor changes as required.

1.03 The tests covered are:

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

1.05 Table A indicates the tests requiring action and/or verification at more than one location.

1.06 From office records, for each of the transmitting leads listed in Table D, record an associated code which, when translated will cause that transmitting lead(s) to be grounded. From office records, for each of the incompleted codes listed in Table E, record a code and also the designation of the transmitting lead(s) grounded.

1.07 When performing Tests A through H, the traffic register associated with the originating register APD lead will score on each test call.

1.08 ***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.

2. APPARATUS

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

2.02 Office test frame, J23260 (SD-27633-01).

2.03 Trouble indicator and connector circuit, SD-27634-01.

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

2.05 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 strip and relay contact springs).

2.06 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).

TABLE A

ACTION AND/OR VERIFICATION REQUIRED AT:	TESTS										
	A	B	C	D	E	F	G	H	I	J	K
Office Test Frame (OTF)	√	√	√	√	√	√	√	√			
Trouble Indicator and Connector Circuit (TIC)		√	√	√	√	√	√	√	√	√	
Jack, Lamp, and Key Circuit	√	√	√	√	√	√	√	√	√	√	√
Pretranslator			√	√	√	√	√		√	√	√
Originating Register	√	√	√		√			√			

√ As required

TABLE B

APPARATUS	TESTS										
	A	B	C	D	E	F	G	H	I	J	K
Test Circuit (2.02)	1	1	1	1	1	1	1	1			
Trouble Indicator (2.03)	1	1	1	1	1	1	1	1	1	1	
322A (make-busy) Plug	√	√	√	√	√	√	√	√	√	√	√
32A Test Set	1	1									
Blocking and Insulating Tools (2.04)		√	√	√	√	√	√	√	√		√
KS-3008 Stopwatch or Equivalent									1		
Cord (2.05)										2	
Cord (2.06)											1

√ As required

3. PREPARATION

STEP	ACTION	VERIFICATION
	◗*Note:* Refer to paragraphs 1.04 through 1.08.◖	
	Tests A Through H	
1	At OTF— Restore all keys and switches.	All lamps extinguished.
2	Set RSG switch to ORB to select originating register group.	
3	Set RSS switch to select originating register to be used for test.	

STEP	ACTION	VERIFICATION
4	Operate FS_ key to select trunk link frame of originating register to be used for test.	
5	Set CST, CSU switches to select noncoin class of service.	
6	Operate OTL, MCB, CB, 3D keys.	
7	Operate ~~MFK~~ MKP_ key associated with a completing marker.	
7.1	OPERATE PRT-KEY ASSOCIATED WITH PRETRANSLATOR TO BE TESTED	
8	Set PS switch to 15PPS, 65 percent break position.	
9	Set L-L switch to position 0.	
Tests B Through H		
10	At TIC— Momentarily operate RLS key.	All lamps extinguished.
Tests B Through E, G		
11	Operate TIR AR key to release alarms after timed interval.	

4. METHOD

A. Translation Feature

10	▶At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◀
11	At OTF— Set ▶A, B, C◀ DIAL switches for first code listed in Table D.	
12	At originating register under test— Insert plug of 32A test set into RC jack.	
13	Momentarily operate white (ST) button on 32A test set.	Observe that PST, PRL, and relays designated the same as grounded transmitting lead(s) operated.
14	Momentarily operate red (RL) button on 32A test set.	Originating register released.
15	Repeat Steps 11, 13, 14 for remaining A_, B_, C_ codes in Table D and continue in same manner for all codes in Table E.	

STEP	ACTION	VERIFICATION
16a	If one or more 11 prefix codes are listed in Table D— At OTF— Set ⧫A, B, C⧫ DIAL switches for any 11 code listed.	
17a	At originating register under test— Momentarily operate white (ST) button on 32A test set.	Observe that relays designated the same as grounded transmitting lead(s) operated.
18a	Momentarily operate red (RL) button on 32A test set.	Originating register released.
19	Remove plug of 32A test set from RC jack.	
20	⧫At jack, lamp, and key circuit— Remove plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.⧫
21	At OTF— Restore all keys and switches.	

B. Open Receiving Lead Check Feature

12	⧫At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.⧫
13	At OTF— Set ⧫A, B, C⧫ DIAL switches for any code.	
14	At originating register under test— Insert plug of 32A test set into RC jack.	
15	Block operated BS relay.	
16	Momentarily operate white (ST) button on 32A test set.	Originating register seized.
17	When originating register is seized and AS relay operates— ***Immediately*** remove blocking tool from BS relay.	At TIC— Display registered. PTR, PRT_ lamps lighted. PRL, A_ lamps ***not*** lighted.
18	Momentarily operate RLS key.	Display released.
19	At originating register under test— Operate red (RL) button on 32A test set.	Originating register released.
20	Remove plug of 32A test set from RC jack.	

STEP	ACTION	VERIFICATION
21	▶At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◀
22	At OTF— Restore all keys and switches.	
23	At TIC— Restore TIR AR key.	

C. Open Release Lead Check Feature

12	▶At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◀
13	At OTF— Set ▶A, B, C◀ DIAL switches for any code.	
14	At pretranslator under test— Insulate 9T, 10T of RLK relay.	
15	At OTF— Operate ST key.	At TIC— Display registered. PRT_, PTR lamps lighted. PRL, RLK lamps ***not*** lighted.
16	Momentarily operate RLS key.	Display released.
17	At OTF— Restore ST key.	All lamps extinguished.
18	At pretranslator under test— Block operated TR2 relay.	
19	At OTF— Operate ST key.	At TIC— Display registered. PRT_, TR2 lamps lighted. PTR, PRL, RLK lamps ***not*** lighted.
20	Momentarily operate RLS key.	Display released.
21	At OTF— Restore ST key.	All lamps extinguished.
22	At pretranslator under test— Remove insulator from 9T, 10T of RLK keys.	
23	At originating register under test— Insulate 4M of PRL relay.	

STEP	ACTION	VERIFICATION
24	At OTF— Operate ST key.	At TIC— Display registered. PRT_, PRL, TR2 lamps lighted. RLK, PTR lamps ***not*** lighted.
25	Momentarily operate RLS key.	Display released.
26	At OTF— Restore ST key.	All lamps extinguished.
27	At pretranslator under test— Remove blocking tool from TR2 relay.	
28	At OTF— Operate ST key.	At TIC— Display registered. PRT_, PRL lamps lighted. PTR, RLK lamps ***not*** lighted.
29	Momentarily operate RLS key.	Display released.
30	At OFT— Restore ST key.	All lamps extinguished.
31	At originating register under test— Remove insulator from 4M of PRL relay.	
32	▶At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◀
33	At OTF— Restore all keys and switches.	
34	At TIC— Restore TIR AR key.	

D. Open Transmitting Lead Check Feature

12	▶At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◀
13	At OTF— Set ▶A, B, C◀ DIAL switches for code which, when translated, grounds only CM3 transmitting lead. (Refer to Table D or E.)	
14	At pretranslator under test— Insulate 1T, 2T and 1B, 2B of KTR relay.	
15	At OTF— Operate ST key.	At TIC— Display registered.

STEP	ACTION	VERIFICATION
		PTR, PRT_ lamps lighted. CM3, RLK lamps ***not*** lighted.
16	Momentarily operate RLS key.	Display released.
17	At OTF— Restore ST key.	All lamps extinguished.
18	At pretranslator under test— Block operated TR2 relay.	
19	At OTF— Set ◗A, B, C◖ DIAL switches for code which, when translated, grounds only CMA, CMB, CMC, or SD transmitting lead. (Refer to Table D or E.)	
20	At OTF— Operate ST key.	At TIC— Display registered. PRT_, TR2 lamps lighted. PTR, CM_, SD, RLK lamps ***not*** lighted.
21	Momentarily operate RLS key.	Display released.
22	At OTF— Restore ST key.	All lamps extinguished.
23	Repeat Steps ◗19 through 22◖ for each transmitting lead.	
24	At pretranslator under test— Remove insulators from 1T, 2T and 1B, 2B of KTR relay.	
25	Remove blocking tool from TR2 relay.	
26	◗At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◖
27	At OTF— Restore all keys and switches.	
28	At TIC— Restore TIR AR key.	
E. No Locking Ground on Transmitting Lead Check Feature		
12	◗At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◖

STEP	ACTION	VERIFICATION
13	At OTF— Set ▶A, B, C◀ DIAL switches for code which, when translated, grounds CM3 transmitting lead only. (Refer to Table D or E.)	
14	At originating register under test— Insulate contacts of following relays: 10M of CM3 10M of CMA 10M of CMB 12M of CMC 10M of SD	
15	At OTF— Operate ST key.	At TIC— Display registered. PRT_, RLK lamps lighted. PTR, CM3 lamps ***not*** lighted.
16	Momentarily operate RLS key.	Display released.
17	At OTF— Restore ST key.	All lamps extinguished.
18	At pretranslator under test— Block operated TR2 relay.	
19	At OTF— Set ▶A, B, C◀ DIAL switches for code which, when translated, grounds CMA, CMB, CMC, or SD transmitting lead only. (Refer to Table D or E.)	
20	At OTF— Operate ST key.	At TIC— Display registered. PRT_, RLK, TR2 lamps lighted. PTR, CM_, SD lamps ***not*** lighted.
21	Momentarily operate RLS key.	Display released.
22	At OTF— Restore ST key.	All lamps extinguished.
23	Repeat Steps ▶19 through 22◀ for each transmitting lead.	
24	At originating register under test— Remove insulators from the following relay contacts: 10M of CM3 10M of CMA 10M of CMB	

STEP	ACTION	VERIFICATION
	12M of CMC 10M of SD	
25	At pretranslator under test— Remove blocking tool from TR2 relay.	
26	▶At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◀
27	At OTF— Restore all keys and switches.	
28	At TIC— Restore TIR AR key.	

F. Open Trouble Release Lead Check Feature

11	▶At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◀
12	At OTF— Set ▶A, B, C◀ DIAL switches for code which, when translated, grounds CM3, CMA, CMB, or CMC transmitting lead. (Refer to Table D or E.)	
13	At pretranslator under test— Insulate 1T, 2T of HDK relay and 1, 2B of TRB1 relay.	
14	At OTF— Operate ST key.	Minor alarm sounds. At TIC— Display registered. PRT_ lamp lighted. PRL, RLK, PTR lamps ***not*** lighted. At jack, lamp, and key circuit— TRR lamp lighted.
15	At TIC— Momentarily operate RLS key.	Display released.
16	Momentarily operate TIR AR key.	Minor alarm silenced. At jack, lamp, and key circuit— TRR lamp extinguished.
17	At OTF— Restore ST key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
18	At pretranslator under test— Remove insulator from contacts 1T, 2T of TRB1 relay; insulate 1B, 2B of TR2 relay.	
19	Block nonoperated TRL relay; block operated TR2 relay.	
20	At OTF— Operate ST key.	Major alarm sounds. At TIC— Display registered. PRT_, TR2 lamps lighted. PRL, RLK lamps ***not*** lighted. At jack, lamp, and key circuit— TRR lamp lighted.
21	At TIC— Momentarily operate RLS key.	Display released.
22	Momentarily operate TIR AR key.	Minor alarm silenced. At jack, lamp, and key circuit— TRR lamp extinguished.
23	At OTF— Restore ST key.	All lamps extinguished.
24	At pretranslator under test— Remove insulators from 1T, 2T of HDK and 1B, 2B of TR2 relays.	
25	Remove blocking tools from TRL and TR2 relays.	
26	At OTF— Restore all keys and switches.	
27	◗At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◖
G. Transfer Start Feature		
12	◗At jack, lamp, and key circuit— Insert make-busy plug into PRTMB jack associated with pretranslator under test.	PRT_ lamp lighted.◖
13	At OTF— Set ◗A, B, C◖ DIAL switches for any code.	
14	At pretranslator connector associated with pretranslator under test— Block operated TRS relay.	

STEP	ACTION	VERIFICATION
15	At OTF— Operate ST key.	At TIC— Display registered. PRT_, TRS lamps lighted.
16	Momentarily operate RLS key.	Display released.
17	At OTF— Restore ST key.	All lamps extinguished.
18	At pretranslator connector associated with pretranslator under test— Remove blocking tool from TRS relay.	
19	▶At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◀
20	At OTF— Restore all keys and switches.	
21	At OTF— Restore TIR AR key.	

H. Display Lost Feature

11	▶At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◀
12	At TIC— Insert make-busy plug into TIC-MB PRT_ jack associated with pretranslator under test.	
13	At originating register under test— Block nonoperated PRL relay.	
14	At OTF— Set ▶A, B, C◀ DIAL switches for any code.	
15	Operate ST key.	Minor alarm sounds. At TIC— PRT-DL lamp lighted. At jack, lamp, and key circuit— TRR lamp lighted.
16	At TIC— Momentarily operate TIR AR key.	Minor alarm silenced. PRT-DL lamp extinguished. At jack, lamp, and key circuit— TRR lamp extinguished.
17	At OTF— Restore ST key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
18	At originating register under test— Remove blocking tool from PRL relay.	
19	▶At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◀
20	At TIC— Remove make-busy plug from TIC-MB PRT_ jack.	
21	At OTF— Restore all keys and switches.	

I. Work Timer and Trouble Recorder Timer Features

1	At TIC— Insert make-busy plug into TIC-MB PRT_ jack associated with pretranslator under test.	
2	▶At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◀
3	At pretranslator under test— Block nonoperated TR relay.	
4	Manually operate RLK relay; ***start timing.***	In 0.2 to 0.4 seconds— WT relay operated.
5	Release RLK relay.	
6	Remove blocking tool from TR relay.	
7	Block nonoperated TRB relay.	
8	Block operated RLK relay; ***start timing.***	In 2.2 to 3.4 seconds— Major alarm sounds. TRT_ lamp lighted.
9	Remove blocking tool from TRB and RLK relays.	
10	Momentarily operate AR key.	Major alarm silenced. TRT_ lamp extinguished.
11	At TIC— Remove make-busy plug from TIC-MB PRT_ jack associated with pretranslator under test.	

STEP	ACTION	VERIFICATION
12	▶At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◀

J. Trouble Detection Feature for False Ground or Crosses

1	At TIC— Momentarily operate RLS key.	All lamps extinguished.
2	Operate TIR AR key.	
3	▶At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◀
4	At pretranslator under test— For first lead provided in Table C, block indicated relay(s) and momentarily ground indicated relay contact or terminal strip terminals.	At TIC— Display registered. PRT_, XX lamps lighted.
5	Momentarily operate RLS key.	All lamps extinguished.
6	At pretranslator under test— Remove blocking tool(s).	
7	Repeat Steps 4 through 6 for each lead in Table C.	

TABLE C

LEAD UNDER TEST	RELAYS BLOCKED		GROUND	
	OPERATED	NONOPERATED	RELAY CONTACTS	PTC TERMINAL STRIP TERMINALS
SD			2T of PW1	
CM3			2T of CM3	
CMA			2T of CMA	
CMB			2T of CMB	
CMC			2T of CMC	
PTR			2B of FA1	
PRL			5T of TRTR	
RLK			8T of TRTR	
BSP, BSS	*TM	*WT		BSP, BSS

* First block WT relay, then TM relay.

STEP	ACTION	VERIFICATION
8	▶At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◀
9	At TIC— Restore TIR AR key.	
K. Make-Busy Feature		
1	▶At jack, lamp, and key circuit— Insert make-busy plug into PRTMB_ jack associated with pretranslator under test.	PRT_ lamp lighted.◀ At pretranslator under test— MB relay operated.
2	Momentarily connect battery to fuse alarm bar associated with pretranslator.	FA1 relay operated.
3	▶At jack, lamp, and key circuit— Remove make-busy plug from PRTMB_ jack associated with pretranslator under test.	PRT_ lamp extinguished.◀ At pretranslator under test— FA1, MB relays remain operated.
4	Insulate 3B, 4B and 4T, 5T 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 and then insulators from TR relay.	MB relay remains operated.
9	Block operated TRB1 relay.	
10	Remove blocking tool from TRL relay.	MB relay remains operated.
11	Block operated the first pretranslator connector PCA_ relay associated with pretranslator under test.	
12	Remove blocking tool from TRB1 relay.	MB relay remains operated.
13	Block operated the second pretranslator connector PCA_ relay associated with pretranslator under test.	
14	Remove blocking tool from first PCA_ relay.	MB relay remains operated.
15	Remove blocking tool from second PCA_ relay.	MB relay released.

TABLE D

TRANSMITTING LEADS GROUNDED	CODE*			CODE†	
	A	B	C	11	A
None				11	
CMA				11	
CMB				11	
CMC				11	
CM3				11	
SD & CMA				11	
SD & CMB				11	
SD & CMC				11	
SD & CM3				11	
SD				11	

* Pretranslators arranged for translation of (a) 3-digit home area office codes or (b) 3-digit home area office codes and 3-digit NPA codes.

† Pretranslators arranged for translation of 11 prefix codes.

TABLE E

CODE*			TRANSMITTING LEADS GROUNDED	CODE†			TRANSMITTING LEADS GROUNDED	CODE‡			TRANSMITTING LEADS GROUNDED
A	B	C		A	B	C		A	B	C	
2					0					0	
3					1					1	
4					1	1+				2	
5					2					3	
6					3					4	
7					4					5	
8					5					6	
9					6					7	
					7					8	
					8					9	
					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 3-digit codes which require A-B-C- digits for translation.

\+ Record this code only when the code is an X11 code.