

REGULAR PRETRANSLATOR SD-25568-01

TESTS USING MASTER TEST FRAME

NO. 5 CROSSBAR OFFICES

1. GENERAL

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1.01 This section provides tests which check the performance of the regular pretranslator circuit (SD-25568-01).

return locking ground on the transmitting leads from the originating register. 8

1.02 This section is reissued to revise Test J and Tables A and D as well as other minor changes. This reissue does not affect the Equipment Test Lists.

F. Open Trouble Release Lead Check Feature: This test checks that the pretranslator recognizes an open trouble release (PTR) lead in the pretranslator or originating register. 9

1.03 The tests covered are:

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A. Translation Feature: This test checks the operation of the pretranslator digit registers and translators for all codes. 3

G. Transfer Start Feature: This test checks that the pretranslator recognizes a transfer start signal from the pretranslator connector. 9

B. Open Receiving Lead Check Feature: This test checks that the pretranslator recognizes an open receiving (A, B, or C) lead from the originating register. 5

H. Display Lost Feature: This test checks that the associated DL lamp is lighted when the trouble recorder is busy and the pretranslator attempts to make a trouble record. 10

C. Open Release Lead Check Feature: This test checks that the pretranslator recognizes open release (PRL) and release check (RLK) leads to the originating register. 6

I. Work Timer and Trouble Recorder Timer Features: The following features are checked: (1) If the pretranslator is held longer than a specified time, the work timer will time out and cause a trouble record to be taken. (2) If, after the work timer has timed out, the trouble record is not completed within a specified time, the trouble timer will time out. 10

D. Open Transmitting Lead Check Feature: This test checks that the pretranslator recognizes open transmitting leads (SD, CM3, CMA, CMB, CMC) to the originating register. 7

J. Trouble Detection Feature for False Ground or Crosses: This test checks that all cross-detection relays function properly under trouble conditions. 11

E. No Locking Ground on Transmitting Lead Check Feature: This test checks that the pretranslator recognizes the failure to

K. Make-Busy Feature: This test checks that the MB relay is operated

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- in all pretranslator make-busy conditions.
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- 1.04 Tests F, I, J, and K require actions and/or verifications at the master test frame (MTF) and pretranslator frame.
- 1.05 All tests covered in this section should be made during periods of light traffic.
- 1.06 **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.
- 1.07 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.
- 1.08 The location statement, At MTF—, is used to refer to all apparatus located on the four basic bays of the MTF.
- 1.09 ♦When option "C" in SD-25568-01 is in use in an office, Test J, Step 2, ground should

be applied as shown on Table D. Column labeled "Relay Windings" should be used.

- 1.10 On Issue 76D of SD-25800-01, a group of 20 "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 20 discontinued lamps, such as ATNT, DT, IAO, IMS, INC, IR, IT, ITDO, ITNP, ITP, IT1, LT, MISC, MLV, OGT, OR, ORIG, PTT, SDR,, and TVT.♦

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).

3. PREPARATION

STEP	ACTION	VERIFICATION
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Note: Refer to 1.05, 1.07, and 1.08.

Tests A, D, E, F

- 1 From office records, for each of the transmitting leads listed in Table B, record an associated code which, when translated, will cause that transmitting lead(s) to be grounded.

STEP

ACTION

VERIFICATION

◆ TABLE A ◆

APPARATUS	TESTS				
	A THRU G	H	I	J	K
Test Circuit (2.02)	1	1			
322A (make-busy) Plug		√	√	√	√
Blocking and Insulating Tools (2.03)			√	√	√
KS-3008 Stopwatch or Equivalent			1		
Cord (2.04)				2	
Cord (2.05)				1	1

√ As Required.

- 2 From office records, for each of the incompleting codes listed in Table C, 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 PTT class of test.
- 6 Select pretranslator under test.
- 7 Select A_, B_, C_ digits for first code listed in Table B.
- 8 Momentarily operate ST key. PRL lamp lighted.
Lamp(s) lighted designating transmitting lead(s) grounded.

STEP	ACTION	VERIFICATION
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TABLE B

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.

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|-----|--|---|
| 9 | Momentarily operate RL key. | All lamps extinguished. |
| 10 | Repeat Steps 7 through 9 for the remaining A_, B_, C_ codes in Tables B and C, respectively. | |
| 11a | If 11 prefix codes are listed in Table B—
Operate 11 key. | |
| 12a | Select A_ digit for first 11 prefix code listed. | |
| 13a | Momentarily operate ST key. | PRL lamp lighted.
Lamp(s) lighted designating transmitting lead(s) grounded. |
| 14a | Momentarily operate RL key. | All lamps extinguished. |
| 15a | Repeat Steps 12a, 13a, 14a for remaining 11 prefix codes. | |
| 16 | Restore all keys and switches. | |

STEP

ACTION

VERIFICATION

TABLE C

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.

B. Open Receiving Lead Check Feature

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|---|---|--|
| 1 | At MTF—
Restore all keys and switches. | |
| 2 | Momentarily operate RL key. | All lamps extinguished. |
| 3 | Select PTT class of test. | |
| 4 | Select pretranslator under test. | |
| 5 | Select any A_, C_ digits. | |
| 6 | Momentarily operate ST key. | PTR, HD lamps lighted.
Trouble record taken.
B_ digit, PRL designations <i>not</i> perforated. |
| 7 | Momentarily operate RL key. | All lamps extinguished. |
| 8 | Restore all keys and switches. | |

STEP	ACTION	VERIFICATION
C. Open Release Lead Check Feature		
1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select PTT class of test.	
4	Select pretranslator under test.	
5	Select A_, B_, C_ digits for any code.	
6	Operate PRL key.	
7	Momentarily operate ST key.	PTR, HD, G1 lamps lighted. Trouble record taken. RLK designation <i>not</i> perforated.
8	Momentarily operate RL key.	All lamps extinguished.
9	Operate TR2 key.	
10	Momentarily operate ST key.	PRL, GR lamps lighted. Lamp(s) lighted designating transmitting lead(s) grounded. Trouble record taken. TR2 designation perforated. RLK designation <i>not</i> perforated.
11	Momentarily operate RL key.	All lamps extinguished.
12	Operate RLK key.	
13	Momentarily operate ST key.	GR, HD lamps lighted. Lamp(s) lighted designating transmitting lead(s) grounded. Trouble record taken. TR2 designation perforated. RLK designation <i>not</i> perforated.
14	Momentarily operate RL key.	All lamps extinguished.
15	Restore PRL key.	
16	Momentarily operate ST key.	PRL, GR lamps lighted. Lamp(s) lighted designating transmitting lead(s) grounded. Trouble record taken. TR2 designation perforated. RLK designation <i>not</i> perforated.

STEP	ACTION	VERIFICATION
17	Momentarily operate RL key.	All lamps extinguished.
18	Restore TR2 key.	
19	Momentarily operate ST key.	PRL, GR lamps lighted. Lamp(s) lighted designating transmitting lead(s) grounded. RLK designation <i>not</i> perforated.
20	Momentarily operate RL key.	All lamps extinguished.
21	Restore all keys and switches.	
D. Open Transmitting Lead Check Feature		
3	At MTF— Restore all keys and switches.	
4	Momentarily operate RL key.	All lamps extinguished.
5	Select PTT class of test.	
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 B or C.)	
9	Momentarily operate ST key.	PTR, HD, G1 lamps lighted. CM3 lamp <i>not</i> lighted. Trouble record taken. RLK designation <i>not</i> perforated.
10	Momentarily operate RL key.	All lamps extinguished.
11	Operate TR2 key.	
12	Select A_, B_, C_ digits for code which, when translated, grounds only CMA, CMB, CMC, or SD transmitting lead. (Refer to Table B or C.)	
13	Momentarily operate ST key.	GR, PRL lamps lighted. CM_ or SD lamp <i>not</i> lighted. Trouble record taken. TR2 designation perforated. RLK designation <i>not</i> perforated.
14	Momentarily operate RL key.	All lamps extinguished.

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STEP	ACTION	VERIFICATION
15	Repeat Steps 12 through 14 for each transmitting lead.	
16	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 PTT class of test.	
6	Select pretranslator under test.	
7	Operate LK key.	
8	Select A_, B_, C_ digits for code which, when translated, grounds only the CM3 transmitting lead. (Refer to Table B or C.)	
9	Momentarily operate ST key.	CM3 lamp lights momentarily. GR, PRL lamps lighted. Trouble record taken. RLK designation perforated.
10	Momentarily operate RL key.	All lamps extinguished.
11	Operate TR2 key.	
12	Select A_, B_, C_ digits for code which, when translated, grounds only CMA, CMB, CMC, or SD transmitting lead. (Refer to Table B or C.)	
13	Momentarily operate ST key.	CM_ or SD lamp momentarily lighted. GR, PRL lamps lighted. Trouble record taken. TR2, RLK designations perforated.
14	Momentarily operate RL key.	All lamps extinguished.
15	Repeat Steps 12 through 14 for each transmitting lead.	
16	Restore all keys and switches.	

STEP	ACTION	VERIFICATION
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 PTT class of test.	
6	Select pretranslator under test.	
7	Select A_, B_, C_ digits for code which, when translated, grounds only CM3, CMA, CMB, or CMC transmitting lead. (Refer to Table B or C.)	
8	Operate PTR, PRL keys.	
9	Momentarily operate ST key.	GR, PRL lamps lighted. Major alarm sounds. At pretranslator frame— TRT lamp lighted.
10	Momentarily operate AR key.	Major alarm silenced. TRT lamp extinguished.
11	At MTF— Momentarily operate RL key.	All lamps extinguished.
12	Restore PRL key.	
13	Operate RLK key.	
14	Repeat Steps 9 through 11.	
15	Restore all keys and switches.	
G. Transfer Start Feature		
1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select PTT class of test.	
4	Select pretranslator.	
5	Select A_, B_, C_ digits for any code.	
6	Operate TRS key.	

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STEP	ACTION	VERIFICATION
7	Momentarily operate ST key.	GR, PRL lamps lighted. Trouble record taken. TRS designation perforated.
8	Momentarily operate RL key.	All lamps extinguished.
9	Restore all keys and switches.	
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 PTT class of test.	
5	Select A_, B_, C_ digits for code requiring grounded CM3, CMA, CMB, CMC, or SD transmitting lead (Refer to Table B).	
6	Operate OT key.	
7	Select pretranslator under test.	
8	Momentarily operate ST key.	DL_ lamp associated with pretranslator under test lighted.
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 of pretranslator tested.	
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.	

STEP	ACTION	VERIFICATION
4	Manually operate RLK relay; <i>start timing</i> .	In 0.2 to 0.4 seconds— WT relay operated.
5	Release RLK relay.	
6	Remove blocking tool from TR relay.	
7	Block operated RLK relay; <i>start timing</i> .	In 2 to 3 seconds— Major and minor alarms sound. TRT lamp lighted.
8	Remove blocking tool from RLK relay.	
9	Momentarily operate AR key.	Major alarm silenced. TRT lamp extinguished.
10	At MTF— Momentarily operate TRR-AR key.	Minor alarm silenced.
11	Remove make-busy plugs from TRMB PRT_, PRTMB jacks.	

J. Trouble Detection Feature for False Ground or Crosses

Note: Refer to 1.09

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 D, block indicated relay and momentarily ground indicated relay contact, terminal strip terminals ♦ or relay winding.♦	At MTF— Trouble record taken. XX designation perforated.
3	At pretranslator frame— Remove blocking tool.	
4	♦At MTF— Momentarily operate RL key.	All lamps extinguished.♦
5	Repeat Steps 2, 3, ♦4♦ for each lead in Table D.	
6	At MTF— Remove make-busy plug from PRTMB jack of pretranslator tested.	

STEP	ACTION	VERIFICATION
7	Block operated TRL relay.	
8	Remove blocking tool from TR relay.	MB relay remains operated.
9	Remove insulators from TR relay contacts.	
10	Block operated TRB1 relay.	
11	Remove blocking tool from TRL relay.	MB relay remains operated.
	<i>Note:</i> The major alarm will sound when any PCA_relay is operated, therefore perform Steps 12 through 18 before releasing the alarm.	
12	Block operated the first pretranslator connector PCA_relay associated with pretranslator under test.	Major alarm sounds.
13	Remove blocking tool from TRB1 relay.	MB relay remains operated.
14	Block operated the second pretranslator connector PCA_relay associated with pretranslator under test.	
15	Remove blocking tool from first PCA_relay.	MB relay remains operated.
16	Block operated the third pretranslator connector PCA_relay associated with pretranslator under test.	
17	Remove blocking tool from second PCA_relay.	MB relay remains operated.
18	Remove blocking tool from third PCA_relay.	MB relay released.
19	Momentarily operate AR key.	Major alarm silenced.