

**IDDD PRETRANSLATOR SD-27849-01**  
**TESTS USING MASTER TEST FRAME**  
**NO. 5 CROSSBAR OFFICES**

<b>1. GENERAL</b>		<b>PAGE</b>
1.01	This issue affects Equipment Test Lists.	
1.02	The tests covered are:	
	<b>PAGE</b>	
<b>A. Translation Feature:</b>	This test checks the operation of the pretranslator digit registers and translators for all codes. . . . .	<b>3</b>
<b>B. Open Receiving Lead Check Feature:</b>	This test checks that the pretranslator recognizes an open receiving (A-, B-, or C-) lead from the originating register. . . . .	<b>3</b>
<b>C. Open Release Lead Check Feature:</b>	This test checks that the pretranslator recognizes open release (PRL) and release check (RLK) leads to the originating register. . . . .	<b>4</b>
<b>D. Open Transmitting Lead Check Feature:</b>	This test checks that the pretranslator recognizes open transmitting leads (SD, CM3, CMA, CMB, CMC) to the originating register. . . . .	<b>5</b>
<b>E. No Locking Ground on Transmitting Lead Check Feature:</b>	This test checks that the pretranslator recognizes the failure to return locking ground on the transmitting leads from the originating register. . . . .	<b>6</b>
<b>F. Open Trouble Release Lead Check Feature:</b>	This test checks that the pretranslator recognizes an open trouble release (PTR) lead in the pretranslator or originating register. . . . .	<b>7</b>
	<b>G. Transfer Start Feature:</b> This test checks that the pretranslator recognizes a transferred start lead signal from the pretranslator connector. . . . .	<b>8</b>
	<b>H. Display Lost Feature:</b> 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. . . . .	<b>8</b>
	<b>I. Work Timer and Trouble Recorder Timer Features:</b> 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. . . . .	<b>9</b>
	<b>J. Trouble Detection Feature for False Ground or Crosses:</b> This test checks that all cross-detection relays function properly under trouble conditions. . . . .	<b>9</b>
	<b>K. Make-Busy Feature:</b> This test checks that the MB relay is operated in all pretranslator make-busy conditions. . . . .	<b>10</b>
1.03	Tests I, J, and K require actions and/or verifications at master test frame (MTF) and pretranslator frame.	
1.04	All tests in this section should be made during periods of light traffic.	
1.05	The manner of selecting some circuits and test conditions at the MTF and its associated circuits varies depending on the apparatus options	

**Section 218-130-502**

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.

**1.06** 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).

**TABLE A**

APPARATUS	TESTS				
	A THRU G	H	I	J	K
Test Circuit (2.02)	1	1			
332A (make-busy) Plug		✓	✓	✓	✓
Blocking and Insulating Tools (2.03)			✓		✓
KS-3008 Stopwatch or equivalent			1		
Cord (2.04)				1	
Cord (2.05)					1

✓ As required.

**3. PREPARATION**

<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
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**Tests A, 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.

STEP	ACTION	VERIFICATION
<b>4. METHOD</b>		

STEP	ACTION	VERIFICATION
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**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- through C- digits as required for first code listed in Table C.	
8	Momentarily operate ST key.	PRL lamp lighted. Lamp(s) lighted designating transmitting lead(s) grounded.
9	Momentarily operate RL key.	All lamps extinguished.
10	Repeat Steps 7 through 9 for the remaining codes in Tables 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 PTT class of test.	
4	Select pretranslator under test.	
5	Momentarily operate ST key.	PTR, HD lamps lighted. Trouble record taken. A-, B-, C- digits, PRL designations <i>not</i> perforated.
6	Momentarily operate RL key.	All lamps extinguished.
7	Restore all keys and switches.	

STEP	ACTION	VERIFICATION
<b>C. Open Release Lead Check Feature</b>		
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- through C- digits as required 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.	
<b>D. Open Transmitting Lead Check Feature</b>		
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- through C- digits as required for code which, when translated, grounds only CM3 transmitting lead. (Refer to Table C or D.)	
9	Momentarily operate ST key.	PTR, HD, G1 lamps lighted. CM3 lamp <i>not</i> lighted. Trouble record taken. TOK, PRL ddesignations perforated. RLK designation <i>not</i> perforated.
10	Momentarily operate RL key.	All lamps extinguished.
11	Operate TR2 key.	
12	Select A- through C- digits as required for code which, when translated, grounds only the CMA, CMB or CMC transmitting lead. (Refer to Table C or D.)	
13	Momentarily operate ST key.	GR, PRL lamps lighted. CM- lamp <i>not</i> lighted. Trouble record taken. TR2 designation perforated. RLK designation <i>not</i> perforated.

**Section 218-130-502**

<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
14	Momentarily operate RL key.	All lamps extinguished.
15	Repeat Steps 12 through 14 for each CM-transmitting lead.	
16	Select A- through C- digits as required for code which, when translated, grounds the CMB and SD or CMA and SD transmitting leads. (Refer to Table C or D.)	
17	Momentarily operate ST key.	GR, PRL lamps lighted. CM-, SD lamps <i>not</i> lighted. Trouble record taken. TR2 designation perforated. RLK designation <i>not</i> perforated.
18	Momentarily operate RL key.	All lamps extinguished.
19	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- through C- digits as required for code which, when translated, grounds only CM3 transmitting lead. (Refer to Table C or D.)	
9	Momentarily operate ST key.	CM3 lamp lighted 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- through C- digits as required for code which, when translated, grounds only	

STEP	ACTION	VERIFICATION
	the CMA, CMB, or CMC transmitting lead. (Refer to Table C or D.)	
13	Momentarily operate ST key.	CM- lamp lighted momentarily. GR, PRL lamps lighted. Trouble record taken. TR2, RLK designations perforated.
14	Momentarily operate RL key.	All lamps extinguished.
15	Select A- through C- digits as required for code which, when translated, grounds CMB and SD or CMA and SD transmitting leads. (Refer to Table C or D.)	
16	Momentarily operate ST key.	CM-, SD lamps lighted momentarily. GR, PRL lamps lighted. Trouble record taken. TR2, RLK designations perforated.
17	Momentarily operate RL key.	All lamps extinguished.
18	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 PTT class of test.	
6	Select pretranslator under test.	
7	Select A- through C- digits as required for code which, when translated, grounds only the CM3, CMA, CMB or CMC transmitting lead. (Refer to Table C or D.)	
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.

**Section 218-130-502**

<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
11	At MTF— Momentarily operate RL key.	All lamps extinguished.
12	Restore PRL key; operate RLK key.	
13	Repeat Steps 9 through 11.	
14	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- through C- digits as required for any code.	
6	Operate TRS key.	
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- through C- digits as required for any code.	
6	Operate OT key.	
7	Select pretranslator under test.	

STEP	ACTION	VERIFICATION
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.	
<b>I. Work Timer and Trouble Recorder Timer Features</b>		
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 RLK relay; <i>start timing.</i>	In 230 to 290 milliseconds— WT relay operated.
5	Release RLK relay.	
6	Remove blocking tool from TR relay.	
7	Block operated RLK relay; <i>start timing.</i>	In 2.0 to 2.8 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- and PRTMB jacks.	
<b>J. Trouble Detection Feature for False Ground or Crosses</b>		
1	At MTF— Insert make-busy plug into PRTMB jack associated with pretranslator being tested.	

TABLE D

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

- \* Do not list C digit when codes are 2-digits.  
Do not list B or C digit when codes are 1-digit.
- † Do not list C digit when codes are 2-digit.
- ‡ Use this column for 3-digit codes only.