INTERRUPTER CIRCUIT SD-27510-01

TESTS

NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing the 1-, 1-1/3, 2-, or 4-ipm and 6- or 12-minute interrupter circuit SD-27510-01 when connected to 2- or 4-wire connecting circuits. The information for testing this interrupter circuit for use with 4-wire intertoll trunk circuits was formerly in Section 218-930-501.

1.02 The tests covered are:

1.03 Tests A and B can be performed on the same cycle of tests to avoid duplication of steps.

1.04 When performing Test C, a maximum of ten trunks can be locked out from receiving timing indications.

1.05 ***Lettered Steps:*** A letter a, b, or 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

All Tests

2.01 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 419A or 624B tool (as required). This testing cord is used for making connections to terminal strip punching.

Test A

2.02 Test receiver, 716C or equivalent, attached to a W2AB cord, equipped with two 360A tools (2W21A cord), one KS-6278 connecting clip, and one 411A (test pick) tool (for checking the presence of ground on terminal strip punching).

2.03 KS-3008 stopwatch or equivalent.

Test C

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

3. PREPARATION

3.01 Obtain from office records timing interval assigned to each counter unit in office and record in Table A, Test A.

3.02 Obtain from office records the number of the contact of the A0 or A1 relay associated with each counter unit and record in Table C, Test C.

4. METHOD

STEP	ACTION	VERIFICATION
A. Timing Test		
2-Wire Connecting Circuits		
	Note: Do not start test until all relays are normal on counter unit being tested.	
1	At counter unit being tested— Connect ground to punching 31 of terminal strip B on counter unit being tested.	ST relay operated, then released. (Relay may release from 0 to 15 seconds after ground has been applied, depending upon position of timer.)
2	When ground is present on punching 21 (PU lead) of terminal strip B on counter unit being tested, ***start timing.***	
3	When ground is present on punching 11 (DA lead) of terminal strip B on counter unit being tested, ***stop timing.***	EN relay momentarily operated. Timing interval for counter unit being tested is given in Table A.
4	Remove ground from punching 31 of terminal strip B on counter unit being tested.	Relays released after timing interval unless seized by service call. *Note:* Counter circuit may go through a second cycle if ST relay reoperates before ground is removed from punching 31.
5	Repeat Steps 1 through 4 until all PU and DA leads have been checked in accordance with Table B.	

TABLE A

COUNTER UNIT	TIME INTERVAL SEC/MIN	COUNTER UNIT	TIME INTERVAL SEC/MIN	COUNTER UNIT	TIME INTERVAL SEC/MIN
1	_____	9	_____	17	_____
2	_____	10	_____	18	_____
3	_____	11	_____	19	_____
4	_____	12	_____	20	_____
5	_____	13	_____	21	_____
6	_____	14	_____	22	_____
7	_____	15	_____	23	_____
8	_____	16	_____	24	_____

STEP	ACTION	VERIFICATION

TABLE B

	STEP 2			STEP 3	
PU LEAD	PUNCHING	TERM. STRIP	DA LEAD	PUNCHING	TERM. STRIP
CPU0	21	B	CDA0	11	B
CPU1	22	B	CDA1	12	B
CPU2	23	B	CDA2	13	B
CPU3	24	B	CDA3	14	B
CPU4	25	B	CDA4	15	B
CPU5	26	B	CDA5	16	B
CPU6	27	B	CDA6	17	B
CPU7	28	B	CDA7	18	B
CPU8	27	A	CDA8	17	A
CPU9	28	A	CDA9	18	A

6 Repeat Steps 1 through 5 for each counter unit in interrupter circuit.

4-Wire Connecting Circuits

Note: Do not start test until all relays are normal on counter unit being tested.

7 At counter unit being tested—
Connect ground to punching 57 of terminal strip on counter unit being tested.

ST relay operated, then released.
(Relay may release from 0 to 15 seconds after ground has been applied, depending upon position of timer.)

8 When ground is present on punching 47 of terminal strip on counter unit being tested, ***start timing.***

9 When ground is present on punching 37 of terminal strip on counter unit being tested, ***stop timing.***

EN relay momentarily operated.
Timing interval for counter unit being tested is given in Table A.

10 Remove ground from punching 57 of terminal strip on counter unit being tested.

Relays released after timing interval unless seized by service call.

Note: Counter circuit may go through a second cycle if ST relay reoperates before ground is removed from punching 57.

11 Repeat Steps 7 through 10 for each of counter units in interrupter circuit.

STEP	ACTION	VERIFICATION
B. Lockout Test		
	Note: Do not start test until all relays are normal on counter unit being tested.	
1a	If connecting circuit is 2-wire— At counter unit being tested— Connect ground to punching 31 of terminal strip B on counter unit being tested.	ST relay operated, then released. (Relay may release from 0 to 15 seconds after ground has been applied, depending upon position of timer.)
2b	If connecting circuit is 4-wire— At counter unit being tested— Connect ground to punching 57 of terminal strip on counter unit being tested.	ST relay operated, then released. (Relay may release from 0 to 15 seconds after ground has been applied, depending upon position of timer.)
3	Observe that ST relay remains normal until EN relay operates and releases.	After timing interval given in Table A, Test A— EN relay operated and released, then ST relay operated and released.
4	Remove ground connected in Step 1a or 1b.	Relays released after timing cycle unless counter circuit is seized by service call.
5	Repeat Steps 1a or 2b through 4 for each counter unit in interrupter circuit.	
C. Circuit Reseizure		
	Note: (Refer to 1.04.)	
1	At counter unit being tested— Insulate contact of A0 or A1 relay listed in Table C for counter unit being tested. (Refer to 3.02.)	
	Note: Do not start test until all relays are normal on counter unit being tested.	
2a	If connecting circuit is 2-wire— Connect ground to punching 31 of terminal strip B on counter unit being tested.	ST relay operated.
3b	If connecting circuit is 4-wire— Connect ground to punching 57 of terminal strip on counter unit being tested.	ST relay operated.
4	Block operated EN relay.	ST relay released.
5	Block operated ST1 relay.	
6	Remove blocking tool from EN relay.	EN relay remains operated.
7	Remove blocking tool from ST1 relay.	EN relay released. ST relay operated.

STEP	ACTION	VERIFICATION

TABLE C

COUNTER UNIT	CONTACT INSULATED	COUNTER UNIT	CONTACT INSULATED	COUNTER UNIT	CONTACT INSULATED
1	_____	9	_____	17	_____
2	_____	10	_____	18	_____
3	_____	11	_____	19	_____
4	_____	12	_____	20	_____
5	_____	13	_____	21	_____
6	_____	14	_____	22	_____
7	_____	15	_____	23	_____
8	_____	16	_____	24	_____

8	Repeat Steps 4 through 7 substituting one of relays PU, T1, T2, T3, T4 for ST1 relay in Steps 5, 7 for each repetition.	
9	Remove ground connected in Step 2a or 3b.	At end of timing period— EN relay momentarily operated, restoring all relays to normal.
10	Remove insulator from contact of A0 or A1 relay.	
11	Repeat Steps 1 through 10 for each counter unit of interrupter.	