FALSE OPERATION OF SUBSCRIBER SENDER LINK C RELAY NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section covers procedures to be followed in connection with trouble resulting from false operation of the subscriber sender link C relay due to a false ground or cross in its operating path.

2. INDICATIONS OF TROUBLE CONDITION

2.01 Subscriber sender link alarms attended by line link alarms.

2.02 Originating trouble indicator displays attended by the XDC lamp.

2.03 Stuck subscriber senders.

2.04 Terminating trouble indicator displays of line link lockout.

3. REACTIONS DUE TO TROUBLE

3.01 The completion of originating and terminating traffic is affected by this trouble condition. During periods of peak traffic subscribers may experience delays in the completion of calls.

4. IMMEDIATE PROCEDURE TO FOLLOW

4.01 Determine the particular subscriber sender link involved in the trouble by analyzing the originating trouble indications received. The particular sender link in trouble will reappear on originating trouble indications attended by the XDC lamp.

4.02 Insert a make-busy plug in the hold jack of the subscriber sender link determined in 4.01.

Note: When the common hold jack circuit (SD-25522-01) is in use the sender link in trouble will be held on the first appearance of the trouble.

4.03 When the sender link again blocks determine the two C relays that are operated. One of the C relays is falsely operated and may be determined by observing the associated SG relay which will be normal.

4.04 Remove from service the sender group associated with the falsely operating C relay.

4.05 At the sender link involved in the trouble block the falsely operated C relay in the non-operated position in the approved manner and then remove the make-busy plug from the hold jack.

4.06 Release all stuck originating senders.

5. ANALYSIS OF TROUBLE

5.01 The subscriber sender link C relays serve as a means for connecting certain leads, common to a group of subscriber senders, from a particular subscriber sender link to a particular group of subscriber senders. The corresponding stationary contacts of all C relays associated with a particular subscriber sender group are multipled together. The C relay armature contacts, associated with the secondary select magnet leads, multiple to corresponding contacts of the C relay associated with the subscriber sender group appearing on the same secondary switch. All other C relay armature contacts on a particular subscriber sender link multiple to corresponding contacts of all C relays associated with the sender link.

5.02 Under normal operation in the subscriber sender link only one C relay is operated at a time. A false operation of a subscriber sender link C relay, during a service call, will result in extending the information supplied the subscriber sender group selected for the call to the subscriber sender group associated with the falsely operated C relay. If the subscriber sender group associated with the falsely operated C relay is engaged on a call from some other subscriber sender link, the information from both subscriber sender links is extended to both sender groups through the C relay multiple wiring. This will cause both subscriber sender links to block and time out.

5.03 The subscriber sender link primary select magnet associated with a particular sender group is operated from the ground that operates the C relay. If two subscriber sender link C relays operate, two primary select magnets will operate and a double connection will occur involving two subscriber senders in different sender groups. The subscriber sender, associated with the falsely operated C relay, may be at any stage in the completion of a call when the double connection occurs. The various trouble indications, in 2.01 to 2.04 inclusive, may be received due to the trouble condition.

6. SUGGESTED PROCEDURE FOR LOCATING AND CLEARING TROUBLE

6.01 At the OC relay insulate the contacts in the operating path of the falsely operating C relay in the approved manner. This should indicate whether the C relay is operating from the OC or PS lead. Determine the normal operating circuit for the C relay associated with the lead in trouble. By means of tests and visual inspection locate and clear trouble.

7. TROUBLE CONDITIONS CAUSING REACTIONS MAY BE LISTED BELOW

7.01 A cross in the multiple wiring of contacts 0 to 9 inclusive and 10 to 19 inclusive at a G relay. A cross between contacts 9 and 19, for example, will result in the false operation of relay C-9.

7.02 A cross between 6 and 7 top contacts of an SG relay causing the false operation of the associated C relay.

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FORM E -2623(7-39)

ORIGINATING TROUBLE INDICATOR RECORD
CROSSBAR OFFICES

OFFICE _____

DATE _____ SHEET NO. ____

NO.	TI	CT	DT	DR	GO	G 100	DL GO	DL G100	CF	CN	SN	OF	TL	KEL	KOL	KER	KOR	G	GT1	GT3	GS	DF	SW	M	JC	P	CHL	CHR	Z	ZCK	ZO	ZL	ZK	PS1	NC1	OT1	TC1	TCK	TP1	RP1	TPK	ZR	A	B	C	D	F	AR
1	✓			2			1,3		1	2	0	All	8		2			5				2			3							✓		✓					✓			8	6	3	12	2	
2	✓			1					1	0	0																															5	6	3	All	1,2,4	
3	✓			1			0,2,3		1	1	9	3			0,9			11				2	2	1	2							✓		✓					✓			8	6	3	11	2	
4	✓			0			1		0	2	0																															8	6	7	All	All	
5	✓			2			0,3		2	0	9	2				3		10				2	0	0	4							✓		✓				✓				8	6	3	12	2	
6	✓			3			0,1,2		2	1	7	1				3		1				2	2	0	2							✓		✓					✓			8	6	7	11	2	
7	✓			3					2	0	9	3		9				7				2	6	0	6							✓			✓				✓			3	6	3	10	2	
8	✓			0			1,2,3		0	0	0	3				1		5	1			2	8	2	6							✓		✓					✓			2	5	6	1	2	
9																																															
10																																															
11																																															

Column A - Trouble indication.
Columns B, C, D and E - Any marker, sender, trunk or trunk group.
Columns F and O - The XDF1, XK and XDC lamps appearing with any district junctor on district link frame 2 only, indicate trouble on district link frame 2.
Columns G, H, J, K, L, M, N and P - Have no significance.
Column I - Many D and F lamps on lines 2 & 4 indicate a cross or false ground on the associated leads (in this case due to a falsely operated C relay).

Indication on lines 2 & 4 attended by terminating line link lock-out indications and originating stuck senders and subscriber sender link alarms on various frames.

NO.	OF	TP	EA	LA	SGR	CKG	K4	K5	SPE	SPO	NSE	NSO	DK	AK	TKE	TK	SR	RL	MS	CK	BK	CHE	A	C	S	SL	B	MR	S1K	MRL	ZS	Z	OT	TC	TP2	NM	RO	TB5	CRL	DT3	MR1	TRL	EC	X	SDT	OB	SD	SD1	OG	SO	CR	CL	TW	TIME
1				✓		✓	✓	✓			✓	✓				✓				✓		✓																					✓	XDF1,XK,XDC			✓	✓		✓	3,4	1		9:00 P.M.
2				✓		✓	✓	✓																																		✓										9:02 P.M.
3				✓		✓	✓	✓			✓	✓	✓	✓	✓	✓				✓		✓						✓														✓	XDC			✓	✓		✓	3,4	1		9:05 P.M.
4				✓		✓	✓	✓																																		✓										9:06 P.M.
5		✓		✓		✓	✓	✓			✓	✓	✓	✓		✓	✓			✓	✓	✓																					✓	XDC			✓	✓		✓	3,4	1		9:08 P.M.
6				✓		✓	✓	✓			✓	✓	✓	✓		✓	✓			✓	✓	✓						✓															✓	XDC			✓	✓		✓	3,4	1		9:10 P.M.
7				✓		✓	✓	✓			✓	✓	✓	✓		✓	✓			✓	✓	✓																					✓	XDC			✓	✓		✓	3,4	1		9:12 P.M.
8				✓		✓	✓	✓	✓	✓			✓	✓		✓	✓			✓	✓	✓						✓															✓	XDC					5	✓	3,4	1,2,4		9:15 P.M.
9																																																				
10																																																				
11																																																				

Analysis of Indication: The XDC lamp display occurs when ground is prematurely connected to the DC lead. Trouble indications of XDC attended by indications with many D and F lamps may indicate a falsely operated C relay. The subscriber sender link frame in trouble is shown on indications attended by the XDC lamp (in this case frame 2).

Immediate Procedure to Follow: Determine if the condition can be eliminated by transferring the controller to emergency. If the condition is not cleared make the frame busy.

Procedure for Locating and Clearing Trouble: Test for a cross between G relay contacts 0-9 and 10-19; if these contacts test clear test the top 6-7 contacts of the SG relays for a cross.