

TRANSFER REGISTER LINK  
CHAIN CIRCUITS

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1.2 Reference: FS - number in test titles and text is the Schematic FS - figure which shows path or function being tested.

1.3 NOTE: These tests can only be made before the link is placed in service, or conditions of very light traffic.

2. APPARATUS

2 1 W4A Cord

1. GENERAL INFORMATION

1.1 Description: This section describes the tests of the TP, RB, RP relay chains of ST-521121 Transfer Register Link Circuit.

3. TP RELAY CHAIN TEST (FS 6,1)

VERIFICATION

- | STEP | ACTION   |
|------|--|
| 1.   | Block nonoperated ON, RB relays in all transfer registers. Block nonoperated all RP and RB relays except RPO in TRL. Block operated Z relay  |
| 2.   | Connect ground to contact 10F of TPO relay and to HGO CL1 punching   |
| 3.   | Manually operate first TP relay in hor. grp. 0, TP01   |
| 4.   | Connect battery to lower winding terminal of second TP relay   |
| 5.   | Manually operate second TP relay   |
| 6.   | Remove battery from winding of second TP relay   |
| 7.   | Connect battery to lower winding of first TP relay   |
| 8.   | Remove battery first TP relay  |
| 9.   | Repeat steps 3 through 8 applying the reference to first and second TP relays to the two consecutive TP relays (second and third - third and fourth, etc.) until last TP relay has been referred to as the second TP relay |

First TP relay holds operated, associated hold magnet operated, ground on associated TPC and TPU punchings of XTS(A) RPO operated

Second TP relay not operated

First TP relay released

Second TP relay holds. Verify as in Step 3

First TP relay operates, associated hold magnet does not operate, no ground on associated TPC or TPU punchings XTS(A), second TP relay holds

First TP relay released

NOTE - See Figure 1 for chain sequence

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STEP	ACTION	VERIFICATION
10.	Repeat step 3 for last TP relay	
11.	Remove blocking tools from RP and RB relays. If performing RB relay test next, do not remove blocking from ON and RB relays in the registers	
12.	Remove blocking tool from Z relay. Remove ground cords from TPO relay and HGO punching	

4. RB RELAY CHAIN TESTS (FS 3)

STEP	ACTION	VERIFICATION
1.	Block nonoperated relays ON, RB in all transfer registers	
2.	Block nonoperated all RP relays in TRL frame	
3.	Block operated last TP relay in TRL frame	
4.	Perform operations as shown in Table 1	

5. TABLE 1 PARAGRAPH 4

RB RELAY LOCKING CIRCUIT TESTS			
STEP 1	STEP 2		
MAN OPER LIKE NO RB REL IN REGISTER UNITS (SEE NOTE)	MAN OPER SIMILAR NO RP RELAY IN REGIS TER UNIT	RB RELAY LOCKS IN REG UNIT	RB RELAY RELEASES IN AT LEAST ONE REG UNIT
1-9	0	0	1-9
0-2-9	1	1	0-2-9
0-1-3-9	2	2	0-1-3-9
0-2-4-9	3	3	0-2-4-9
0-3-5-9	4	4	0-3-5-9
0-4-6-9	5	5	0-4-6-9
0-5-7-9	6	6	0-5-7-9
0-6-8-9	7	7	0-6-8-9
0-7-9	8	8	0-7-9
0-8	9	9	0-8

NOTE: Symbol 1-9 indicates 1 to 9 inclusive. All relays should lock when operated.

- When test is completed, unblock all relays in registers and on TRL frames. Also release all RB relays which have remained operated
- Block operated RB relays associated with register units not equipped. Do not remove these blocks until line is equipped with registers in these positions

## 5. RP RELAY CHAIN TESTS (FS 2, 4, 6)

STEP	ACTION	VERIFICATION
1.	Block nonoperated ON and H relay in each transfer register. Block Z relay nonoperated	NOTE - Order of register preference 0-4-8-1-5-9-2-6-3-7
2.	Connect ground to punching 06 (REG-) terminal strip for first preferred register	
3.	Manually operate any TP relay except TPOO in horizontal group O	TP relay locks, preferred RP relay operates, associated select bar operates on switches 0 through 7, hold magnet operates for associated TP relay, associated RB should not operate, associated C and CA relays operate
4.	Block operated RBO relay	RPO, CO, CAO and TP relays should release, select bars and hold magnet should release
5.	Remove ground from (REGO) terminal strip, connect ground to punching 06 of next preferred equipped transfer register	
6.	Repeat steps 3 through 5 for each equipped register unit. If a register unit is not equipped the order of preference is to the next equipped unit in the preference chain	
7.	Block operated RB relay for last preferred equipped register unit. Unblock RB relay associated with next to last preferred equipped register	RP relay associated with next to last preferred equipped register unit operates
8.	Unblock ON and H relay in each transfer register. In TRL frame unblock RB relays associated with equipped register units	
9.	Repeat Steps 1 - 8 with Z blocked operated	NOTE - Order of register preference 9-2-6-3-7-0-4-8-1-5
10.	Remove ground cords and Z relay blocking tool	

## 6. ALARM FUNCTIONS

1.	Block operated TMS relay	WT relay operates (SO) Audible and visual alarms sound (Major)
2.	Remove blocking tool from TMS relay	Audible and visual alarm locked in
3.	Operate AR key	Audible and visual alarm retired

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7. W-Z WALKING CIRCUIT

STEP	ACTION	VERIFICATION
1.	Operate ATP- relay (except TP-00)	If Z relay released RP-0 should operate. If Z relay operated RP-9 should operate
2.	Release TP- relay	
3.	Operate ATP- relay (except TP-00)	The register preference should be reversed from Step 1
4.	Restore TP- relay	

Figure 1

