

“PULSE* 120” – SG-1A
ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGE
MESSAGE REGISTRATION FAULT-CLEARING PROCEDURE

1. GENERAL

1.01 This section describes the procedure for clearing message registration faults in the PULSE 120 electronic private automatic branch exchange (EPABX). *Tone, ringing and dialing faults must be cleared before attempting to correct message registration faults* (see Section 553-5011-503).

2. CIRCUIT DESCRIPTION

2.01 Message registration accumulates and displays the number of completed local calls made from a guest room telephone. The display consists of electromechanical or electronic counters located externally to the PULSE 120 cabinet.

2.02 Power for the message registers is provided

- by the PULSE 120 for +24 V registers (see Fig. 1 and Tables A, B, C)
- by an external power supply for +48 V registers. The +48 V external supply must be routed through the PULSE 120 (see Table A).

2.03 Control circuitry to detect completed calls and drive the registers is located in the option shelf. One of two switch-selectable detection methods can be used:

- a reverse-battery signal from the central office is detected at the appropriate trunk circuit pack and processed in the QPJ59-type circuit pack
- –48 V dc from the CO on a third wire associated with the trunk in use is detected in one of two QPJ99-type circuit packs (15 trunks per pack) and processed in QPJ59.

When a completed call is detected, the appropriate message register is incremented by applying a ground pulse to the message register lead through a QPJ83-type circuit pack as shown in Fig. 1.

2.04 The QPJ99-type circuit packs, required only if third-wire control is used, are contained in connector locations 10 and 11 of the option shelf. The circuit pack in connector 10 detects –48 V dc on the third wires associated with CO trunks 1 through 15. The circuit pack in connector 11 detects

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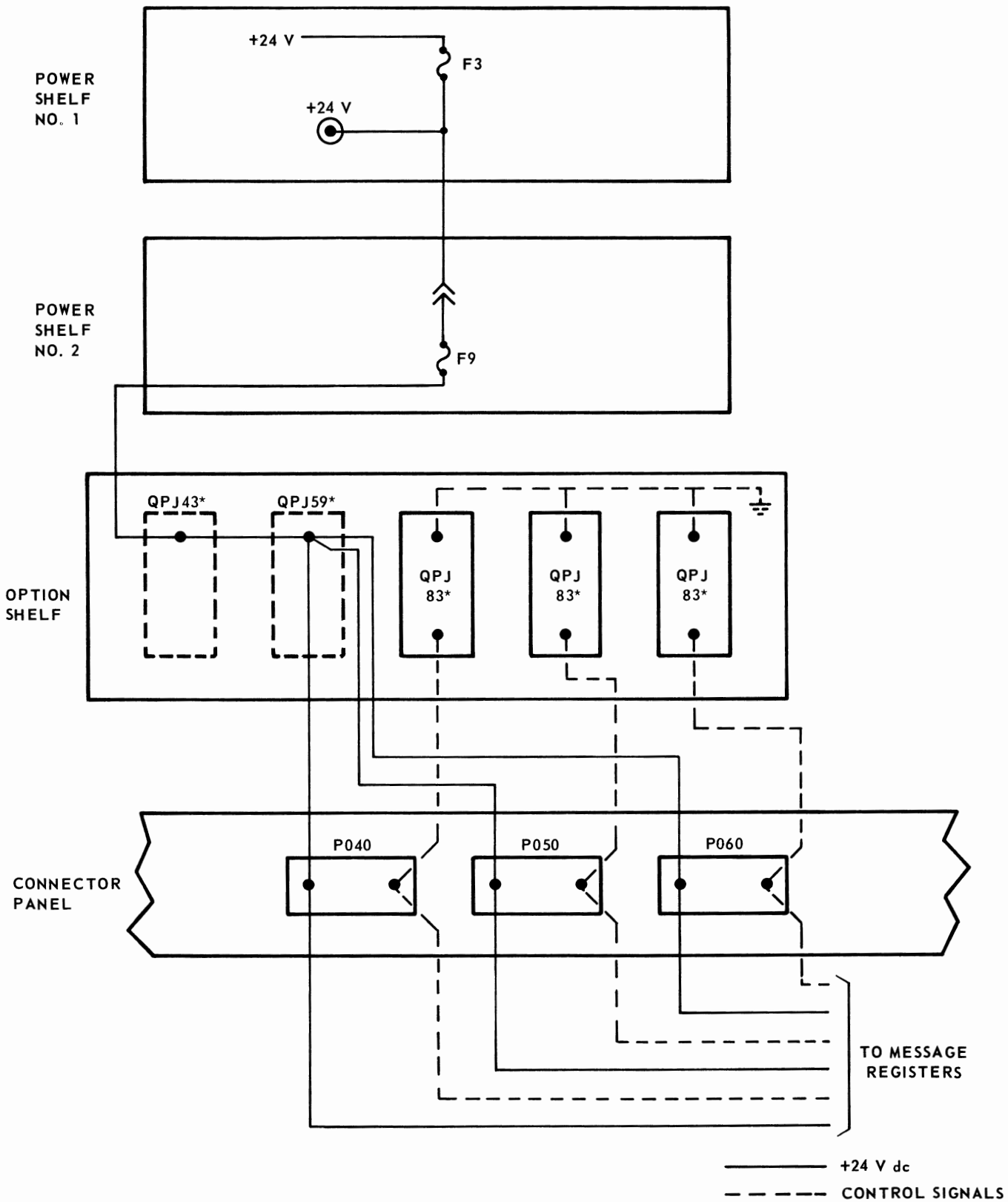


Fig. 1 — +24 V Power Supply to Message Registers

—48 V dc on the third wires associated with CO trunks 16 through 30. All third-wire leads are terminated in P131 on the connector panel in the base of the EPABX cabinet. The connector cable pair, pin numbers, and the color code for each of the third-wire leads are given in Table D.

2.05 The QPJ83-type circuit packs are contained in connector locations 1, 2, and 3 of the option shelf. The circuit pack in connector location 1 serves the message registers for system numbers 210 through 249.

The circuit pack in connector location 2 serves the message registers for system numbers 250 through 289.

The circuit pack in connector location 3 serves the message registers for system numbers 310 through 349.

2.06 The message register leads for system numbers 210 through 249 are terminated in P040 on the connector panel at the base of the EPABX cabinet.

The message register leads for system numbers 250 through 289 terminate in P050 on the connector panel.

The message register leads for system numbers 310 through 349 are terminated in P060 on the connector panel at the base of the EPABX cabinet. The connector cable pair and pin numbers and the color code for each of the message register leads are listed in Tables A, B, and C.

3. FAULT-CLEARING PROCEDURE

3.01 When the substitution of a circuit pack is required during the fault-clearing procedure, the contacts on the new circuit pack must be cleaned (see Section 553-5011-500) before inserting the circuit pack into the connector.

Note 1: The asterisk (*) after the circuit pack code replaces the suffix letter.

Note 2: When substituting a QPJ59* circuit pack, ensure that the switches on the faceplate of the new pack are in the same position as those on the original circuit pack before inserting.

3.02 If a fault is cleared by circuit pack substitution and *the original circuit pack has not caused a fuse to blow and/or there is no visual evidence of burnt or damaged components*, the contacts on this circuit pack and its associated connector must be cleaned. The original circuit pack is then inserted in the connector, and if the fault reappears, the fault-free circuit pack is reinserted.

3.03 If different or additional faults or both are created in the system when substituting a circuit pack, tag and return the replacement as a defective unit.

3.04 If the fault is not cleared by the substitution of a circuit pack, the original circuit pack must be reinserted in the connector. See Section 553-5011-202 for shelf substitution instructions.

3.05 When the fault-clearing procedure is complete, a visual check must be made to ensure that all circuit packs are well seated in their connectors and the screws in the connector plugs and jacks are tight. See Section 553-5011-501 for the EPABX internal cabling arrangement.

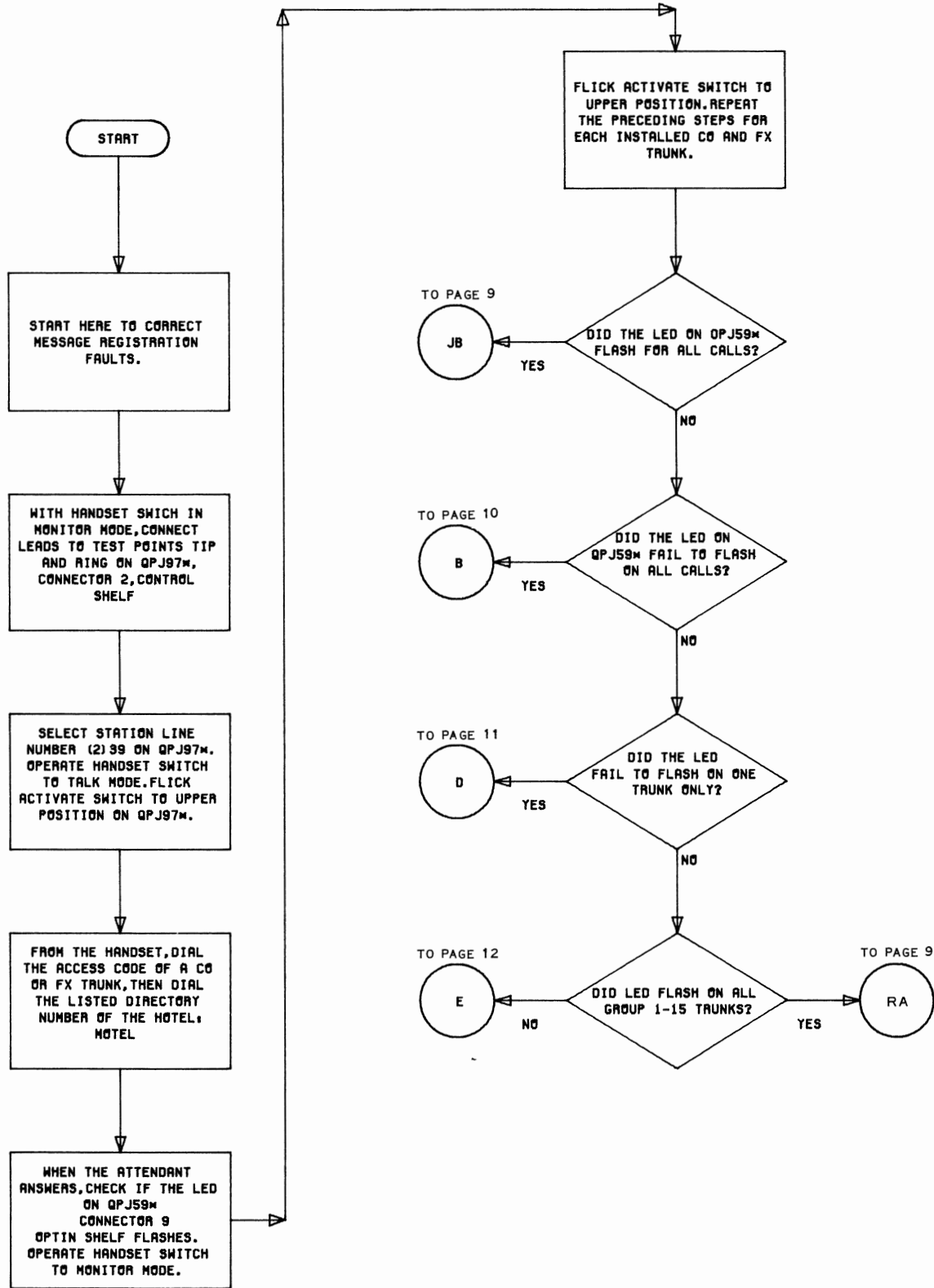
3.06 The following flowchart instructions correct message registration faults.

**TABLE B
TERMINATING SEQUENCE OF
P050 AT THE CROSS-CONNECTING TERMINAL
OPTION SHELF – HOTEL/MOTEL MESSAGE REGISTRATION**

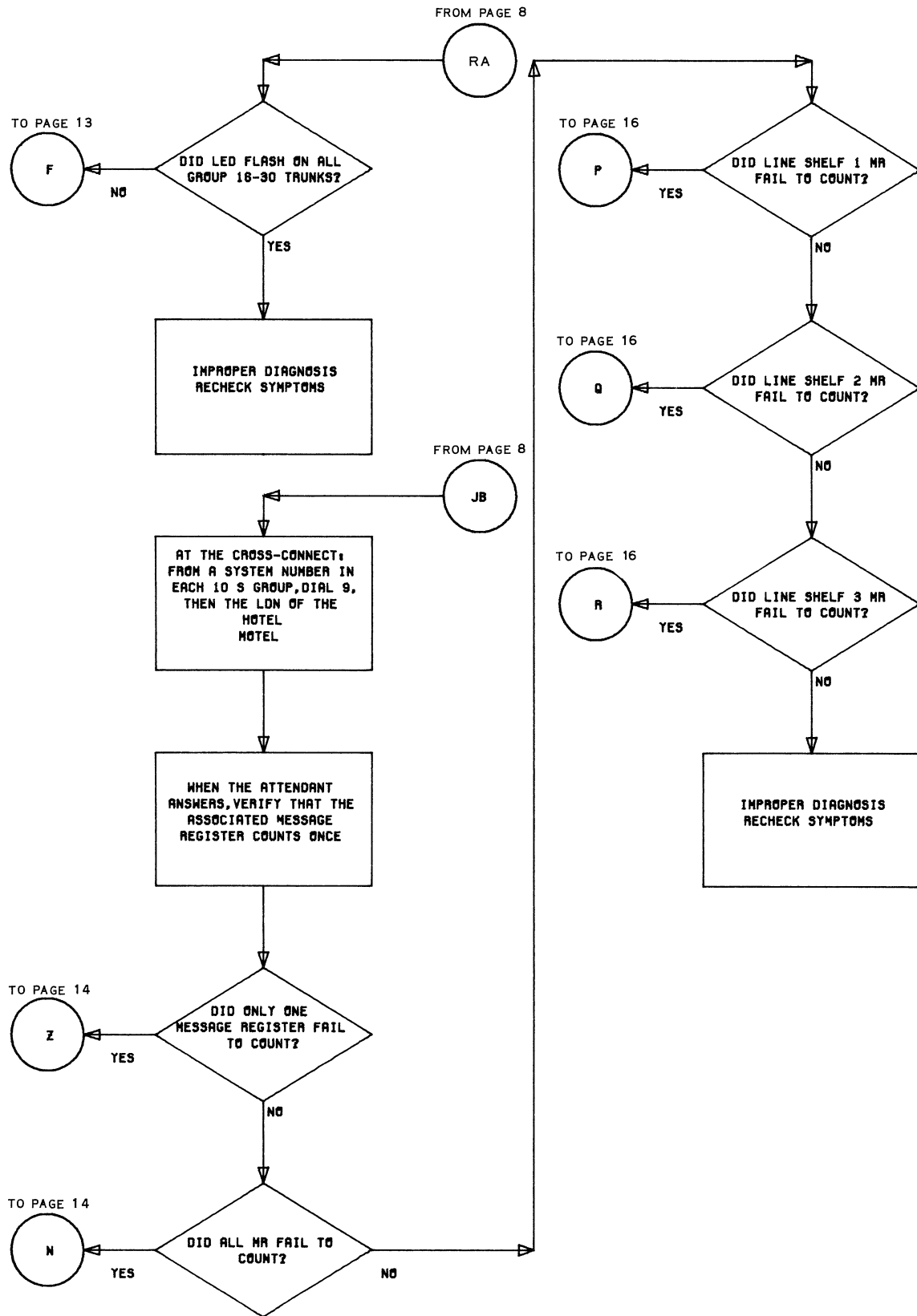
	PAIR	PIN	PAIR COLOR	SYSTEM NO.	DIALED NO. BY PLAN				FUNCTION
					A	B	C	OTHER	
ORANGE BINDER OF A75A FROM CONNECTOR P050 TERMINATED ON CONNECTING BLOCK P050	1T	26	W-BL	250	121	121	121	} Message Register Leads to Message Register or Electronic Message Registration System	
	R	1	BL-W	251	122	122	122		
	2T	27	W-O	252	123	123	123		
	R	2	O-W	253	124	124	124		
	3T	28	W-G	254	125	125	125		
	R	3	G-W	255	126	126	126		
	4T	29	W-BR	256	127	127	127		
	R	4	BR-W	257	128	128	128		
	5T	30	W-S	258	129	129	129		
	R	5	S-W	259	130	130	200		
	6T	31	R-BL	260	131	131	201		
	R	6	BL-R	261	132	132	202		
	7T	32	R-O	262	133	133	203		
	R	7	O-R	263	134	134	204		
	8T	33	R-G	264	135	135	205		
	R	8	G-R	265	136	136	206		
	9T	34	R-BR	266	137	137	207		
	R	9	BR-R	267	138	138	208		
	10T	35	R-S	268	139	139	209		
	R	10	S-R	269	140	140	210		
	11T	36	BK-BL	270	141	141	211		
	R	11	BL-BK	271	142	142	212		
	12T	37	BK-O	272	143	143	213		
	R	12	O-BK	273	144	144	214		
	13T	38	BK-G	274	145	145	215		
R	13	G-BK	275	146	146	216			
14T	39	BK-BR	276	147	147	217			
R	14	BR-BK	277	148	148	218			
15T	40	BK-S	278	149	149	219			
R	15	S-BK	279	150	200	220			
16T	41	Y-BL	280	151	201	221			
R	16	BL-Y	281	152	202	222			
17T	42	Y-O	282	153	203	223			
R	17	O-Y	283	154	204	224			
18T	43	Y-G	284	155	205	225			
R	18	G-Y	285	156	206	226			
19T	44	Y-BR	286	157	207	227			
R	19	BR-Y	287	158	208	228			
20T	45	Y-S	288	159	209	229			
R	20	S-Y	289	160	210	130			
21T	46	V-BL	+24 V				} Message Register Supply		
R	21	BL-V	+24 V						
22T	47	V-O					}		
R	22	O-V							
23T	48	V-G					}		
R	23	G-V							
24T	49	V-BR	Spare				} Spare		
R	24	BR-V							
25T	50	V-S					}		
R	25	S-V							

TABLE D
TERMINATING SEQUENCE OF
P131 AT THE CROSS-CONNECTING TERMINAL
OPTION SHELF – MESSAGE REGISTRATION CONTROL

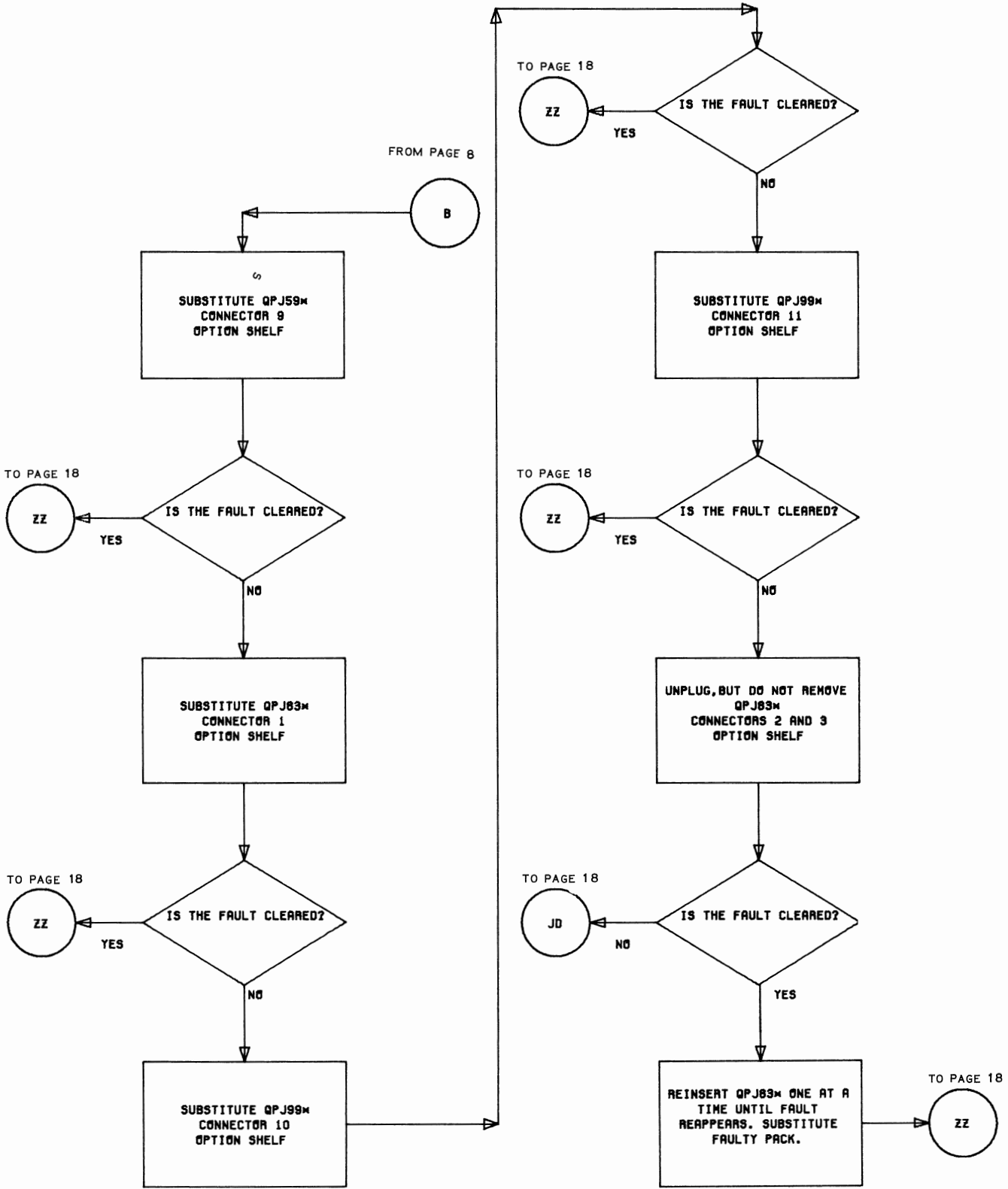
	PAIR	PIN	PAIR COLOR	LEAD DESIGNATION Trunk 3rd Wire for Trunk	FUNCTION
A25B CONNECTOR CABLE FROM CONNECTOR P131 TERMINATED ON CONNECTING BLOCK P131	1T	26	W-BL	16	} Message Registration Control Leads
	R	1	BL-W	1	
	2T	27	W-O	17	
	R	2	O-W	2	
	3T	28	W-G	18	
	R	3	G-W	3	
	4T	29	W-BR	19	
	R	4	BR-W	4	
	5T	30	W-S	20	
	R	5	S-W	5	
	6T	31	R-BL	21	
	R	6	BL-R	6	
	7T	32	R-O	22	
	R	7	O-R	7	
	8T	33	R-G	23	
	R	8	G-R	8	
	9T	34	R-BR	24	
	R	9	BR-R	9	
	10T	35	R-S	25	
	R	10	S-R	10	
	11T	36	BK-BL	26	
	R	11	BL-BK	11	
	12T	37	BK-O	27	
	R	12	O-BK	12	
	13T	38	BK-G	28	
R	13	G-BK	13		
14T	39	BK-BR	29		
R	14	BR-BK	14		
15T	40	BK-S	30		
R	15	S-BK	15		
16T	41	Y-BL	} Spare	} Spare	
R	16	BL-Y			
17T	42	Y-O			
R	17	O-Y			
18T	43	Y-G			
R	18	G-Y			
19T	44	Y-BR			
R	19	BR-Y			
20T	45	Y-S			
R	20	S-Y			
21T	46	V-BL	} Spare	} Spare	
R	21	BL-V			
22T	47	V-O			
R	22	O-V			
23T	48	V-G			
R	23	G-V			
24T	49	V-BR	} Spare	} Spare	
R	24	BR-V			
25T	50	V-S	} Spare	} Spare	
R	25	S-V			



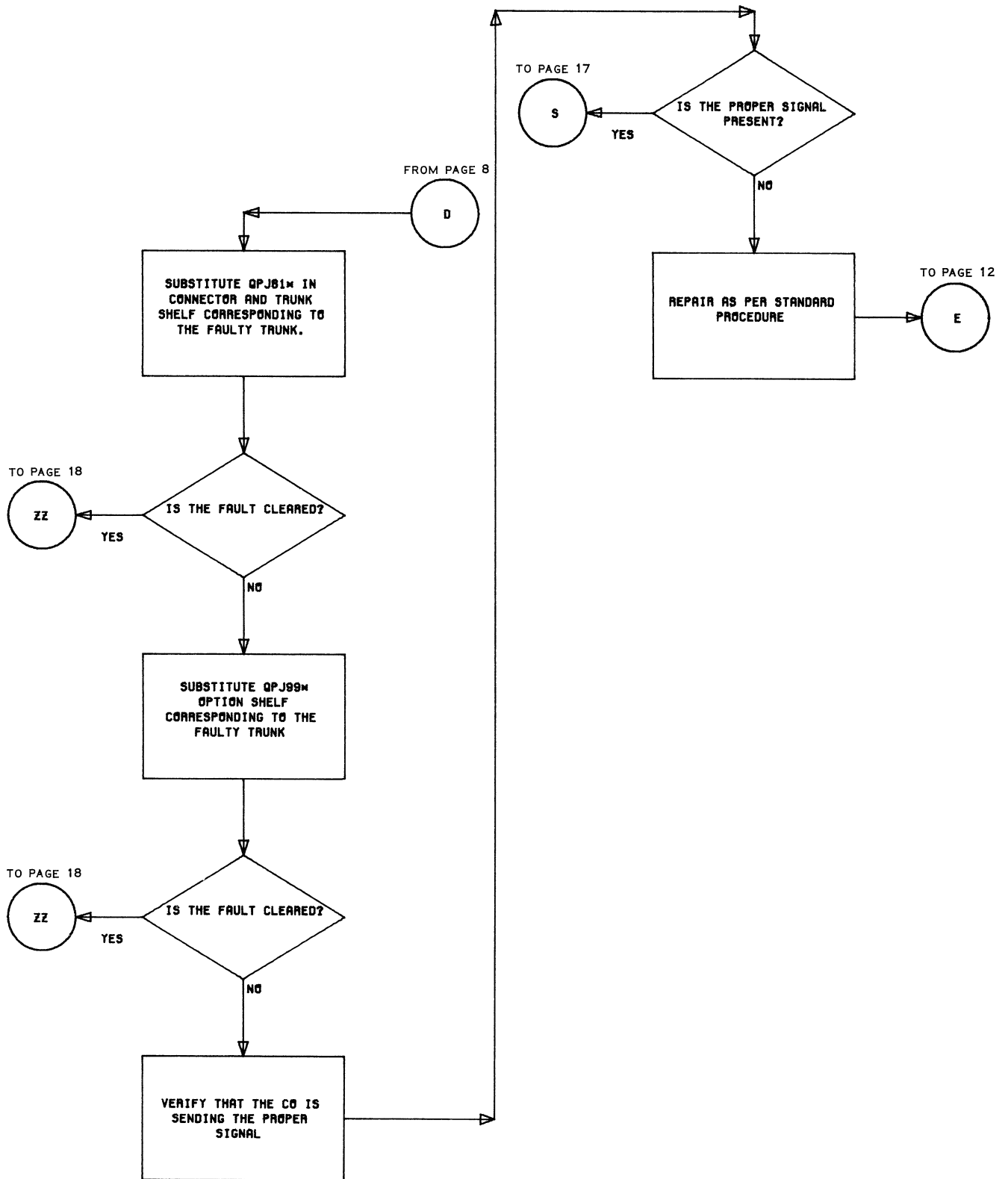
Flowchart 1 — Message Registration Fault-Clearing Procedure



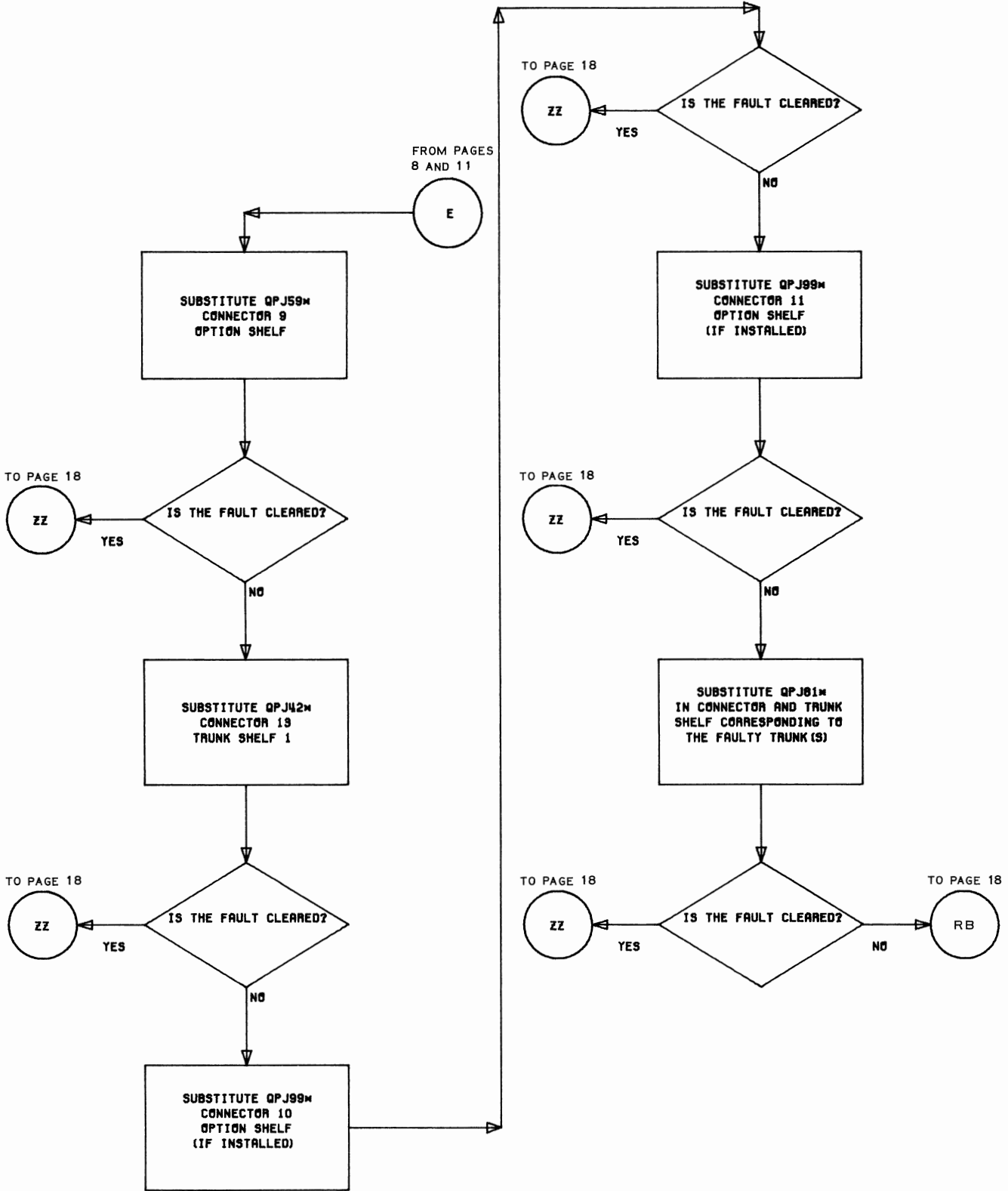
Flowchart 1 (cont)



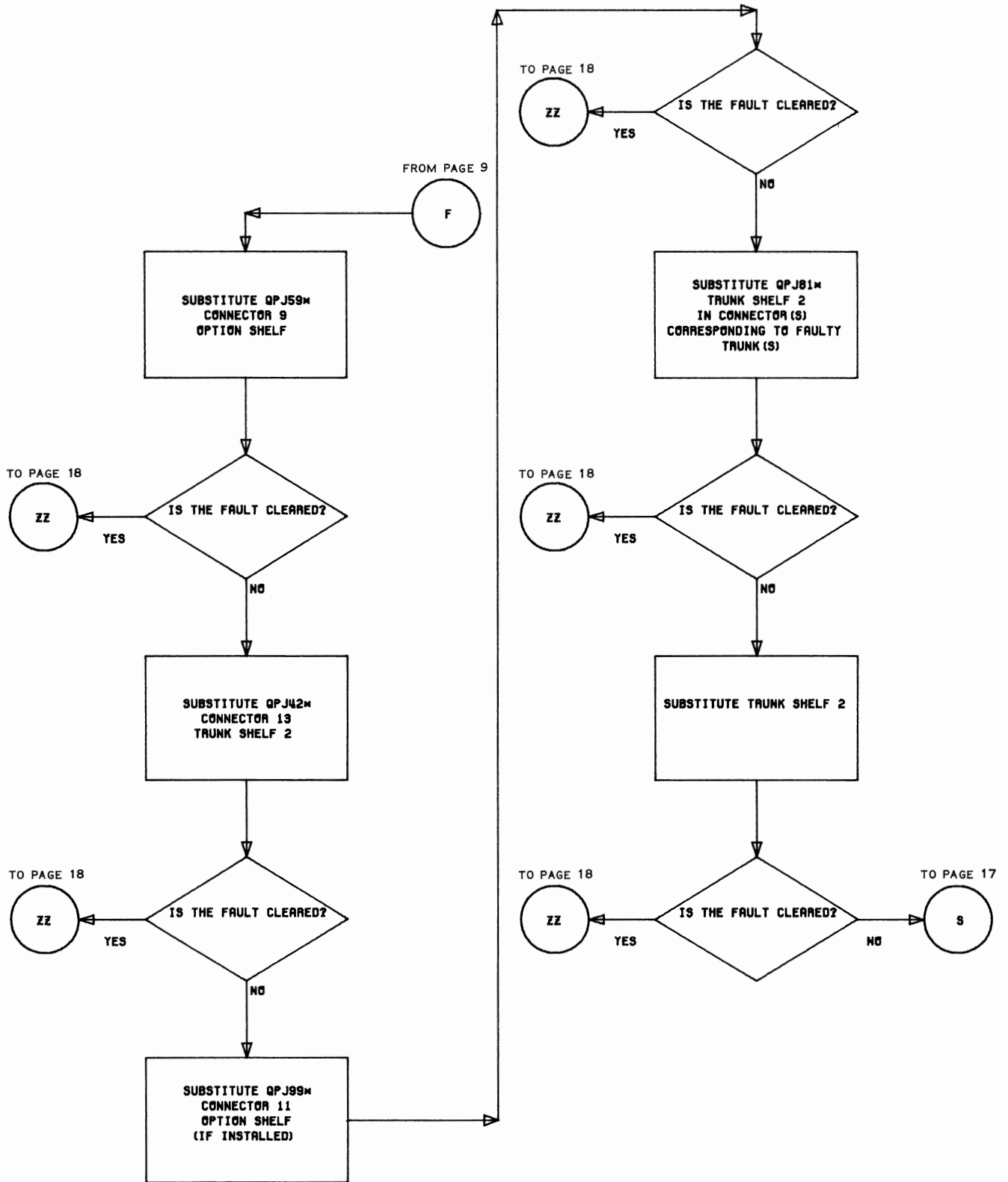
Flowchart 1 (cont)



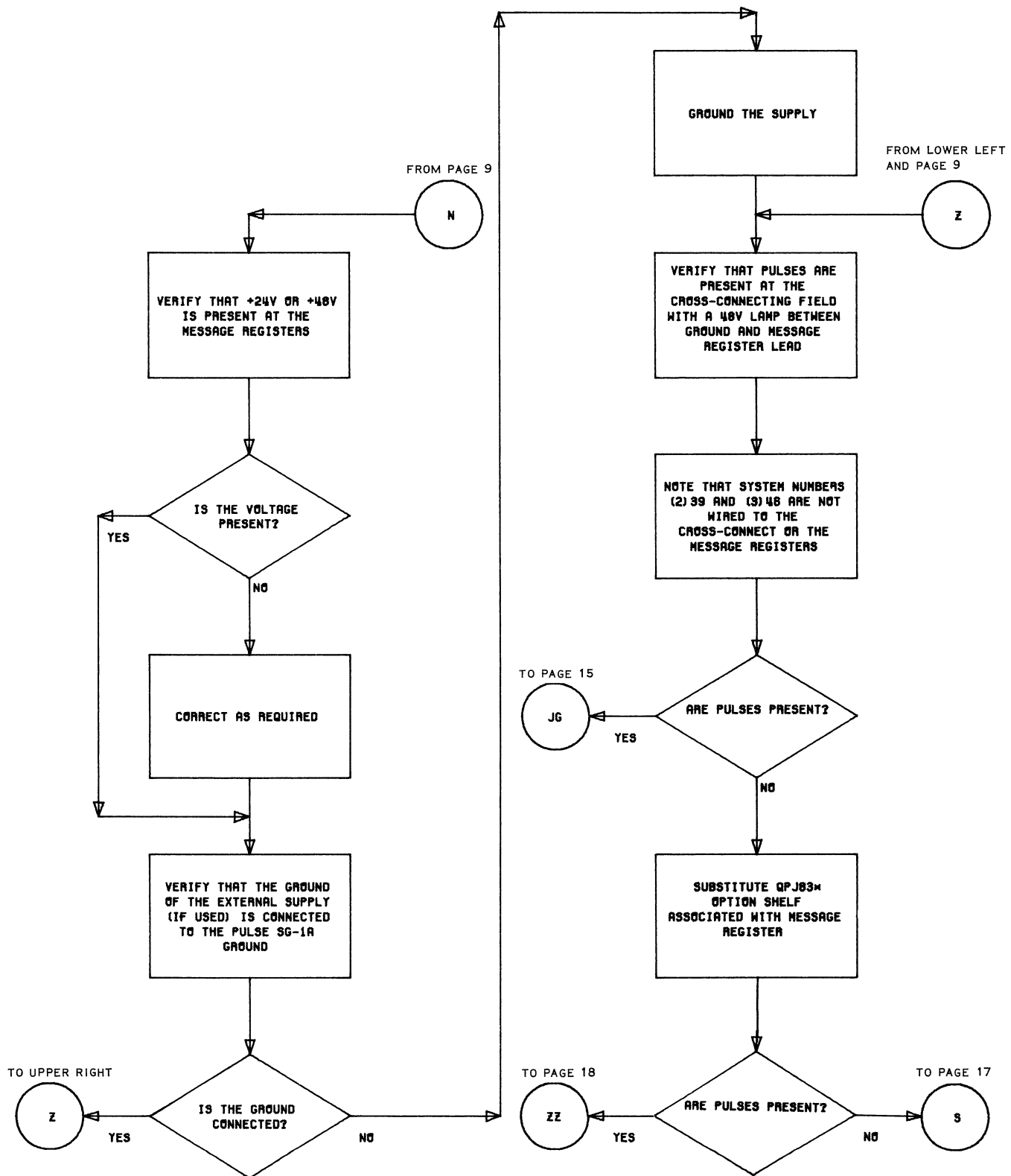
Flowchart 1 (cont)



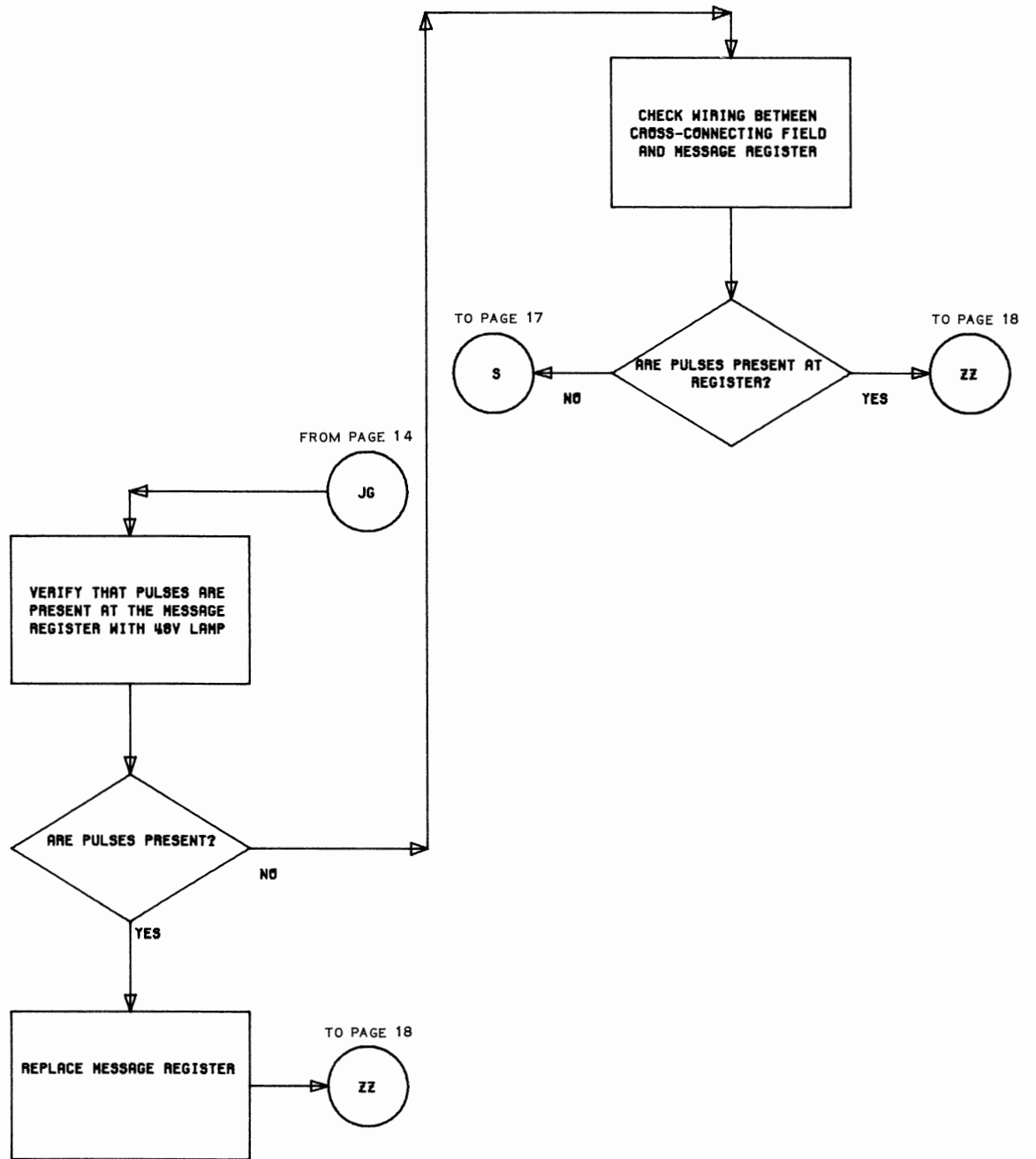
Flowchart 1 (cont)



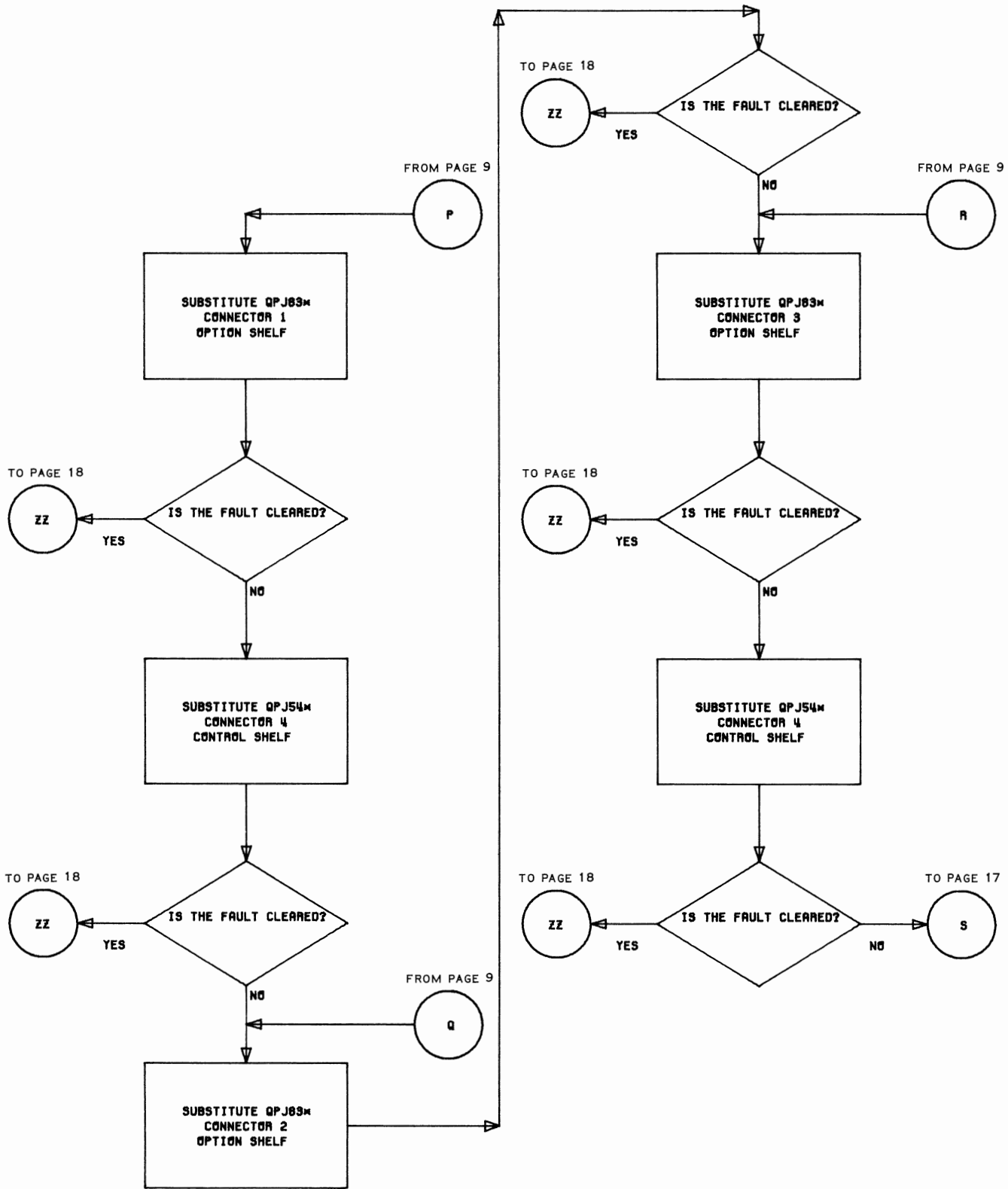
Flowchart 1 (cont)



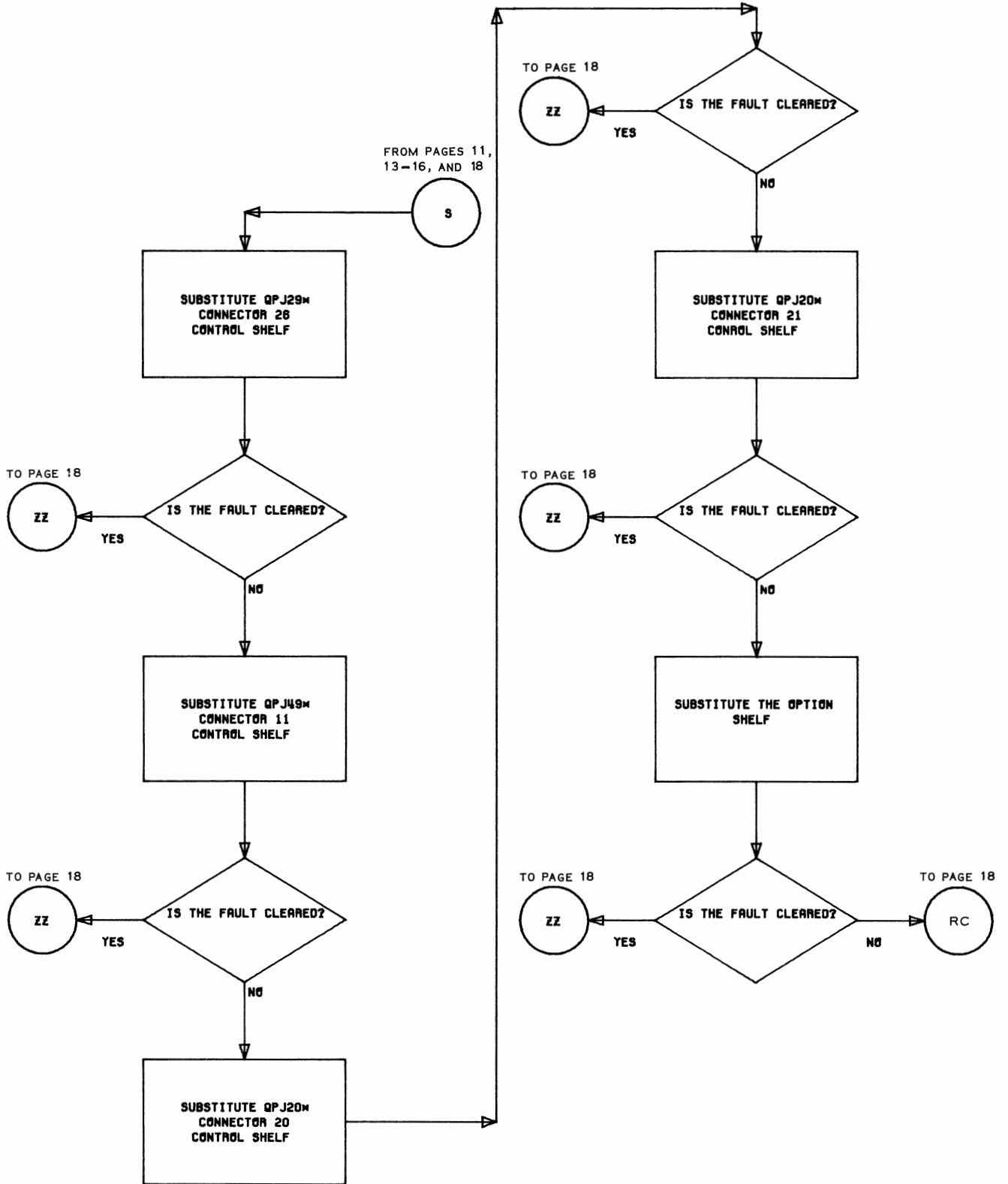
Flowchart 1 (cont)



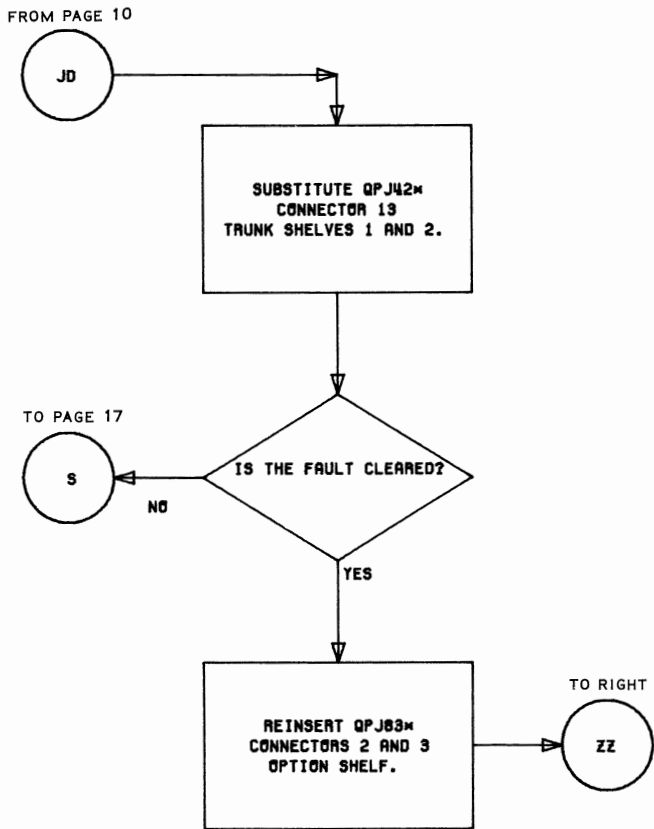
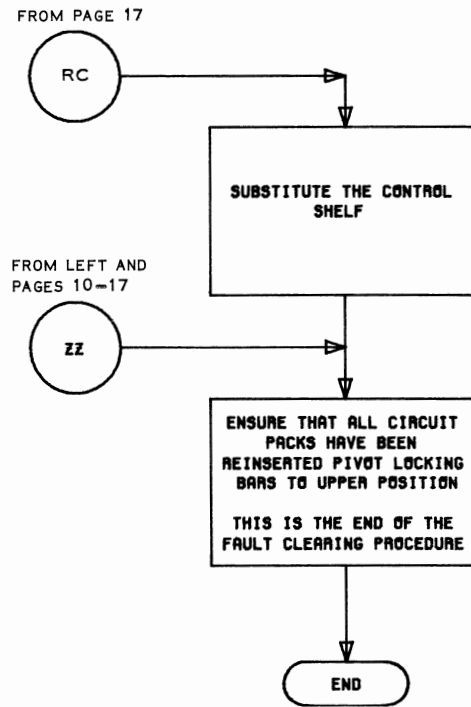
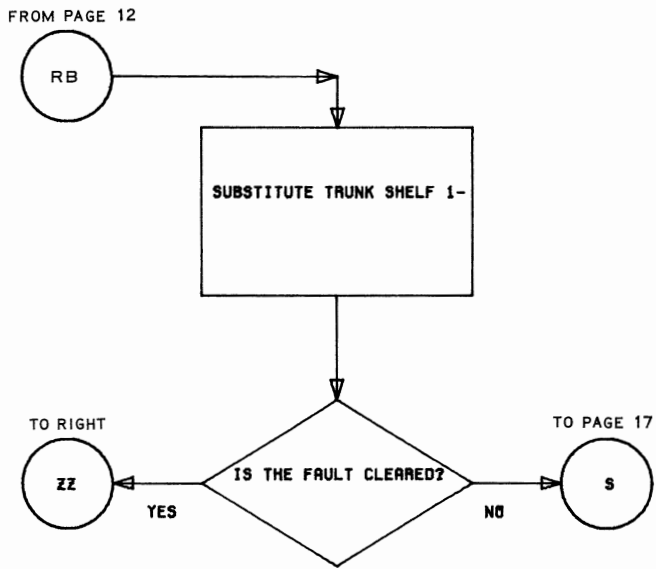
Flowchart 1 (cont)



Flowchart 1 (cont)



Flowchart 1 (cont)



Flowchart 1 (cont)