

“PULSE* 120” – SG-1A

ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGE

TRUNK OPTION FAULT CLEARING PROCEDURE

1. GENERAL

1.01 Trunk options are provided by the insertion of diode pins in Class-Of-Service (COS) blocks on QPJ29 and QPJ62 (or QPJ162)-type circuit packs in control-shelf connector locations 26 and 23 respectively, and by strapping pins (Fig. 1 Page 16) on terminal blocks at the rear of each trunk connector (see Section 553-5011-204).

1.02 For a 3-digit station line numbering plan miscellaneous trunks are selected by dialing:

(a) single digit access codes 1, 4, 5, 6 and 7.

Codes 2 and 3 are not available as single digit access codes. If the system is configured for hotel/motel service, code 7 cannot be used, but 8 gives the long distance operator. If the system has call pickup, or call forward, code 4 is not available as a single-digit access code.

(b) 2-digit access codes 81 through 87.

The single and 2-digit access codes may be used at the customers discretion without additional wiring changes.

1.03 For a 2-digit station line numbering plan, only 2-digit trunk access is available.

REASON FOR REISSUE

1.04 This section is reissued to add information on the latest optional features. Page 3.1 is added for fault-locating. Change arrows indicate additions.

2. FAULT CLEARING PROCEDURE

2.01 Before commencing this fault clearing procedure, the diode pins and straps used to provide trunk options must be checked to ensure correct installation in accordance with Sections 553-5011-204 and 553-5011-205 and to ensure connections are made properly.

2.02 Discrepancies between the record (Section 553-5011-207) and the installed trunk diode pins and straps must be corrected before returning the record to the storage receptacle in the cabinet.

2.03 Diode pin testing procedures are described in Section 553-5011-508.

2.04 Trunk option diode pin assignments and strapping connections are given in Tables A, B, and C.

2.05 When the substitution of a circuit pack is required during the fault clearing procedure, the contacts on the new circuit pack must be cleaned as described in Section 553-5011-500 before inserting the circuit pack into the connector.

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

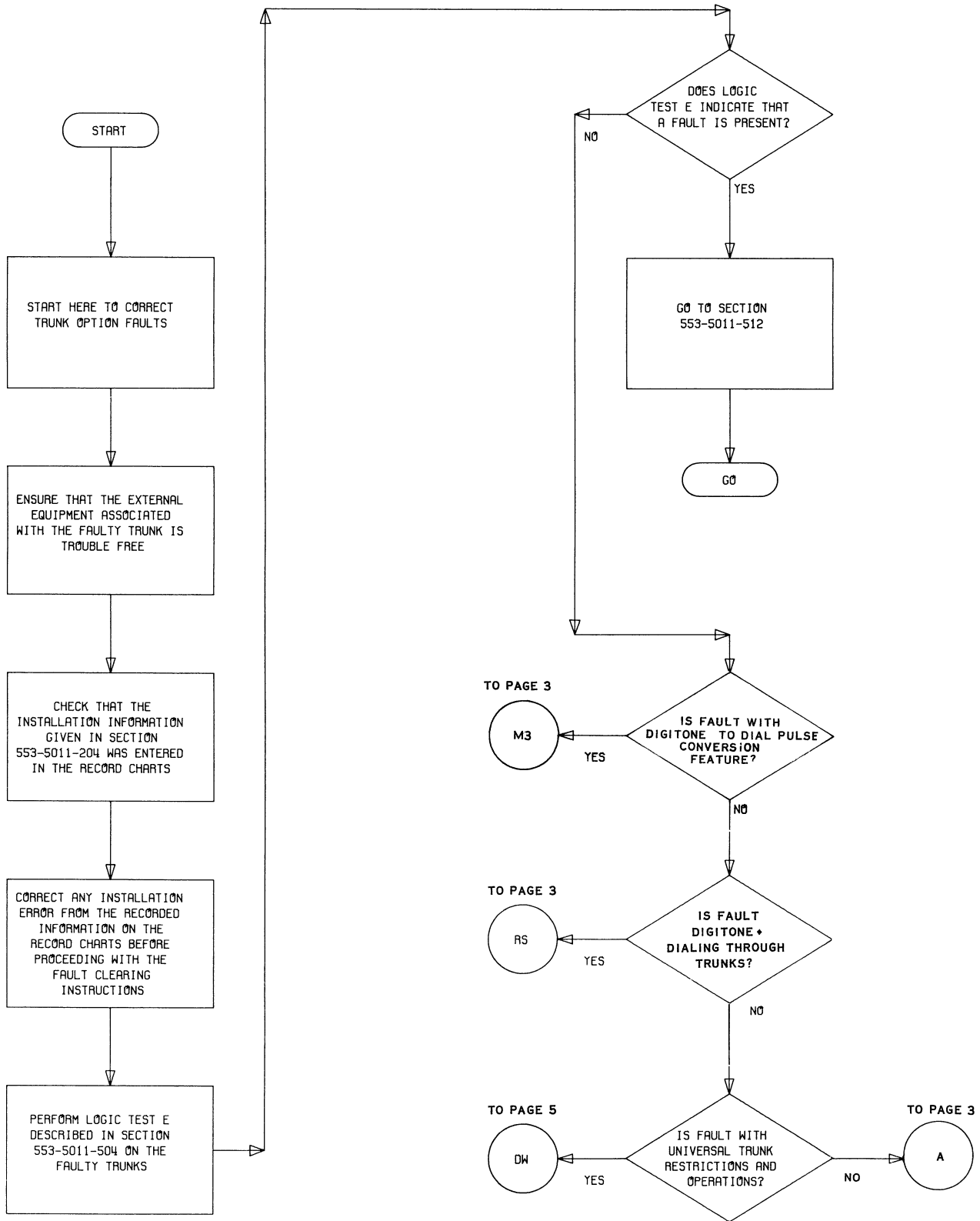
2.06 If different and/or additional faults are created in the system by substituting a circuit pack, the replacement must be tagged and returned as a defective unit.

2.07 If the fault is not cleared by substitution of a circuit pack, the original circuit pack must be reinserted in the connector.

2.08 The instructions for substituting a shelf are given in Section 553-5011-202.

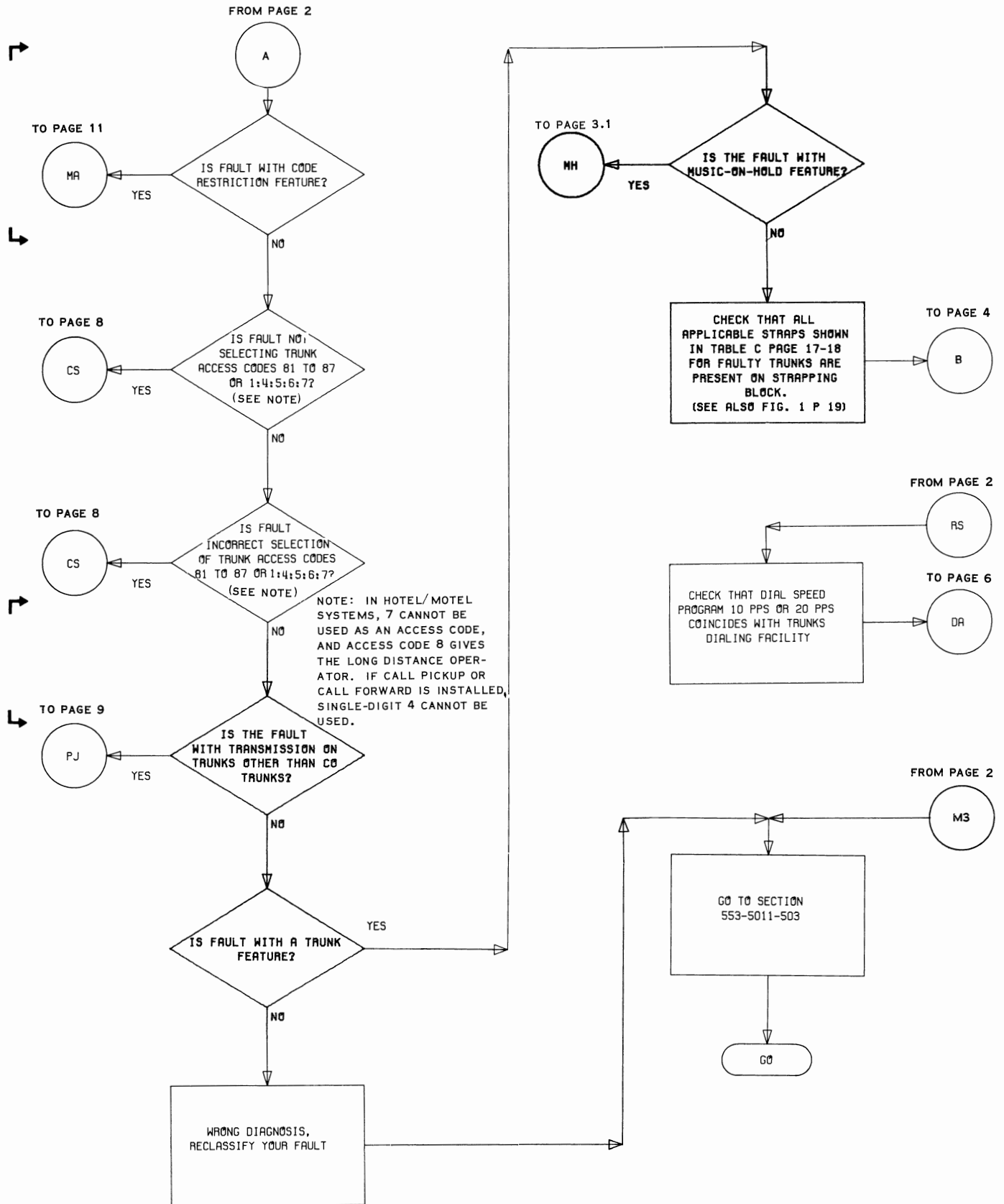
2.09 When the fault clearing procedure is completed, a visual check must be made to ensure that all circuit packs are well seated in their connectors and that screws are tight in connector plugs and jacks. The EPABX internal cable arrangement is given in Section 553-5011-501.

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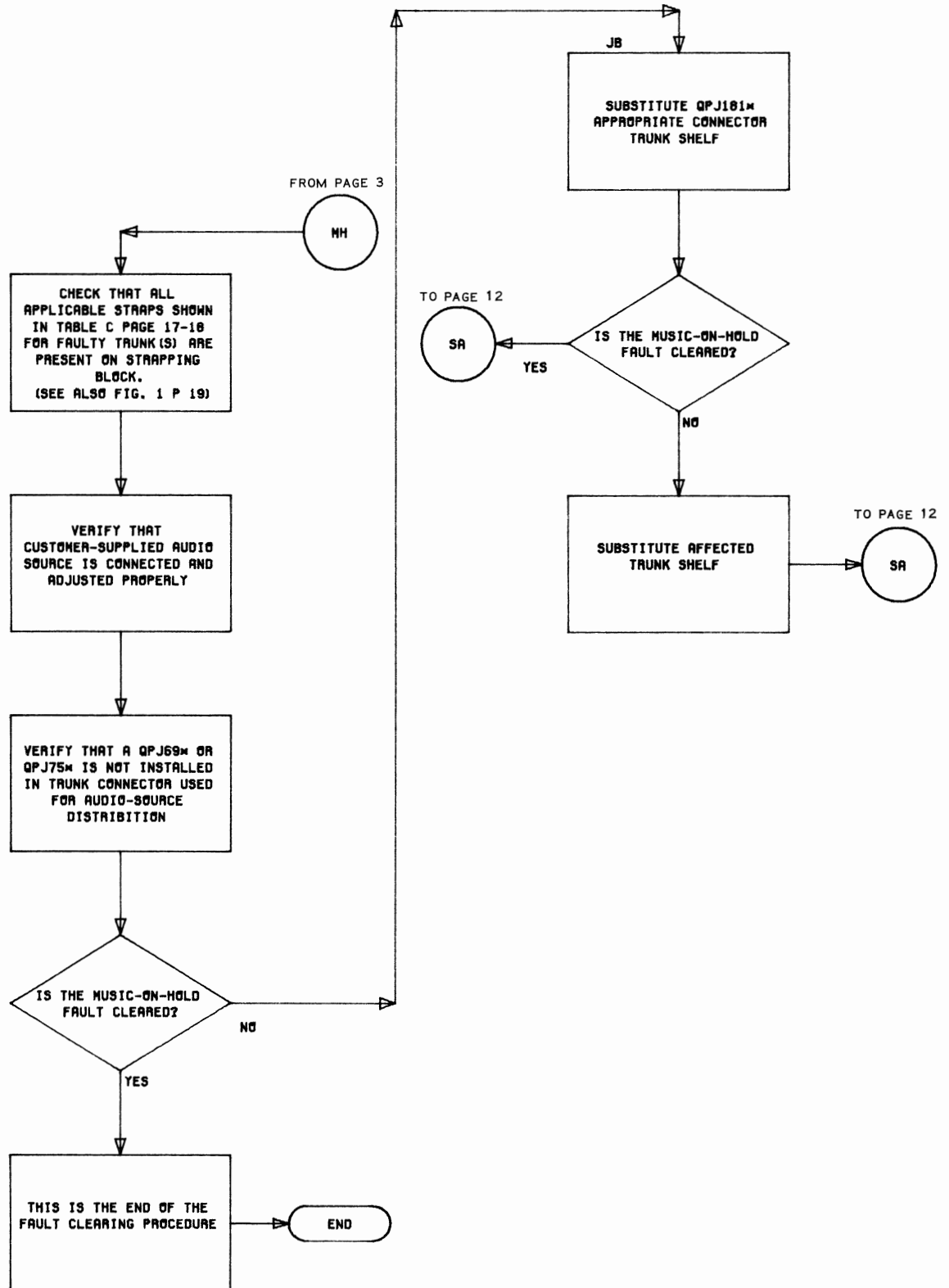


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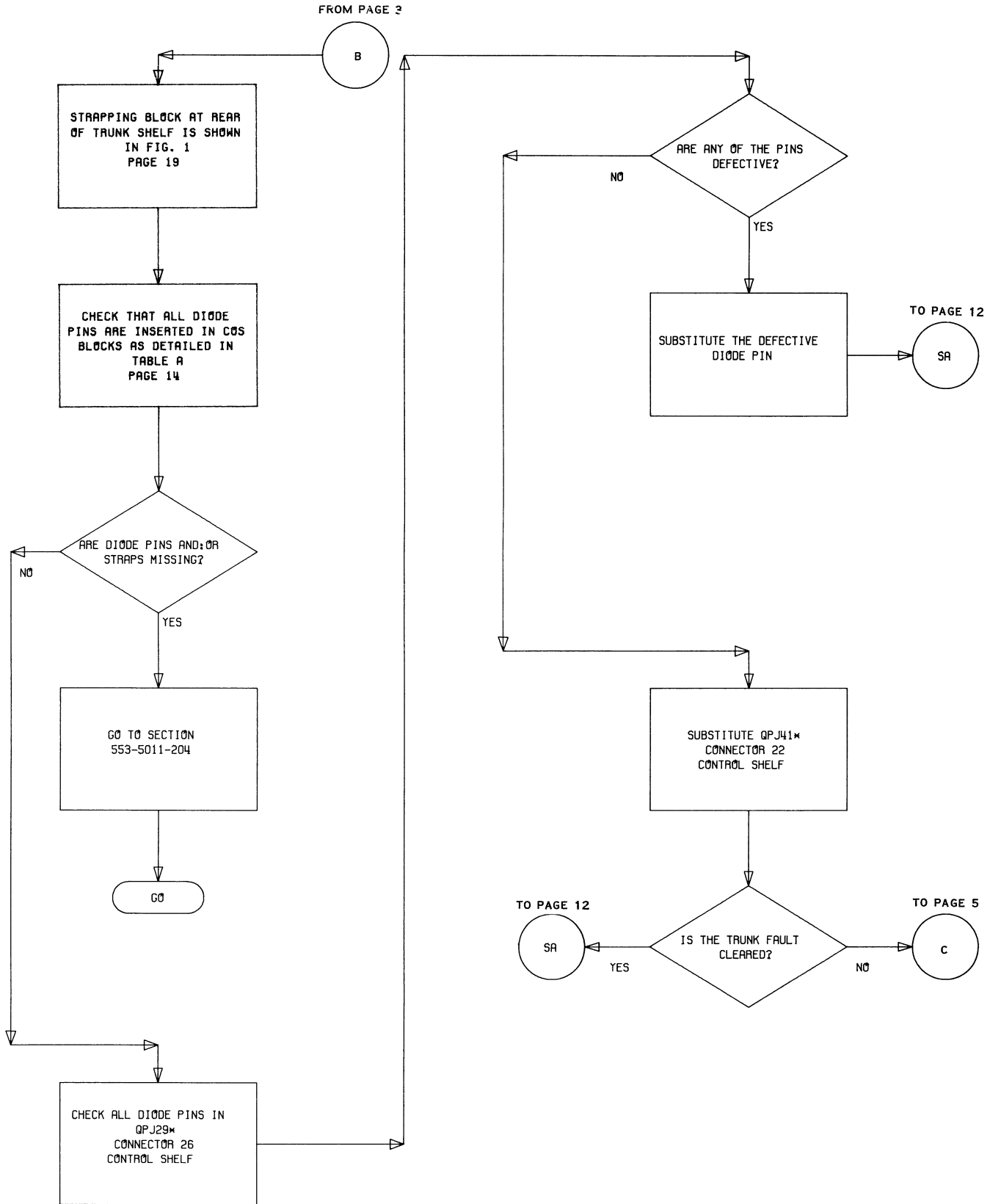
Flowchart 1 – Trunk Option Faults



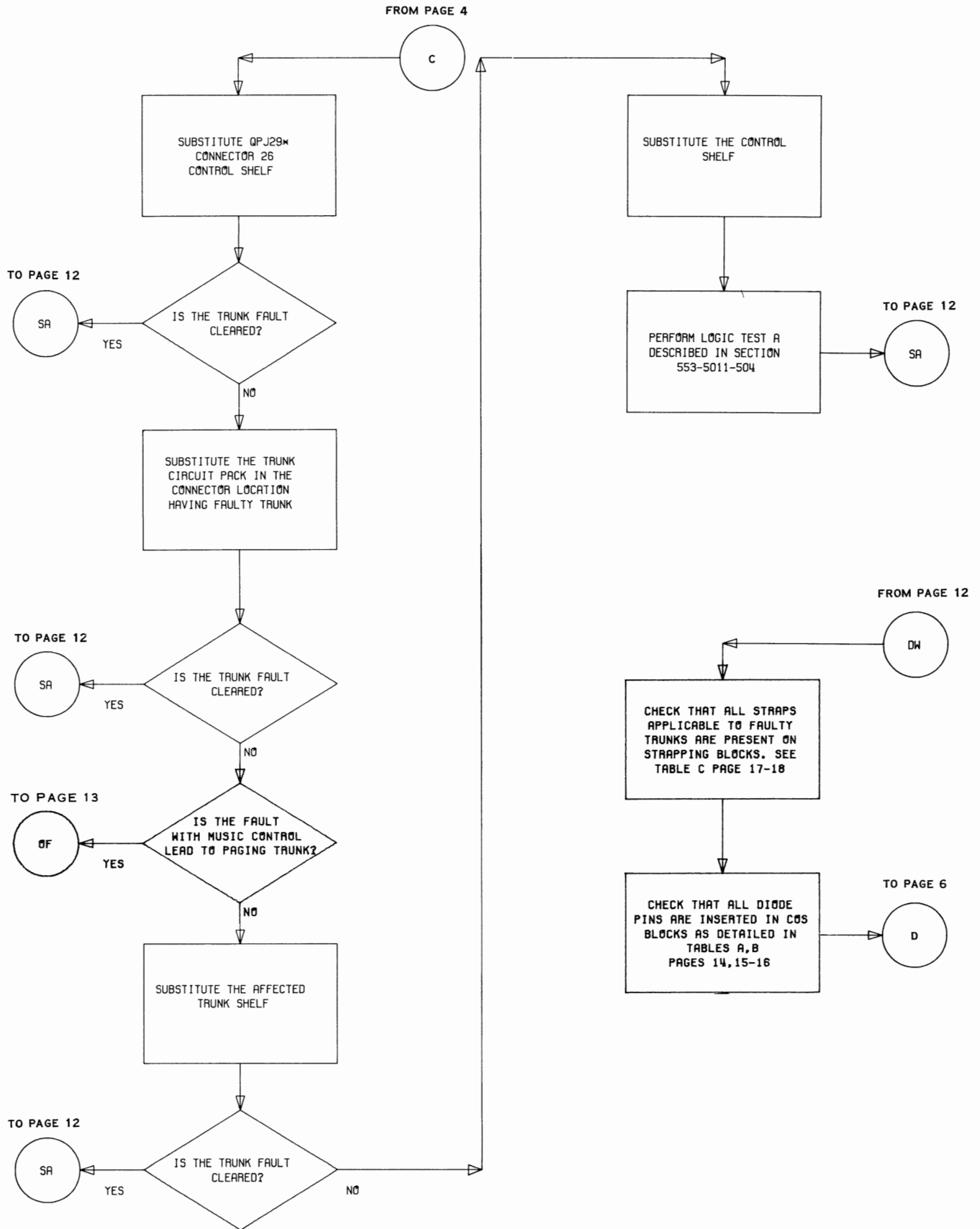
Flowchart 1 (Cont)



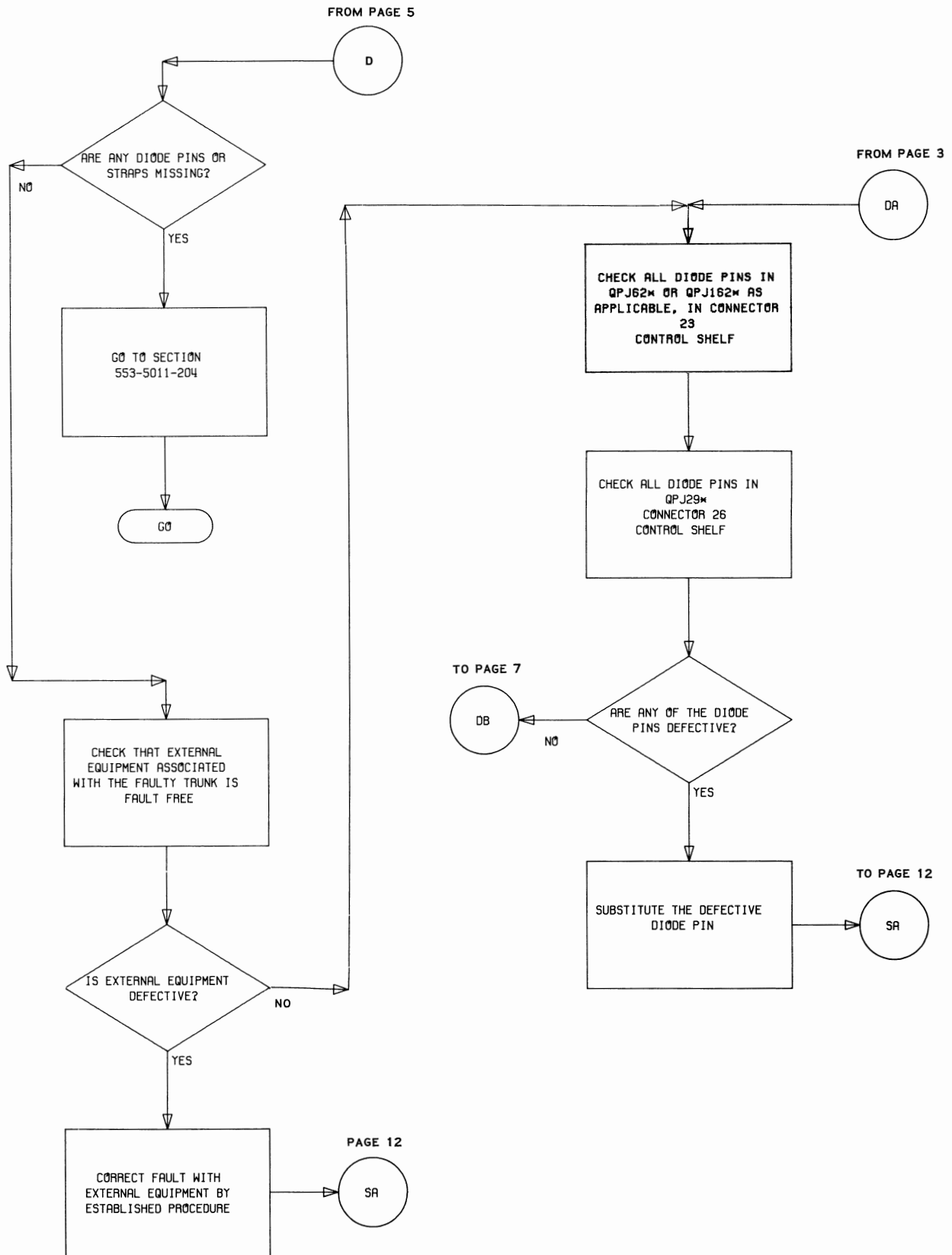
Flowchart 1 (Cont)



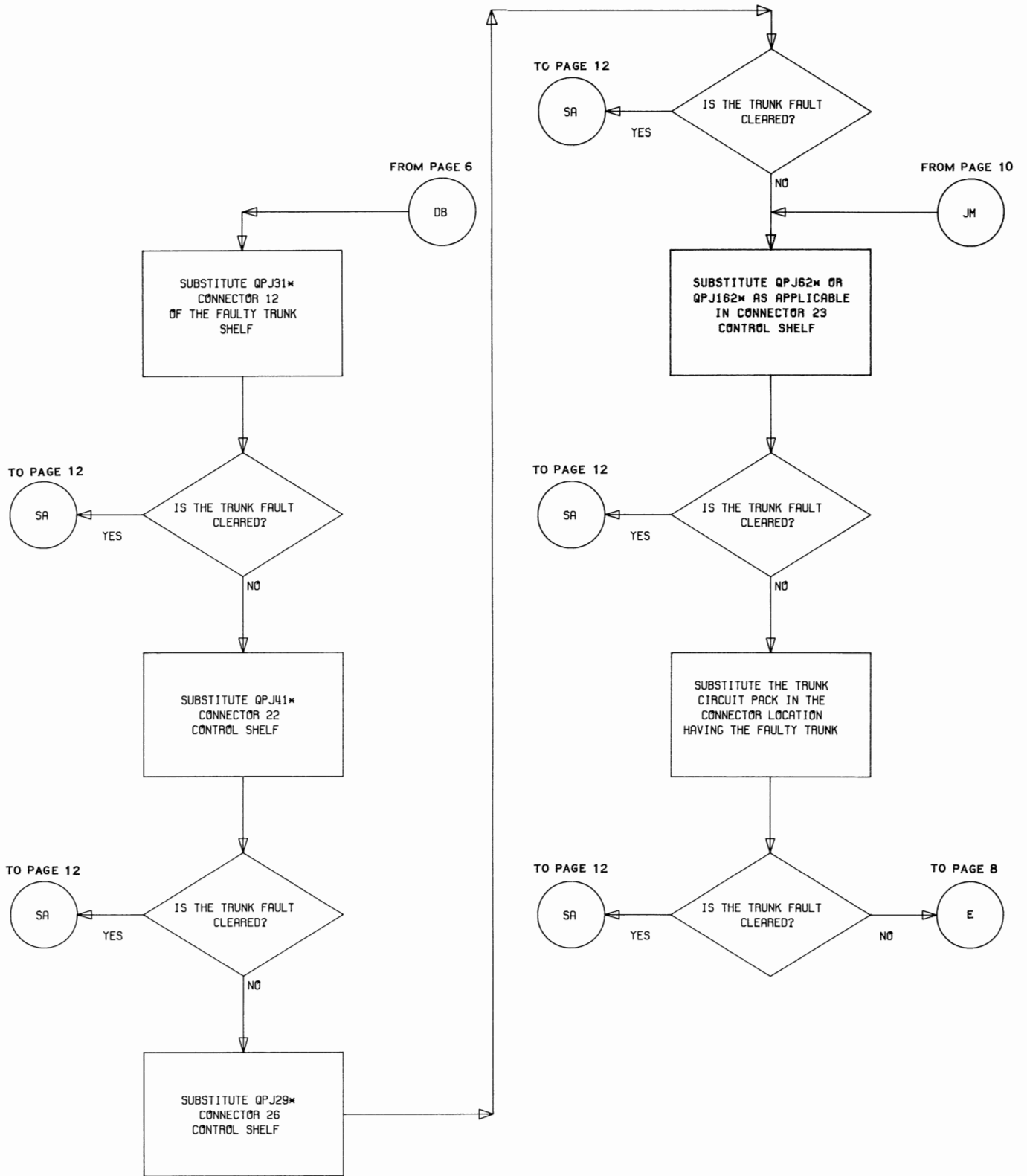
Flowchart 1 (cont)



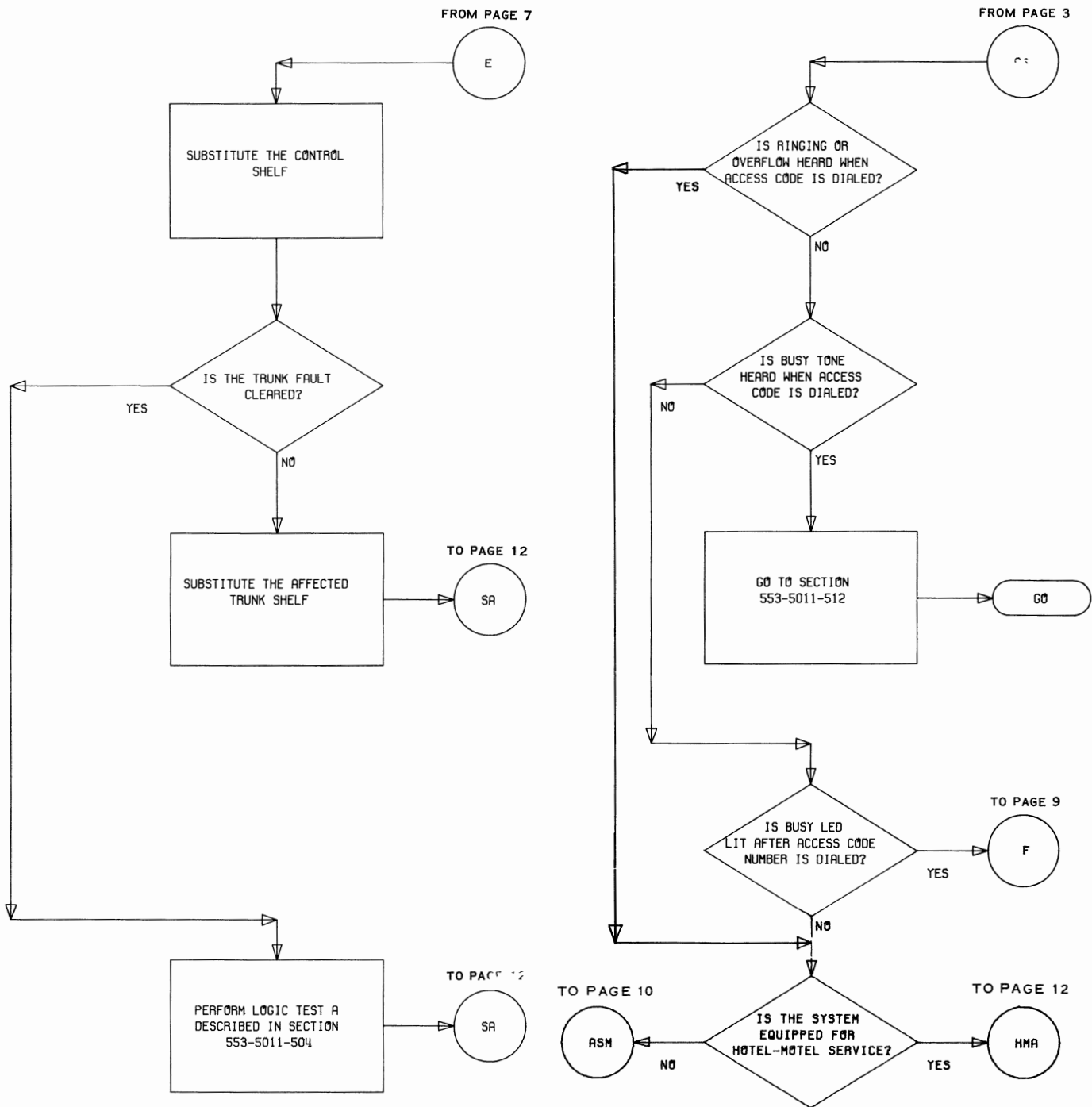
Flowchart 1 (Cont)



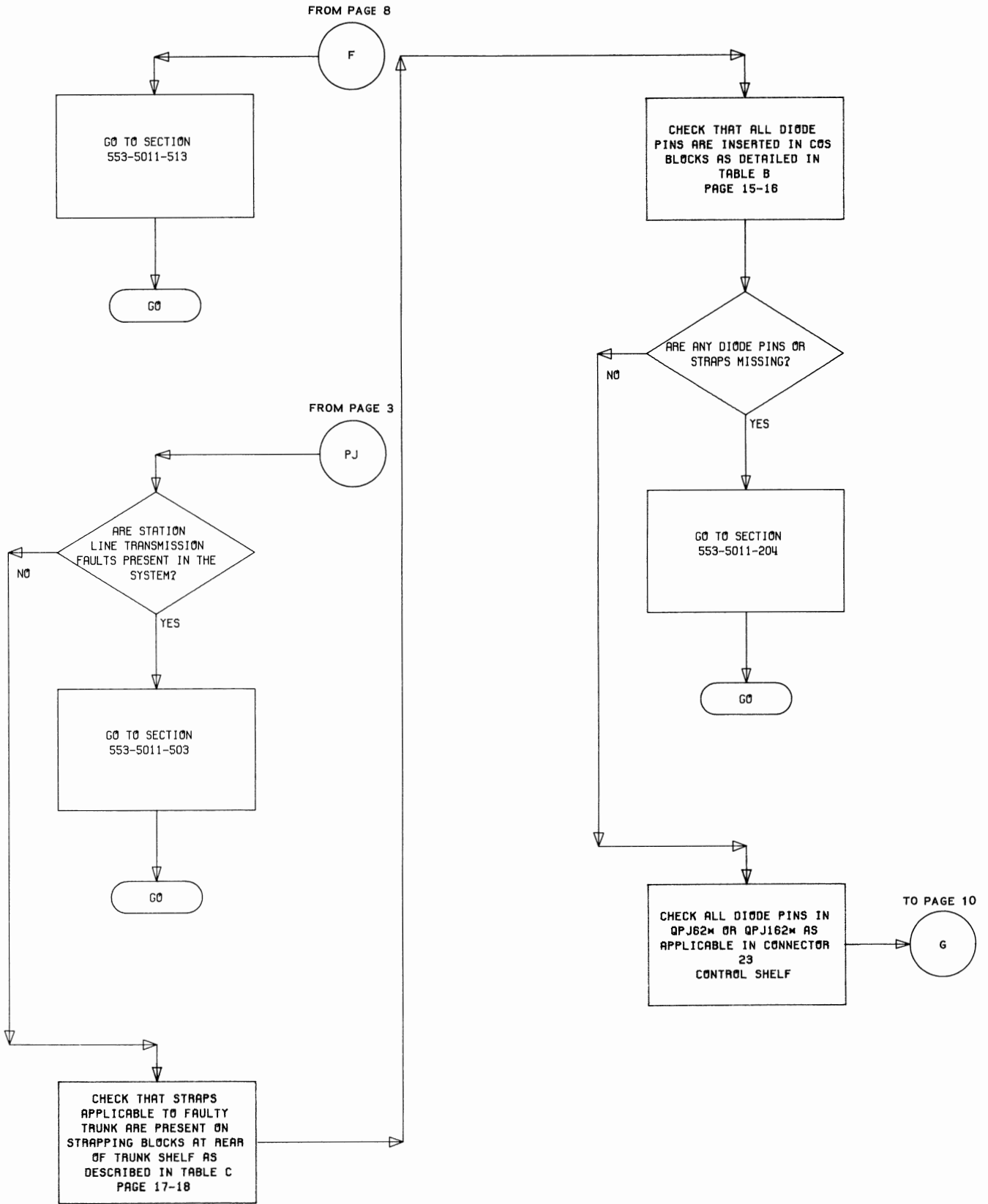
Flowchart 1 (Cont)



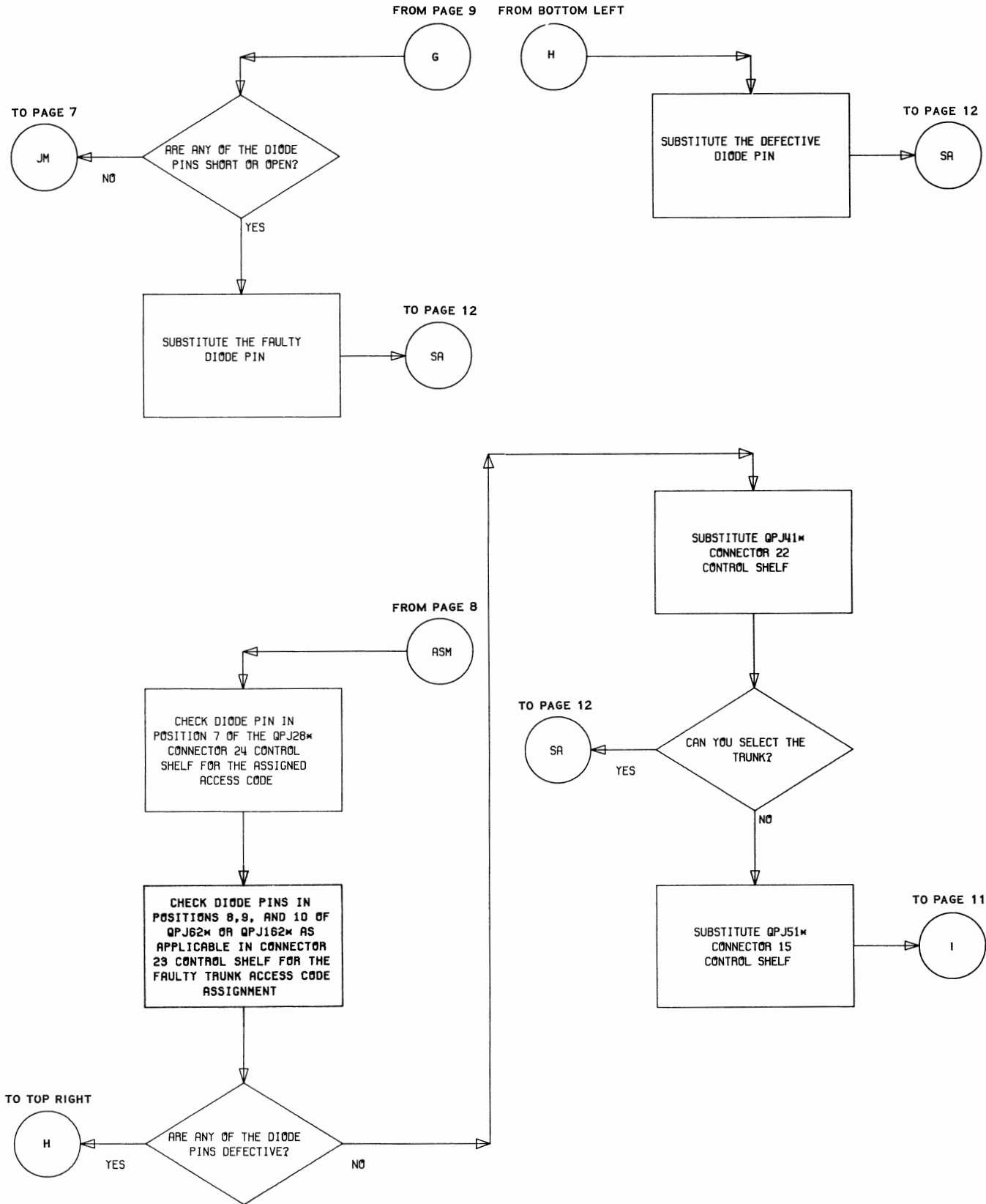
Flowchart 1 (Cont)



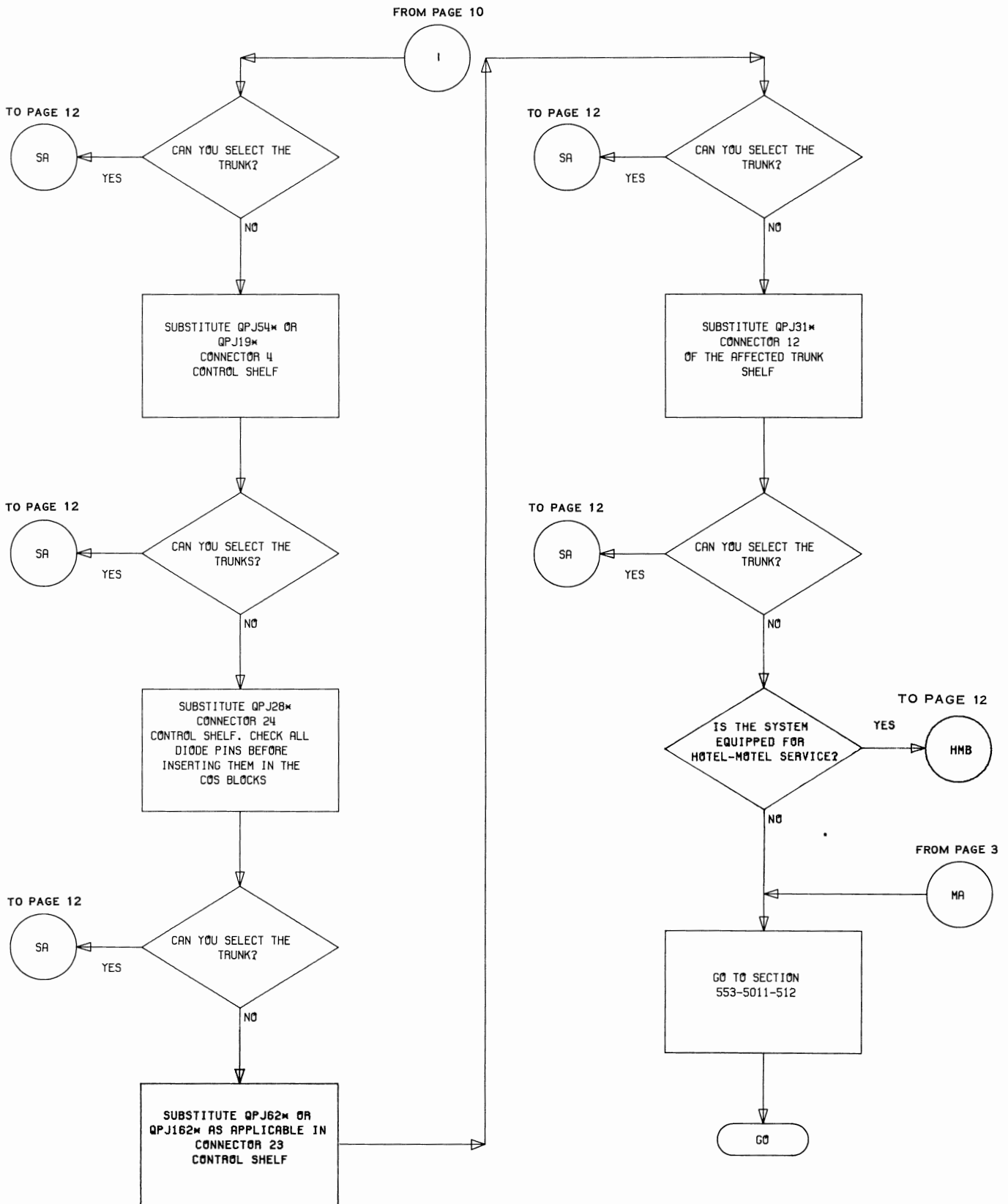
Flowchart 1 (Cont)



Flowchart 1 (Cont)

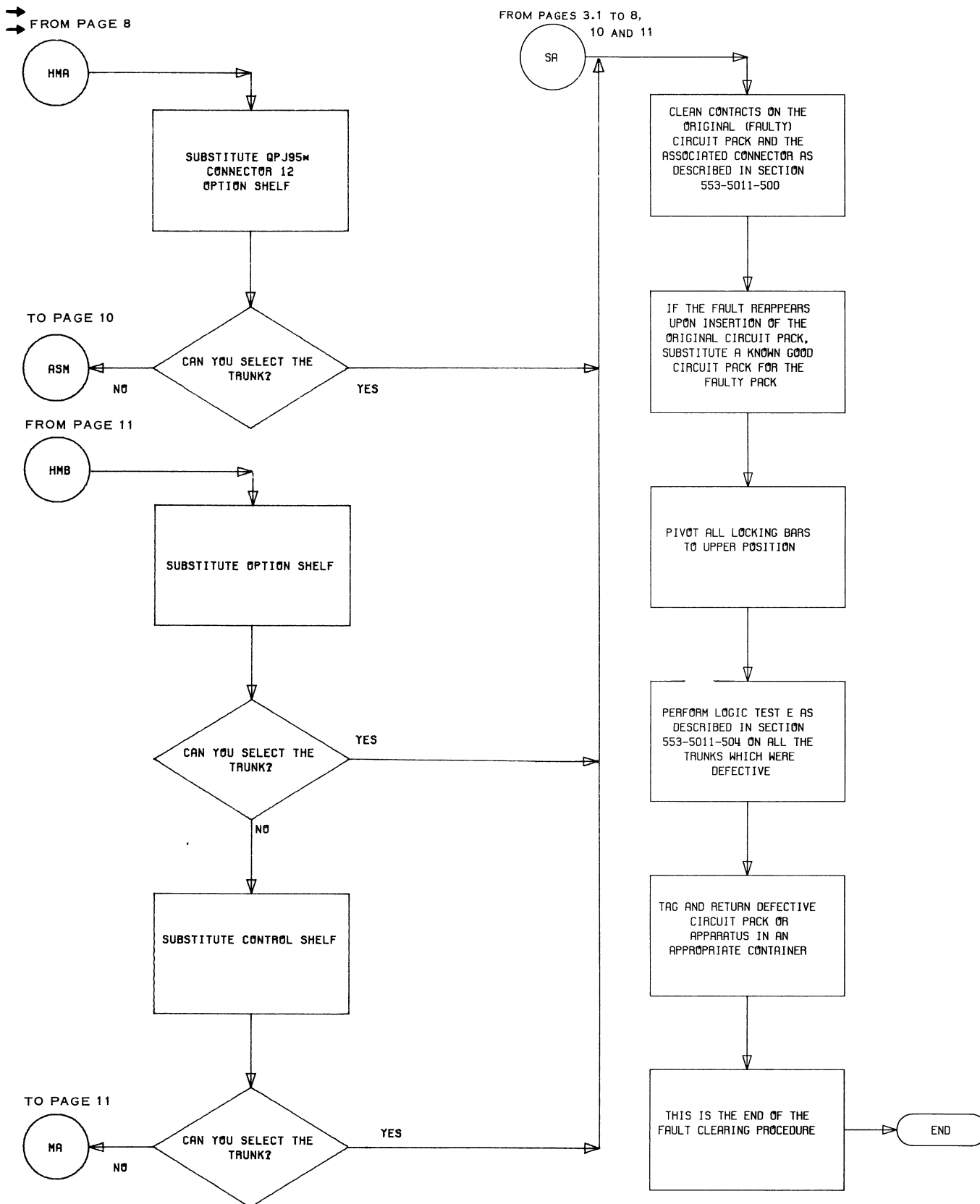


Flowchart 1 (Cont)

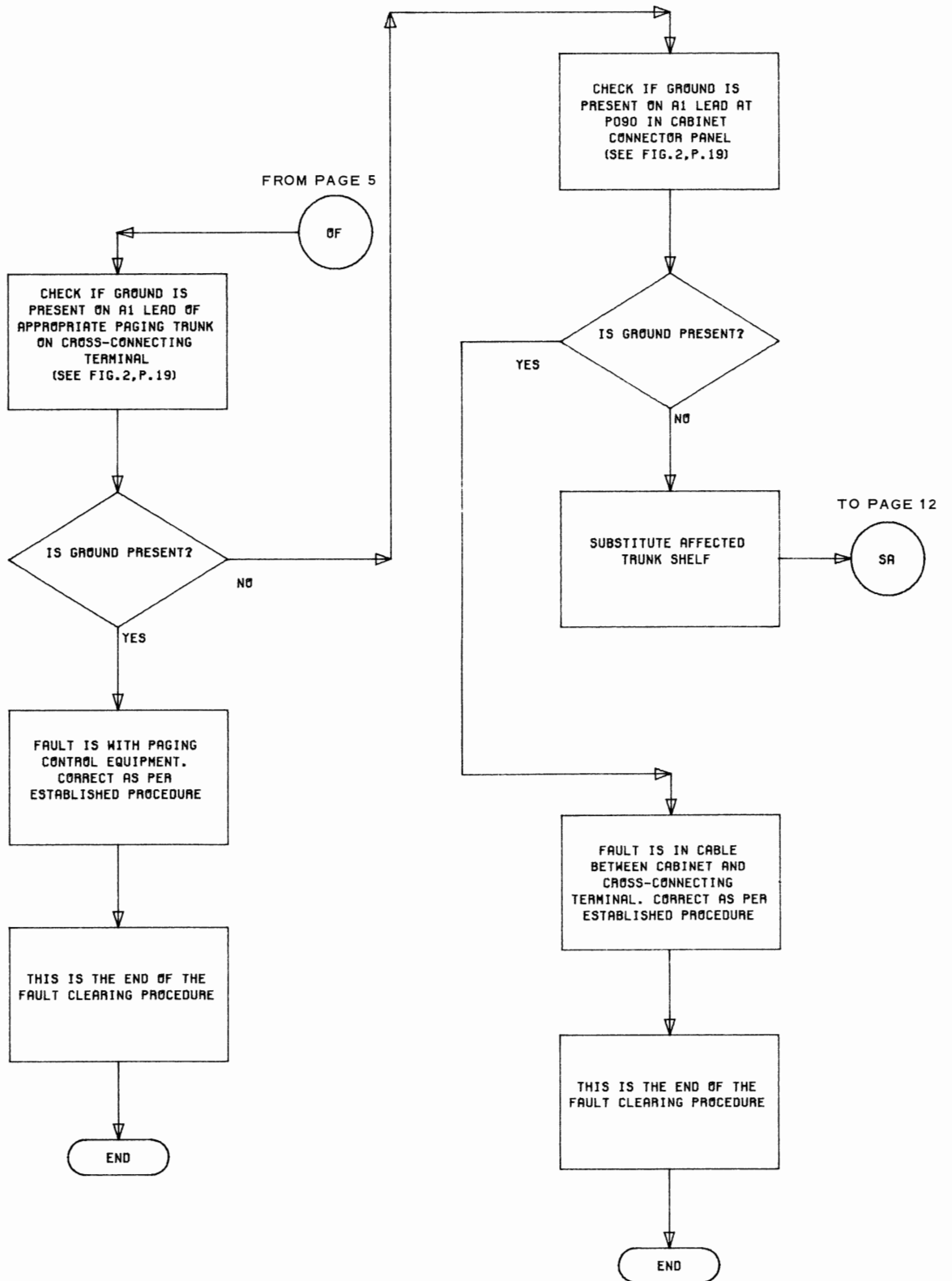


Flowchart 1 (Cont)

SECTION 553-5011-515



Flowchart 1 (Cont)



Flowchart 1 (Cont'd)

TABLE A
COS DIODE PIN ASSIGNMENT FOR INDIVIDUAL TRUNKS ON QPJ29*

OPTIONS AND FEATURES		DIODE POSITIONS									
ITEM	DESCRIPTION	1	2	3	4	5	6	7	8	9	10
1	TRUNK TYPE CO CO (DID) FX or WATS Other (tie, CCSA, paging, dictation)			0 X 0 X	0 0 X X						
2	TIE TRUNK EXCHANGE NETWORK RESTRICTIONS (CO/FX/WATS/CCSA CONNECTION) Unrestricted Semirestricted Fully Restricted Toll-Denial and Code Restriction	0 X X 0	0 0 X X								
3	DIALING I/C Pulse Dialing I/C DIGITONE Dialing										0 X
4	DIALING SPEED 10 pps 20 pps							0 X			
5	DIGITONE TO DIAL PULSE CONVERSION Required Not Required									X 0	
6	CO OR FX SIGNALING Loop Start Ground Start					X 0					
7	CO TRUNK GROUPS CO 1 CO 2								0 X		
8	TOLL-DENIAL OR CODE RESTRICTION INHIBIT Required Not Required						X 0				

Legend: X—diode pin inserted, 0—no diode pin.

TABLE B
COS DIODE PIN ASSIGNMENT FOR INDIVIDUAL TRUNKS ON QPJ62*

OPTIONS AND FEATURES		DIODE POSITIONS									
ITEM	DESCRIPTION	1	2	3	4	5	6	7	8	9	10
1	TRUNK TYPE CCSA Tie Senderized Tie Paging or Dictation	0 X X 0	X 0 X 0	0 0 0 X							
2	TIE TRUNK SPECIAL SERVICE RESTRICTIONS Access to Miscellaneous Trunk Codes Allowed Denied Access to Code 7 or 87 Allowed Denied						0 X				
3	TRUNK ACCESS CODE ASSIGNMENT 1 or 81 82 83 4 or 84 5 or 85 6 or 86 7 or 87								X 0 X 0 X 0 X	0 X X 0 0 X X	0 0 0 X X X X
4	2 DB PAD CONTROL VNL NON-VNL NON-VNL TRANSMISSION COMPENSATED NON-VNL NON-TRANSMISSION COMPENSATED				X 0			X 0			
Legend: X—diode pin inserted, 0—no diode pin.											

**TABLE C
INDIVIDUAL TRUNK OPTIONS AND
FEATURES – STRAPPING CONNECTIONS**

TRUNK TYPE	PRINTED CIRCUIT ASSEMBLY (PCA) TYPE	STRAPPING CONNECTIONS															
		SIGNALING								I/C ONLY OR MAKE BUSY	TERMINATING IMPEDANCE		TRANSMISSION FACILITY OPERATING MODE		SIGNALING RANGE ADJUSTMENT FOR LOOP RESISTANCE		
		LOOP START	GROUND START	E&M	DX 2-WIRE	DX 4-WIRE	LOOP	SWITCHED GROUND	600 Ω		900 Ω	VNL 2 DB PAD SWITCHED	NON VNL 2 DB PAD STRAPPED OUT	>500 Ω	>750 Ω	>2500 Ω	
CO(NON-DID) 2- OR 4-WIRE FX AND WATS	QPJ38A (NONGAIN) QPJ81A (WITH GAIN)	13-20 14-18 15-16	14-22 15-22 19-20						32-33	2-3 5-6	1-2 4-5	29-30†	30-31	–	–	–	
CO(NON-DID) 2- OR 4-WIRE FX AND WATS	QPJ38B THROUGH D§ (NONGAIN) QPJ81B THROUGH G§ (WITH GAIN)	13 20 15 16	15-22 19 20						32-33	2-3 5-6	1-2 4-5	29-30†	30-31	–	7-8	–	
CO(NON DID) 2- OR 4-WIRE FX AND WATS WITH MUSIC ON-HOLD	QPJ181A§	13-20 15-16	15-22 19 20						32-33	2-3 5-6	1-2 4-5	–	§ §	–	7-8	–	
2-WIRE TIE OR CCSA ACCESS LINE 2-WAY DIAL REPEATING	QPJ69*			12-19 16 17 21-22	7-8 9 10 12 20 16-19				32-33	2-3 5-6	1-2 4-5	–	30-31	¶	¶	8-18 10-22	
4-WIRE TIE OR CCSA ACCESS LINE 2-WAY DIAL REPEATING	QPJ69*			12-19 16-17 21-22	8-17 10 21 12-20 16-19				32-33	2-3 5-6	1-2 4-5	29-30	30-31	¶	¶	8-18 10-22	
2-WIRE TIE 2-WIRE DIAL REPEATING	QPJ76*						15-22 19-20		32-33	2-3 5-6	1-2 4-5	–	–	7-9 8-10	–	–	
DID OR 2-WIRE TIE O/G AUTOMATIC I/C DIAL REPEATING	QPJ76*						13-20 14-22		32-33	2-3 5-6	1-2 4-5	–	–	7-9 8-10	–	–	
PAGING	QPJ75*						1 2 4-5	16-17‡	32 33	–	–	–	–	–	–	–	
DICTION	QPJ73*						1-2 4-5		32-33	–	–	–	–	–	–	–	

† Applies to QPJ81* PCA only
‡ Applies to QPJ75B only (for switching of music and paging)
§ QPJ38D QPJ81D G, and QPJ181A detect ringing on +48V when strapping connection 18 31 is made

¶ If distant end is a relay-type DX tie trunk and 8-18 and 10-22 strapping connections are not made (loop resistance <2500Ω to the standard 1250Ω balancing resistance. If tie trunk is between two PULSE machines and the loop resistance is <2500Ω 8-18 and 10-22 must be strapped in one machine. If loop resistance is >2500Ω 8-18 and 10 22 must be strapped in both machines

§ § A customer-supplied audio source connects to pins 30 and 31 for the music-on-hold trunk QPJ181A

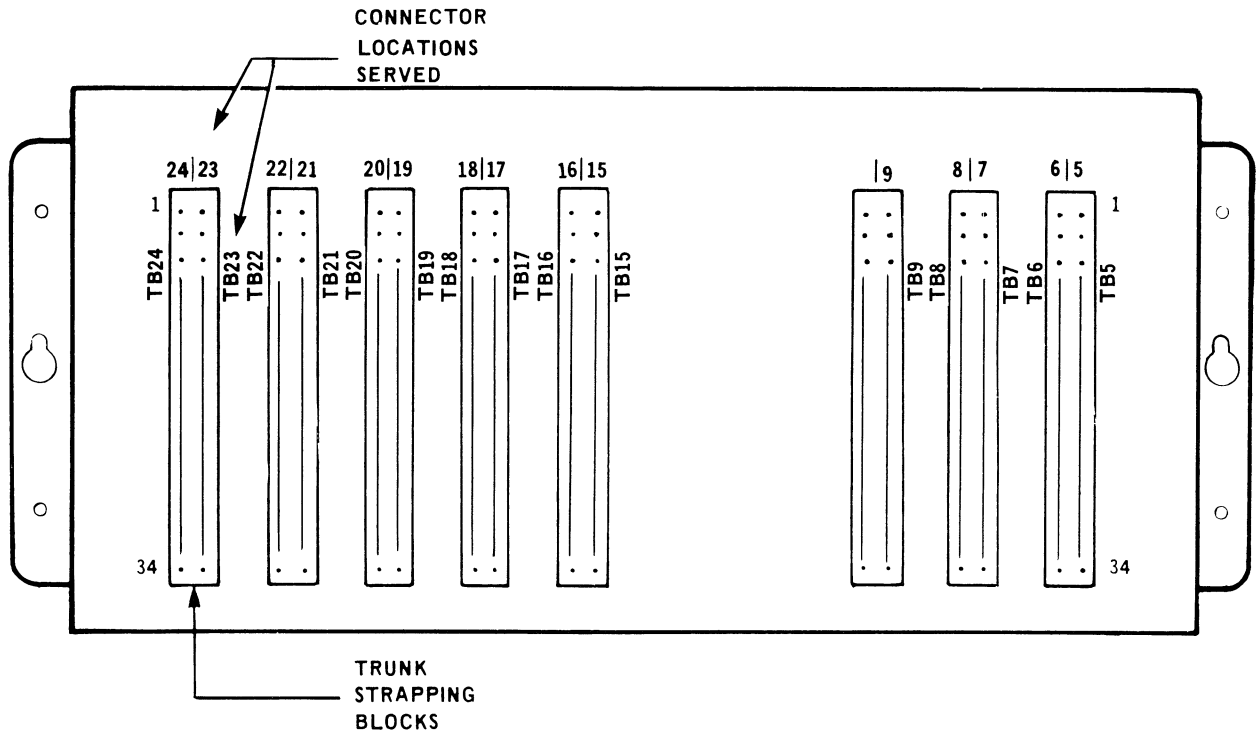
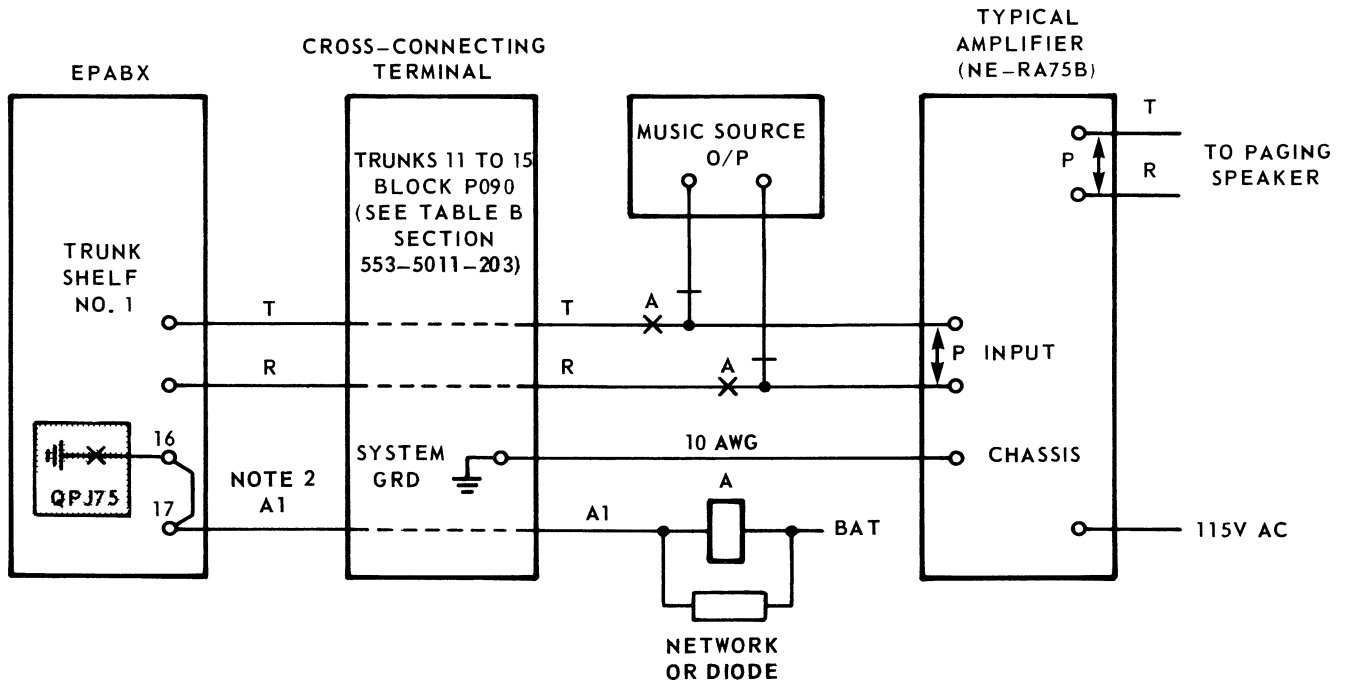


Fig. 1 — Rear View of a Trunk Shelf Showing Option Strapping Blocks



NOTES:

1. TRUNK 11 IS EQUIPPED WITH ATTENDANT PREEMPTION FEATURE.
2. SEE TABLE C, PAGE 17/18 FOR STRAPPING INFORMATION

Fig. 2 — Connection Arrangement for Customer-Provided Paging Amplifier With Music Source