"PULSE*120" – SG-1A

ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGE

RINGING-FAULT CLEARING PROCEDURE

1. GENERAL

1.01 Tone faults must be cleared in the PULSE 120 Electronic Private Automatic Branch Exchange (EPABX) before attempting to correct ringing faults.

2. CIRCUIT DESCRIPTION

2.01 The 12-V, 20-Hz ringing supply generated by the QPJ44-type circuit pack is increased to 86-V, 20-Hz on power shelf 2 and distributed in the EPABX through the QPJ46-type circuit pack.

2.02 The 86-V, 20-Hz and +24 V supplies required for station line signaling are distributed through the system by eight QFF type fuses (see Fig. 1). The station lines served by each of the ringing supply (86 F-) fuses and +24 supply (24 F-) fuses are listed in Table A.

2.03 Test points on the QPJ37-type circuit pack permit a measurement, using a voltmeter of 86-V, 20-Hz supply to the line shelves.

Note: The reading on the NS-14150 meter will be approximately 190-V but will vary since 86-V, 20-Hz is superimposed on dc.

2.04 The maximum number of ringers per station loop in relation to the loop resistance is as follows:

Maximum Loop Resistance (ohms)	350	600	850	1000
Maximum Ringers per Station Loop	5	4	3	2

3. FAULT CLEARING PROCEDURE

3.01 The sequence for inserting circuit packs and jacks during fault clearing procedures is given in Table B, Page 15.

3.02 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.

3.03 If a fault is cleared by circuit pack substitution and there is no visual evidence of burnt or damaged components on the original circuit pack, 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 new circuit pack is reinserted.

3.04 For hotel/motel systems, see Section 553-5011-207 for the numbers to dial to access the station lines prescribed in the flow-charts. (In hotel/motel service the station lines prescribed are the system numbers, not the dialed numbers).

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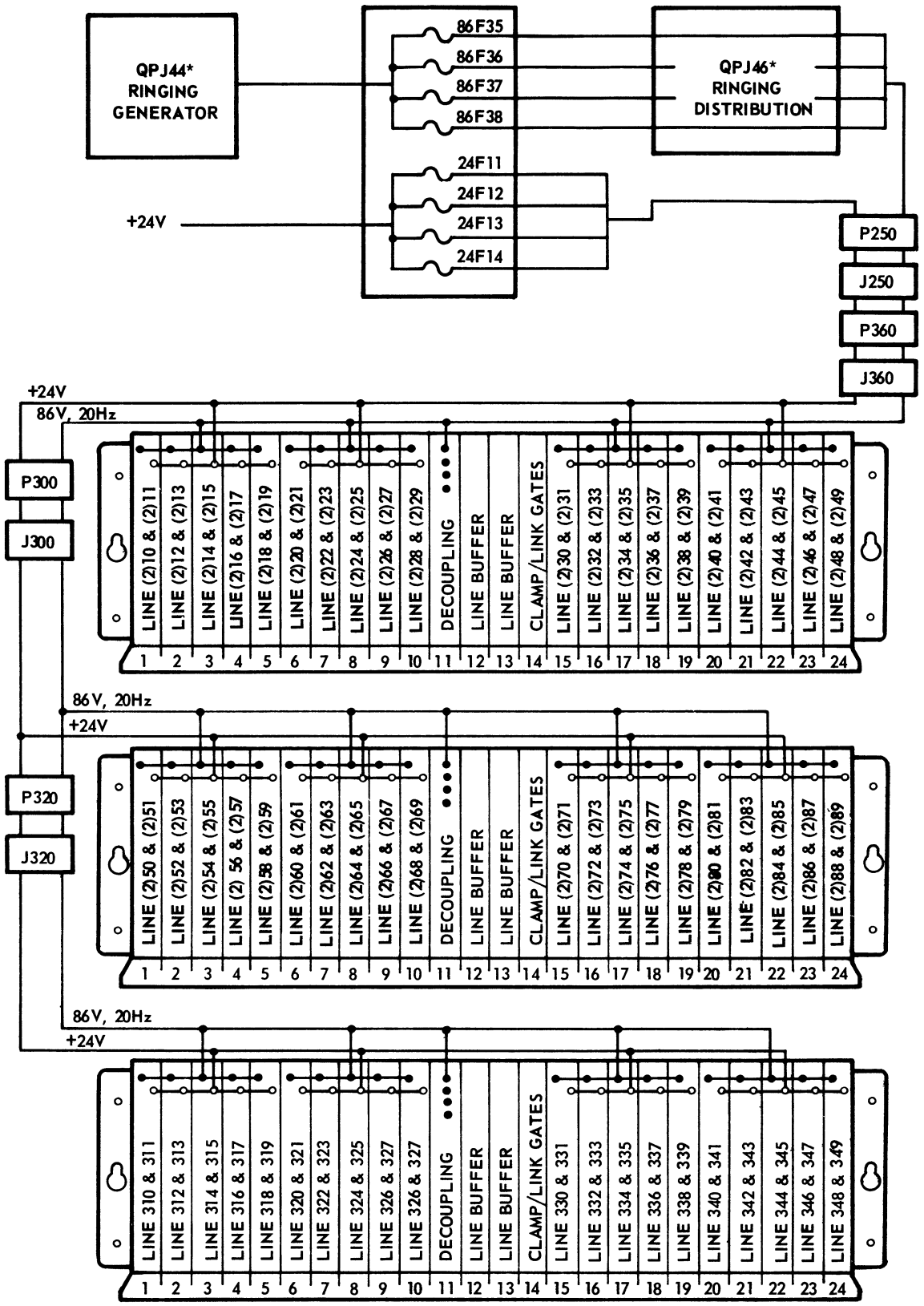
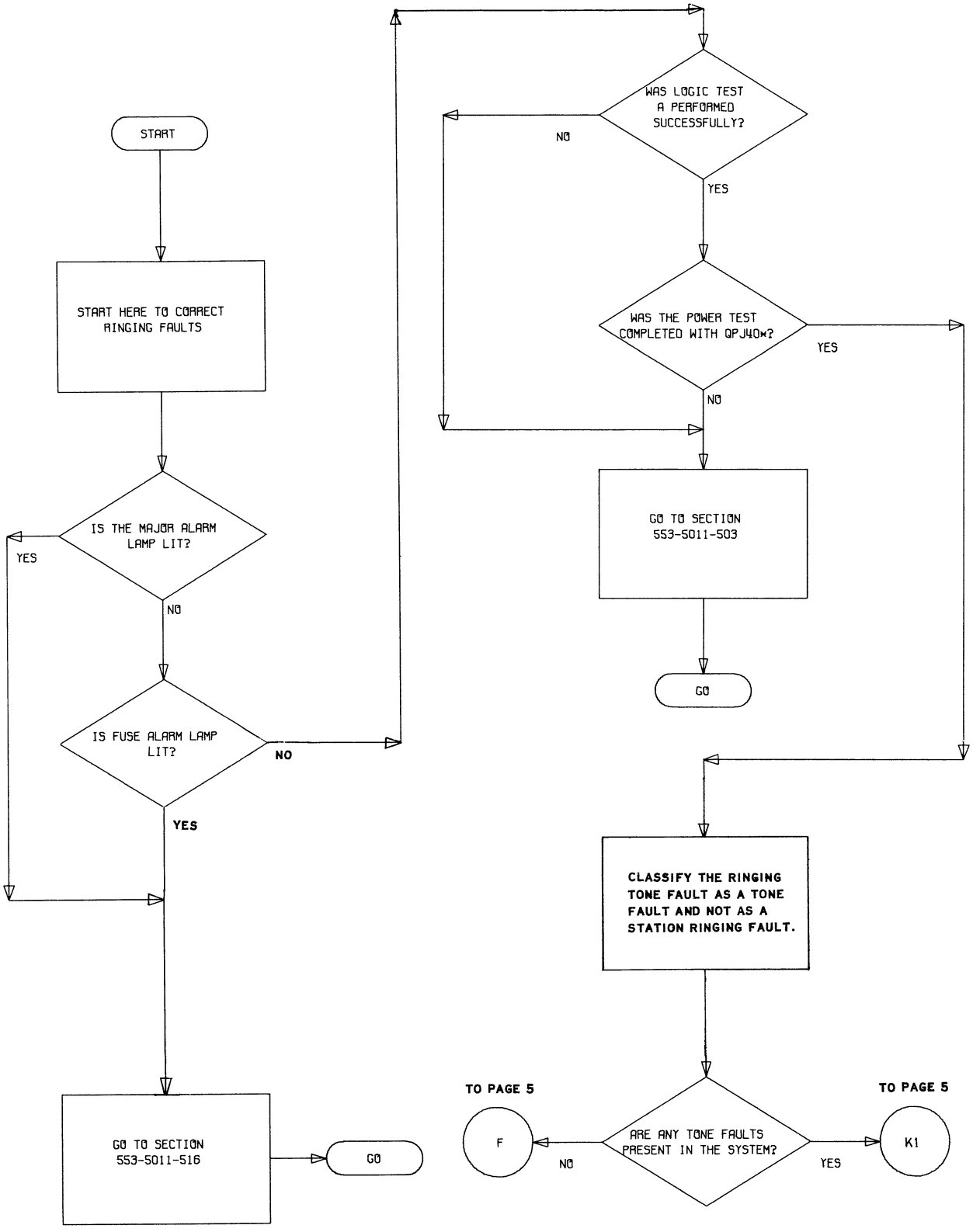


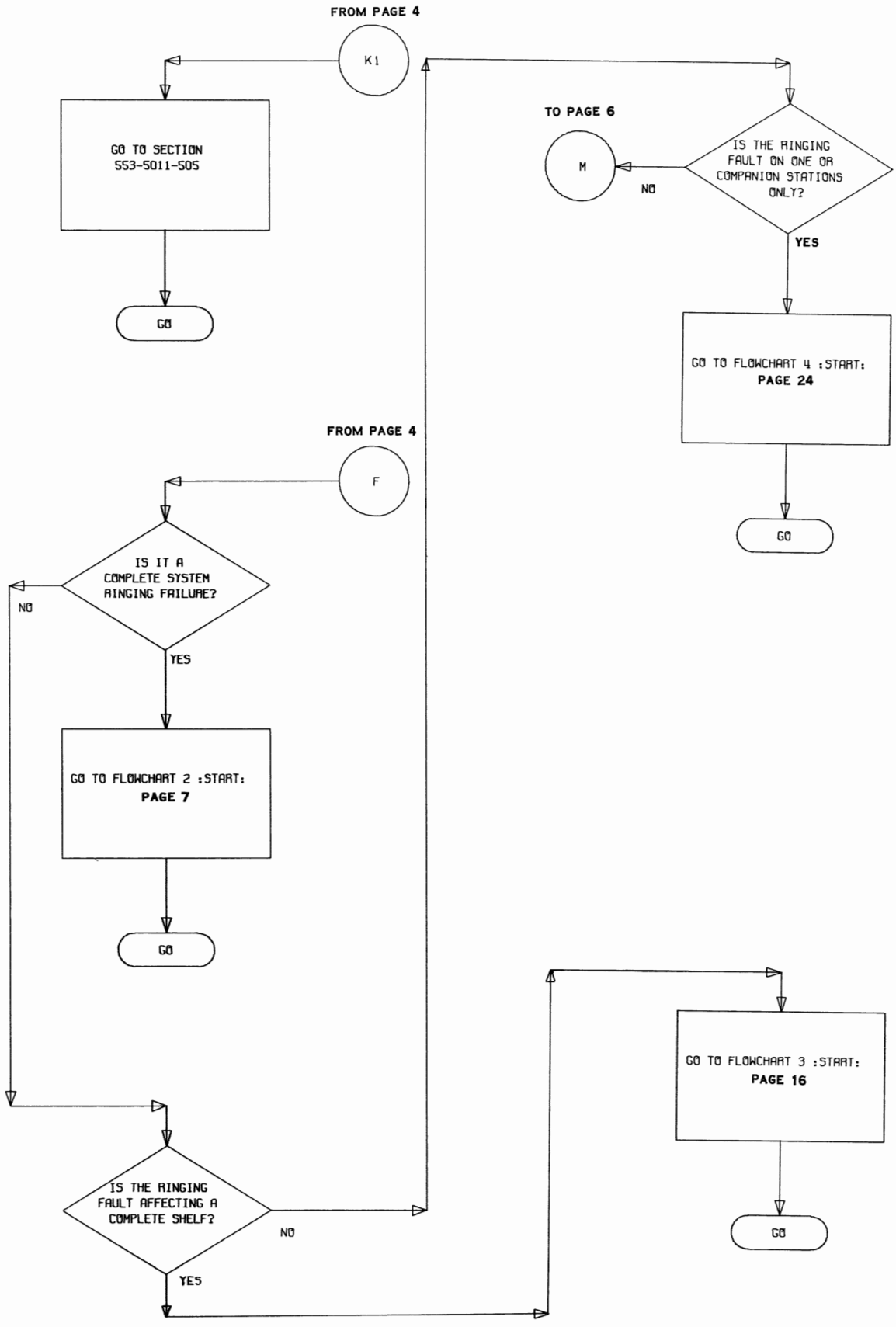
Fig. 1 – Distribution of +24-V and 86-V, 20-Hz Supplies

TABLE A
FUSE DISTRIBUTION FOR 86 V, 20 Hz AND +24 V

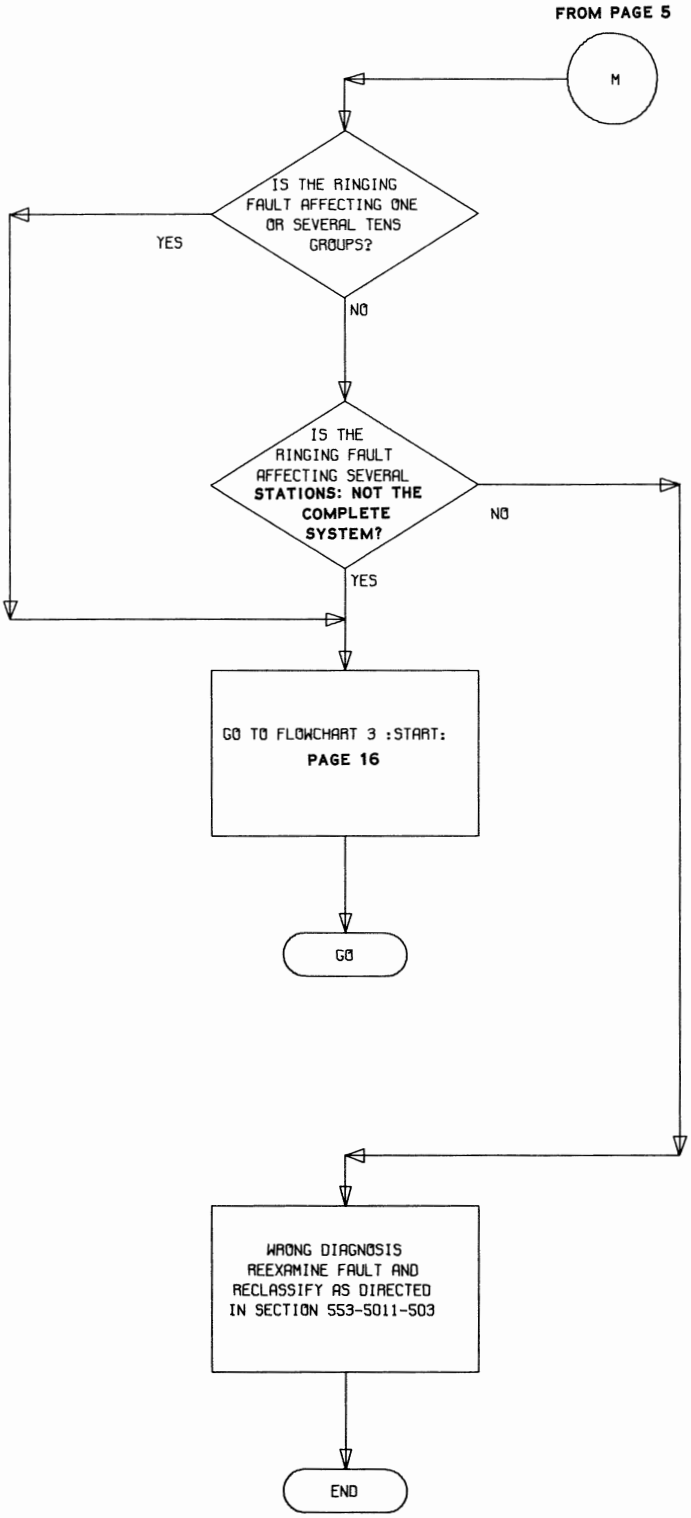
FUSE NO.	STATION LINES SERVED	SHELF LOCATION	TEST POINT NO. ON QPJ37*
86F35 and 24F11	(2)10 to (2)19 (2)50 to (2)59 310 to 319	Line Shelf No. 1 Line Shelf No. 2 Line Shelf No. 3	TP1
86F36 and 24F12	(2)20 to (2)29 (2)60 to (2)69 320 to 329	Line Shelf No. 1 Line Shelf No. 2 Line Shelf No. 3	TP2
86F37 and 24F13	(2)30 to (2)39 (2)70 to (2)79 330 to 339	Line Shelf No. 1 Line Shelf No. 2 Line Shelf No. 3	TP3
86F38 and 24F14	(2)40 to (2)49 (2)80 to (2)89 340 to 349	Line Shelf No. 1 Line Shelf No. 2 Line Shelf No. 3	TP4



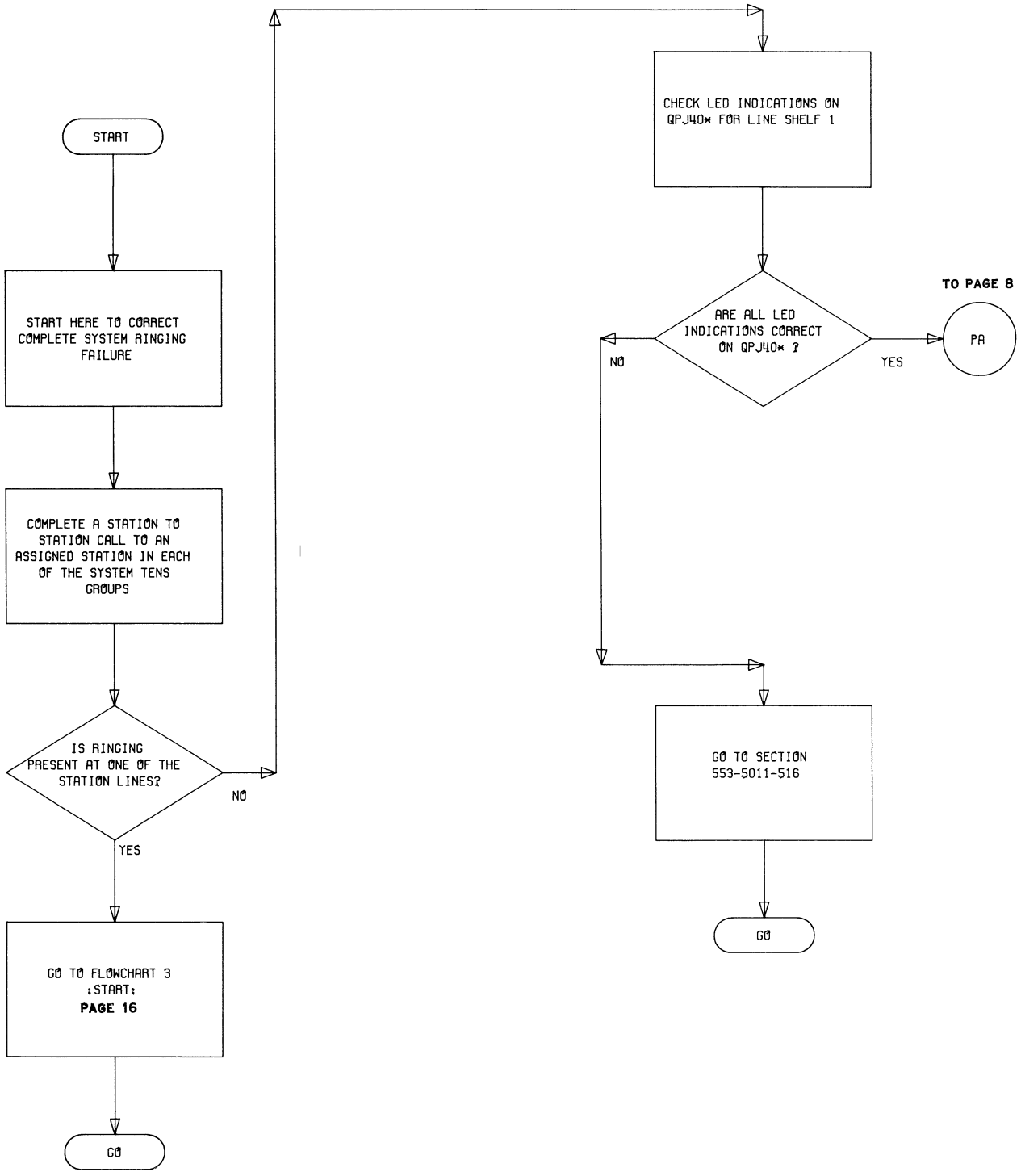
Flowchart 1 – Ringing Fault Classification



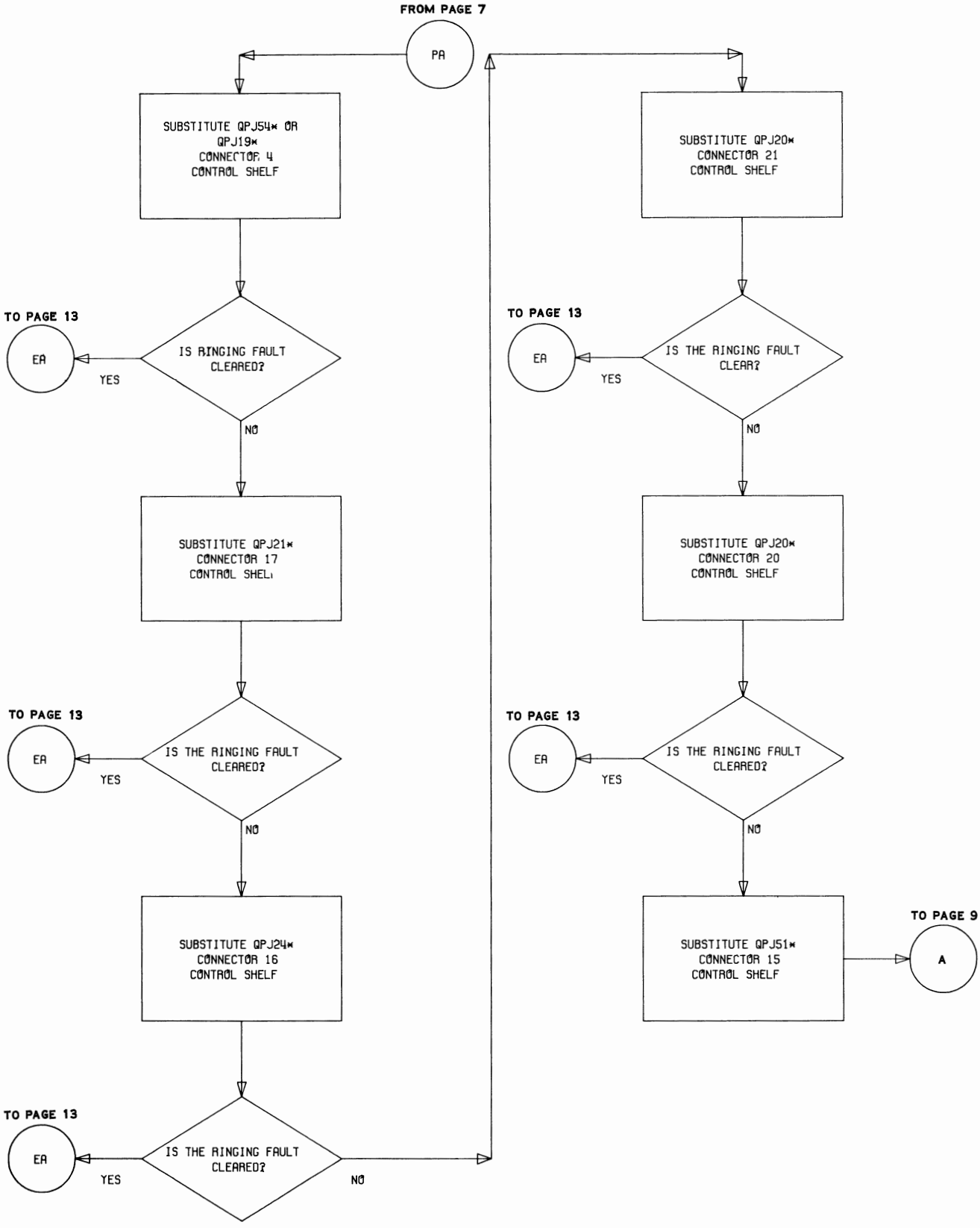
Flowchart 1 (Cont)



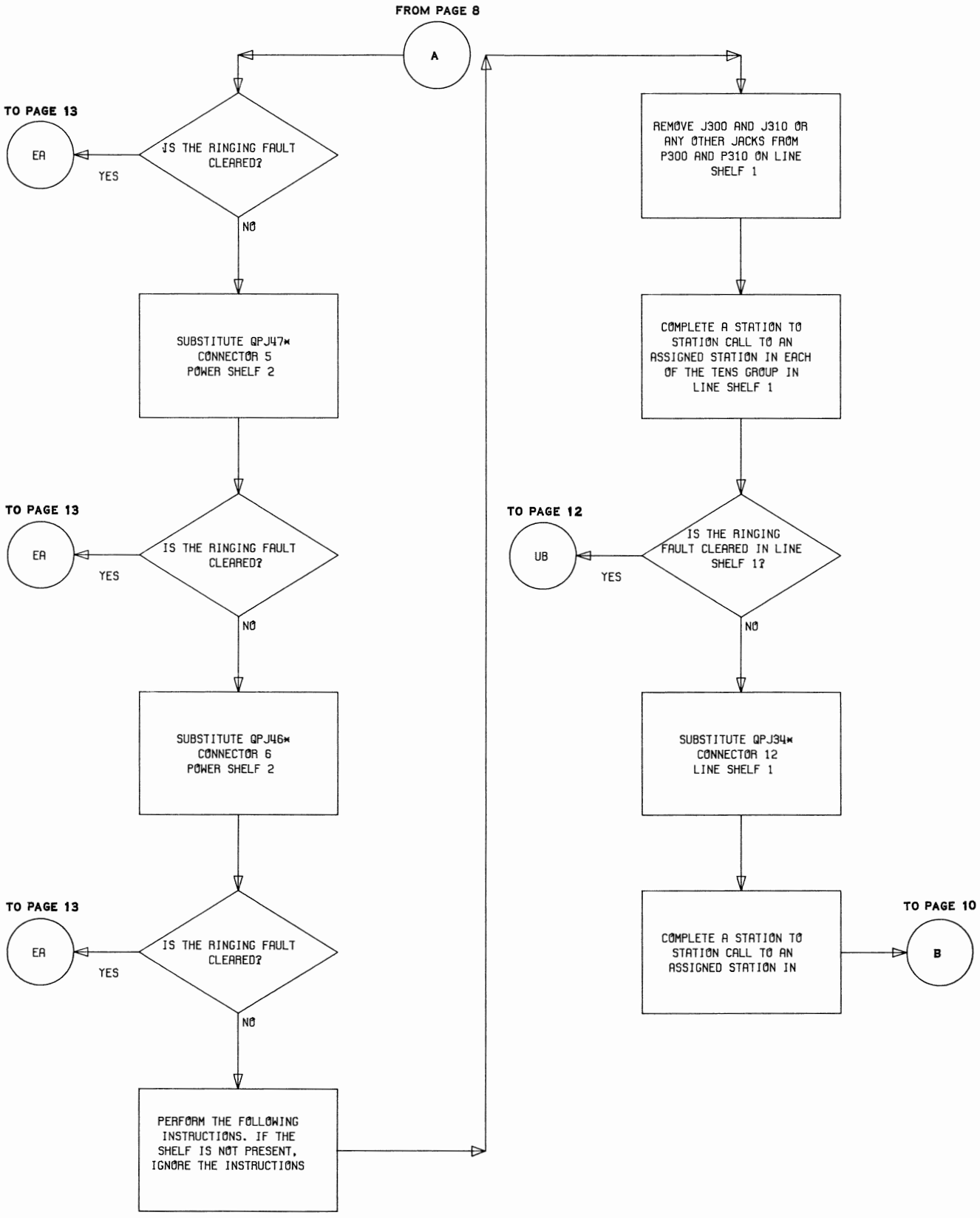
Flowchart 1 (Cont)



Flowchart 2 – Complete System Ringing Failure



Flowchart 2 (Cont)



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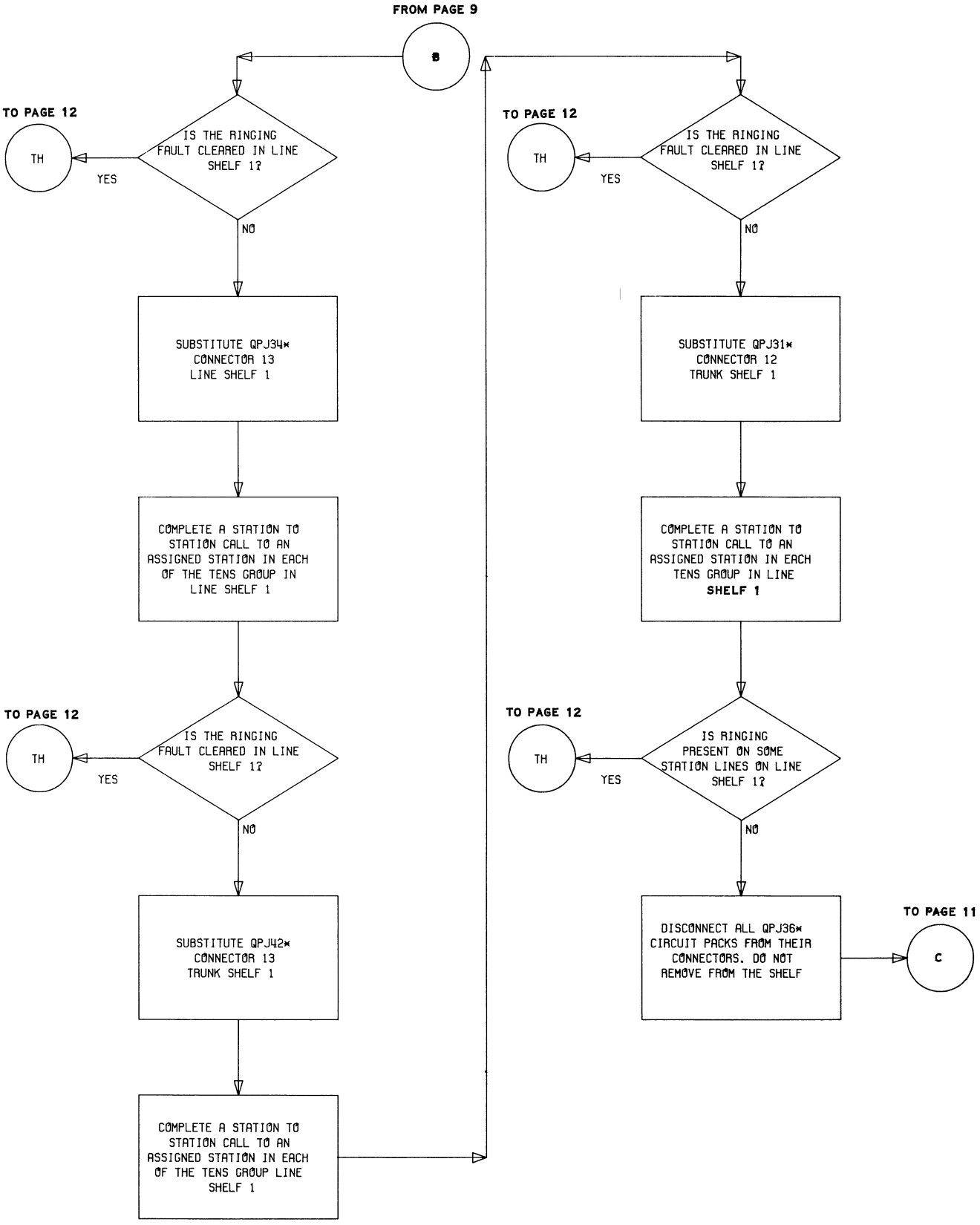

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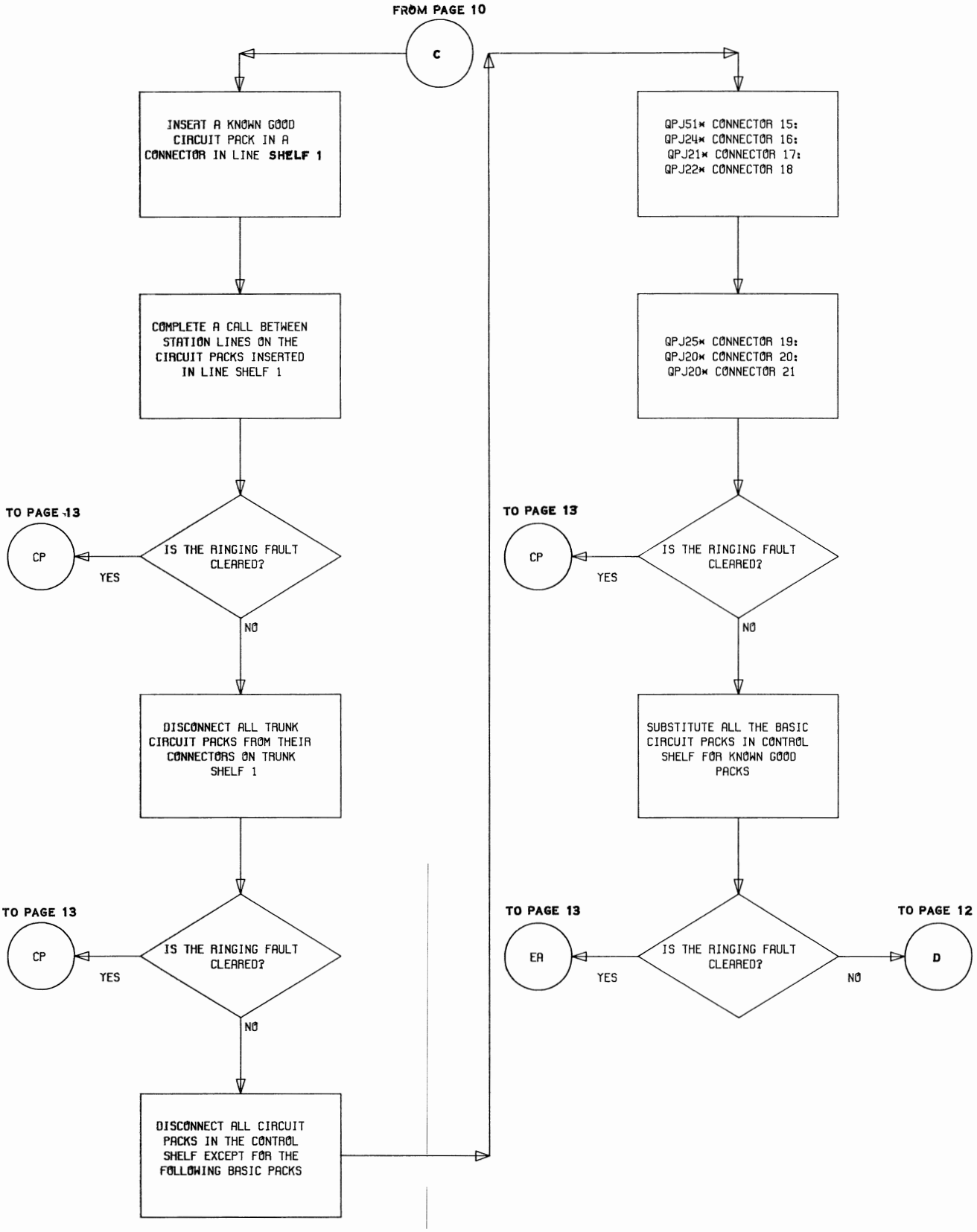

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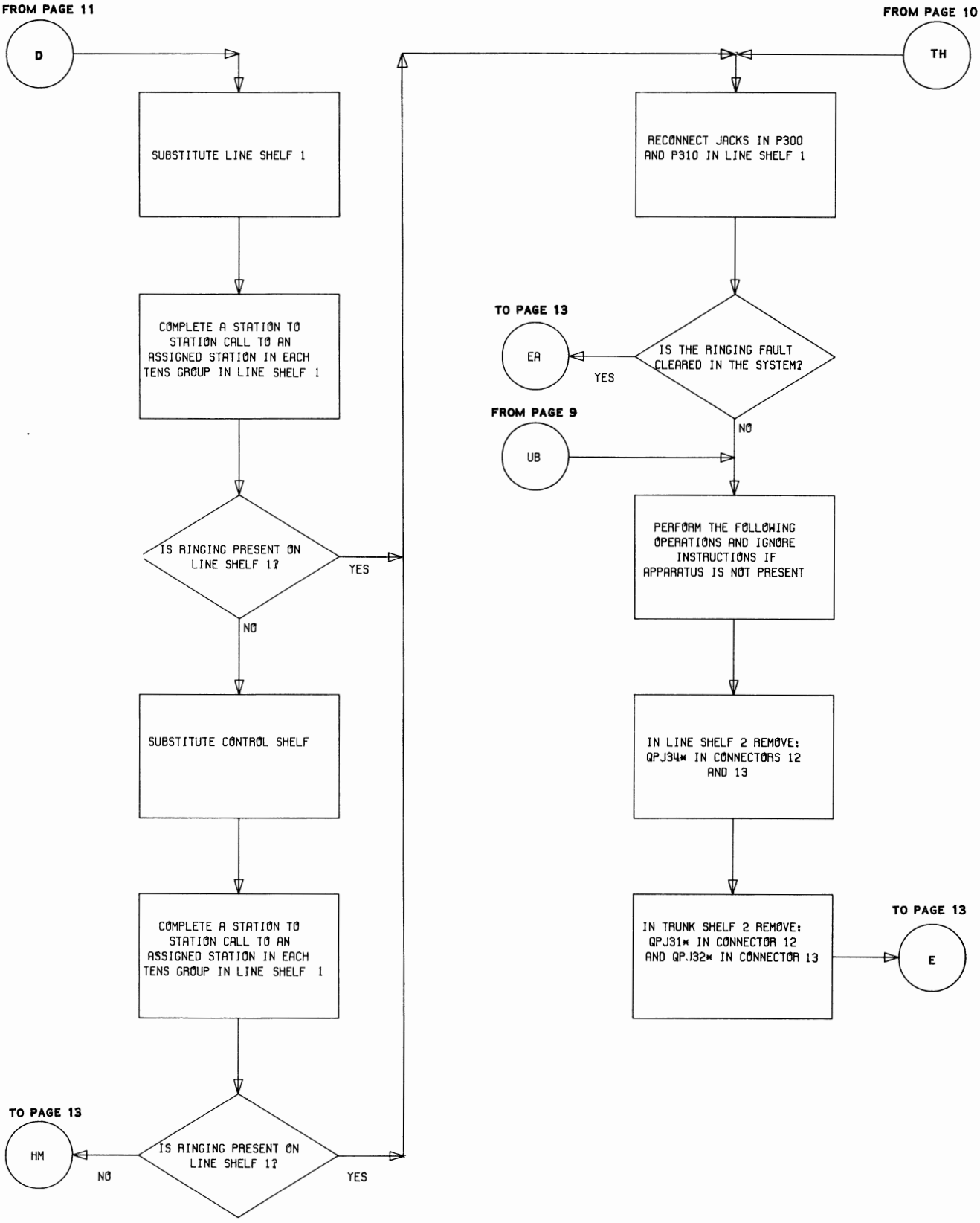

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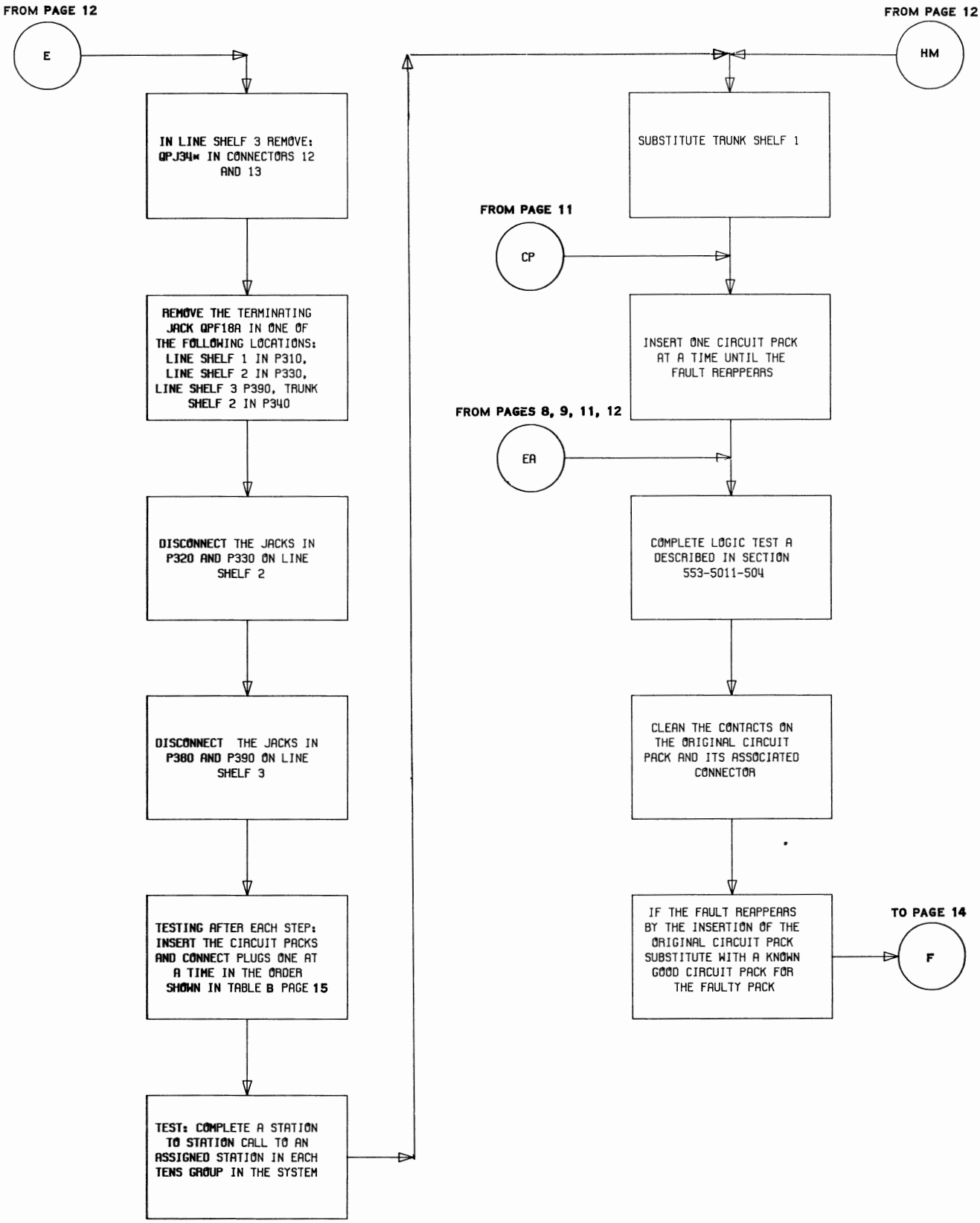

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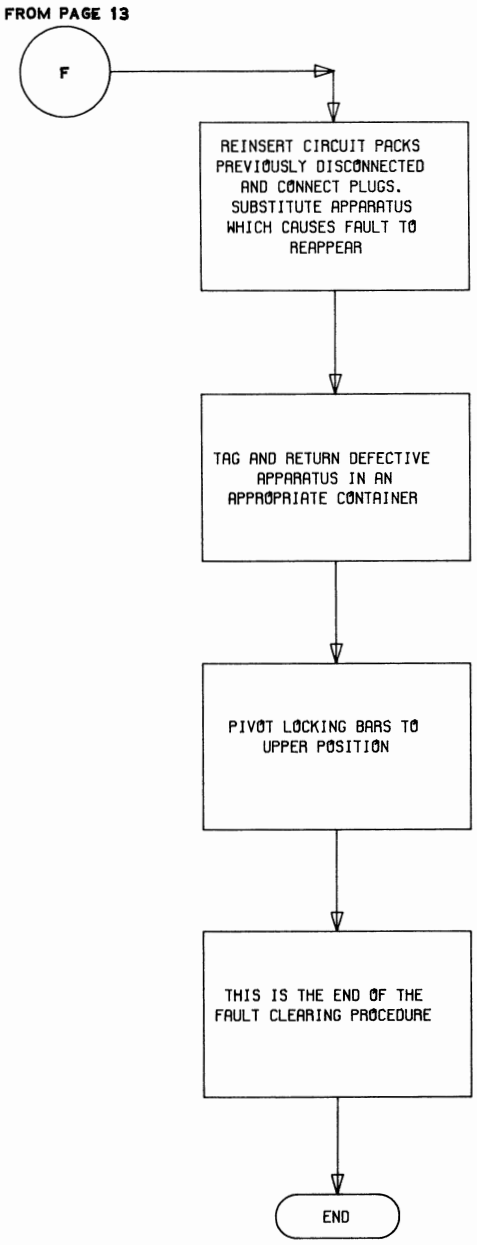
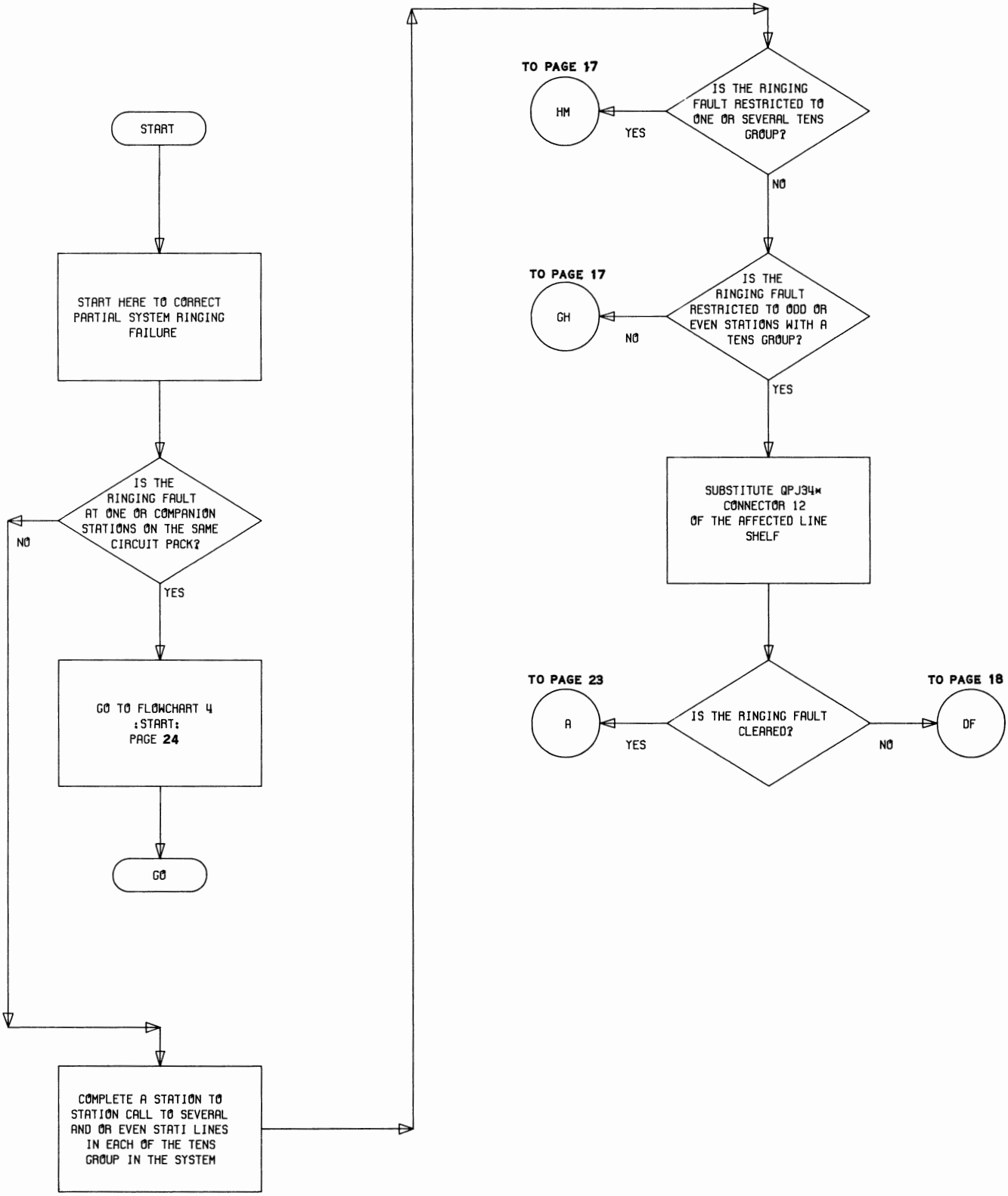


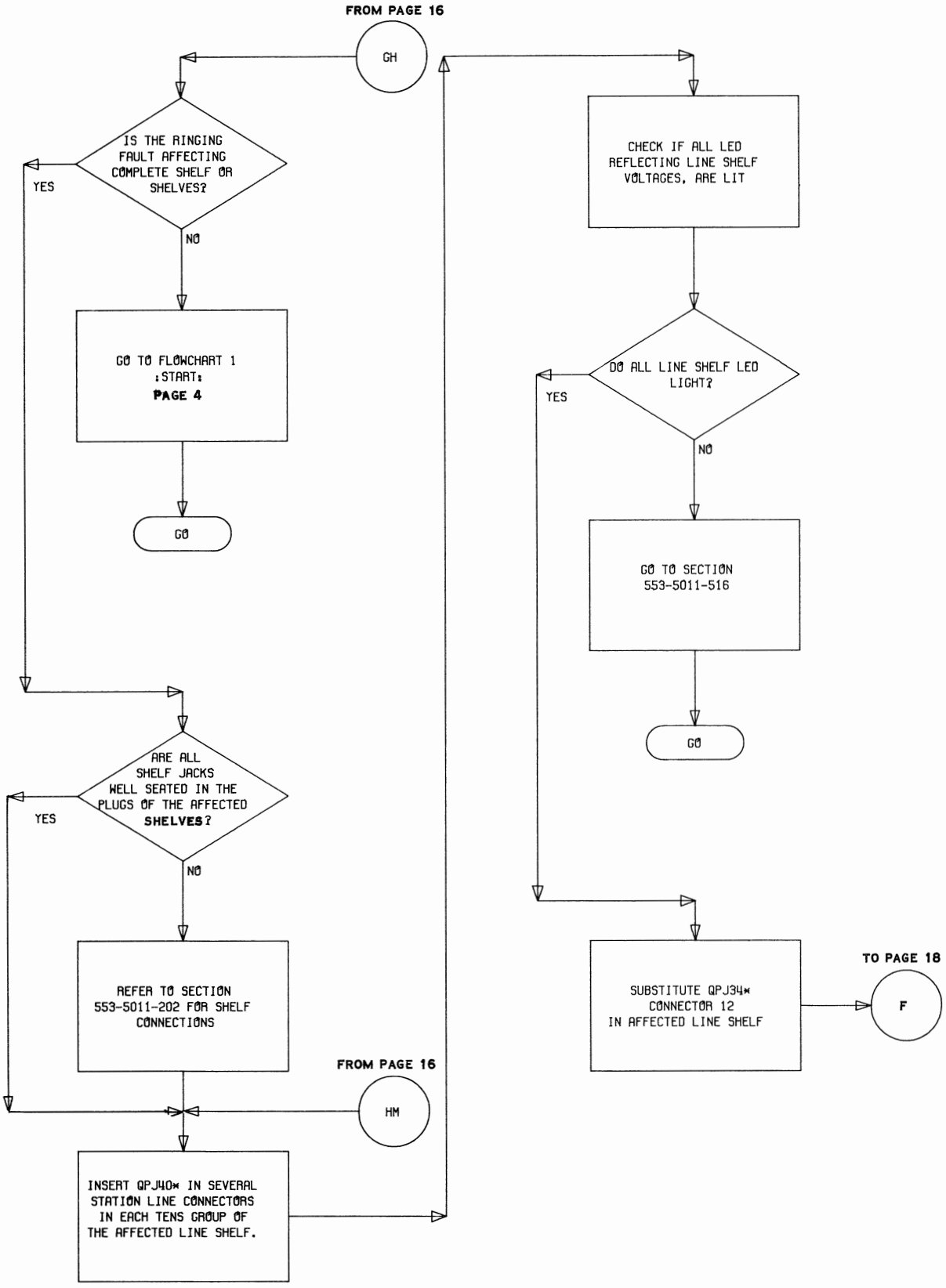
Flowchart 2 (Cont)

TABLE B
SEQUENCE FOR RECONNECTING APPARATUS

SEQUENCE OF INSERTION	CIRCUIT PACK INSERTION		JACK	SHELF SERVED
	CIRCUIT PACK	CONNECTOR		
	–	–	J300 J310	Line Shelf No. 2
2	QPJ34*	12	–	Line Shelf No. 2
3	QPJ34*	13	–	Line Shelf No. 2
4	–	–	J320 J330	Line Shelf No. 2
5	QPJ34*	12	–	Line Shelf No. 3
6	QPJ34*	13	–	Line Shelf No. 3
7	–	–	J380 J390	Trunk Shelf No. 2
8	QPJ31*	12	–	Trunk Shelf No. 2
9	QPJ42*	13	–	



Flowchart 3 – Partial System Ringing Failure



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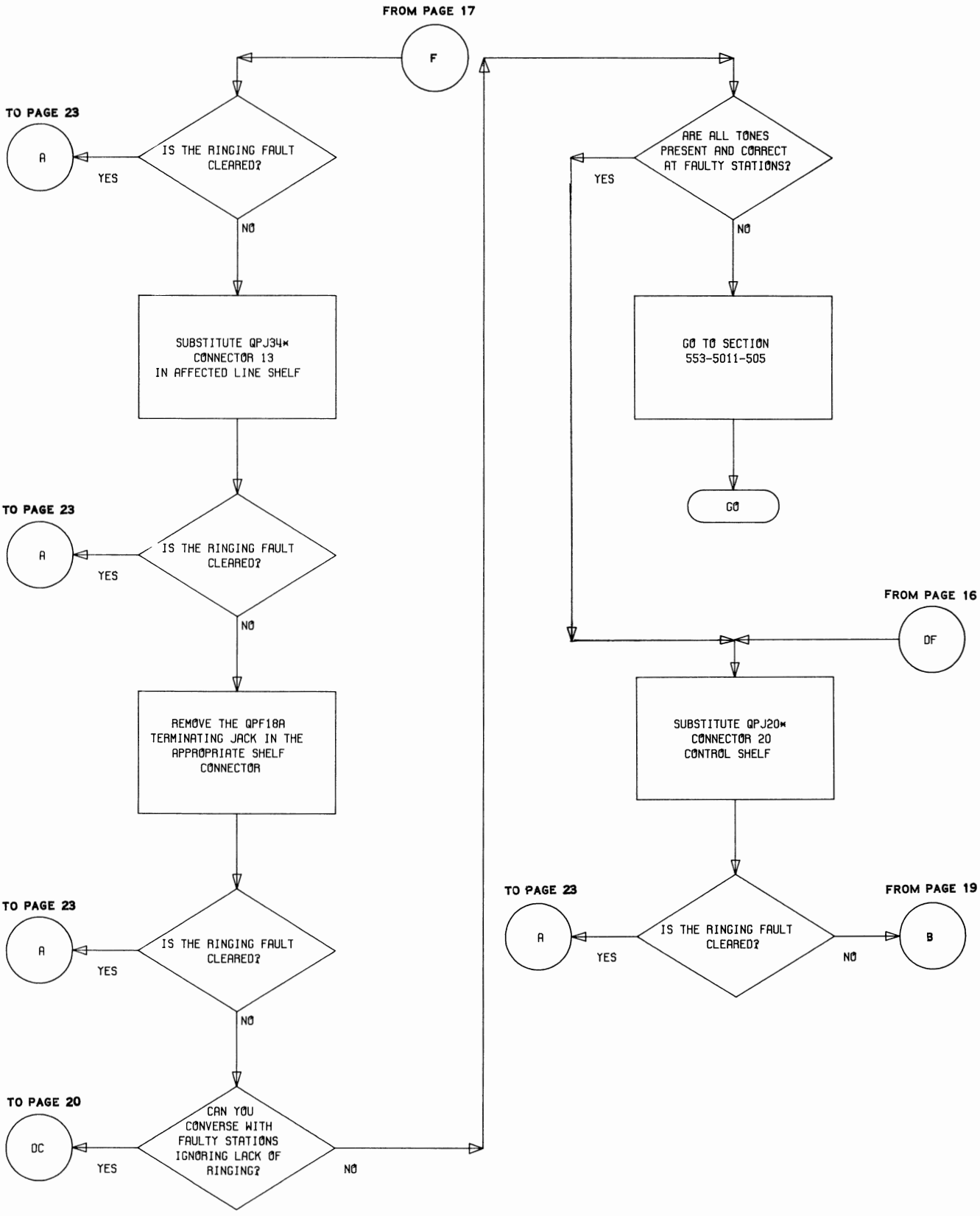

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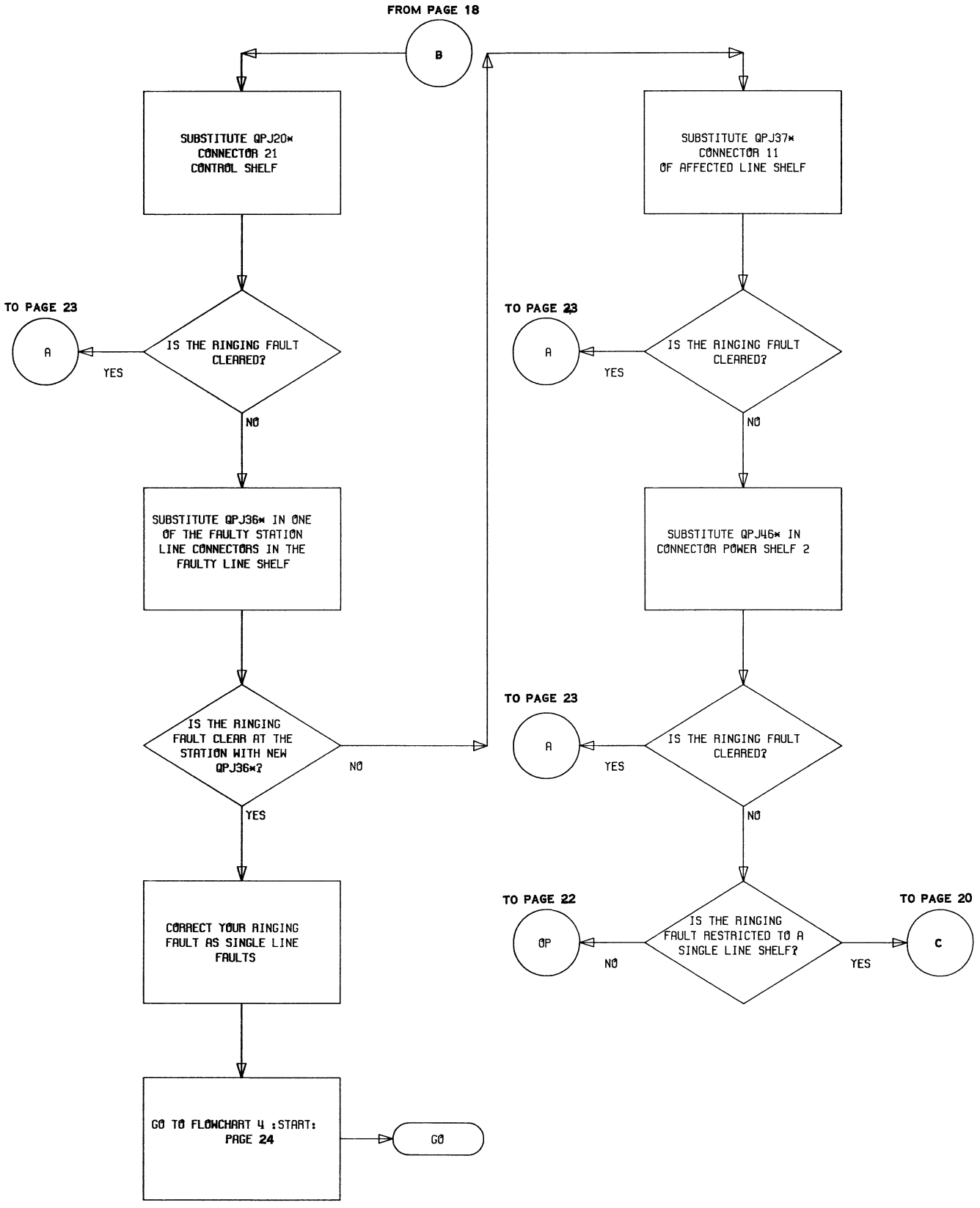

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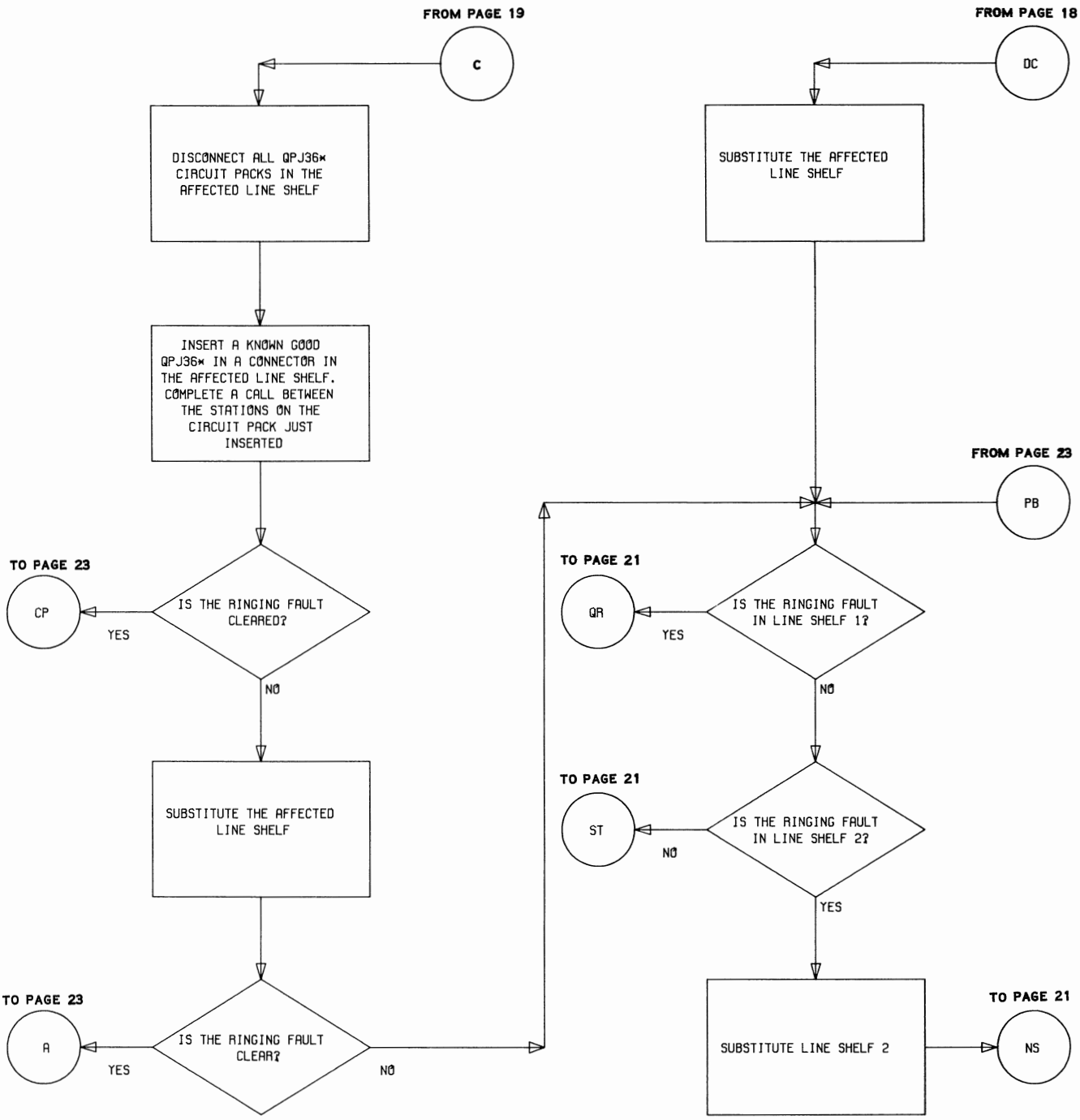

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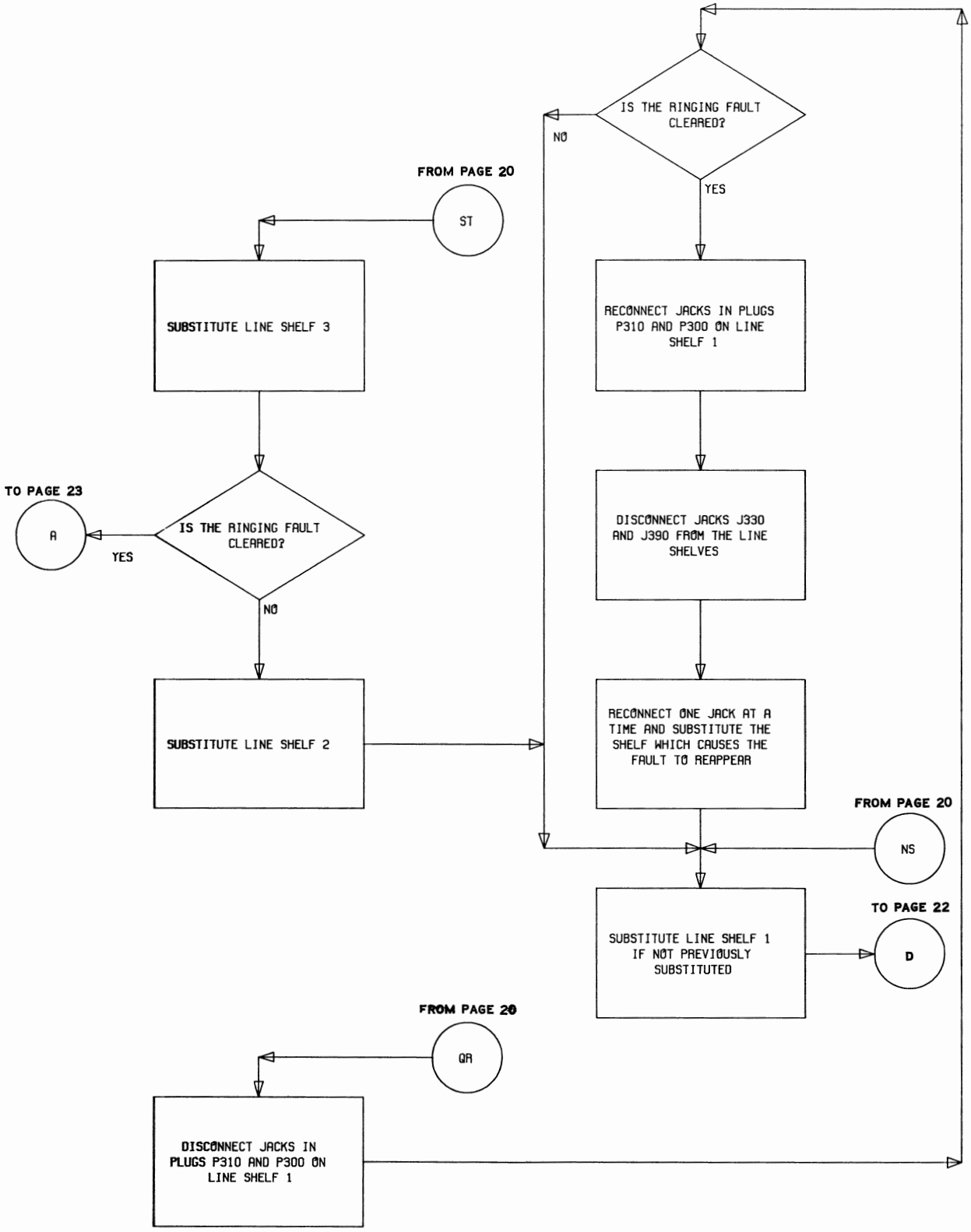

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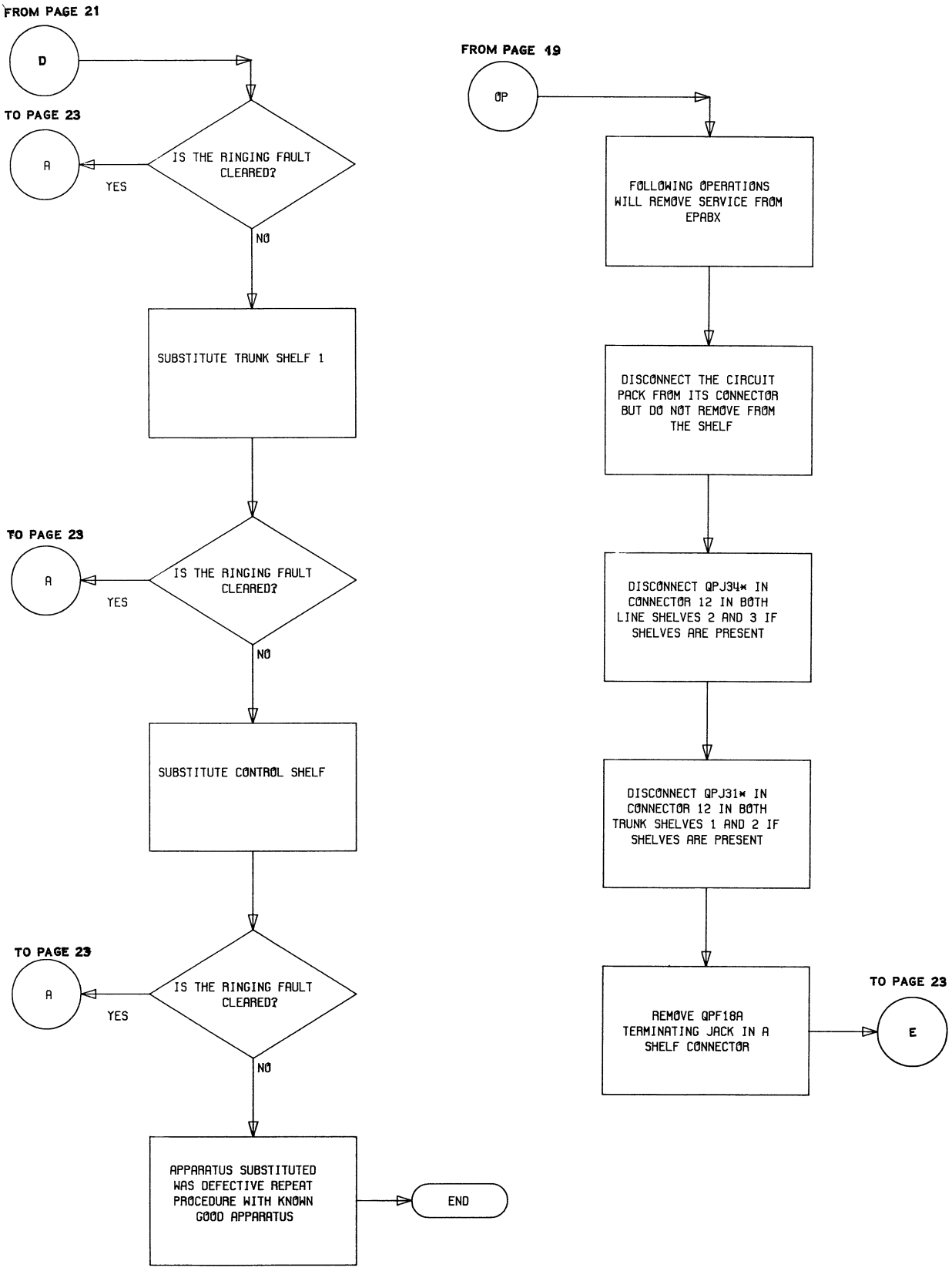

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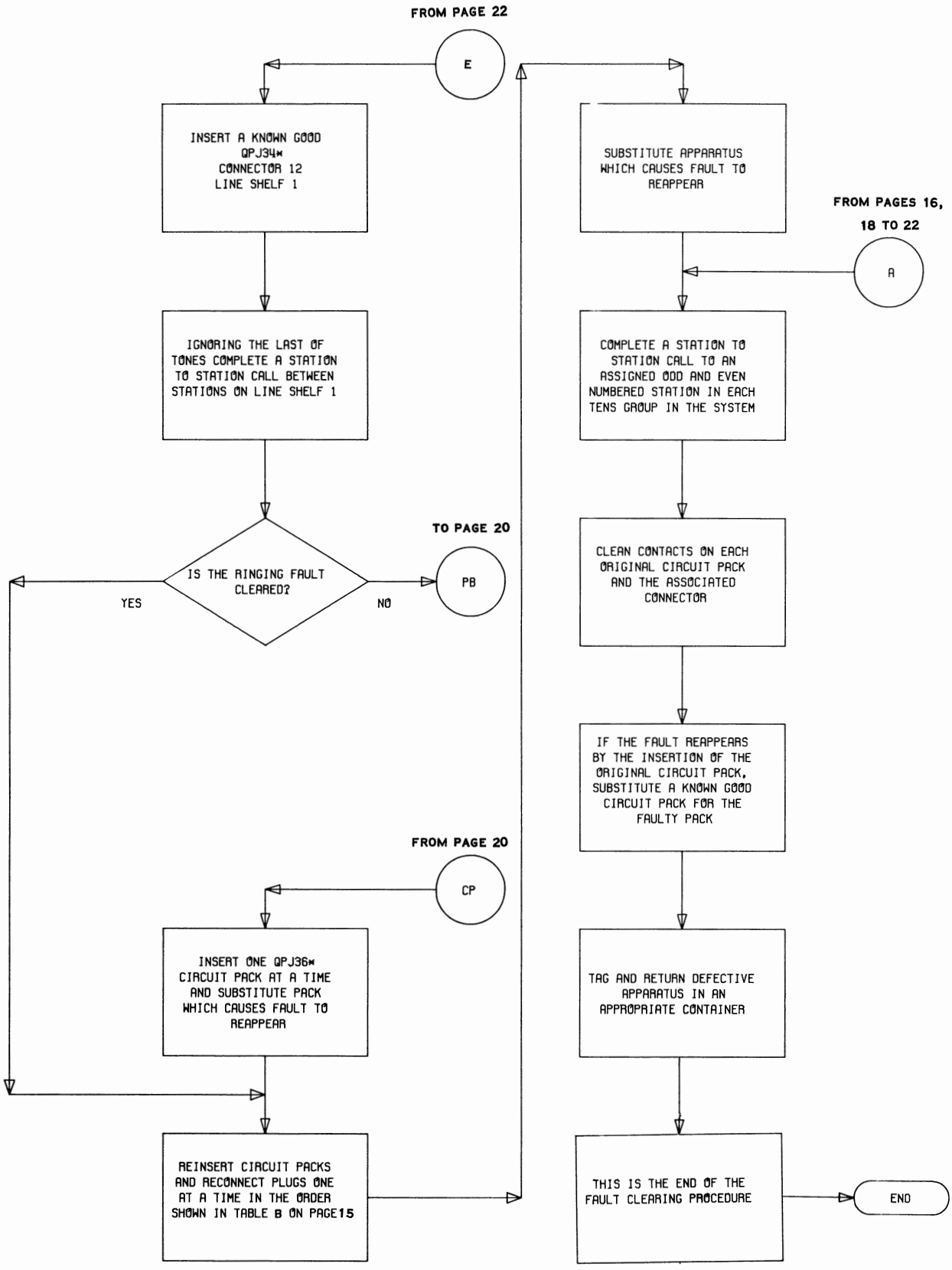

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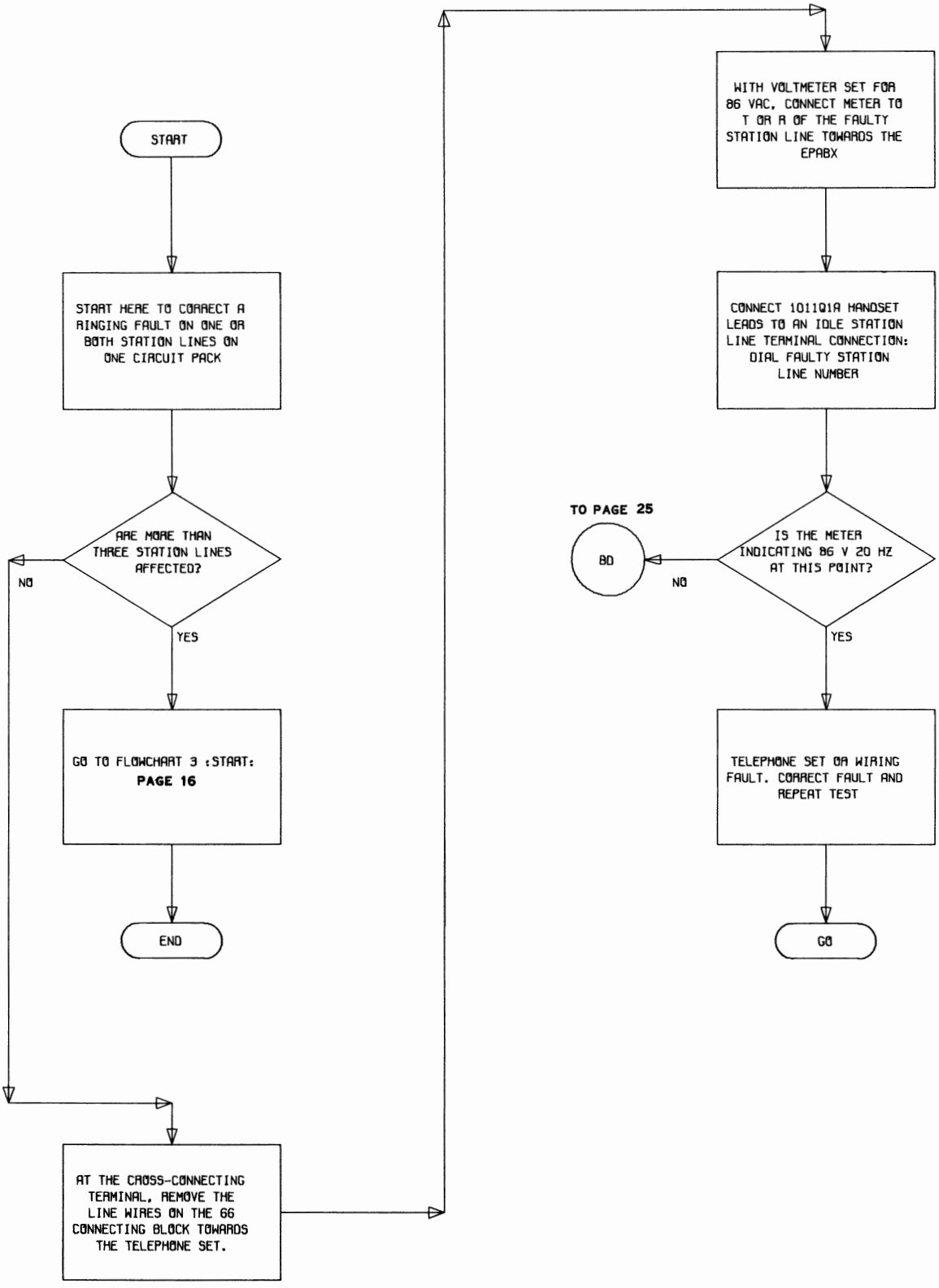
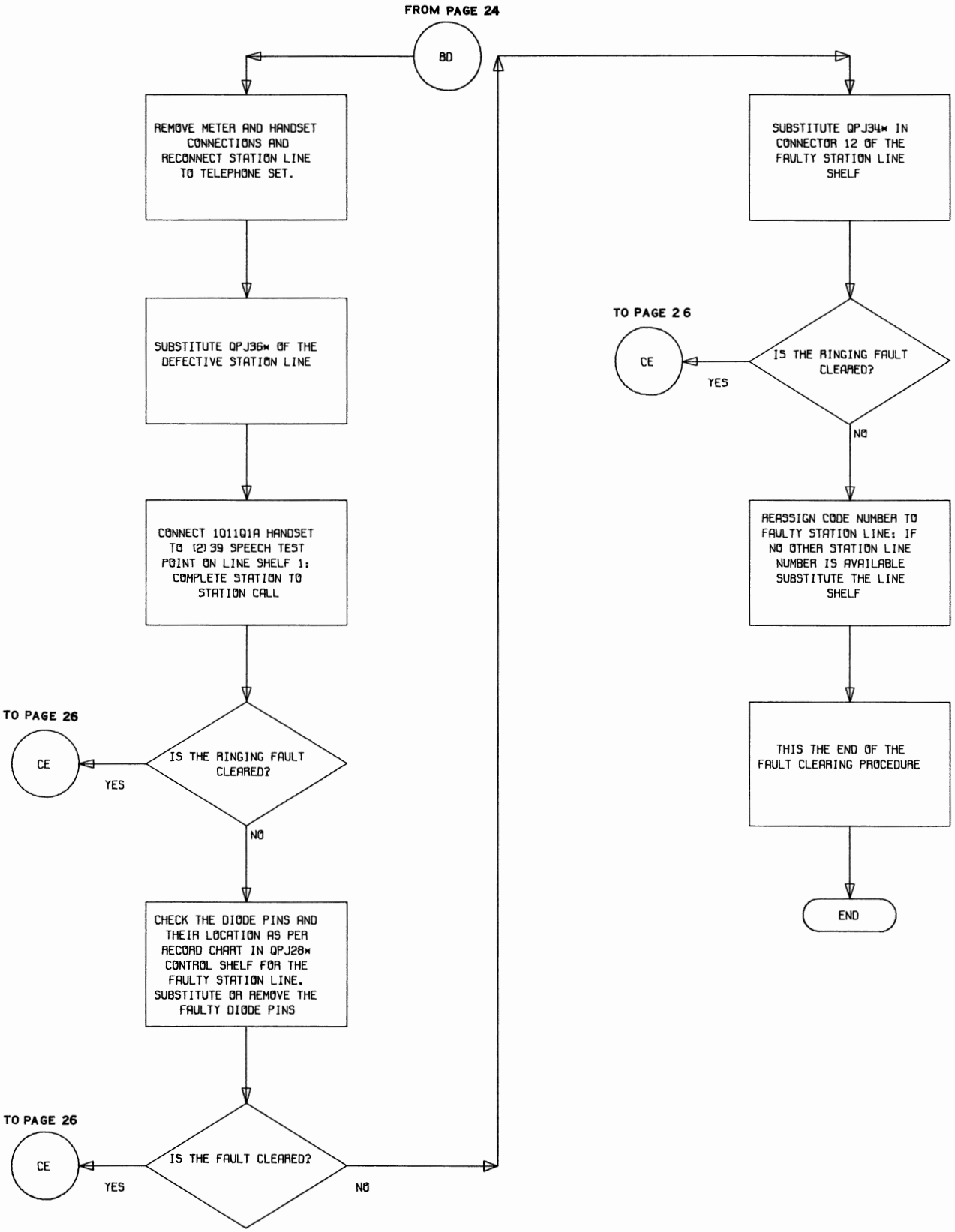


Flowchart 4 – Ringing Fault on Single or Companion Station Lines



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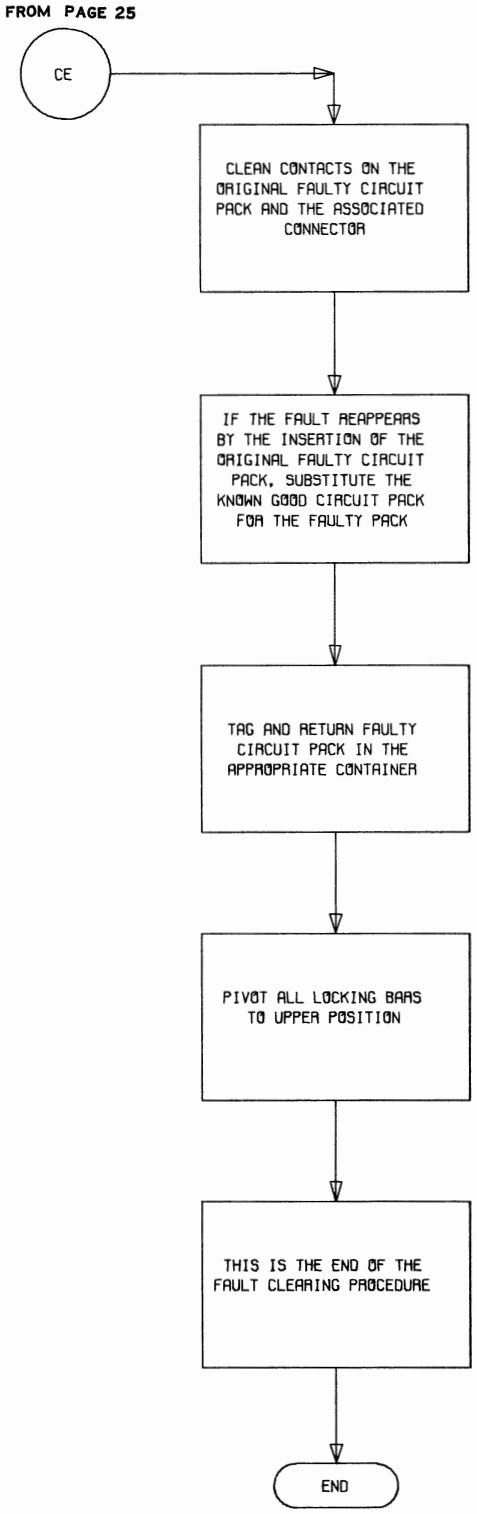

Flowchart 4 (Cont)