

“PULSE* 120” – SG-1A

ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGE
 STATION LINE OPTION FAULT CLEARING PROCEDURE

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1. SELECTION OF OPTIONAL FEATURES

- 1.01 Optional features are provided to station lines on individual and system basis.
- 1.02 Individual station line Class-Of-Service (COS) selection is made by inserting diode pins in COS blocks mounted on QPJ28-type circuit packs. The locations and station lines served by the three QPJ28-type circuit packs are listed in Table A.
- 1.03 Individual station line call pickup group assignment is made by operating miniature slide switches on the QPJ85-type circuit pack in connector location 24 of the QSP6U fully wired option shelf.
- 1.04 Inserting circuit packs and strapping pins on blocks provides station lines with system-option features.
- 1.05 The Code Restriction (CR) feature allows or denies programmed toll, area, service, and exchange codes. The codes are programmed by inserting shorting pins in the Code Restriction Field (CRF).

1.06 The optional feature installations are described in Section 553-5011-204. Markings are entered on the record sheets (Section 553-5011-207) for installation and maintenance references. Any discrepancy between the pin position or strapping and the record charts must be investigated before proceeding with the fault-clearing procedures.

2. DIODE PIN TESTING

- 2.01 The effect of an open circuit diode pin simulates a ‘no diode pin’ condition in a COS block and affects only the station line served by the defective pin.
- 2.02 A short-circuit diode pin in a COS block imposes all the COS of the station line (served by the faulty diode pin), on all station lines which share the feature provided by the faulty pin.
- 2.03 The DIGITONE* stations cannot complete calls when QPJ28-type circuit packs are removed, or when the diode pins are removed from position 10.
- 2.04 The procedure to test diode pins is outlined in Chart 1.
- 2.05 When calling another station *within the same hunting group*, the call cannot hunt through its own number.
- 2.06 For hotel/motel systems, see Section 553-5011-207 for the numbers to dial to access the station lines prescribed in the flowcharts (in hotel/motel service the station lines prescribed are the system numbers, not the dialed numbers).

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CHART 1 – DIODE PIN TESTING

QPJ97-type (Fig. 1) circuit pack must be inserted in connector 2 in the control shelf.

STEP	PROCEDURE	VERIFICATION
1	Flick LAMP TEST switch to down position.	All LED lamps on QPJ97-type circuit-pack illuminated except diode pin tester LED.
2	Insert the diode pin in the diode-pin tester jack on the QPJ97-type circuit-pack.	
SHORTED DIODE PIN TEST		
3	Flick diode-pin tester switch to down position.	If the pin is defective, the LED remains extinguished.
OPENED DIODE PIN TEST		
4	Flick diode-pin tester switch to up position.	If the pin is defective, the LED remains extinguished.
5	Remove the diode pin from diode-pin tester jack.	

**TABLE A
QPJ28-TYPE CIRCUIT PACK
ASSIGNMENT AND LOCATION**

STATION LINE	QPJ28	
	CONNECTOR	SHELF
(2)10 to (2)49	25	Control
(2)50 to (2)89	24	Control
310 to 349	4	Option

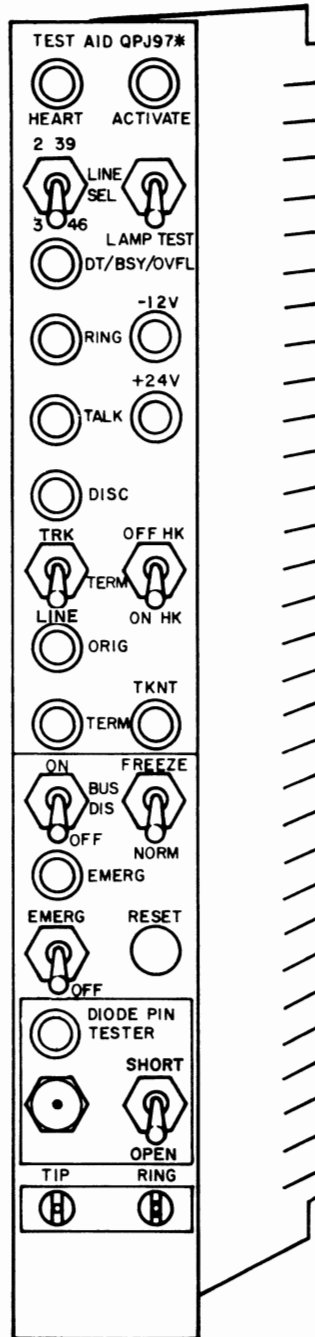


Fig. 1 – QPJ97-Type Circuit Pack

3. FAULT CLEARING PROCEDURE

3.01 Station line tone, ringing and transmission faults **must** be corrected before attempting to correct station line option faults.

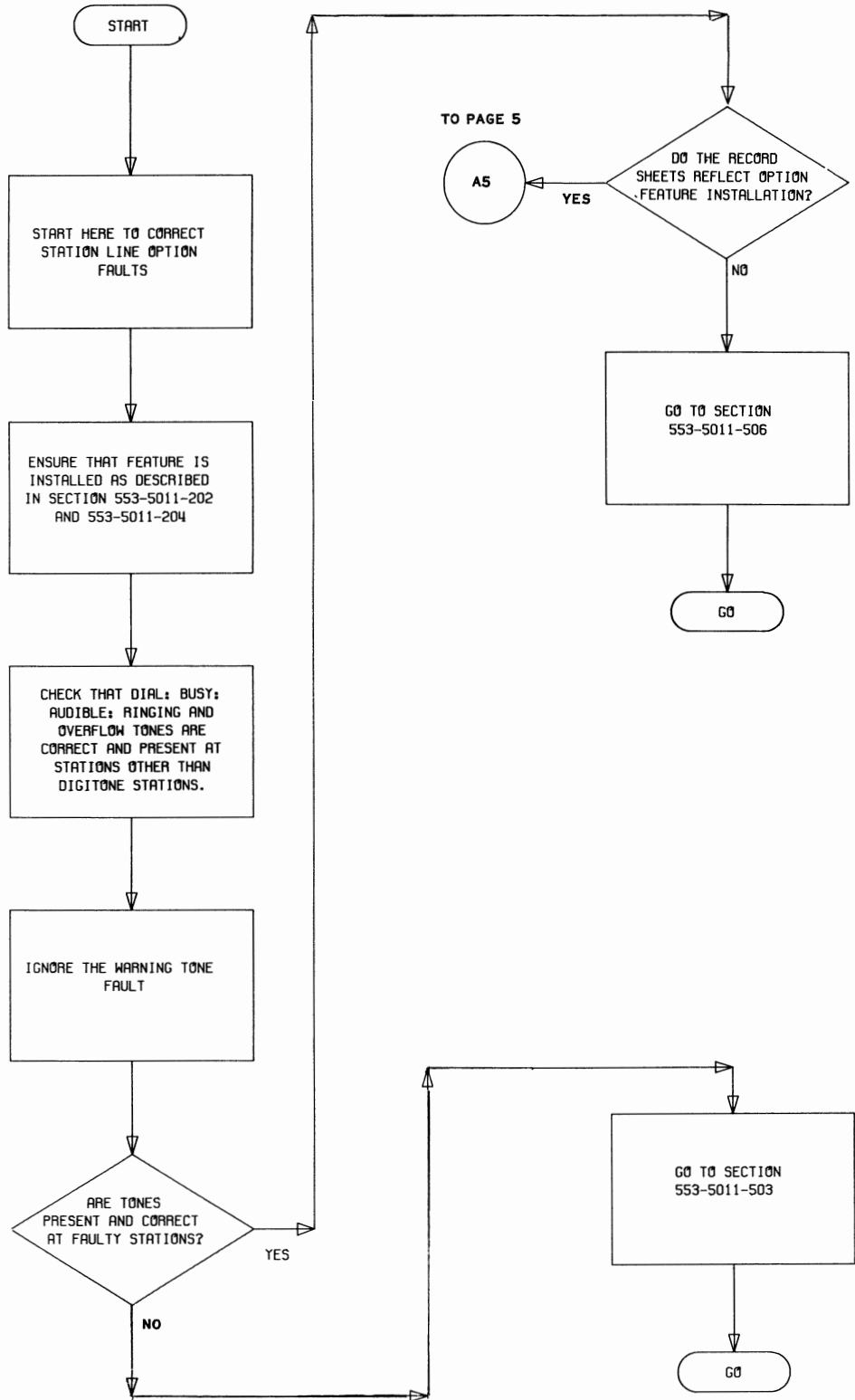
3.02 When the substitution of a circuit pack is required during the fault clearing procedure, the contacts on the new circuit pack must be cleaned as described in Section 553-5011-500 before the circuit pack is inserted into the connector.

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.

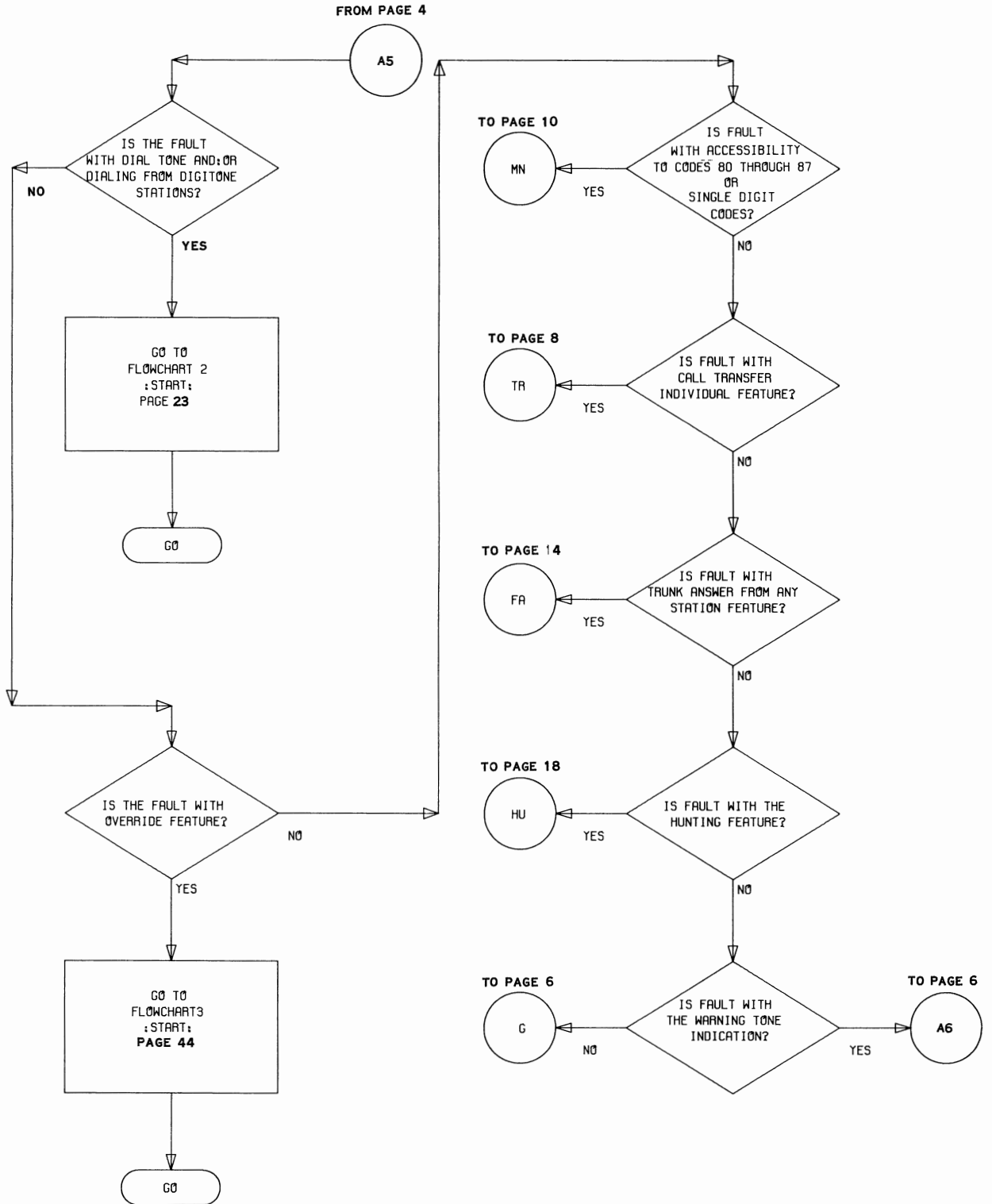
3.04 If different or additional faults, or both are created in the system by substituting a circuit pack, the replacement must be tagged and returned as a defective unit.

3.05 The original circuit pack must be inserted in the connector when the fault is not cleared by substitution.

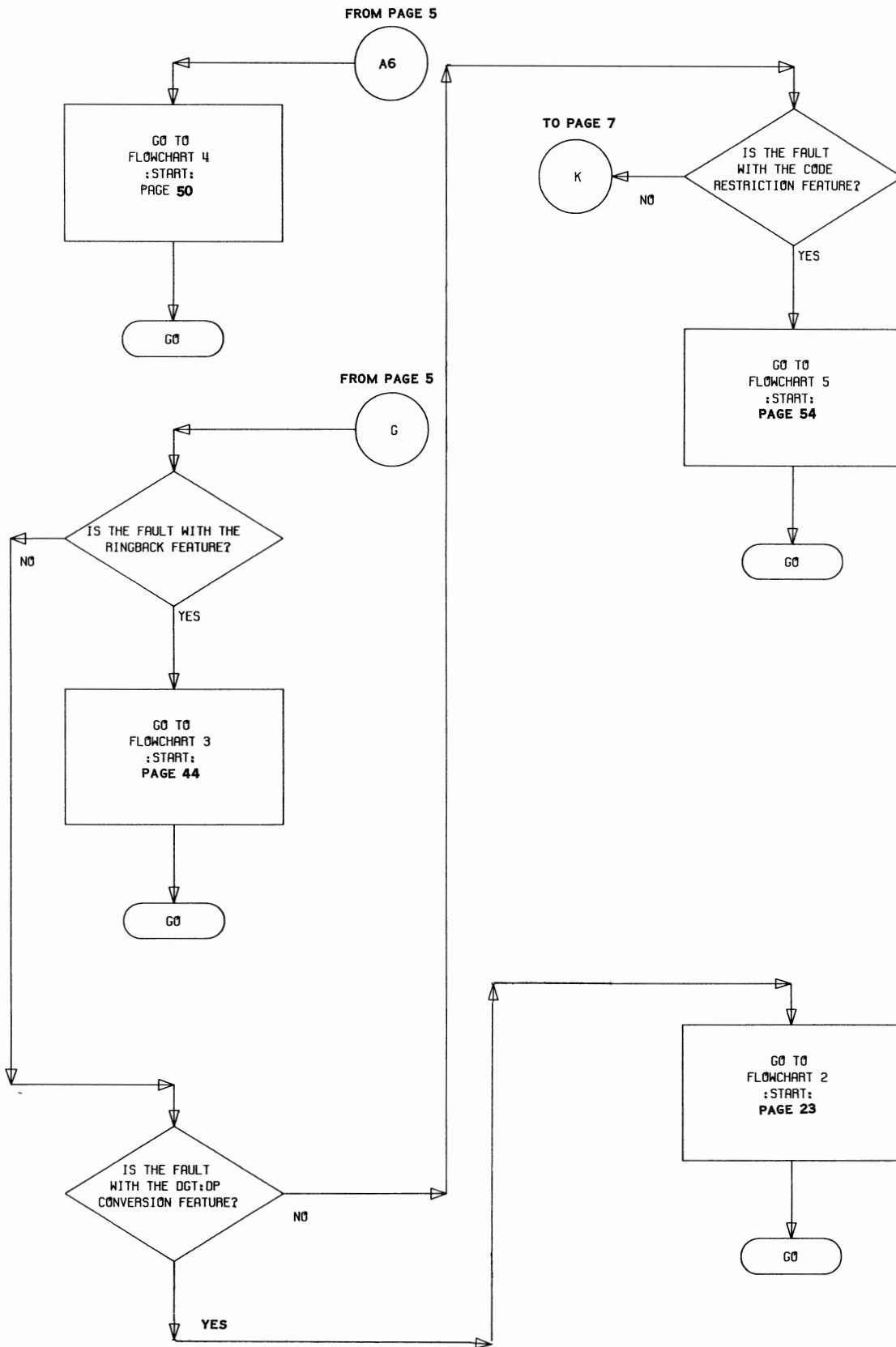
3.06 The instructions for substituting a shelf are detailed in Section 553-5011-202.



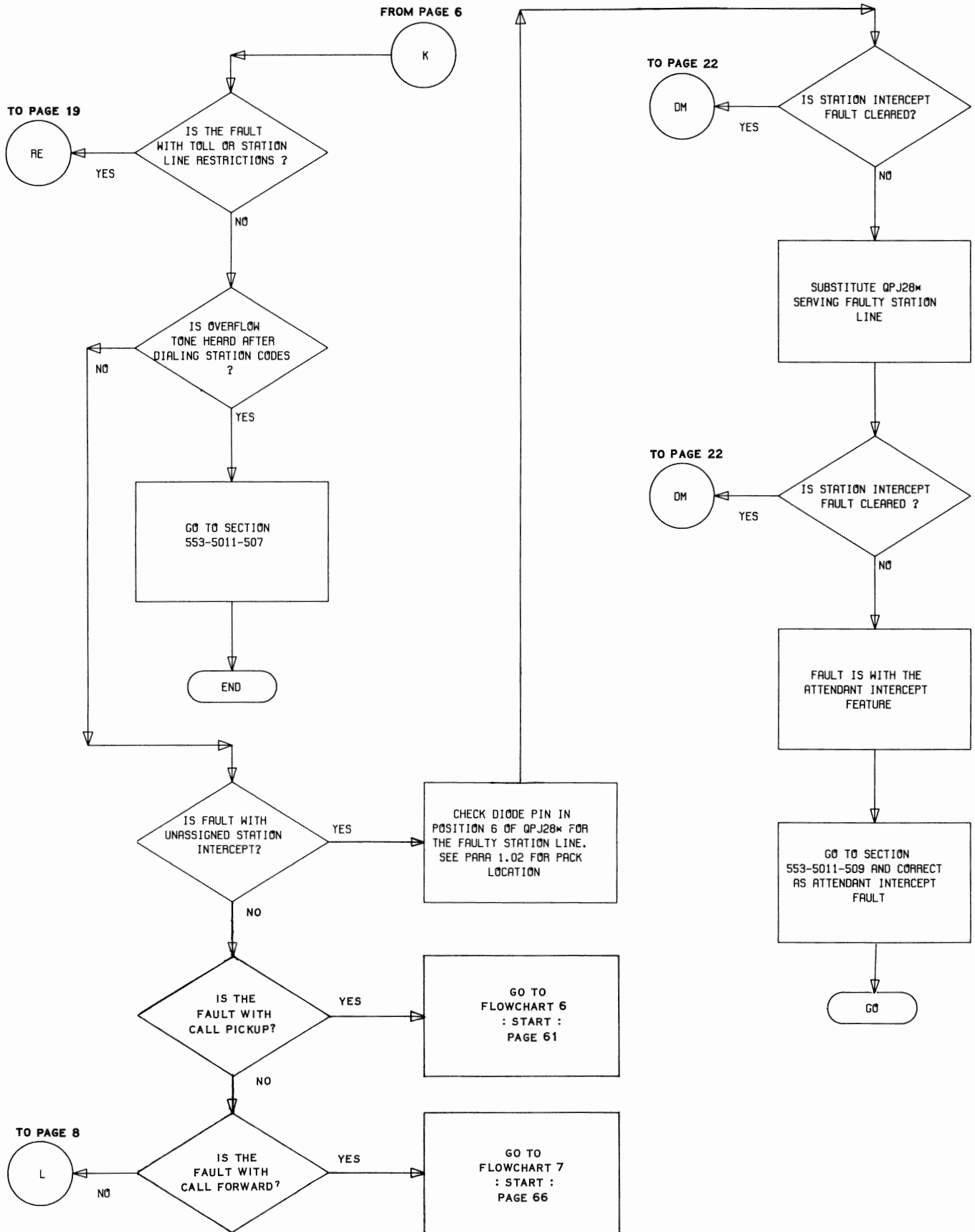
Flowchart 1 - Station Line Option Fault Clearing Procedure



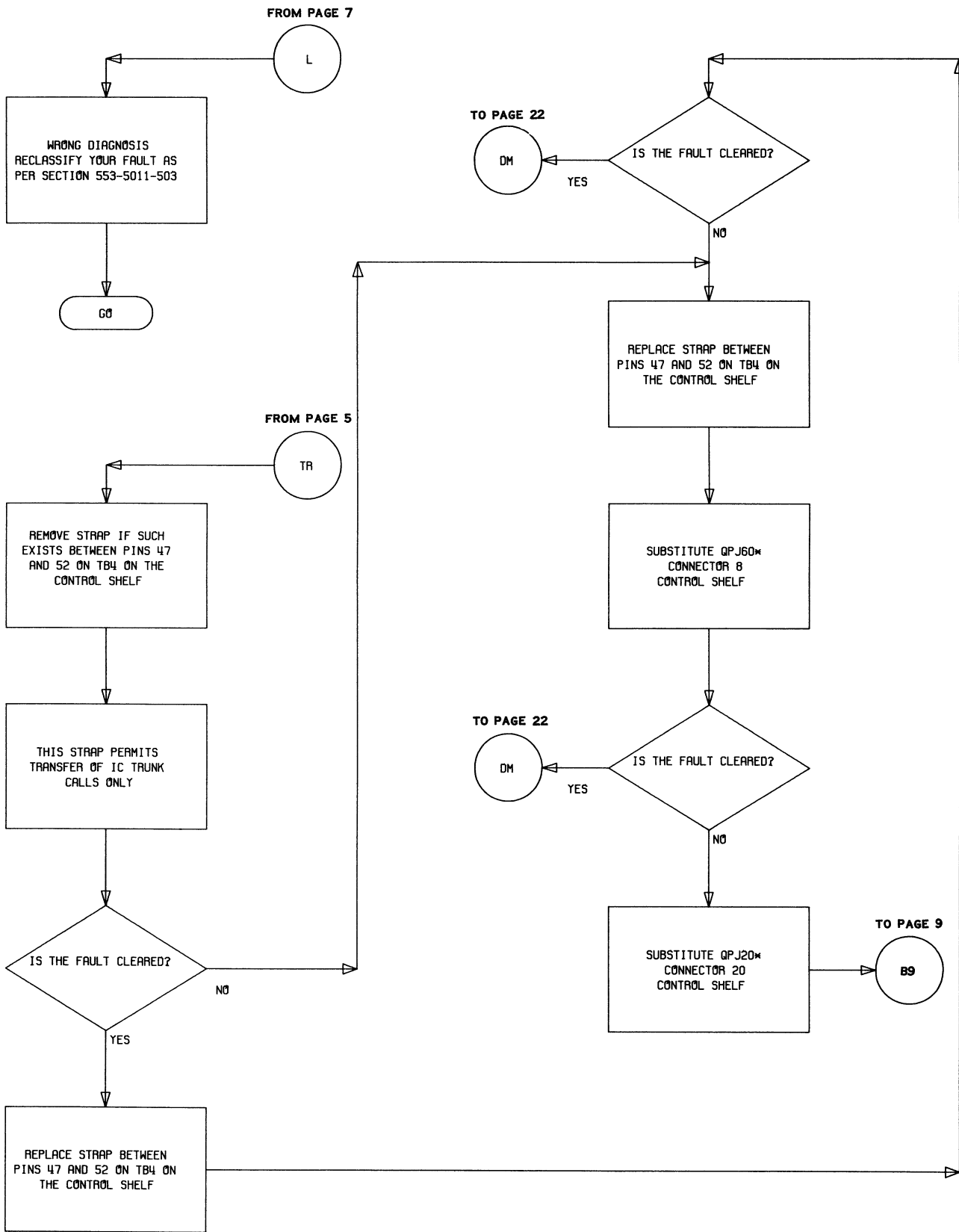
Flowchart 1 (Cont)



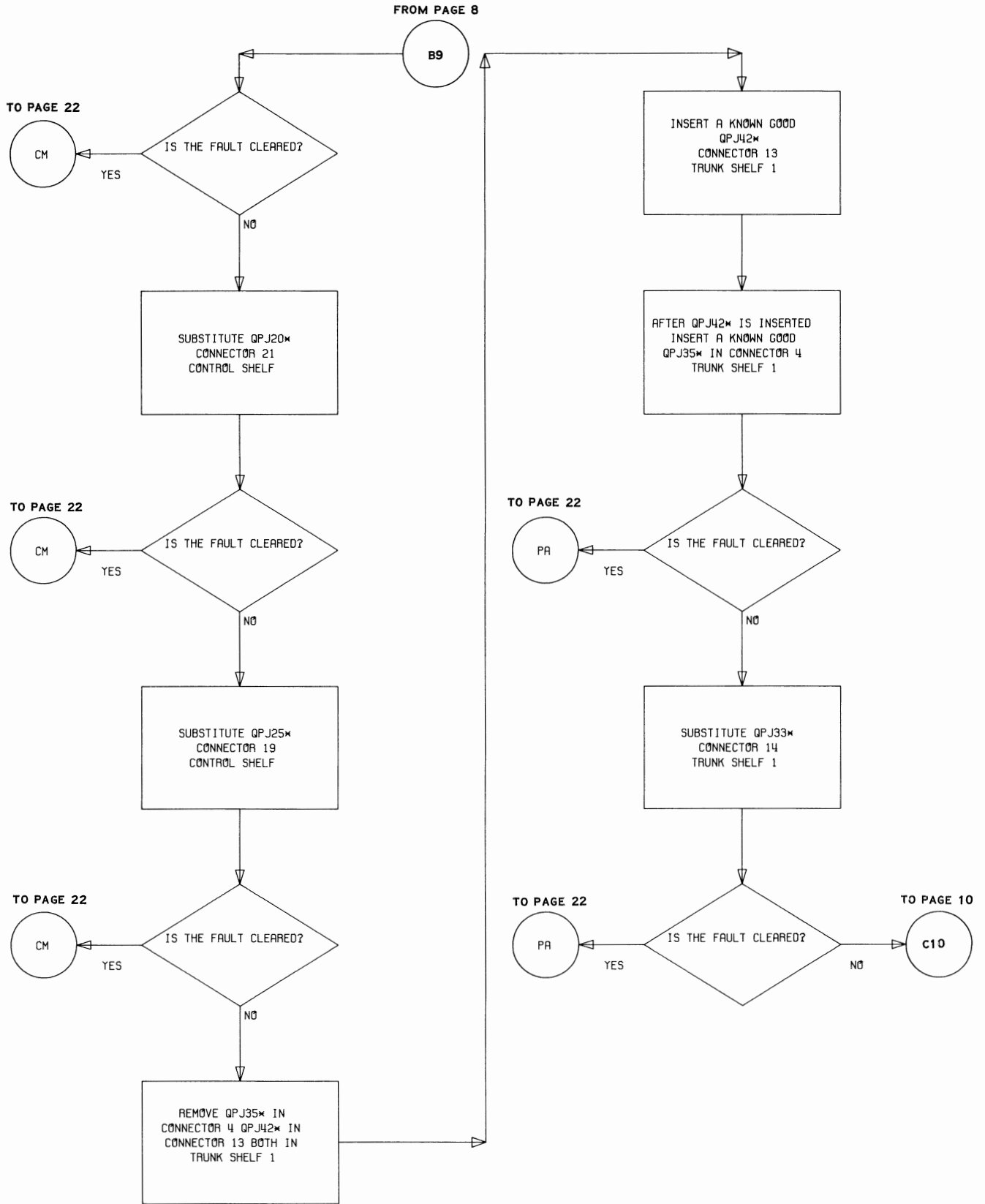
Flowchart 1 (Cont)



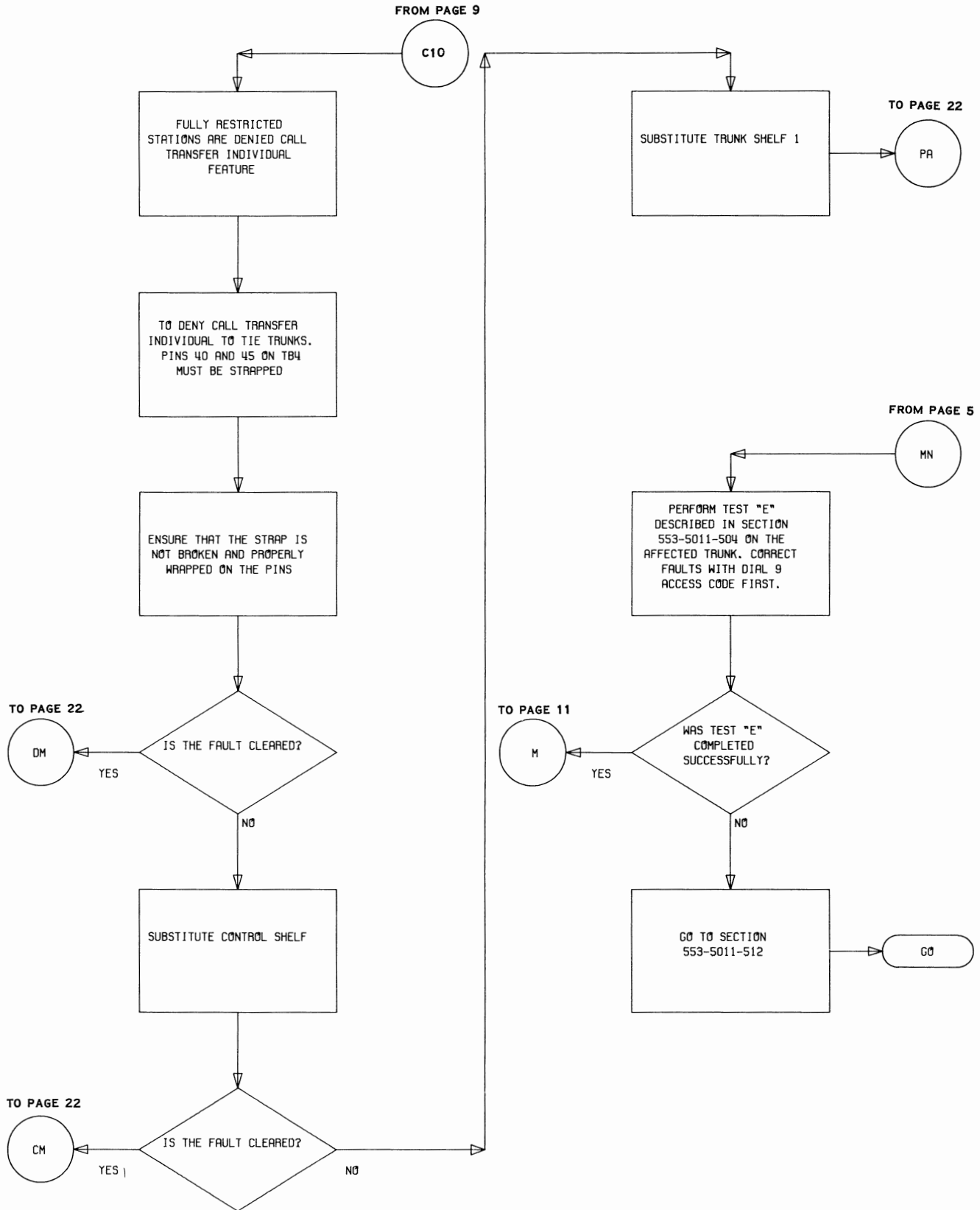
Flowchart 1 (Cont)



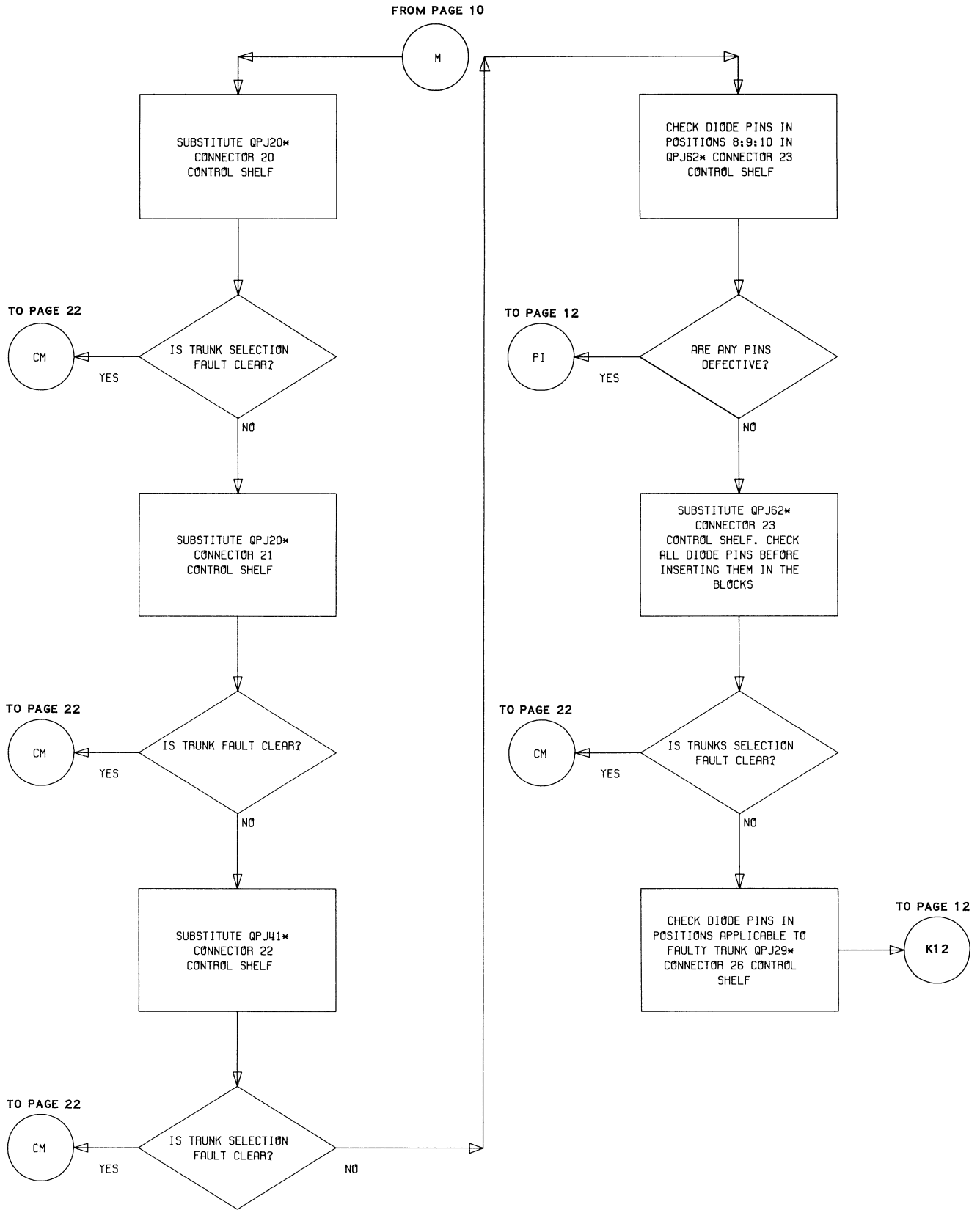
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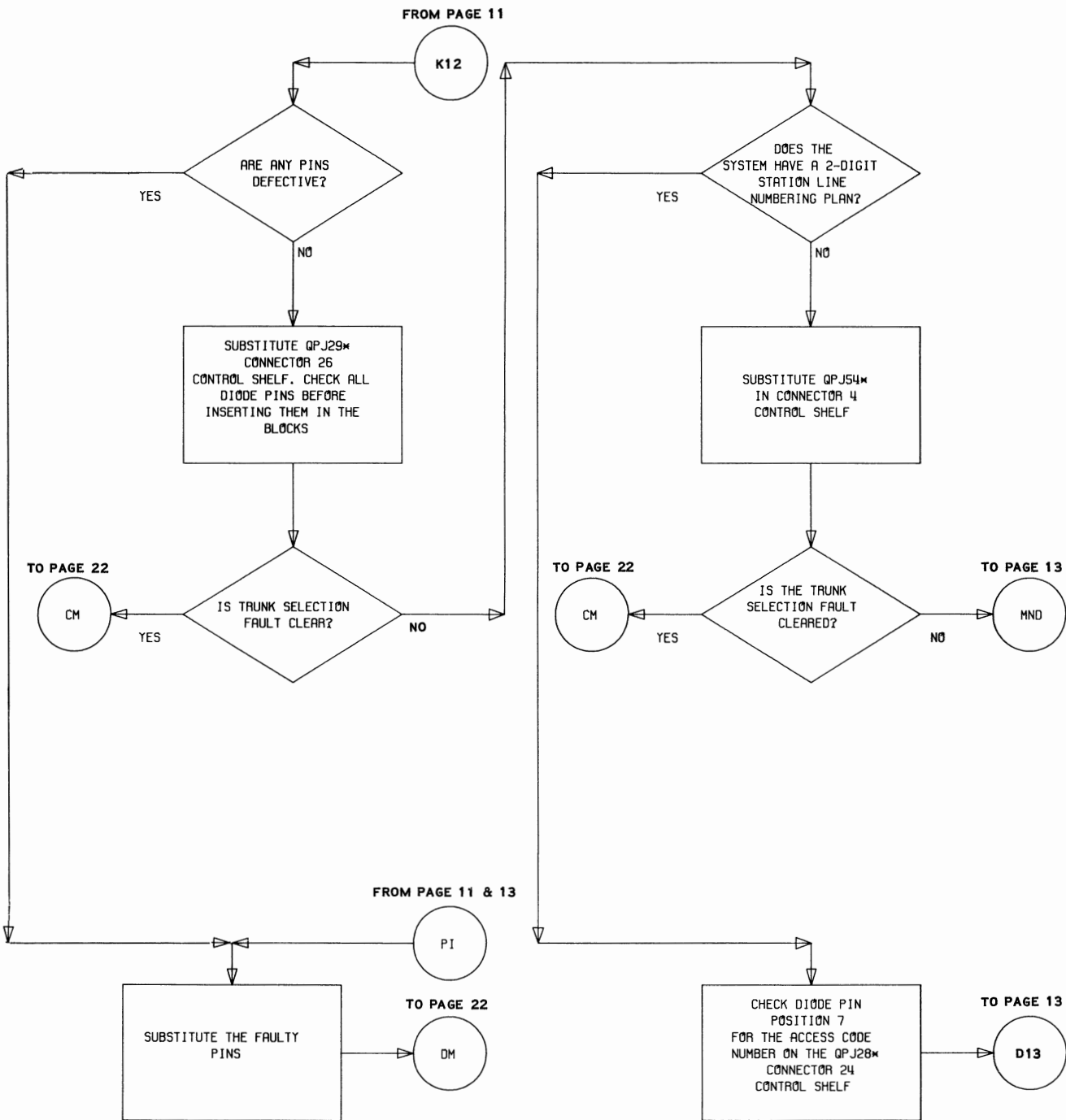
Flowchart 1 (Cont)



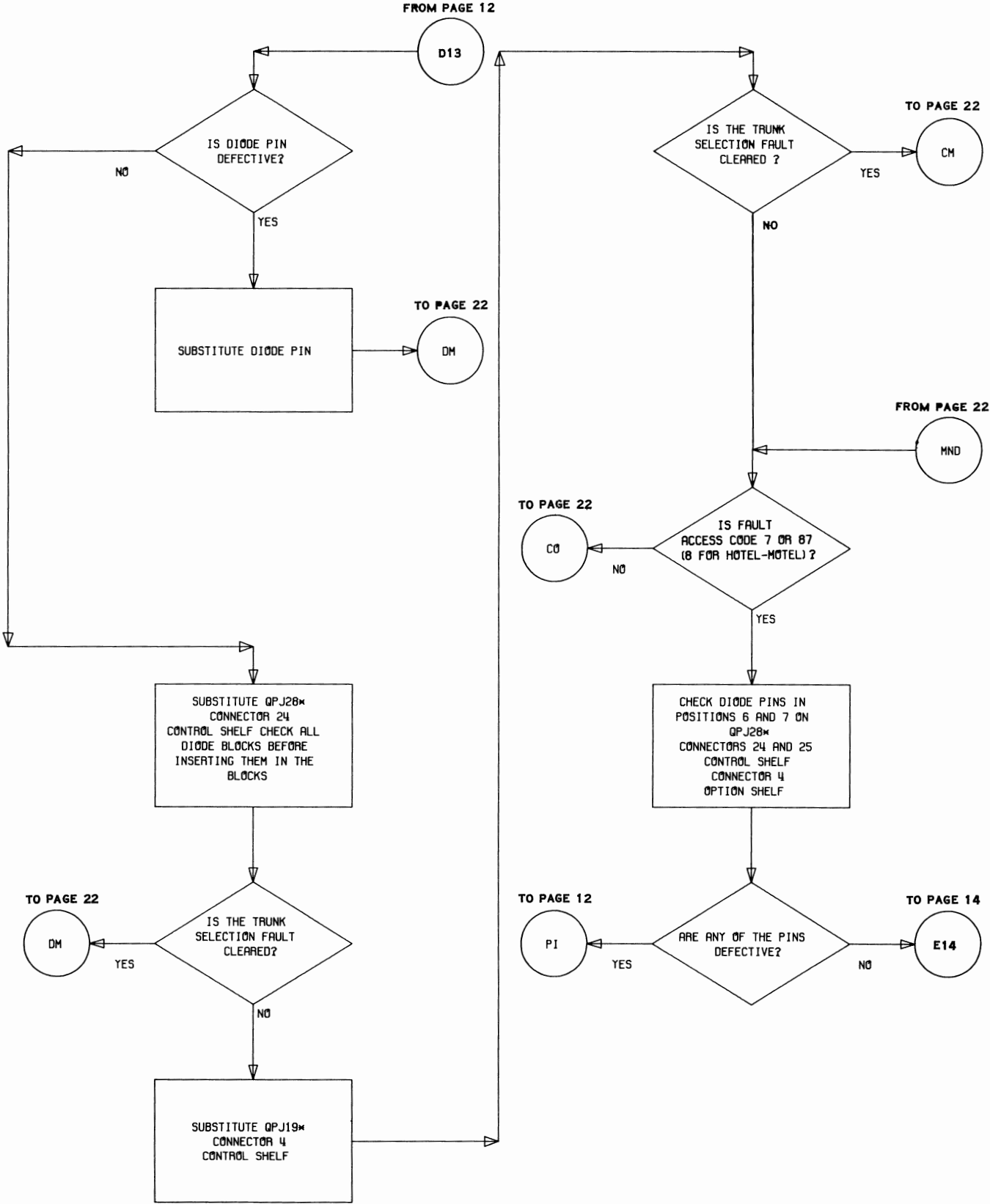
Flowchart 1 (Cont)



Flowchart 1 (Cont)

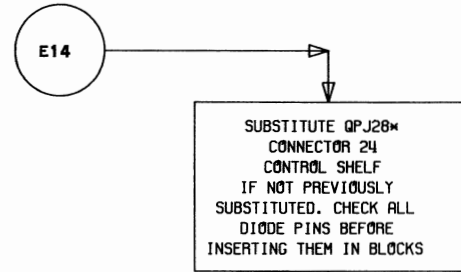


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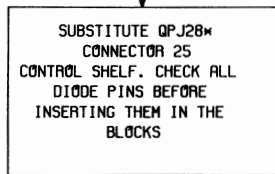


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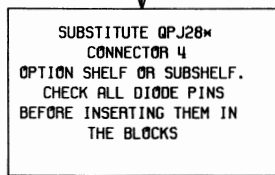
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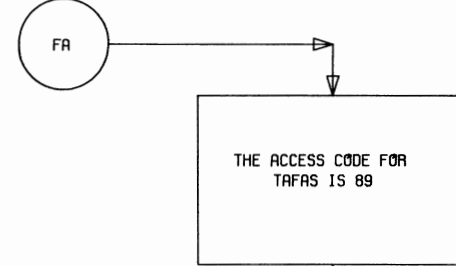
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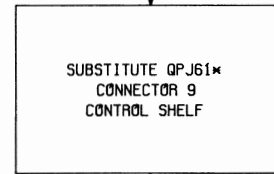
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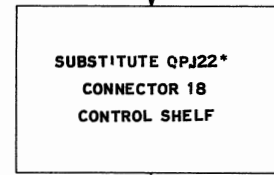
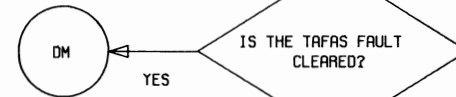
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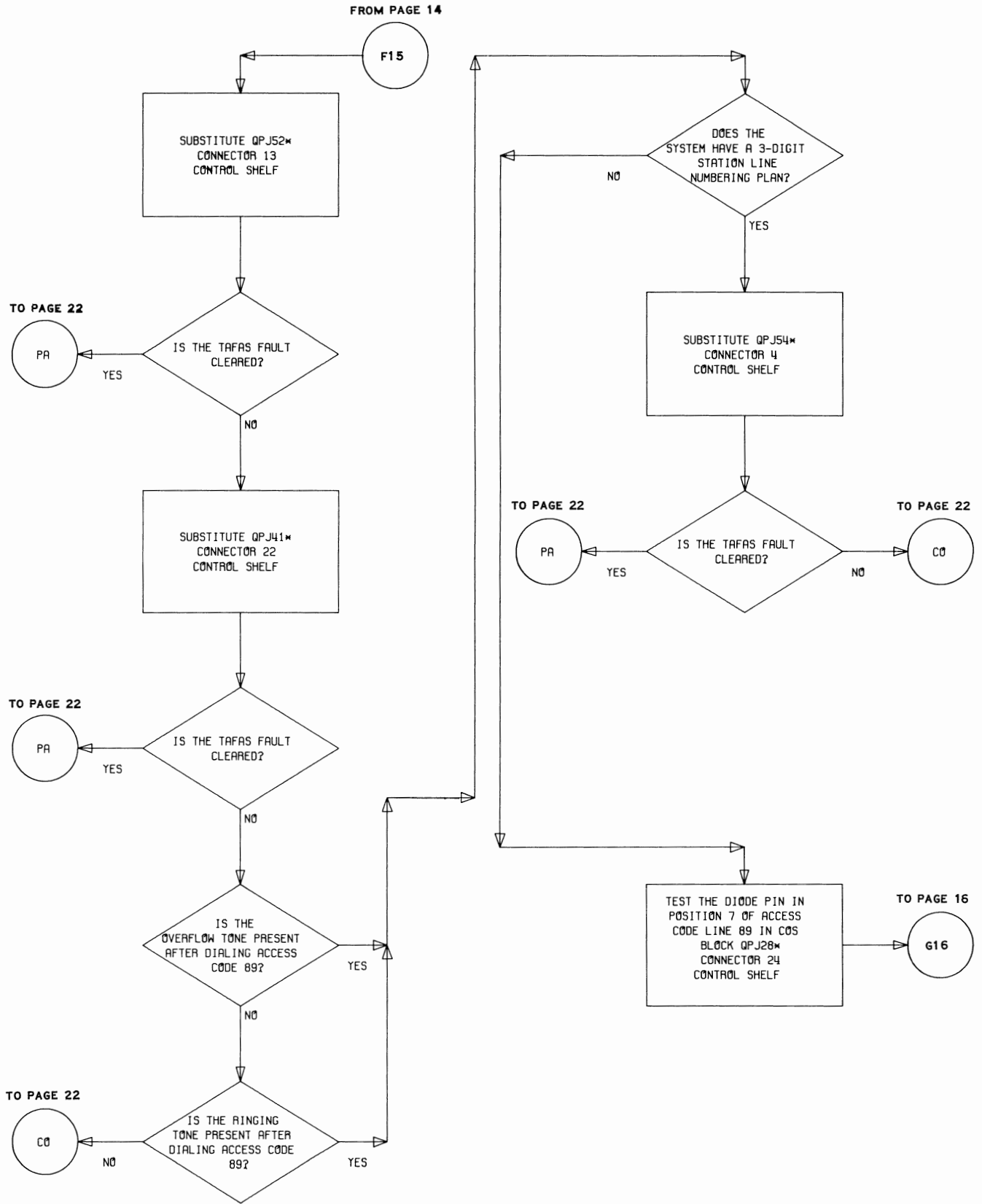
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Flowchart 1 (Cont)

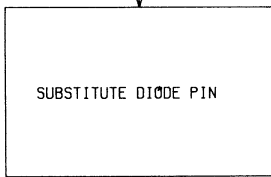
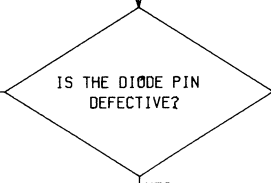


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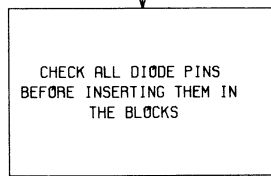
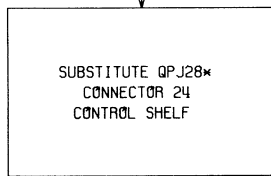
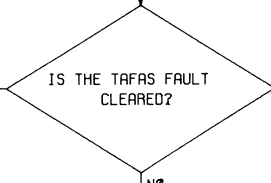
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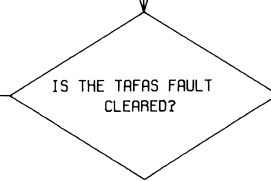
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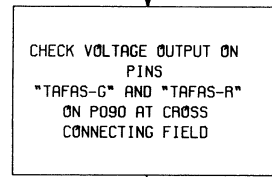
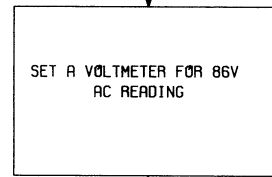
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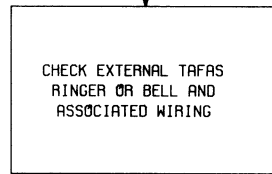
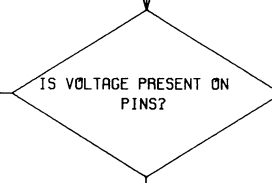
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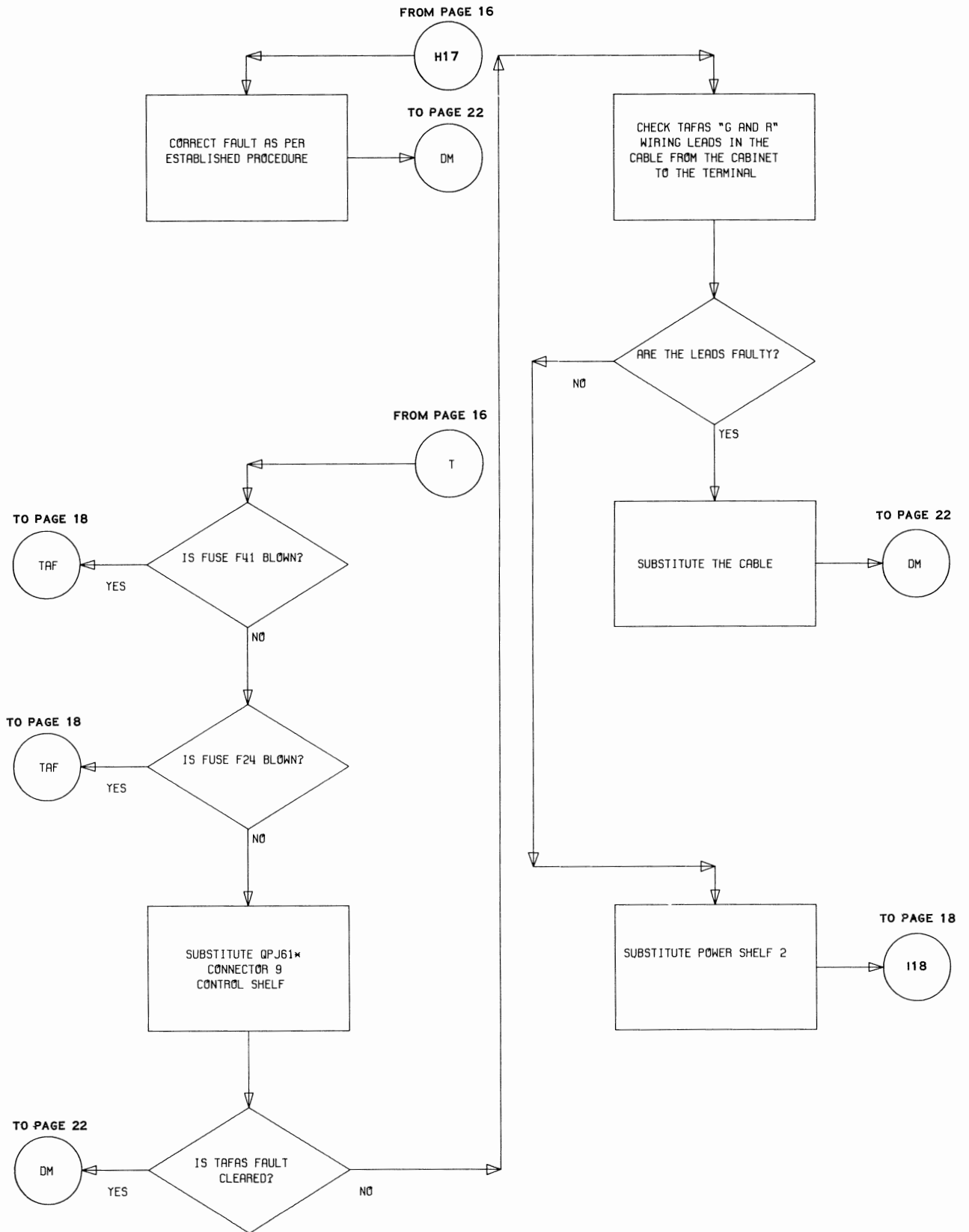
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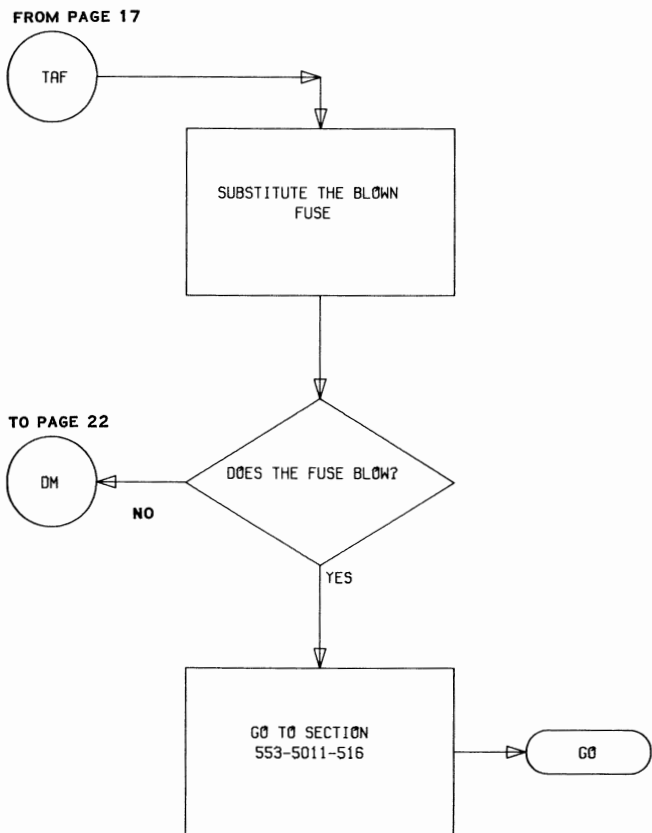
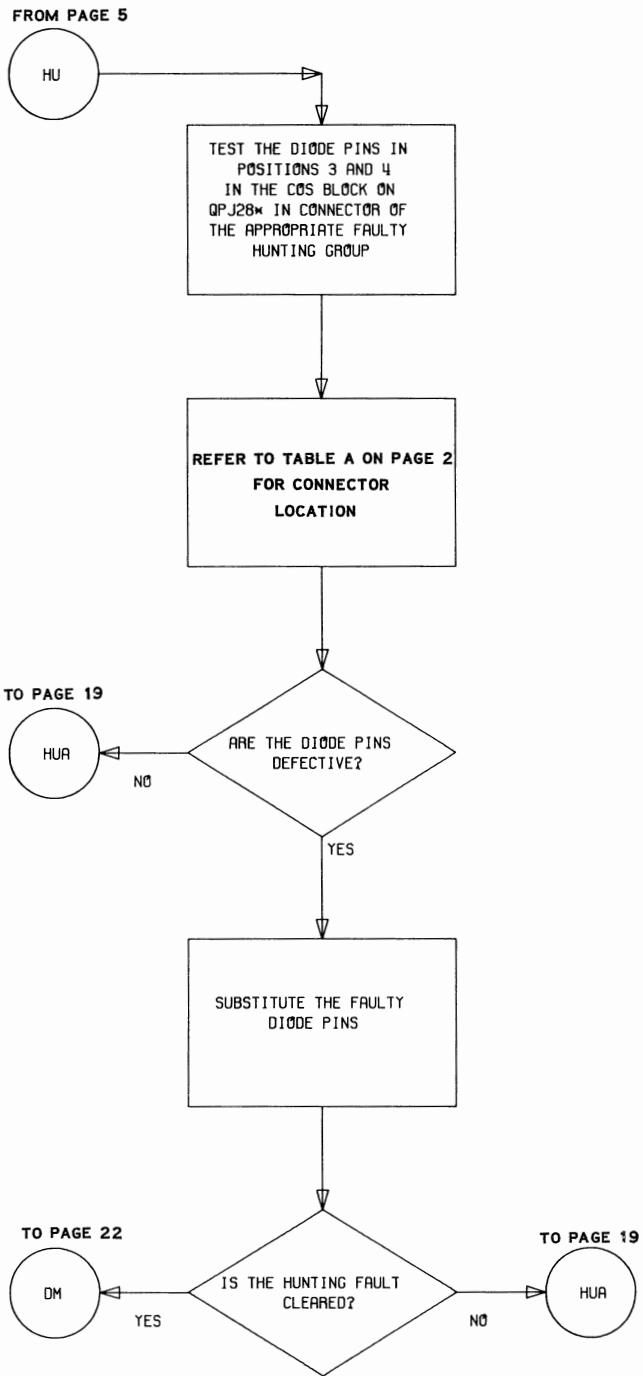
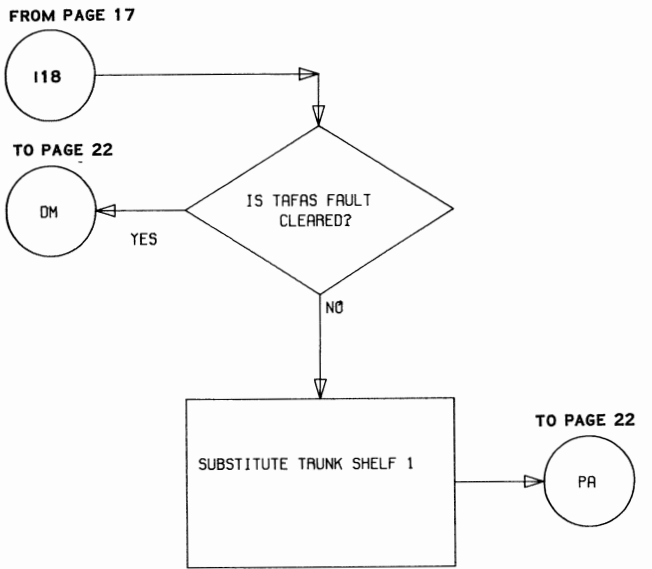
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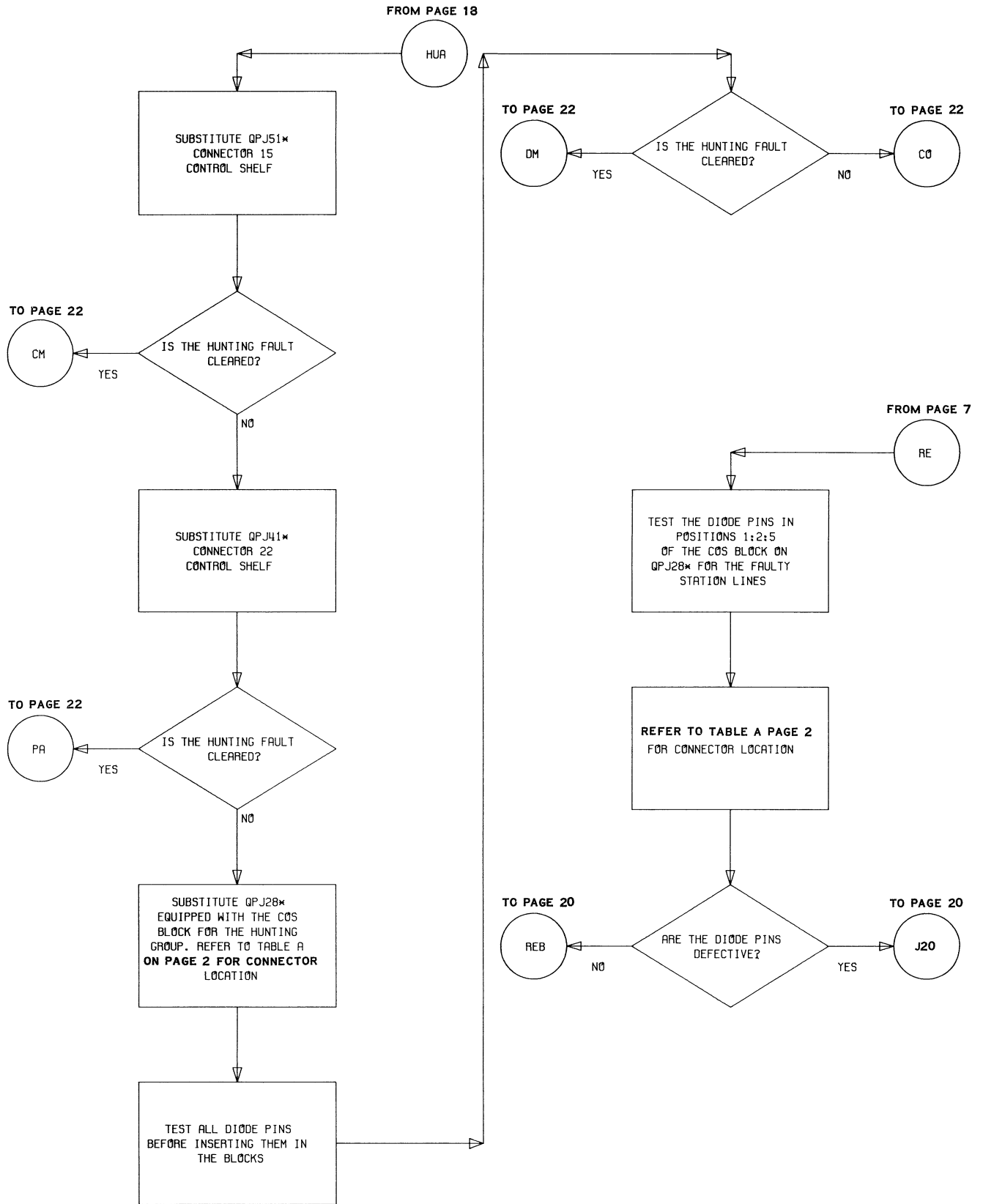
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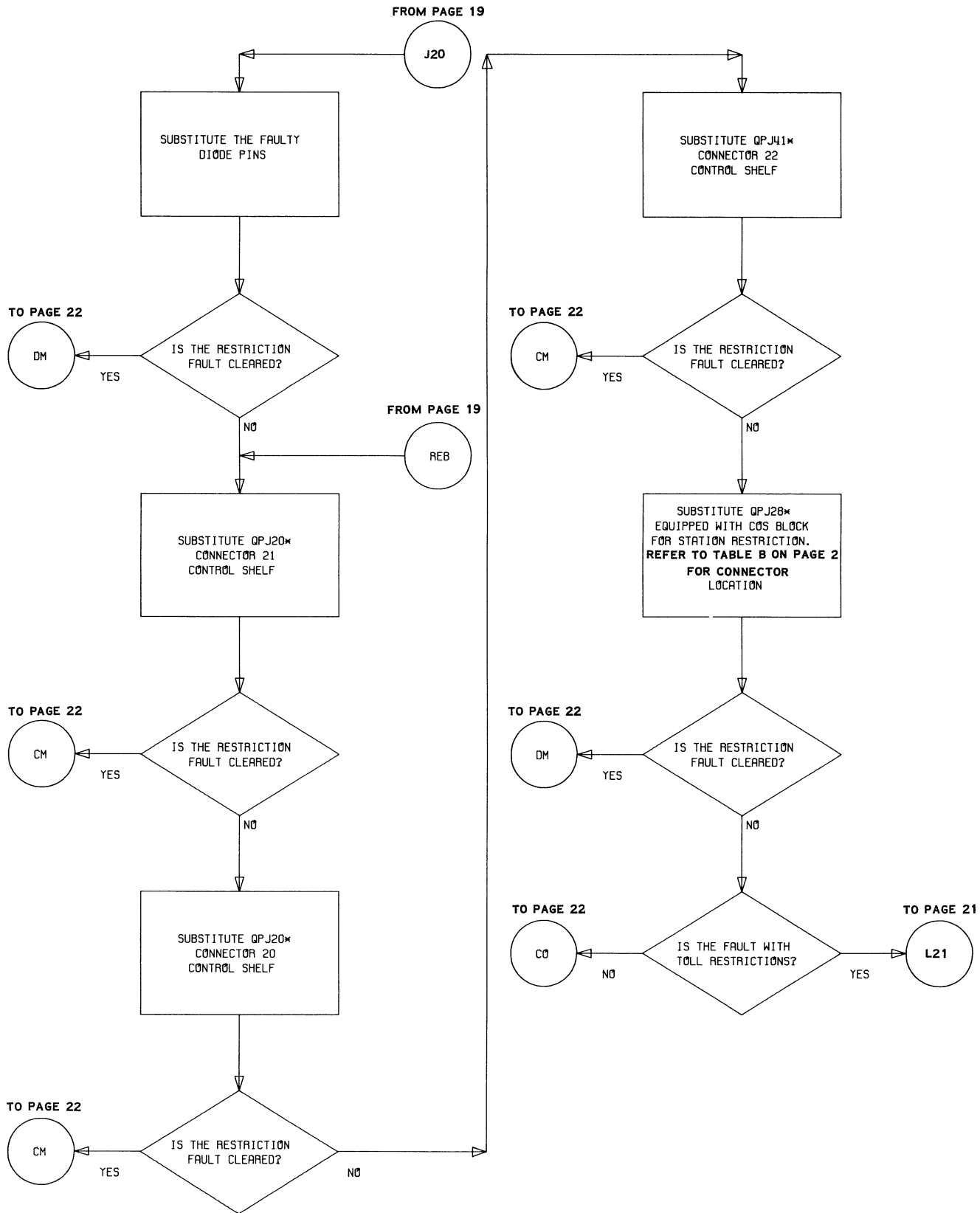
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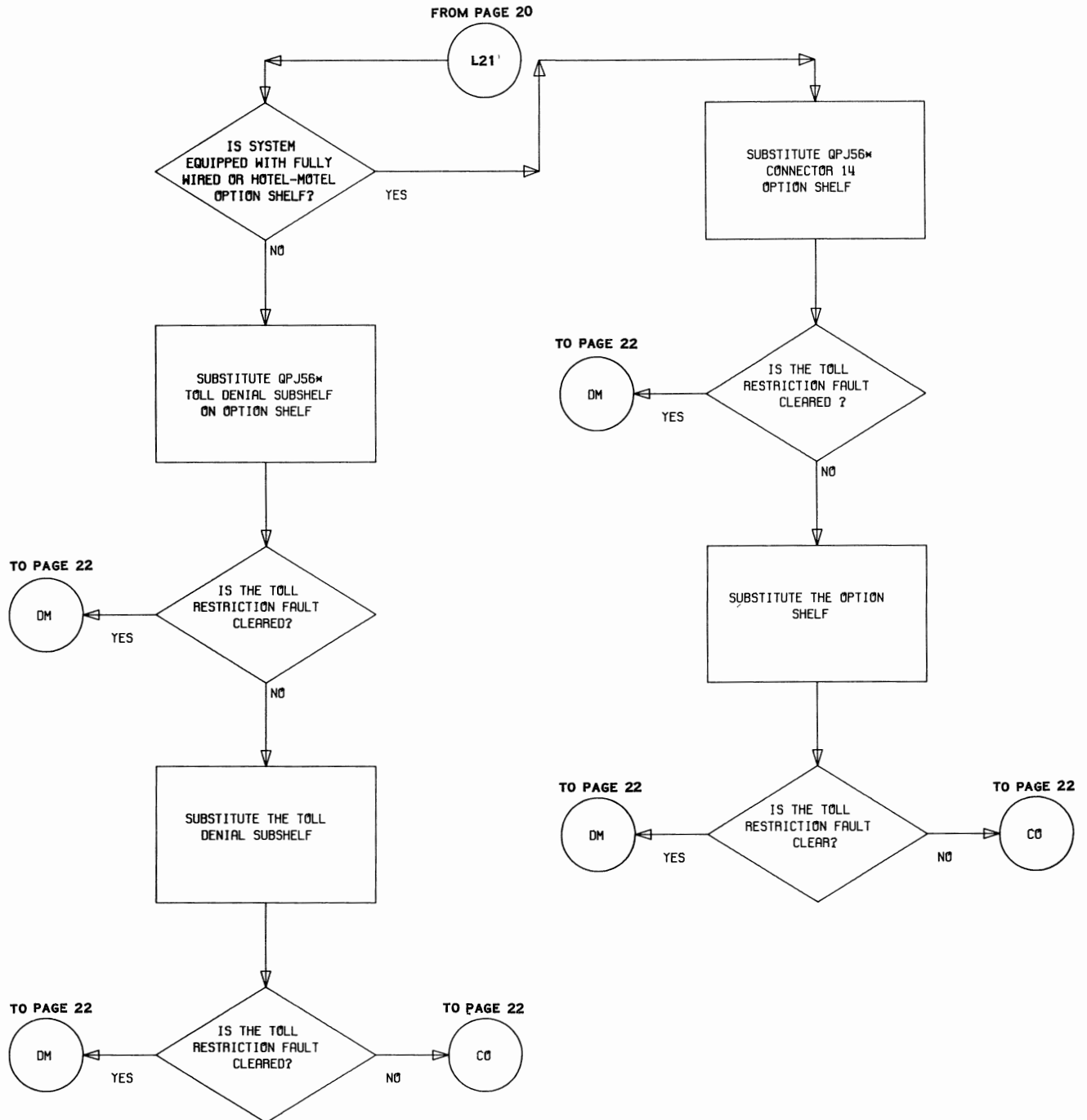
Flowchart 1 (Cont)



Flowchart 1 (Cont)



Flowchart 1 (Cont)

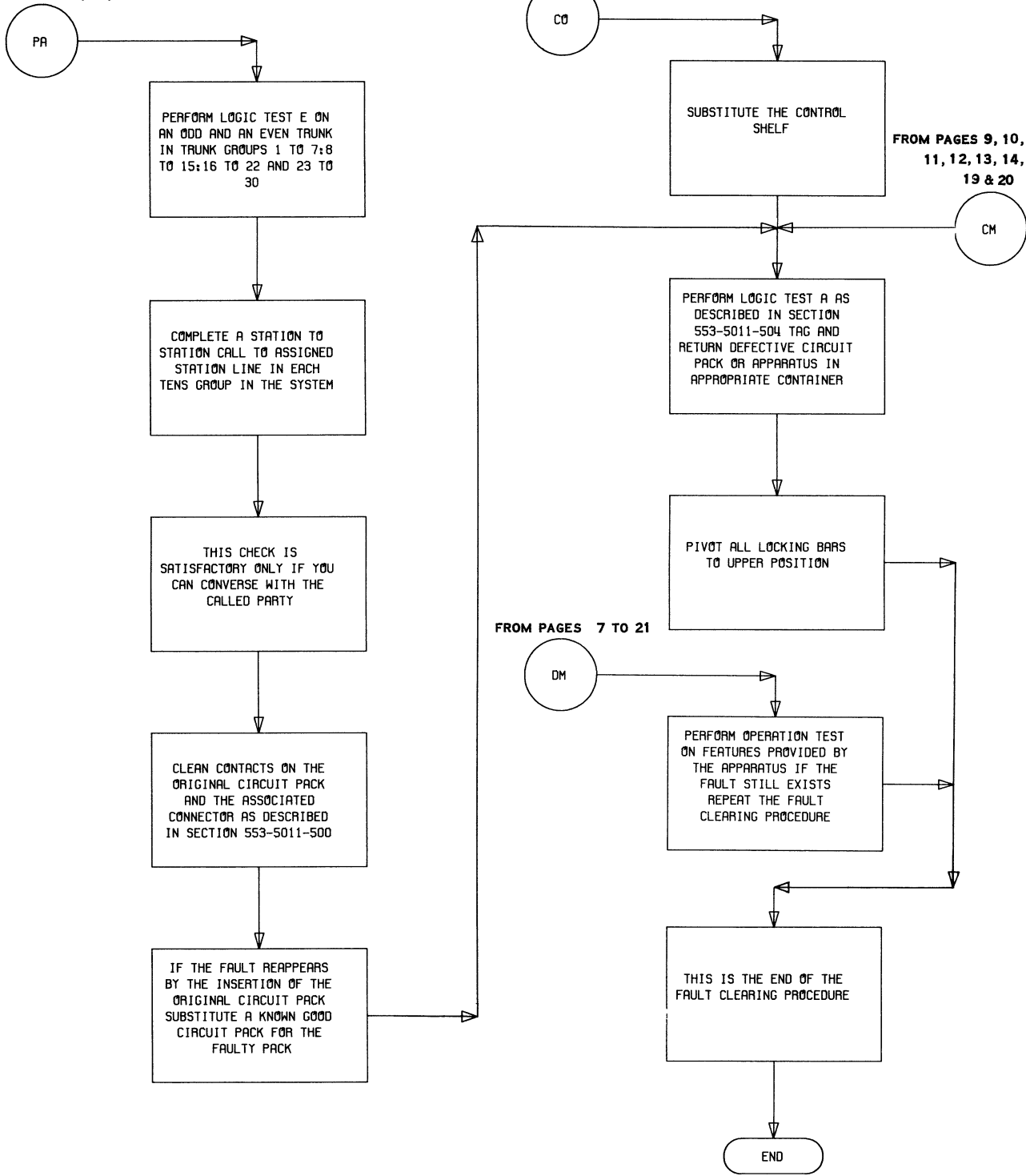


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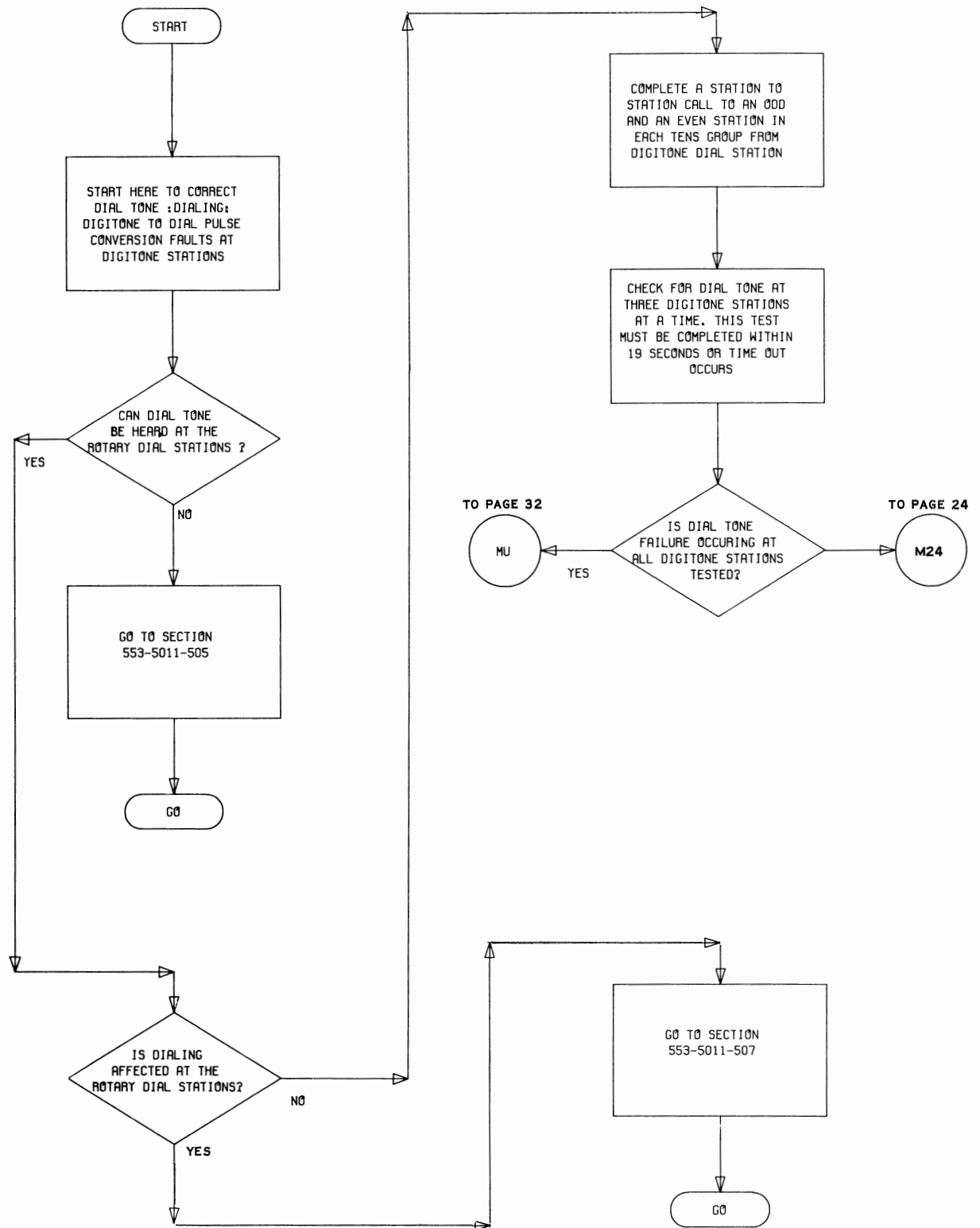
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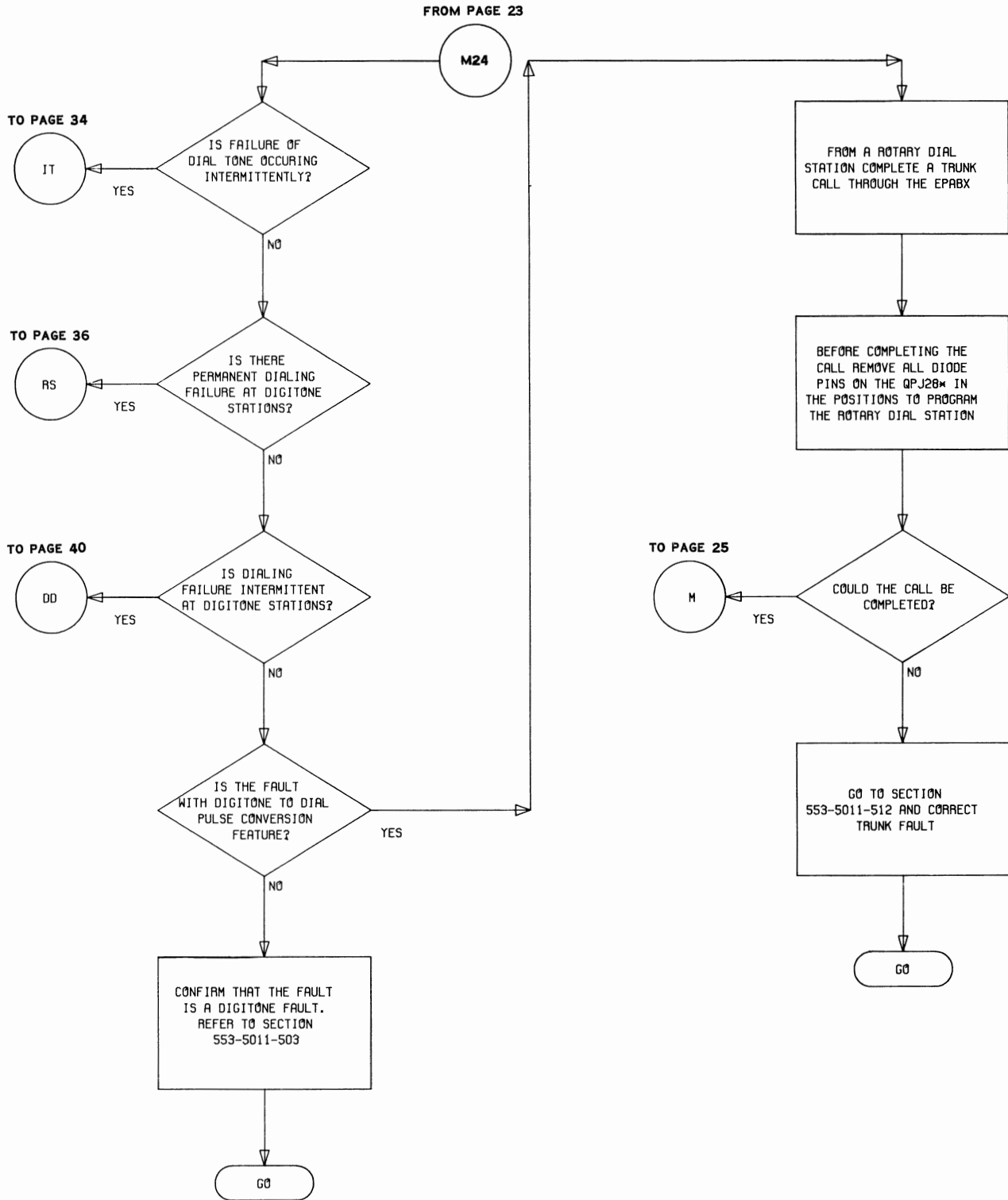
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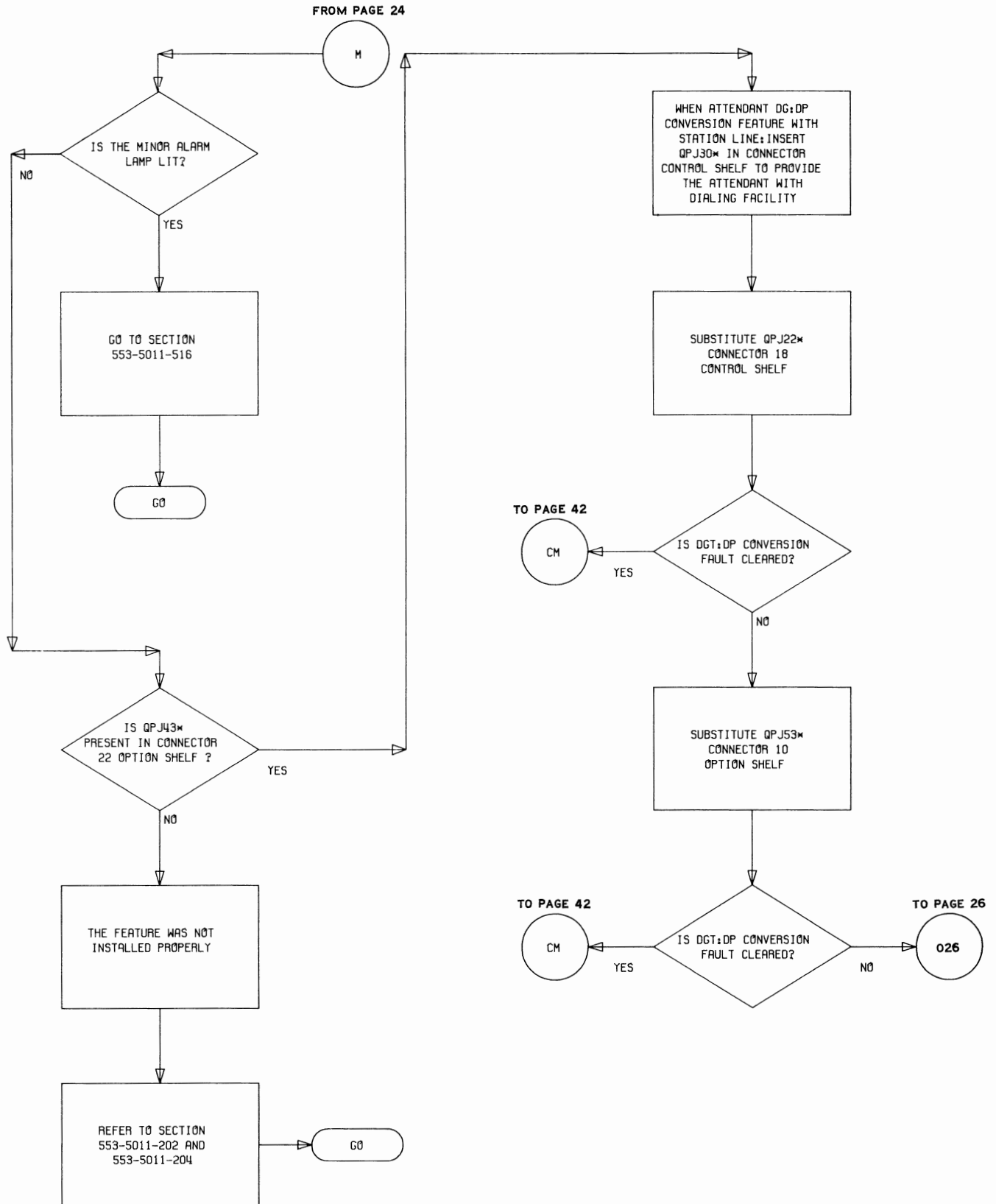
Flowchart 1 (Cont)



Flowchart 2 – DIGITONE Station Tone and/or Dialing Fault Clearing Procedure

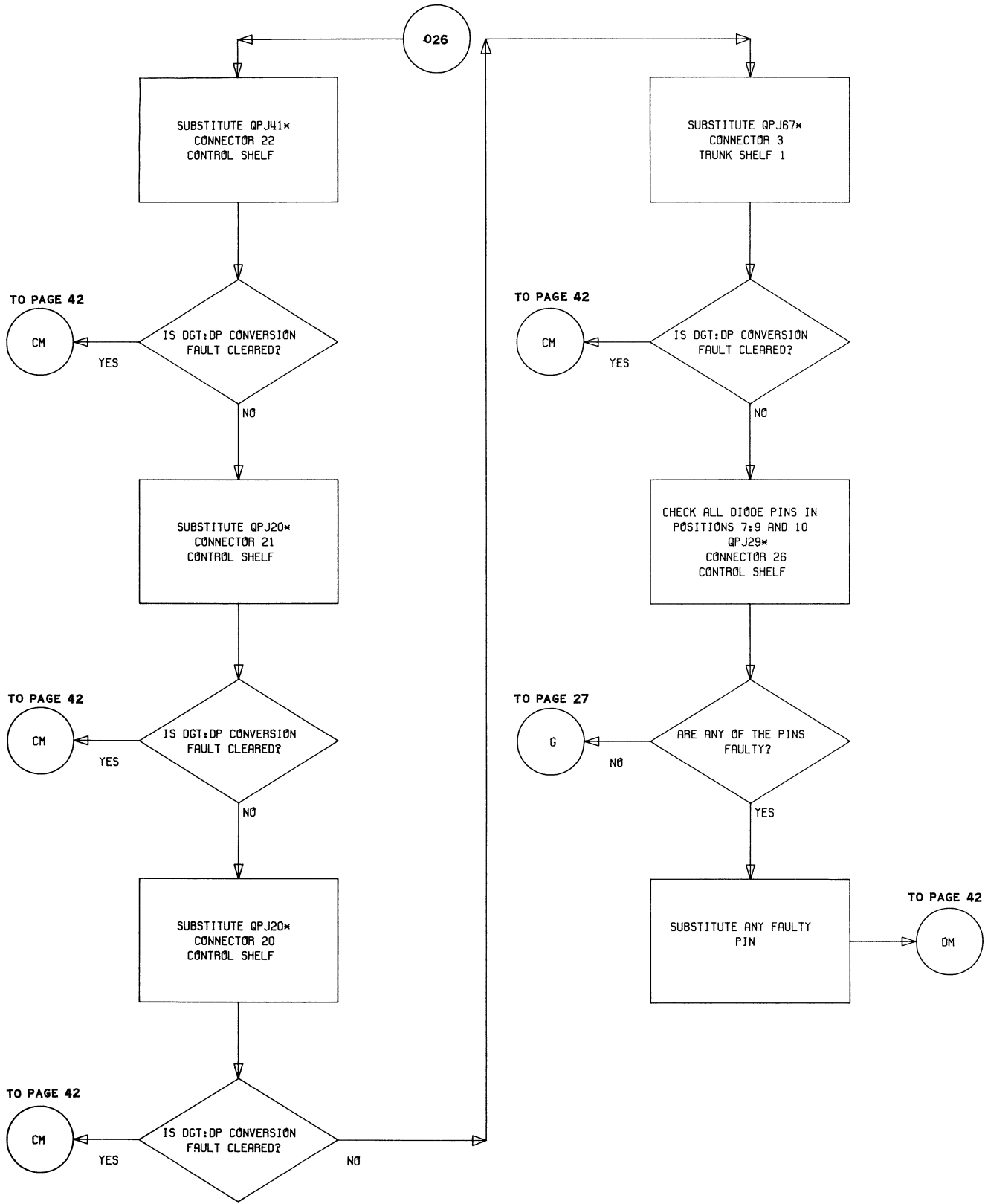


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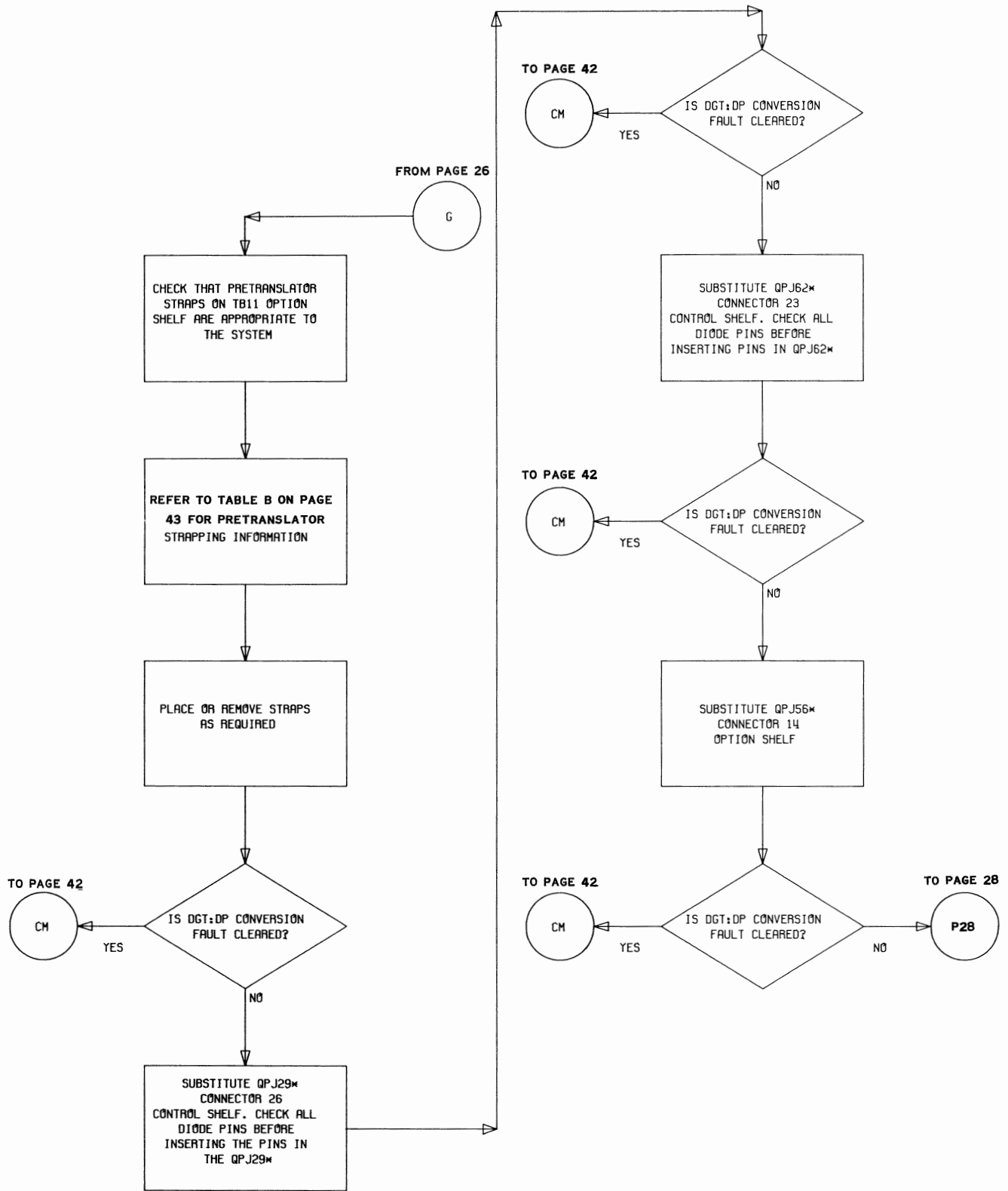


Flowchart 2 (Cont)

FROM PAGE 25

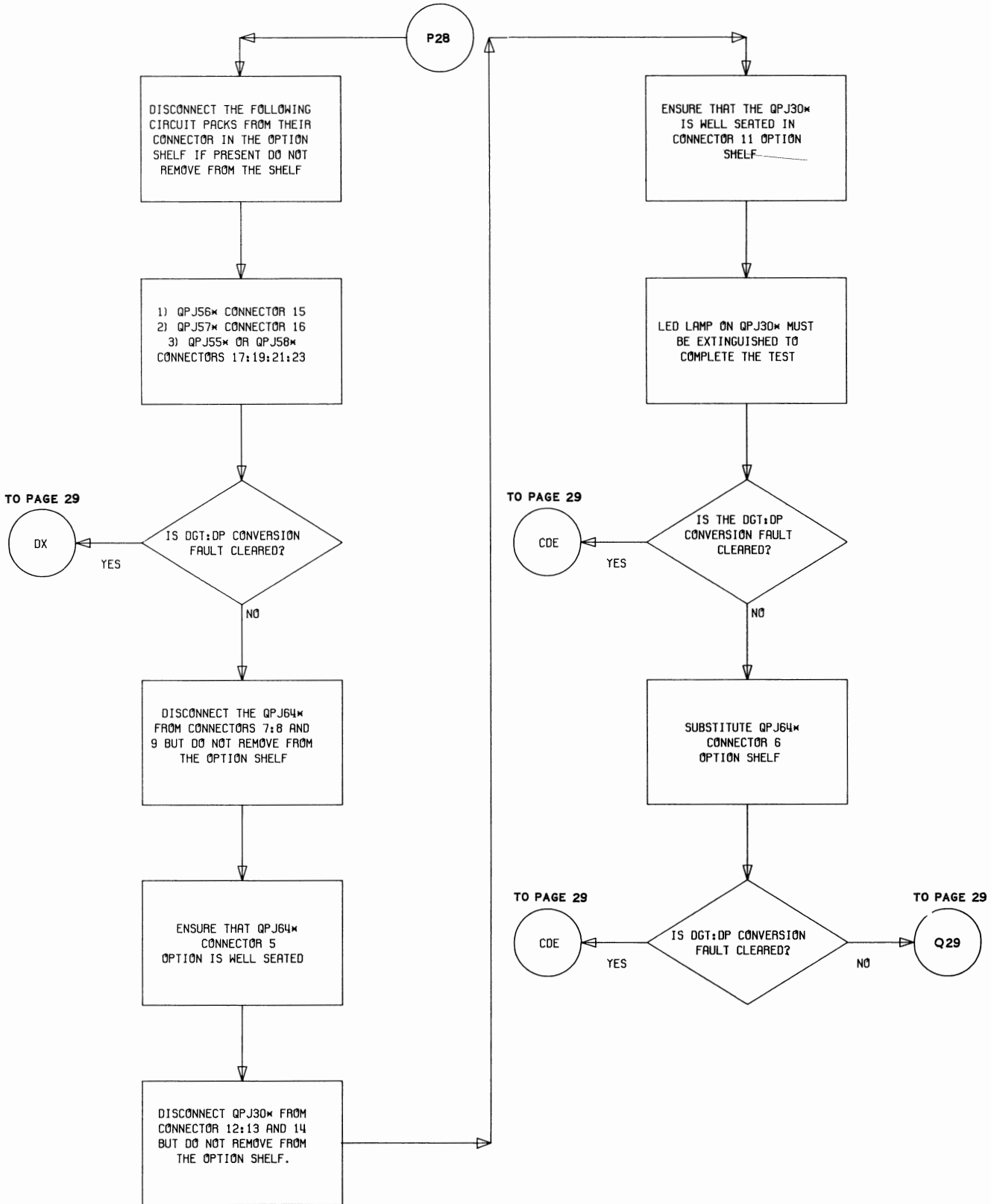


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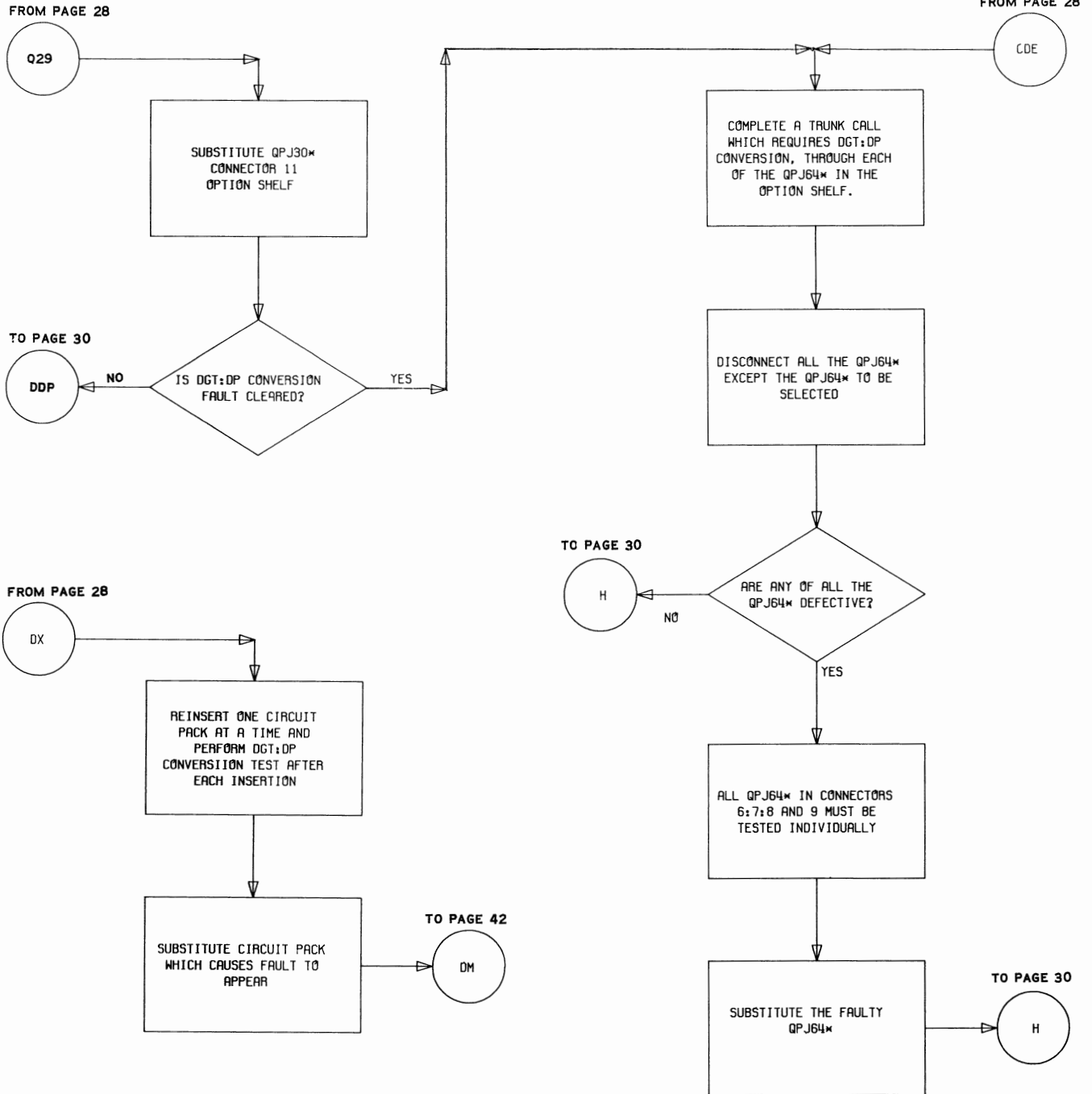


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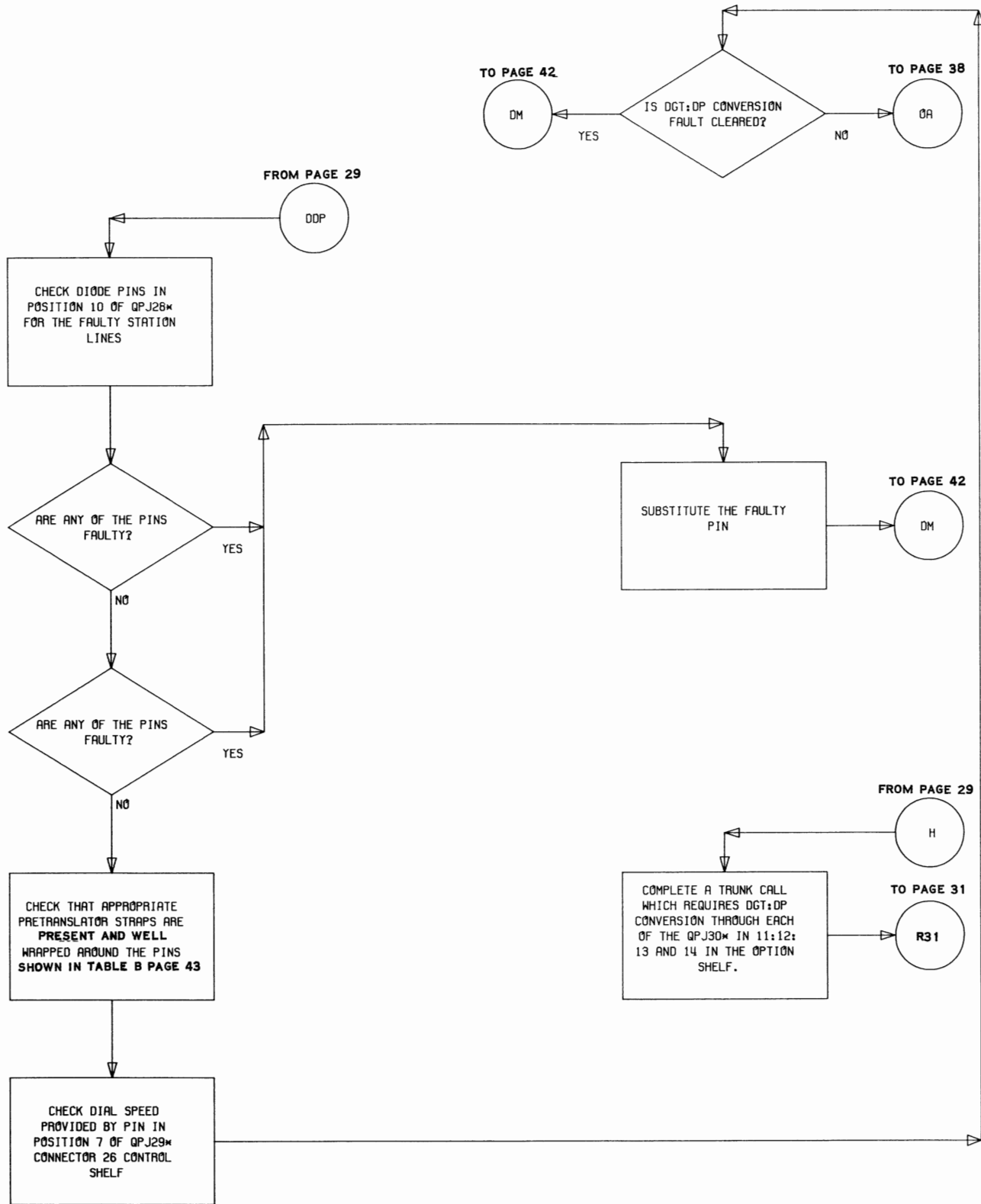
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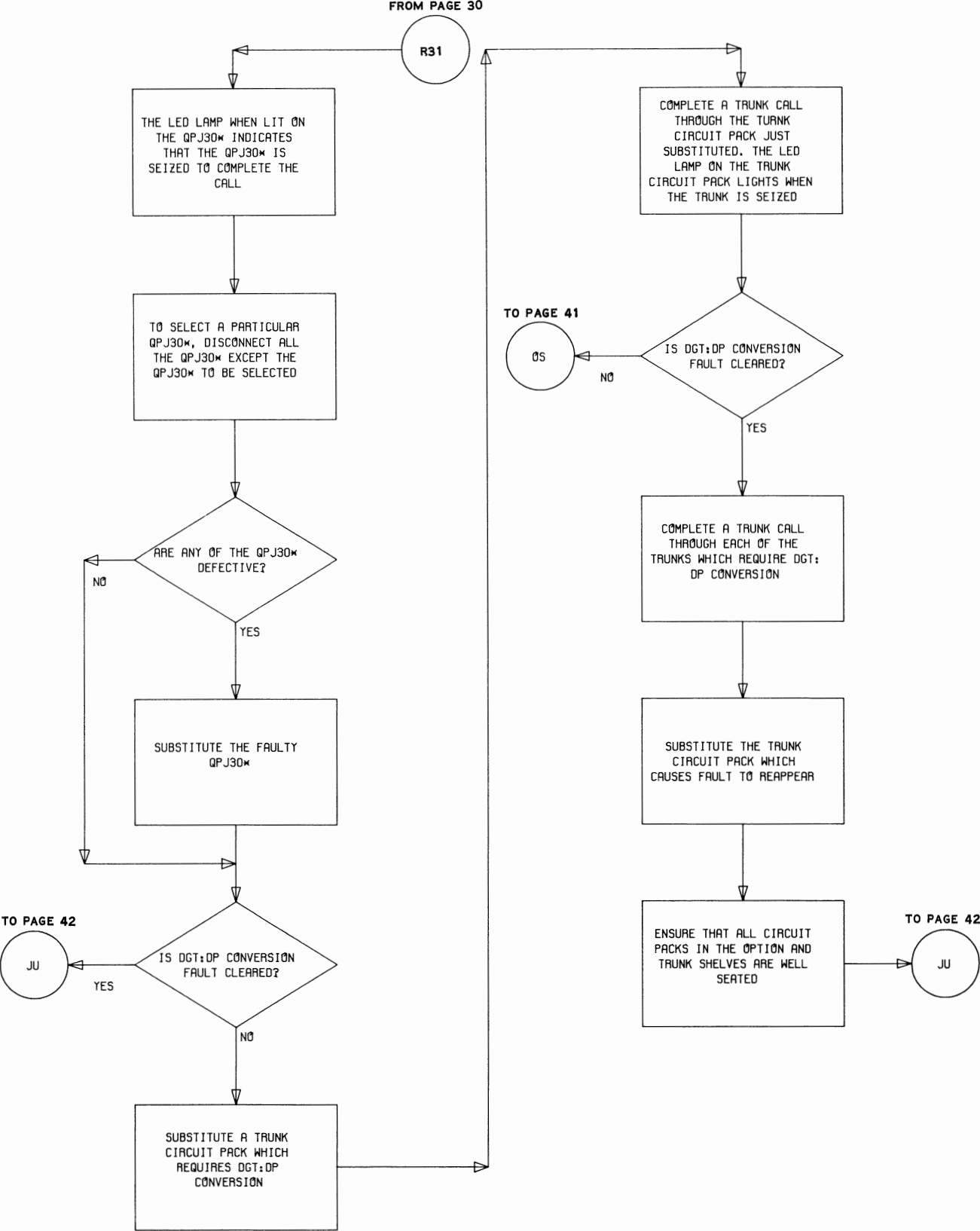
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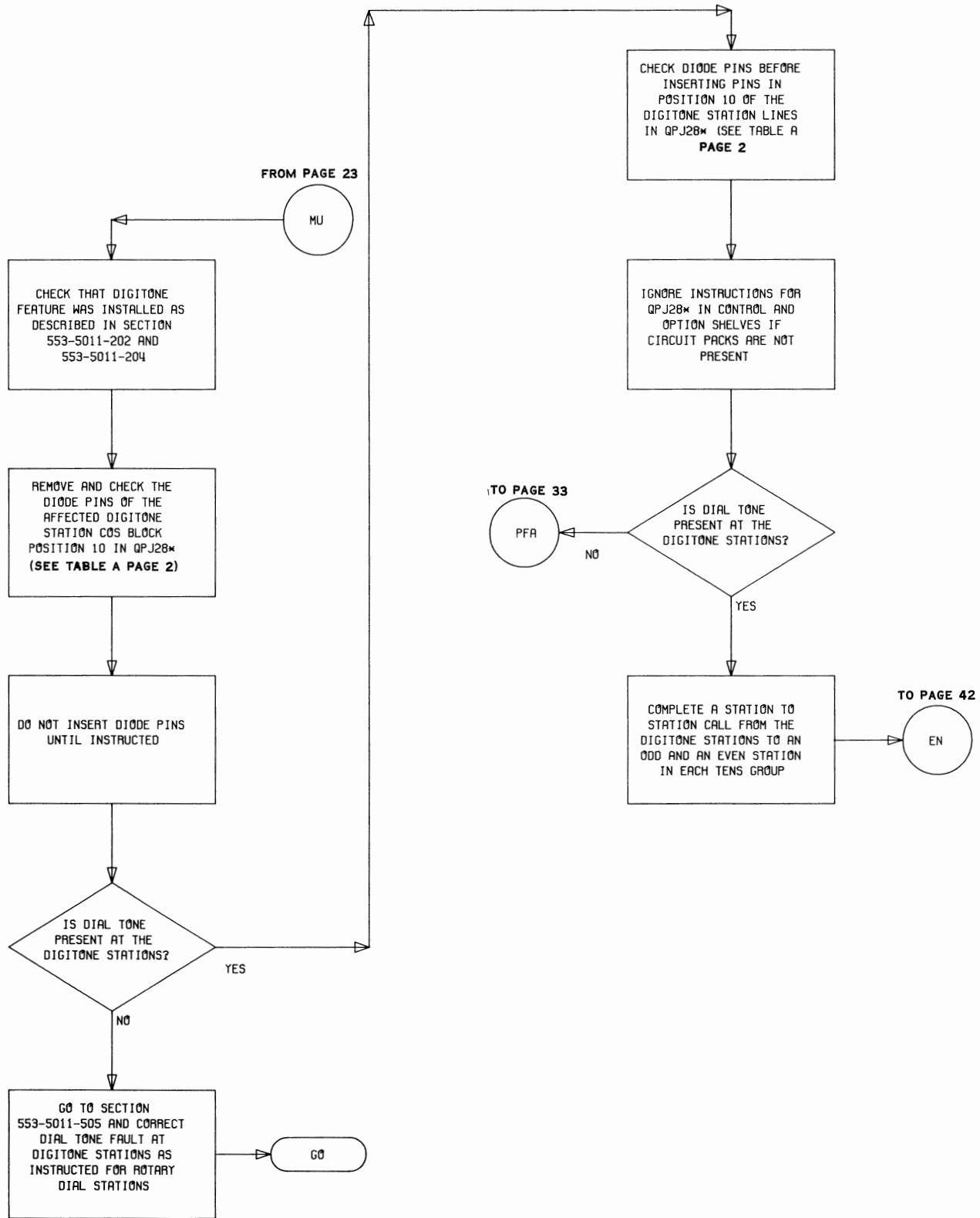
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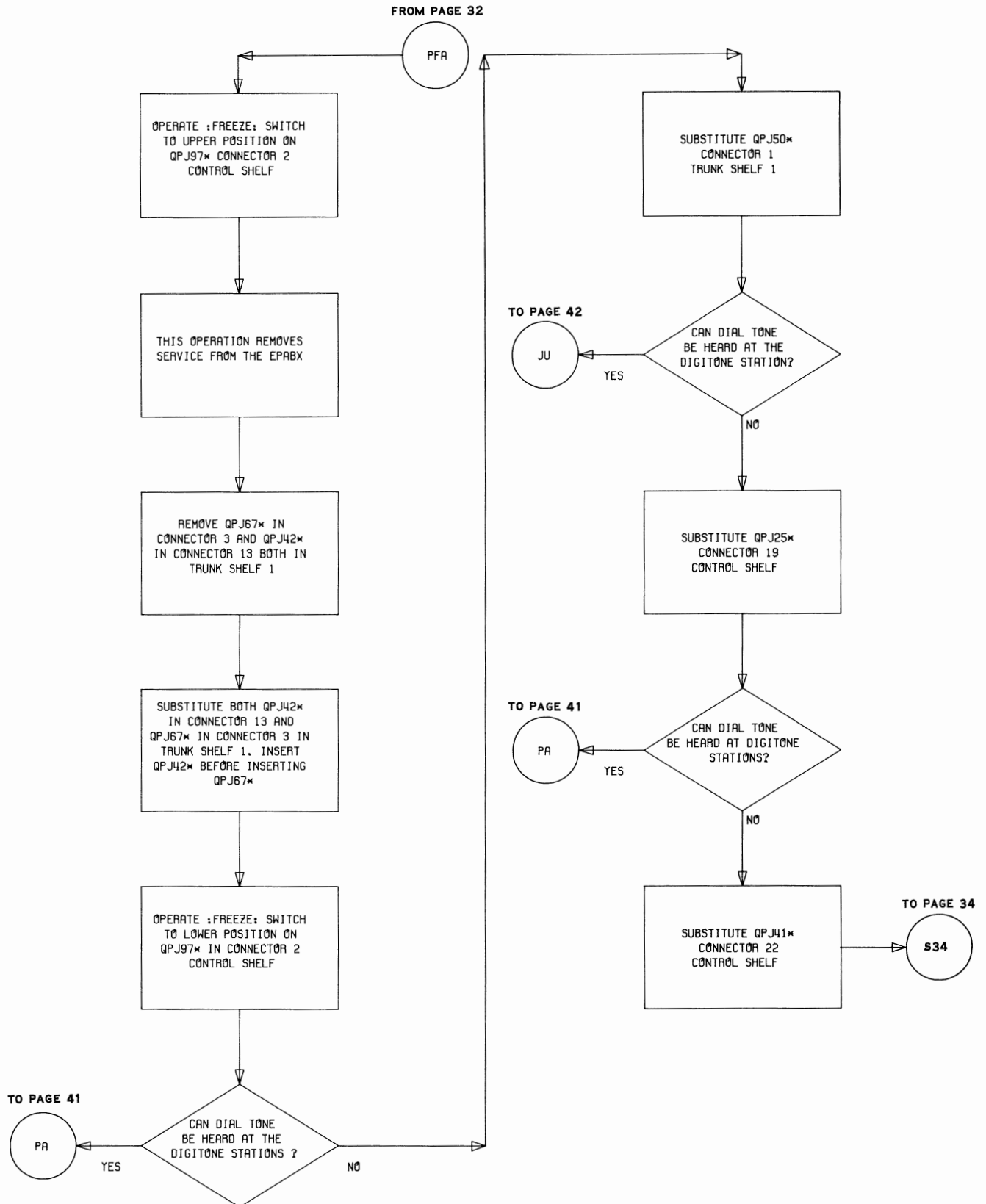
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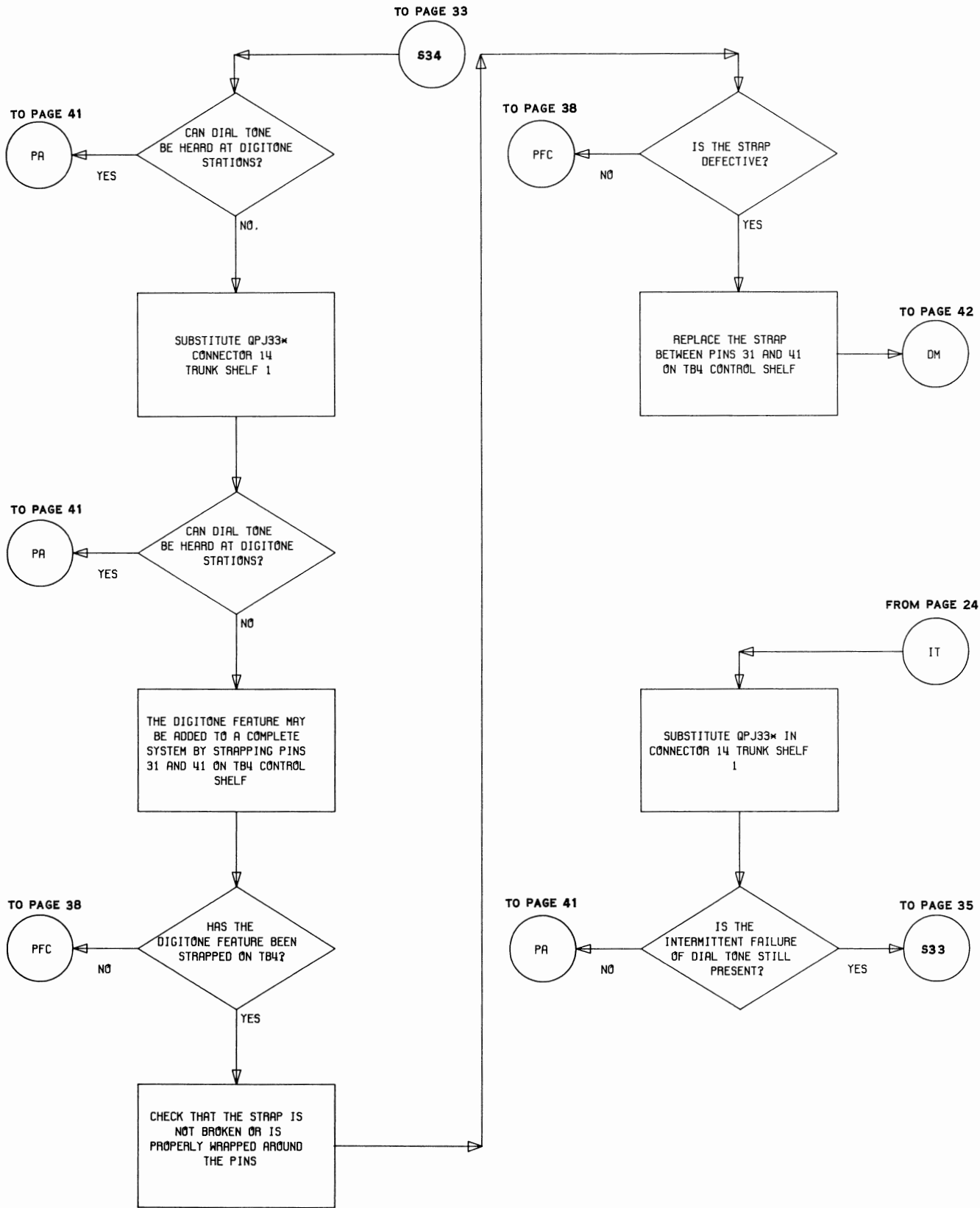
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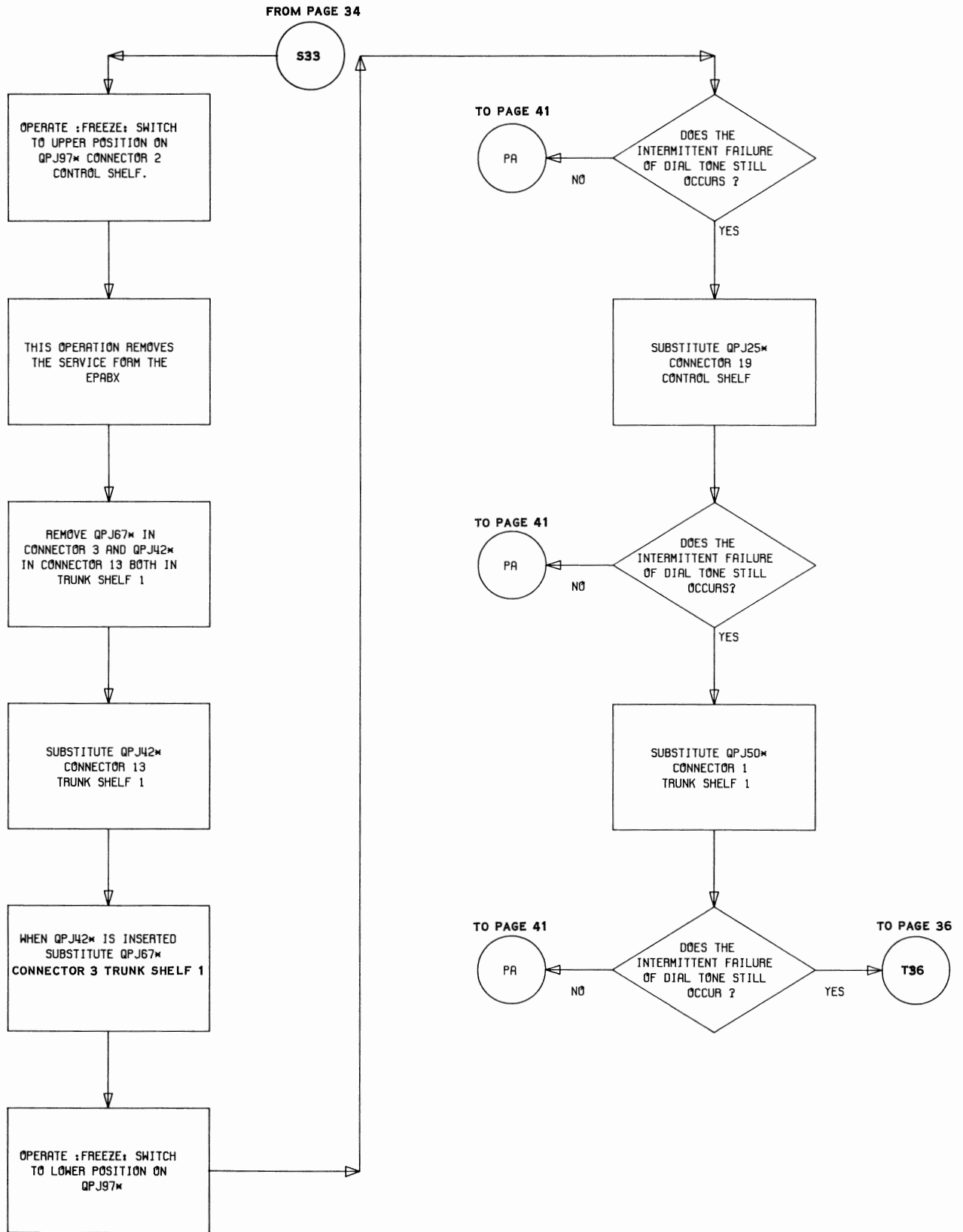
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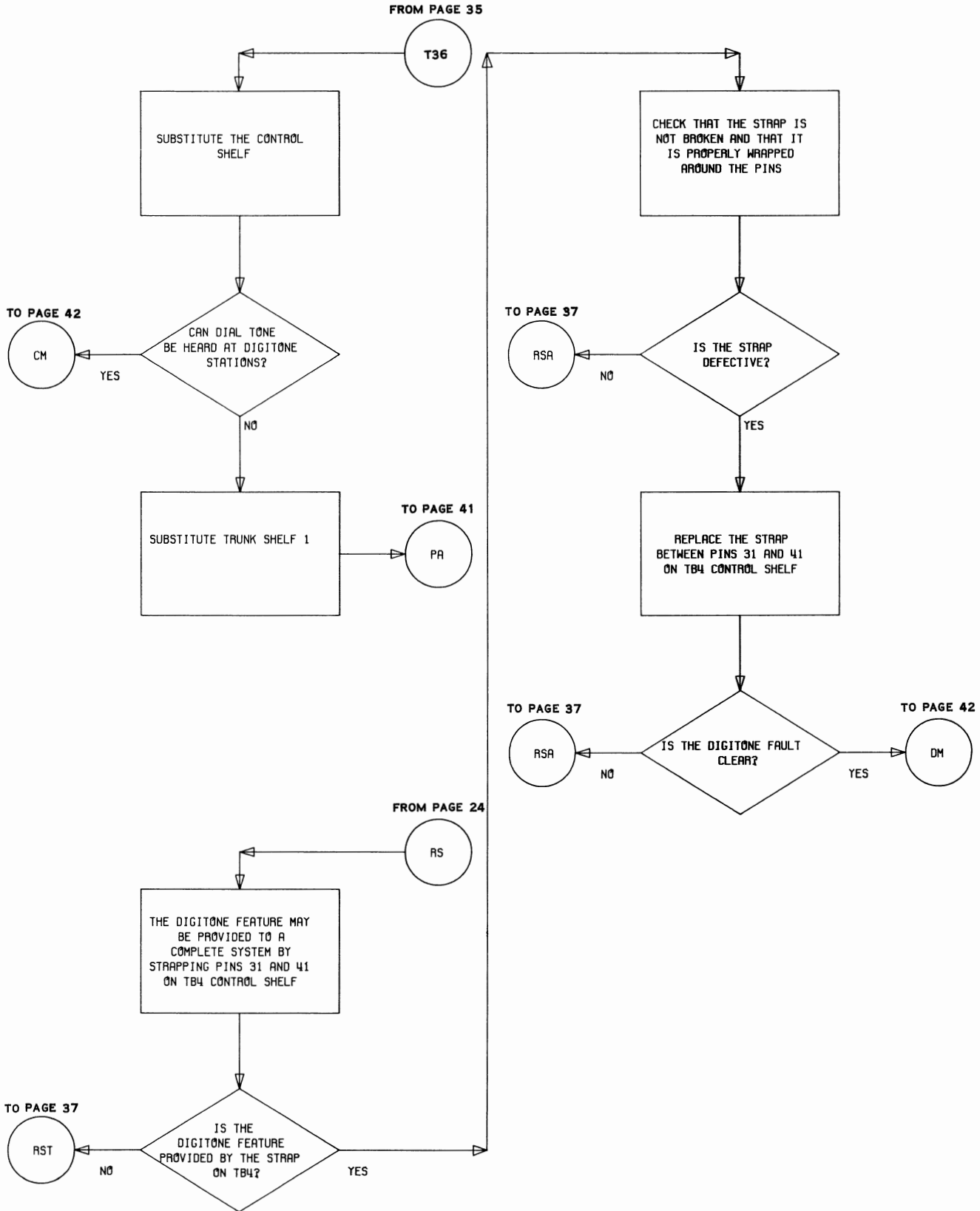
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Flowchart 2 (Cont)

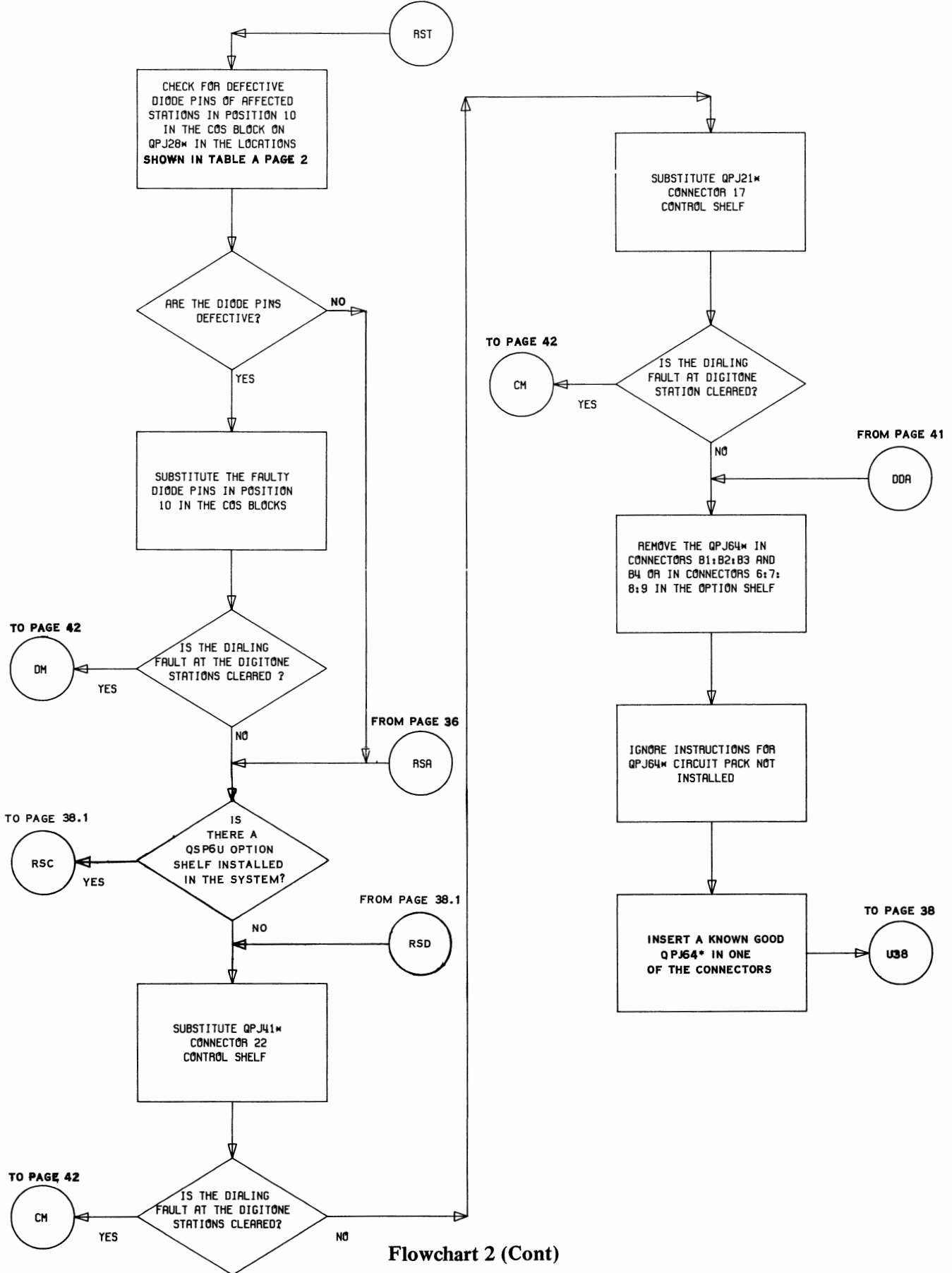


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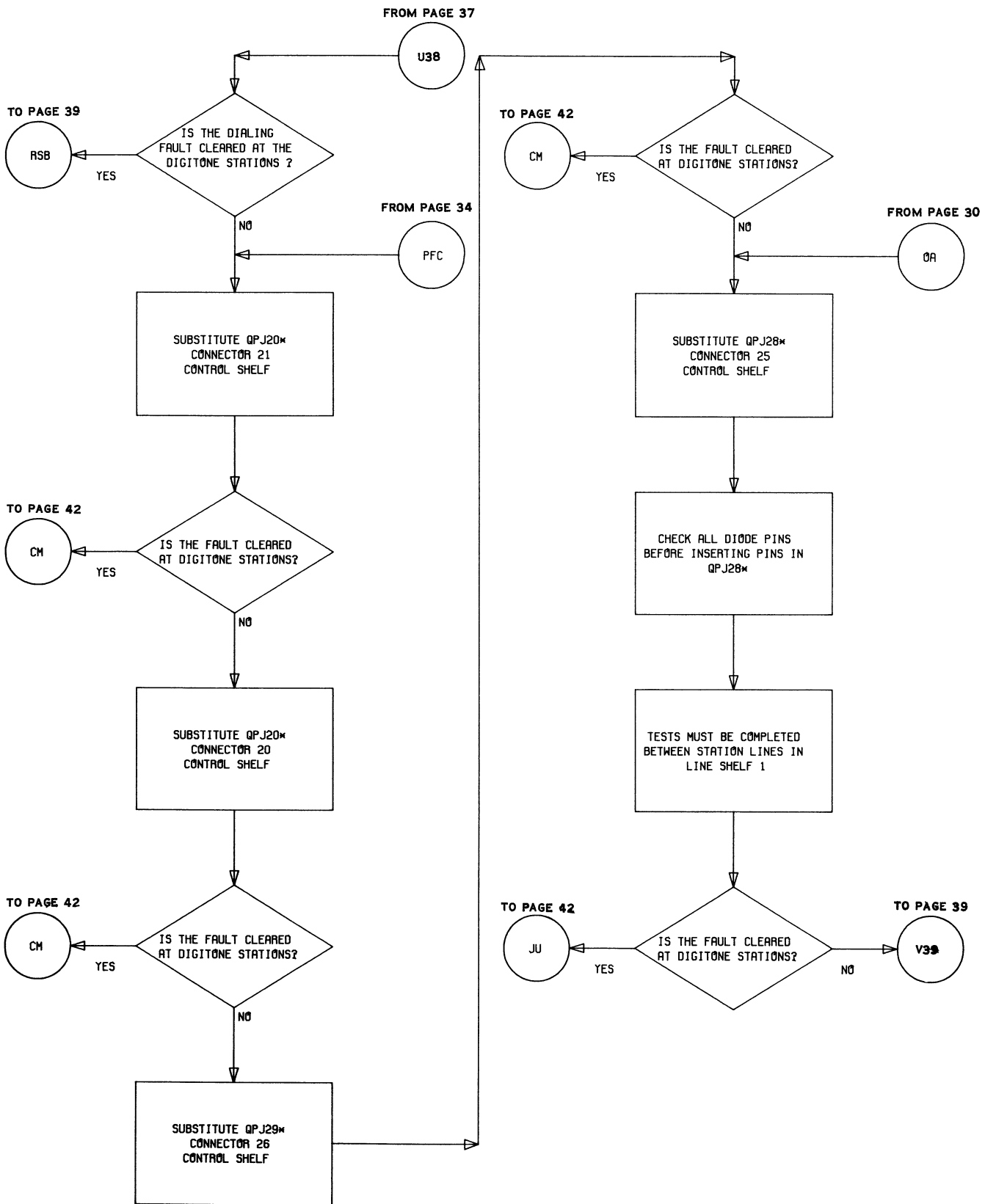


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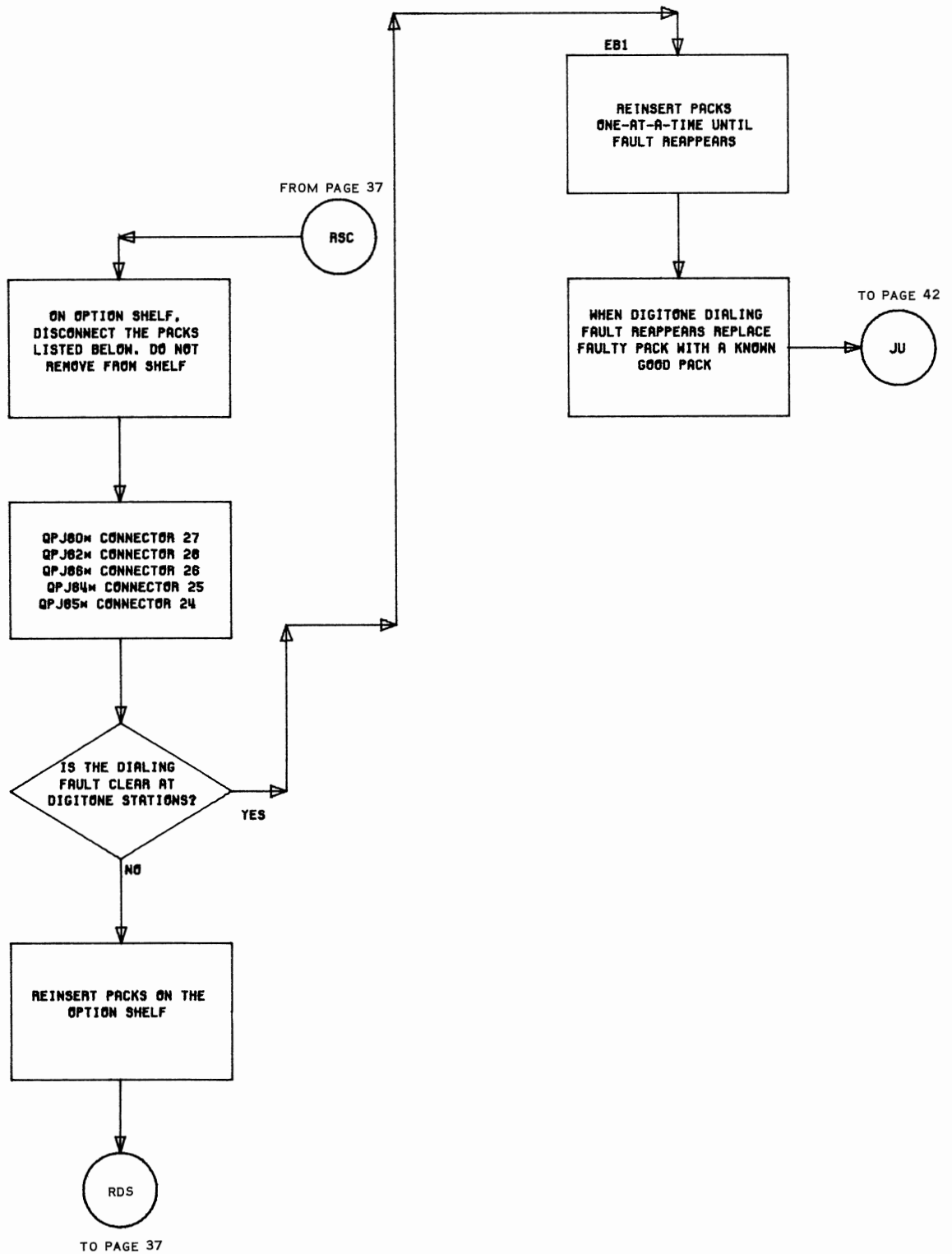
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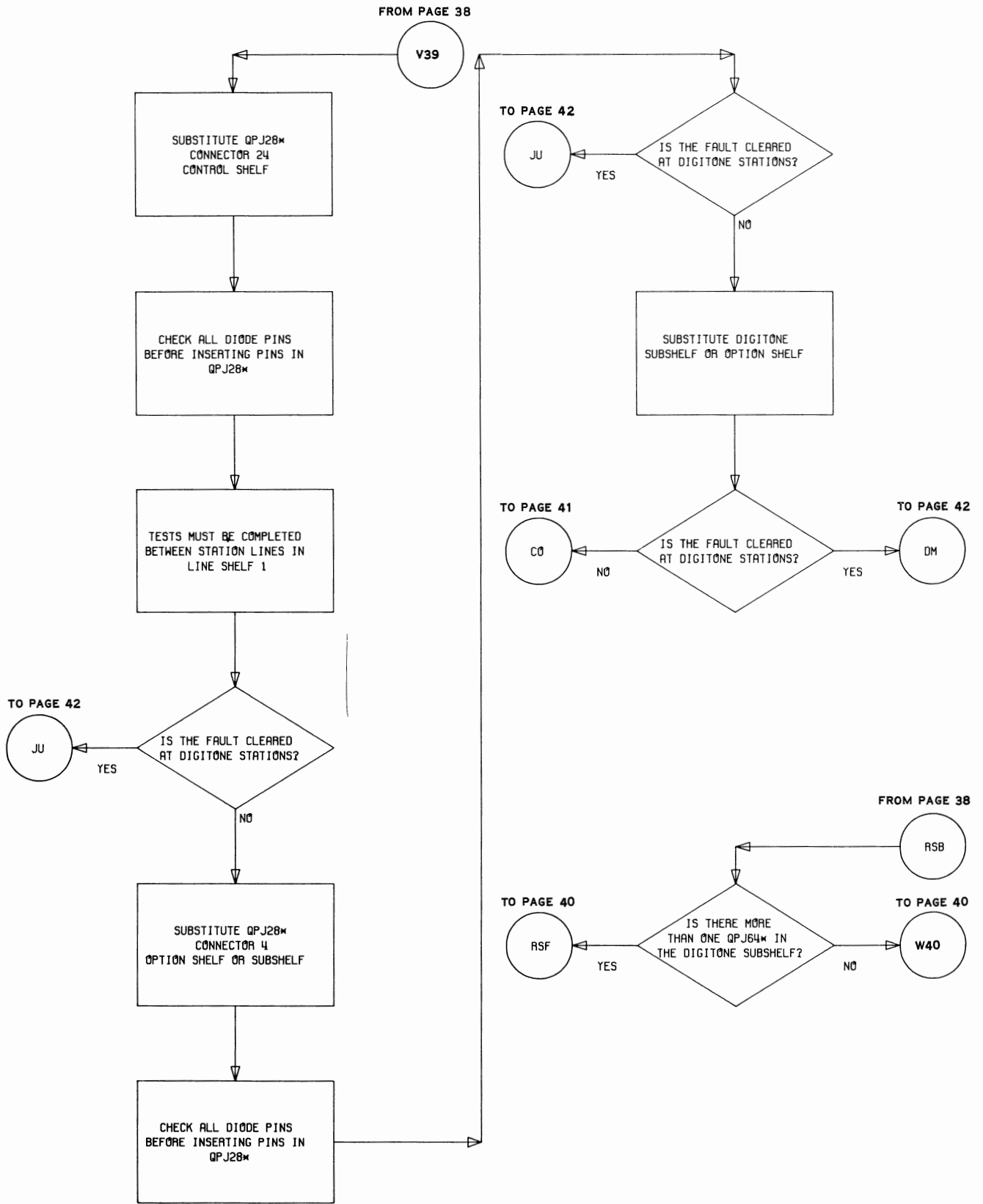
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Flowchart 2 (Cont)

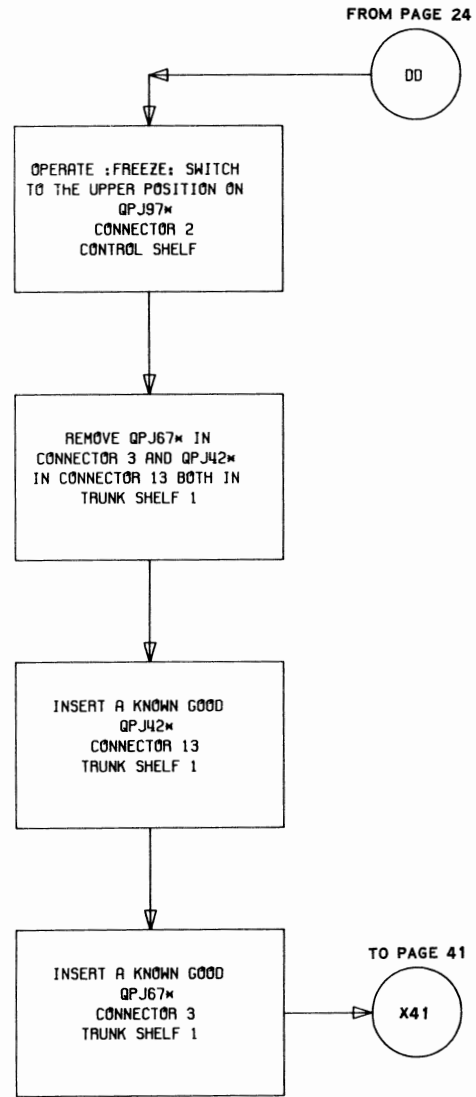
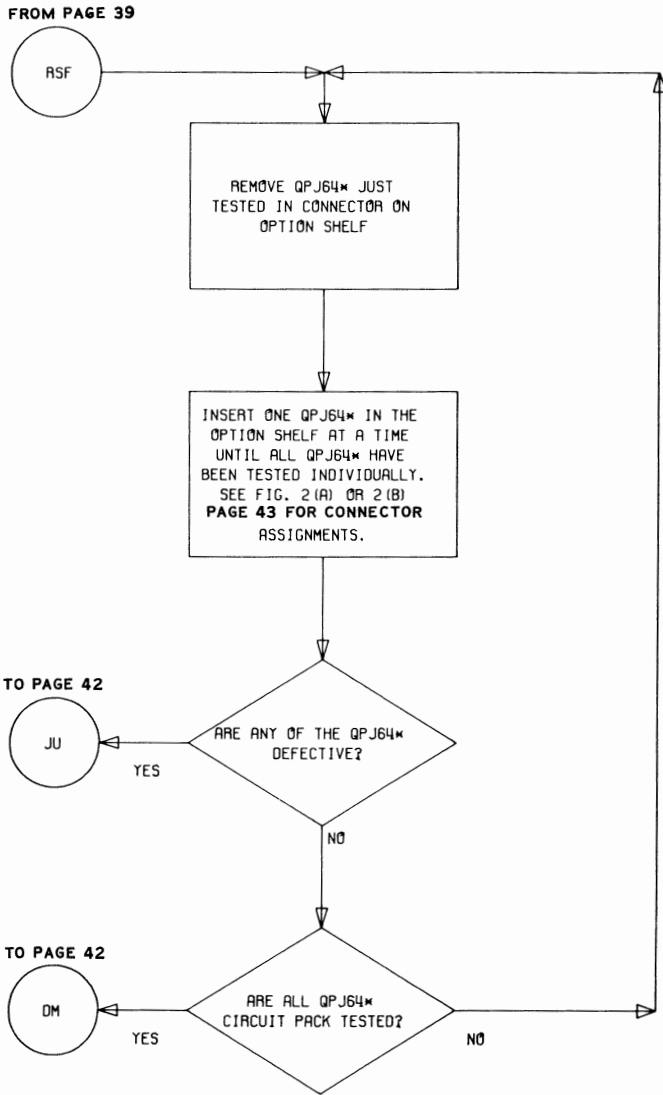
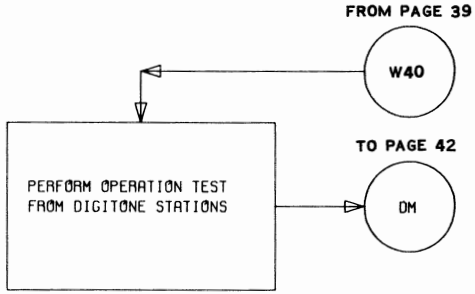


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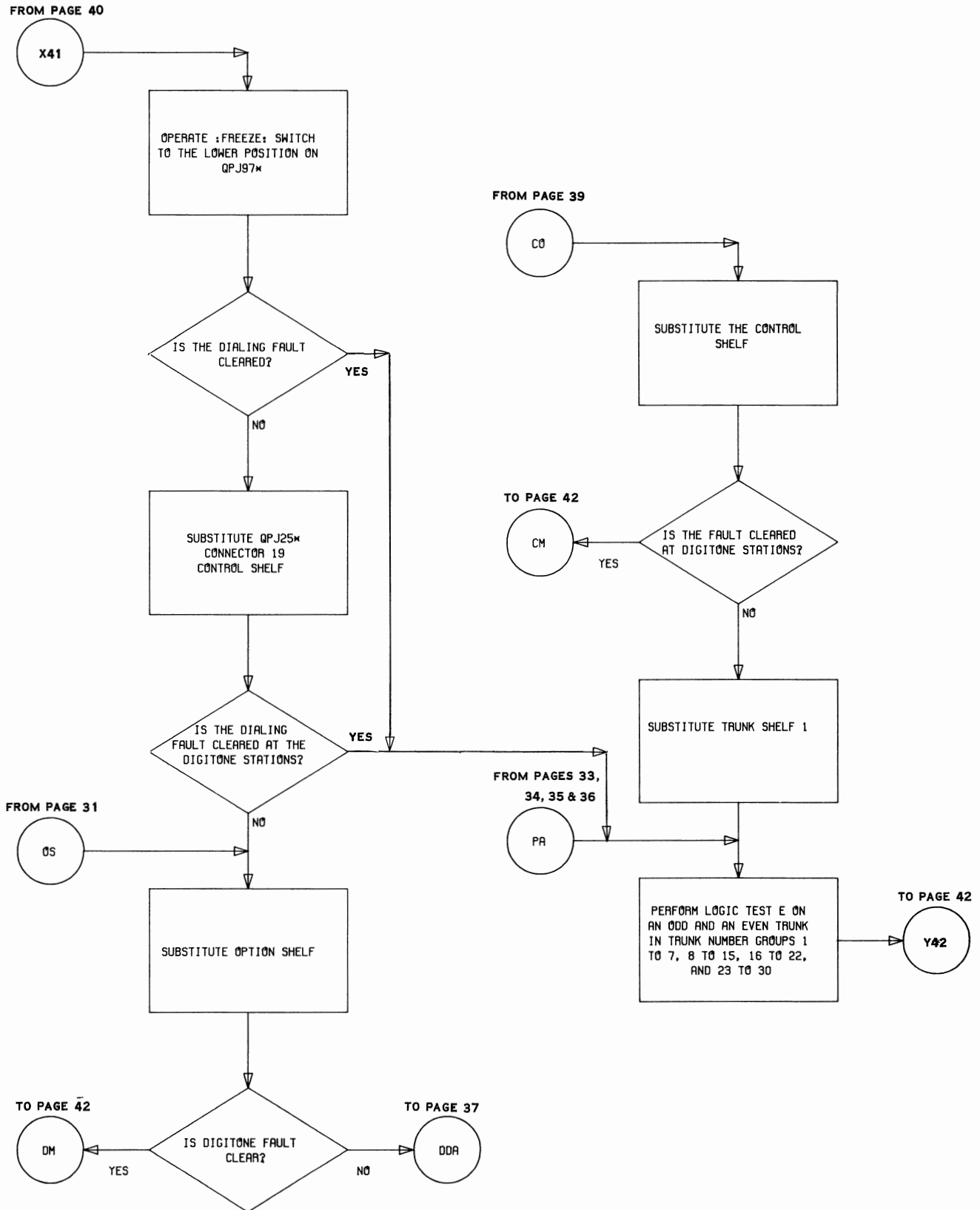


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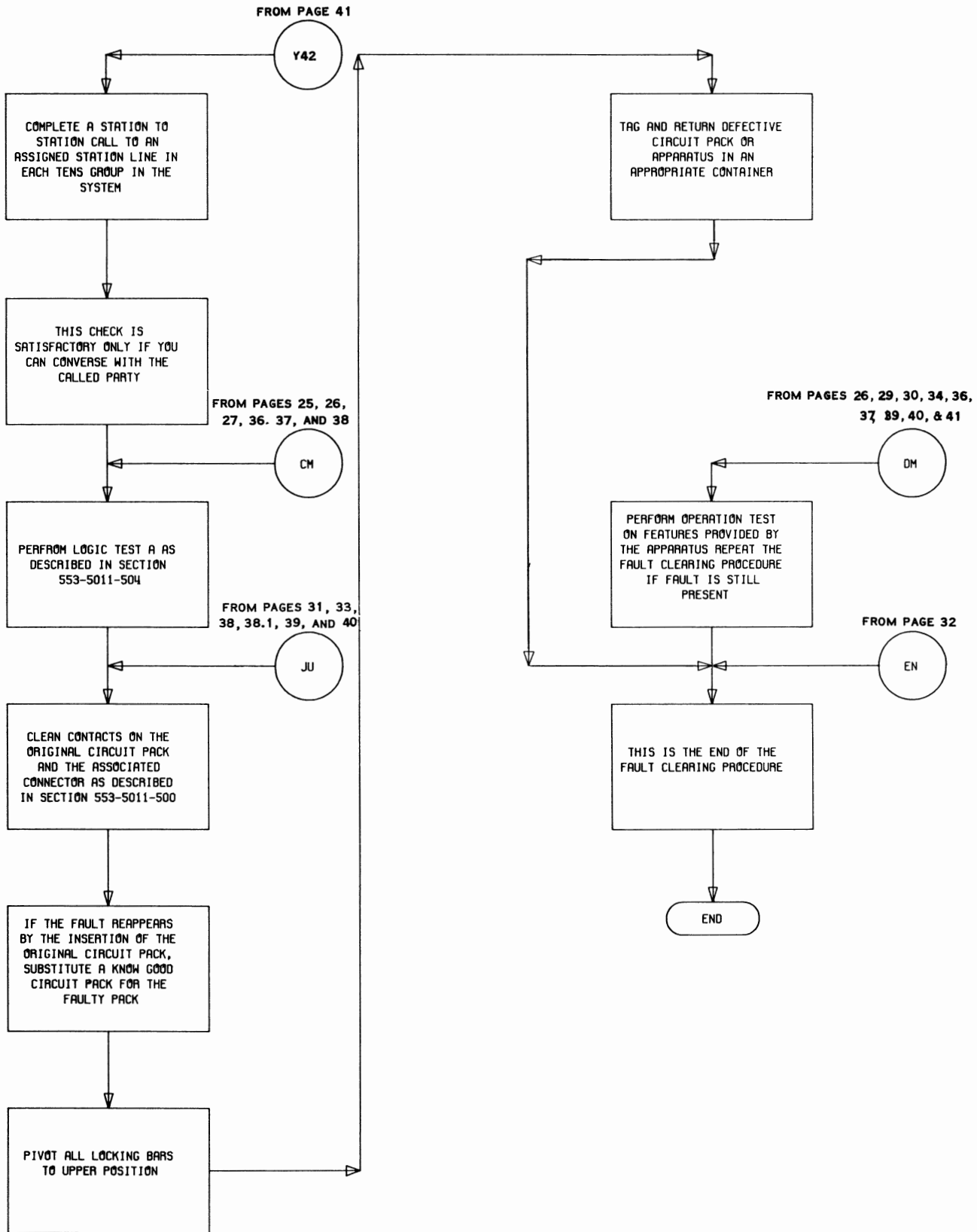
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Flowchart 2 (Cont)



Flowchart 2 (Cont)



Flowchart 2 (Cont)

1	QPJ83* BUSY LAMP FLD CTL LINES (2) 10 TO (2) 49
2	QPJ83* BUSY LAMP FLD CTL LINES (2) 50 TO (2) 89
3	QPJ83* BUSY LAMP FLD CTL LINES 310 TO 349
4	QPJ28* COSSELECT 40 LINES LINES 310 TO 349
5	SPARE
6	QPJ64* DIGITONE RCVR
7	QPJ64* DIGITONE RCVR
8	QPJ64* DIGITONE RCVR
9	QPJ64* DIGITONE RCVR
10	QPJ53* DGT/DP CTL
11	QPJ30* DIAL PULSE SENDER
12	QPJ30* DIAL PULSE SENDER
13	QPJ30* DIAL PULSE SENDER
14	QPJ30* DIAL PULSE SENDER
15	QPJ56* CODE RSTN CTL 1
16	QPJ57* CODE RSTN CTL 2
17	QPJ55* CODE RSTN FULL FLD OR QPJ58* CODE RSTN HALF FLD
18	SPARE
19	QPJ55* CODE RSTN FULL FLD OR QPJ58* CODE RSTN HALF FLD
20	SPARE
21	QPJ55* CODE RSTN FULL FLD OR QPJ58* CODE RSTN HALF FLD
22	SPARE
23	QPJ55* CODE RSTN FULL FLD OR QPJ58* CODE RSTN HALF FLD
24	QPJ85* CALL P/U GRP SELECT
25	QPJ84* CALL P/U CTL
26	QPJ86* ACCESS CODE CTL
27	QPJ80* CALL FWD MEMORY
28	QPJ82* CALL FWD CTL
29	QPJ43* +5 VOLT REGULATOR

Fig. 2 — QSP6U Option Shelf

TABLE B
DIGITONE TO DIAL PULSE CONVERSION – PRETRANSLATOR DISABLE
STRAPPING CONNECTIONS (Required in Flowchart 2, Page 27)

REASON FOR STRAP	STRAP PINS ON TB11 (Option Shelf)	DISABLING EFFECT OF STRAP
Second digit of Area <i>and</i> Exchange code is 0 or 1.	36-37	Partial
Maintenance	41-42	Complete
Local CO access code from a remote PBX is <i>not</i> 9.	46-47	Partial

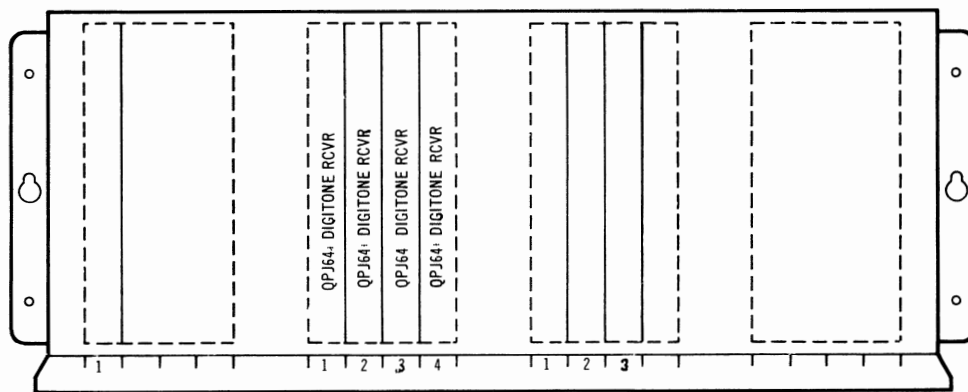


Fig. 2(a) –
QSP6P Option Shelf

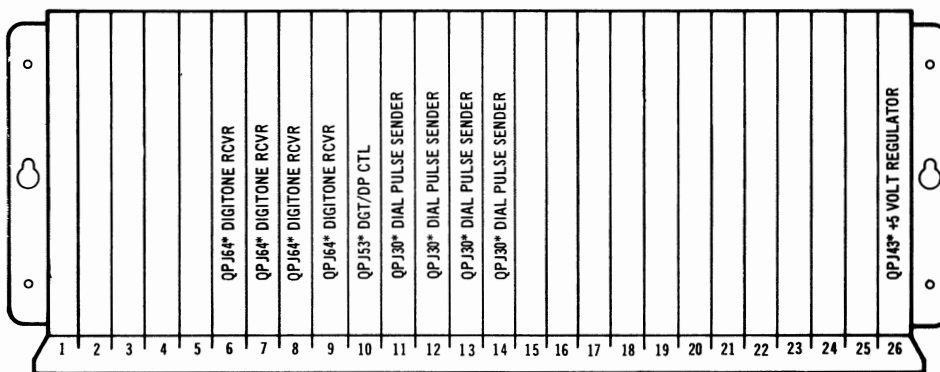


Fig. 2(b) –
QSP6M Option Shelf

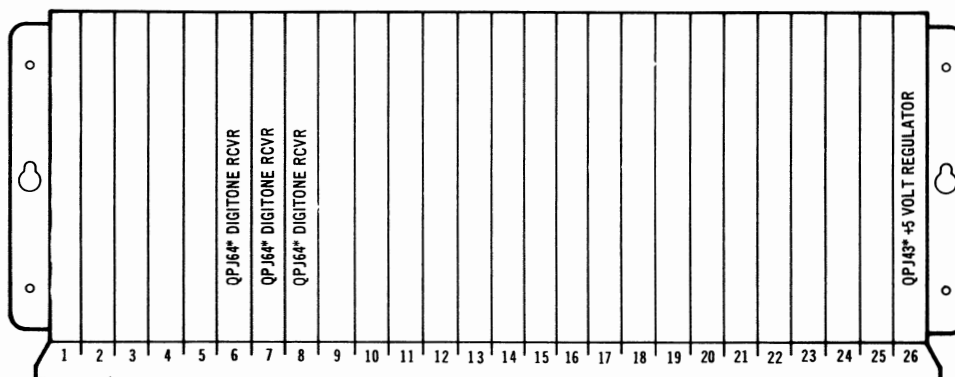
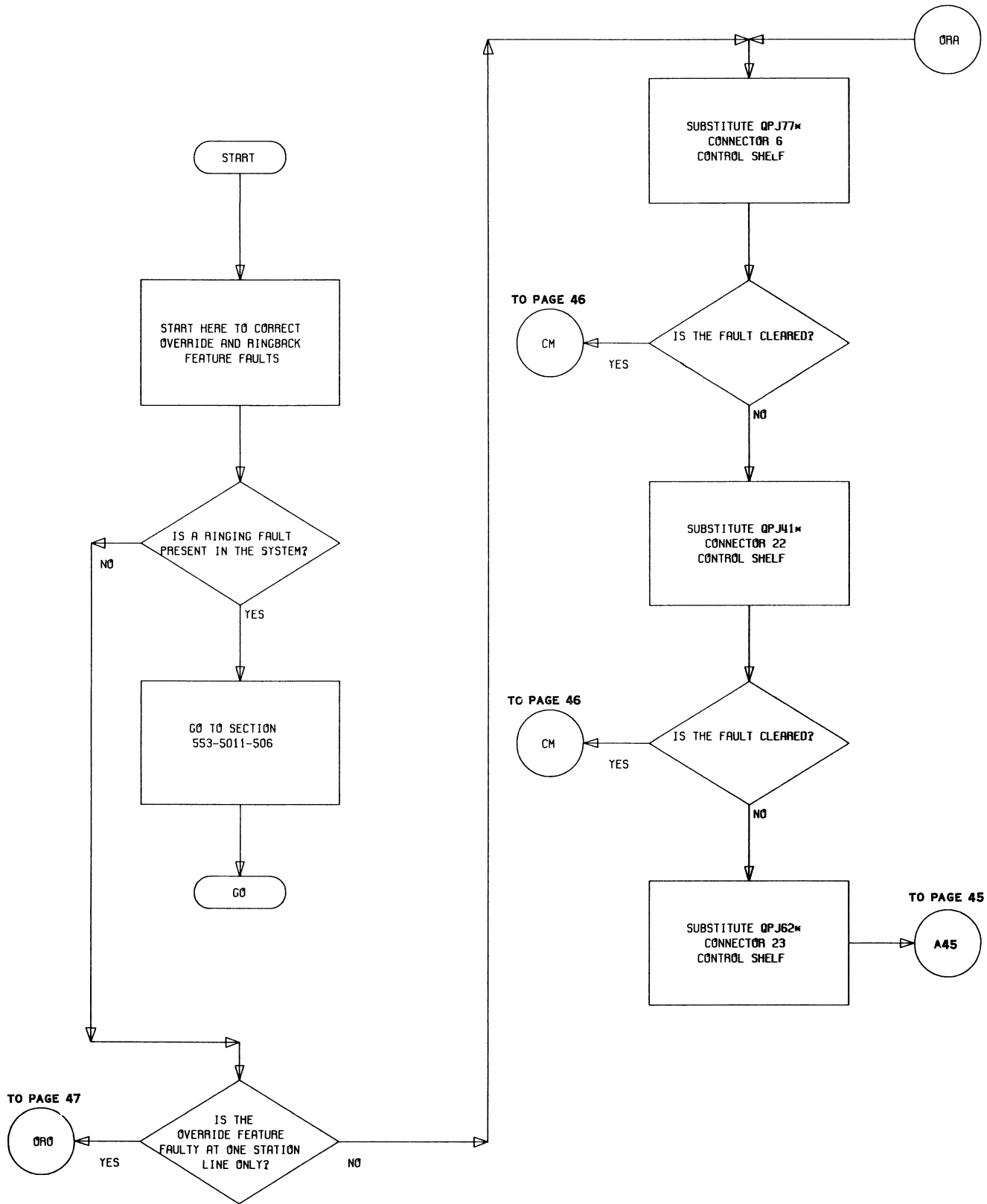
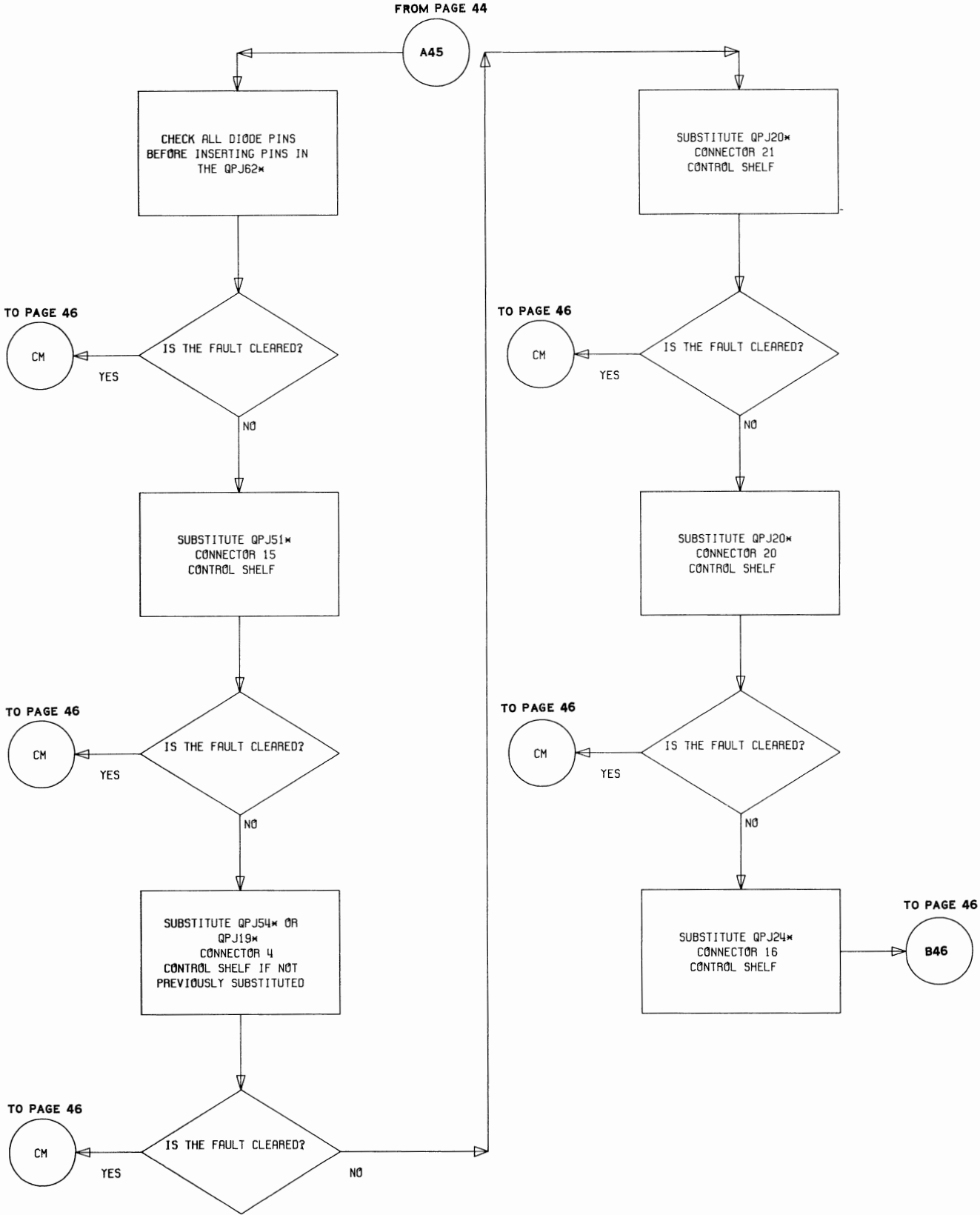


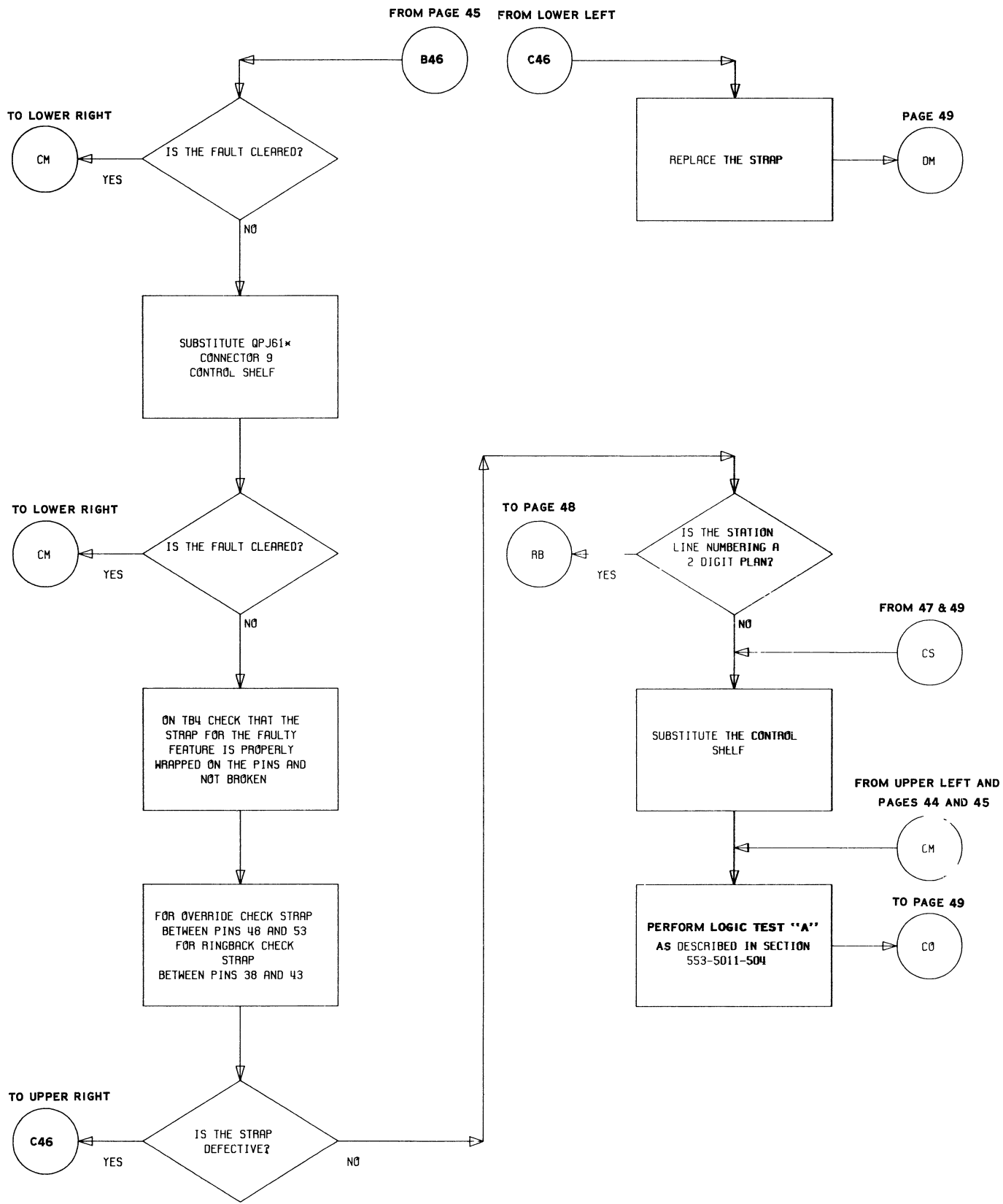
Fig. 2(c) –
QSP6R Option Shelf



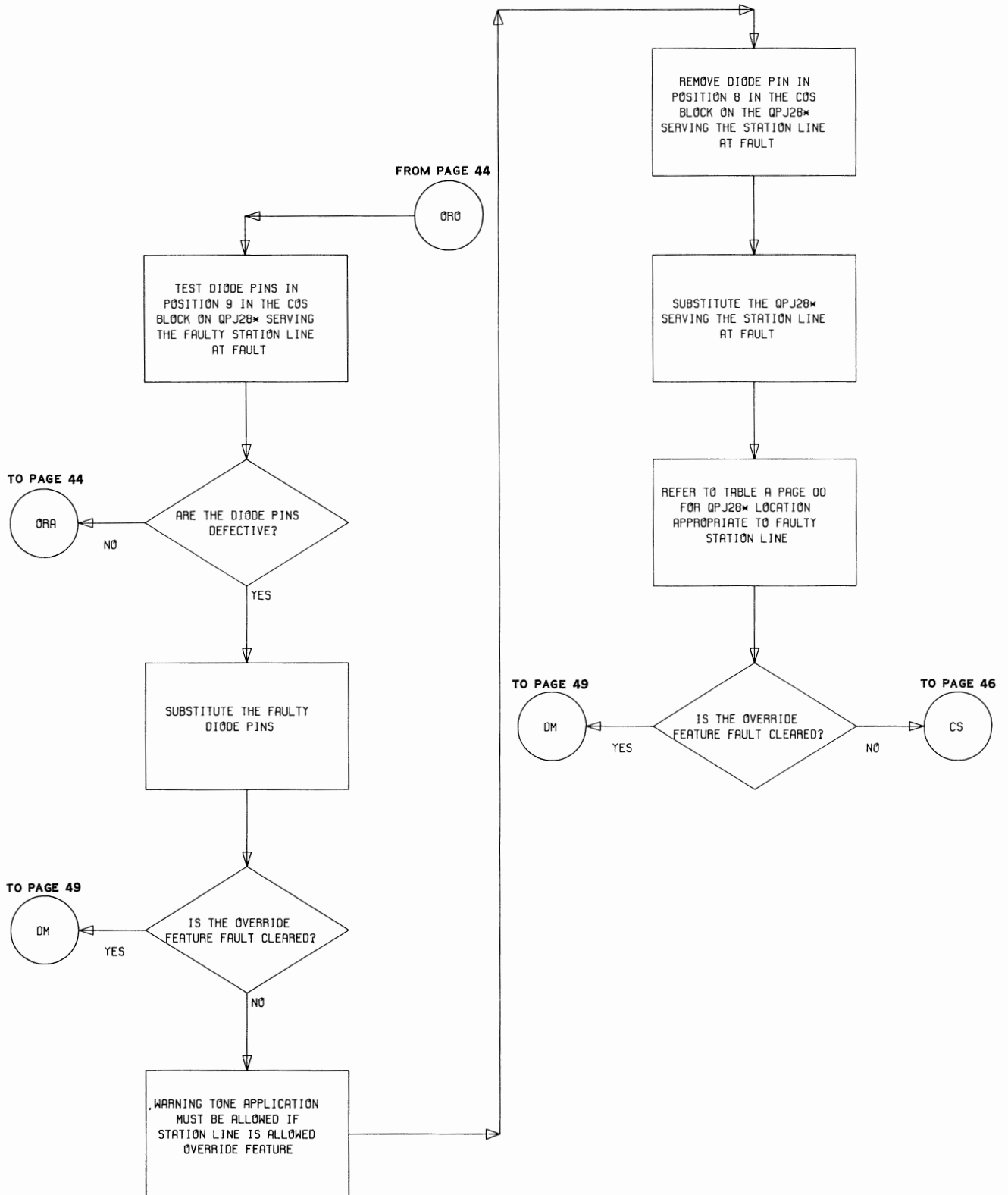
Flowchart 3 – Override and Ringback Fault Clearing Procedure



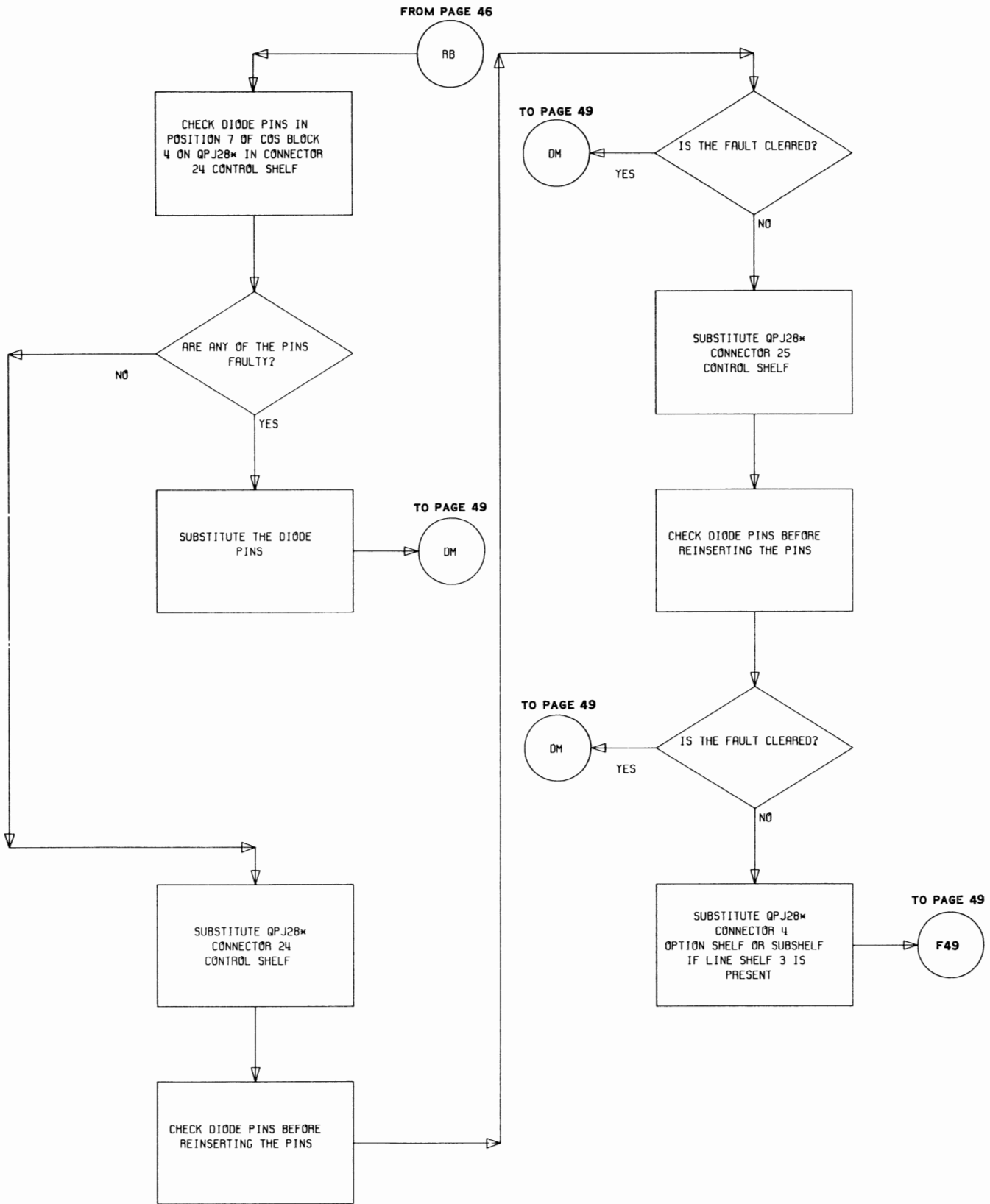
Flowchart 3 (Cont)



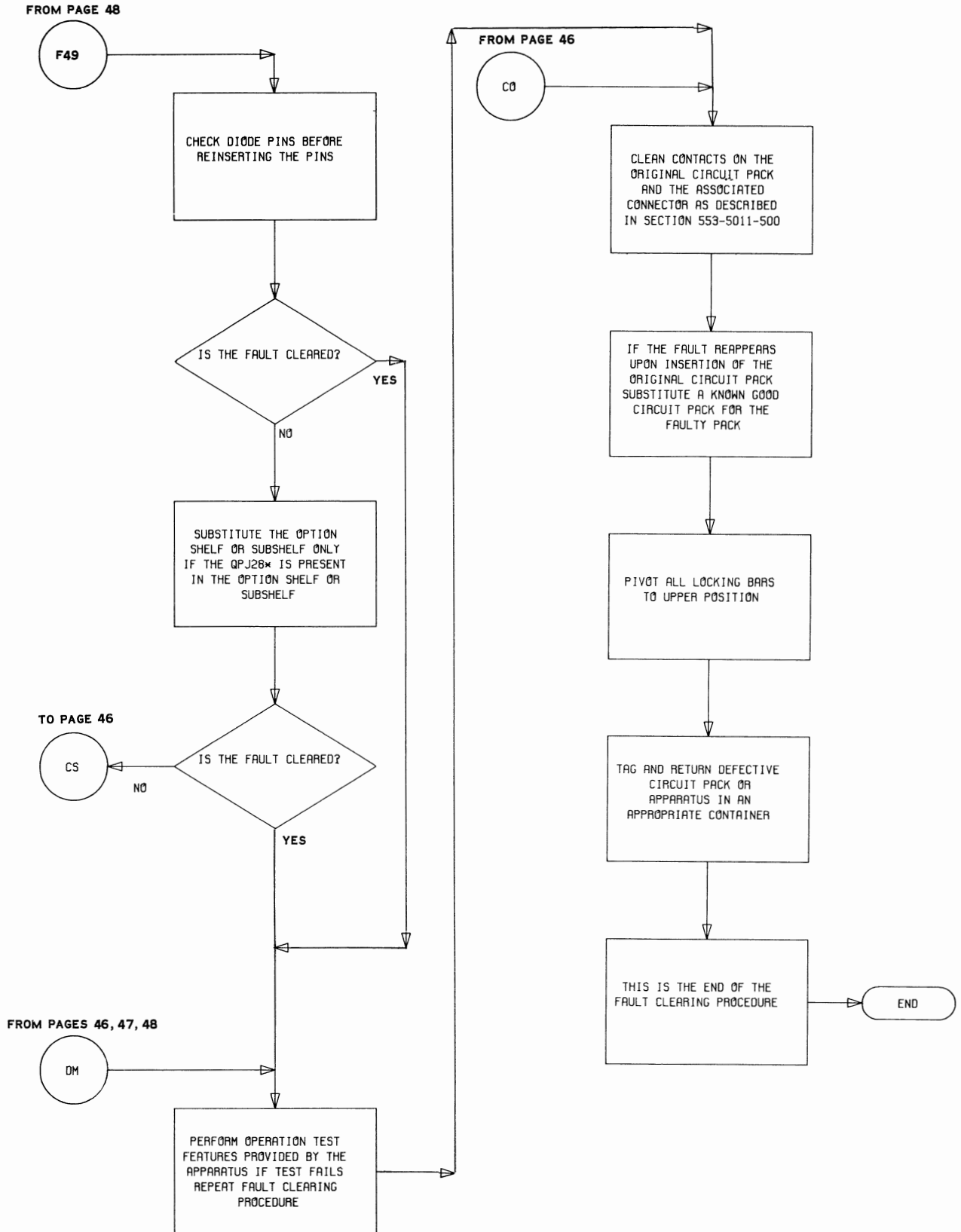
Flowchart 3 (Cont)



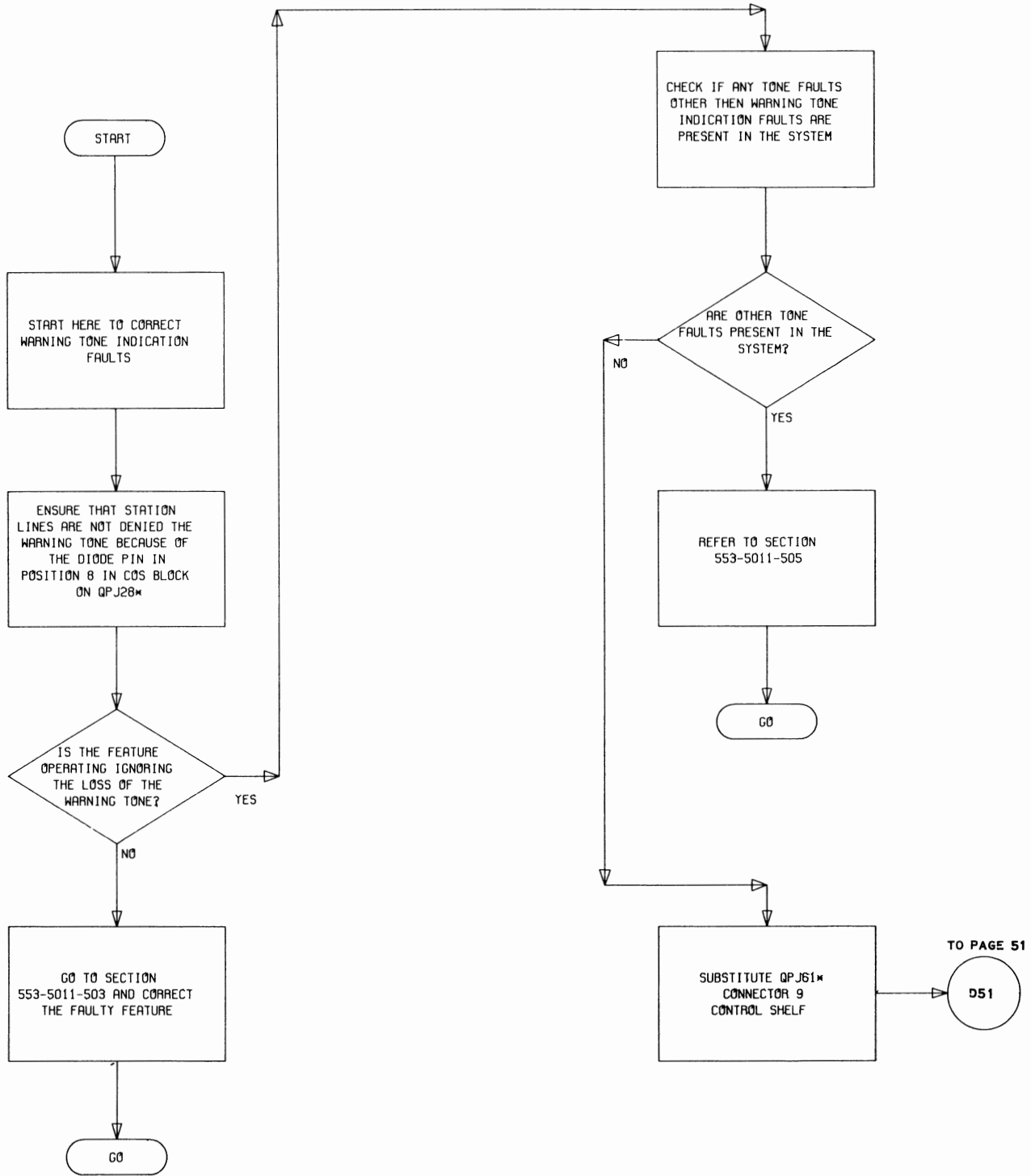
Flowchart 3 (Cont)



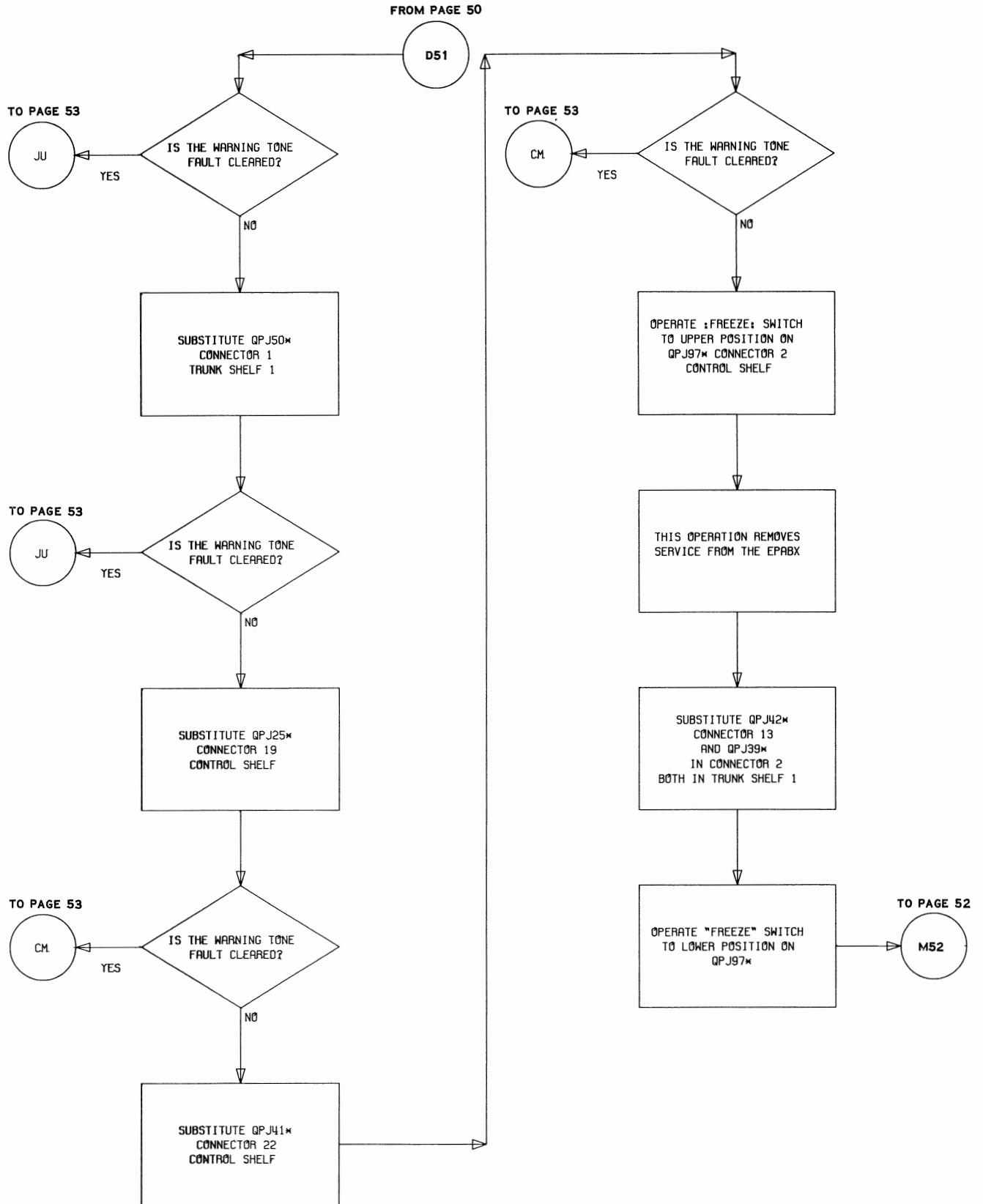
Flowchart 3 (Cont)



Flowchart 3 (Cont)

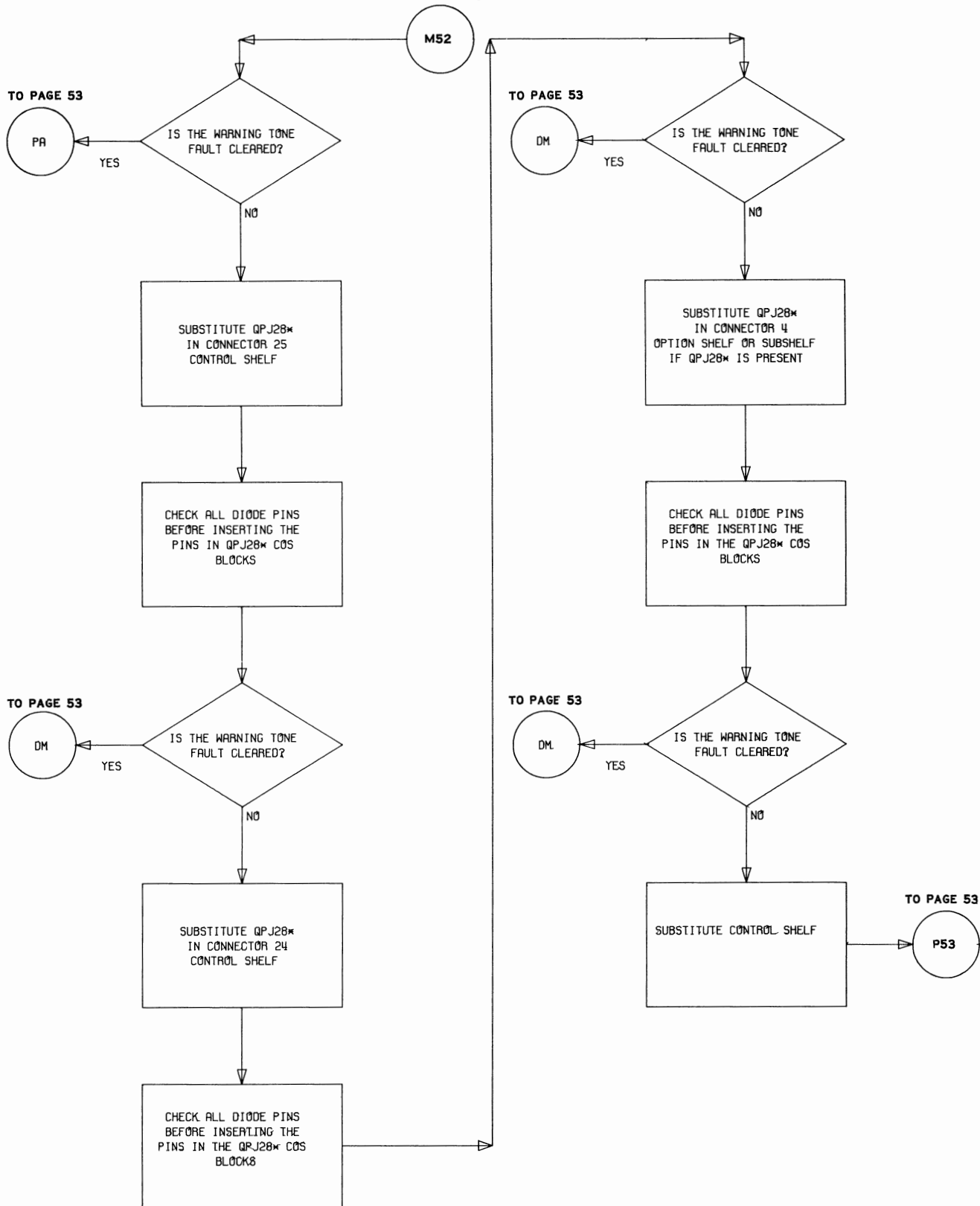


Flowchart 4 – Warning Tone Fault Clearing Procedure

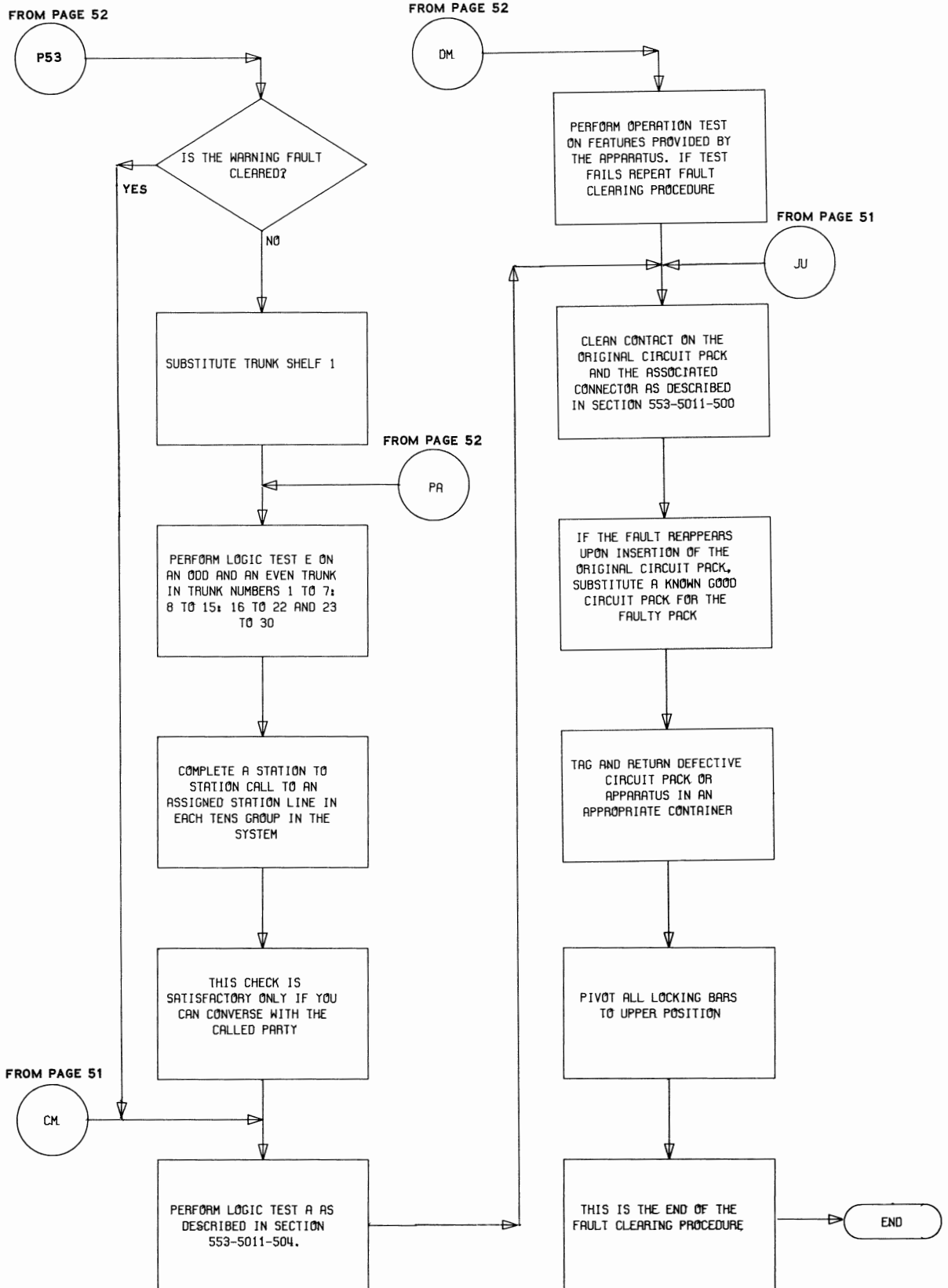


Flowchart 4 (Cont)

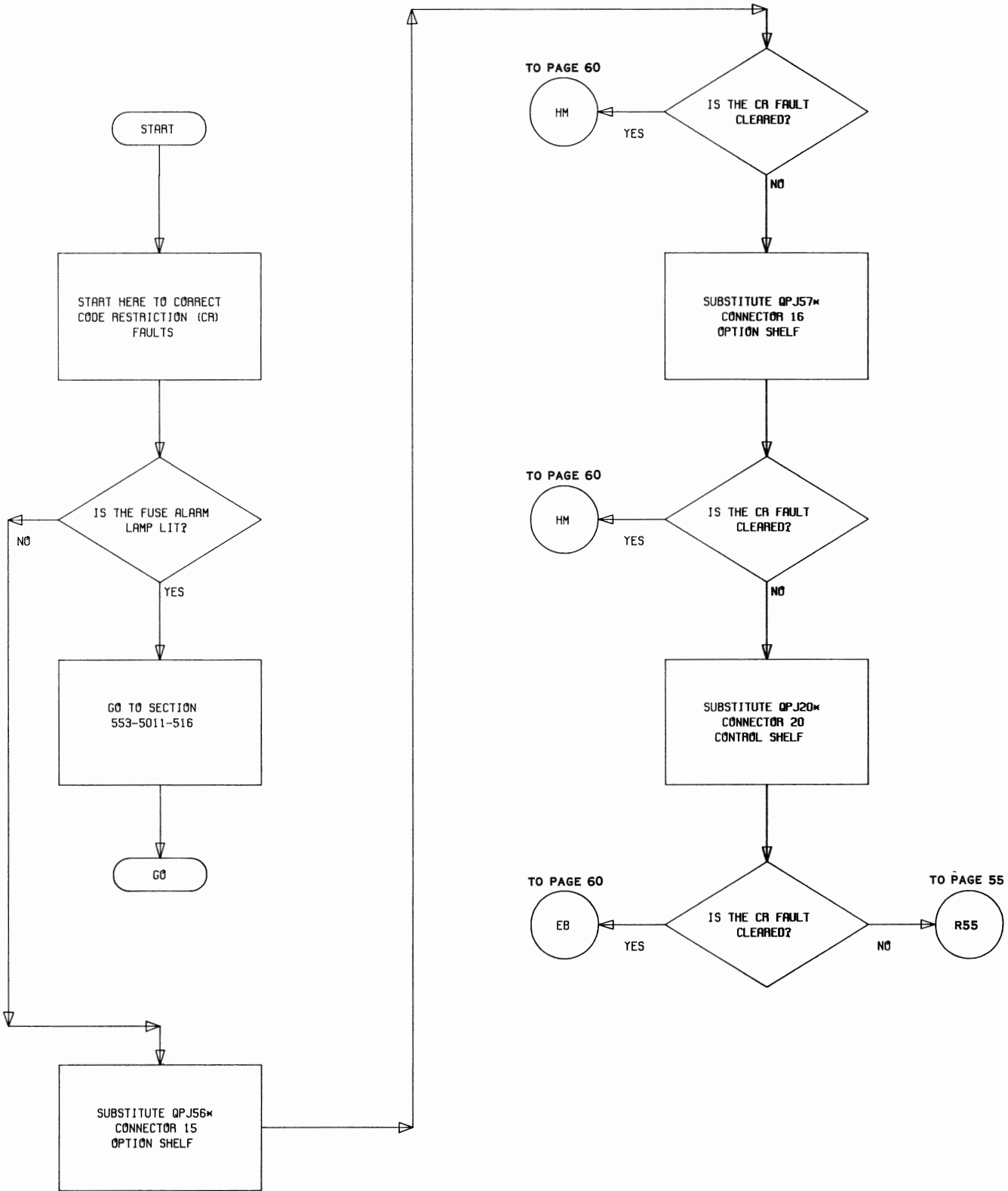
FROM PAGE 51



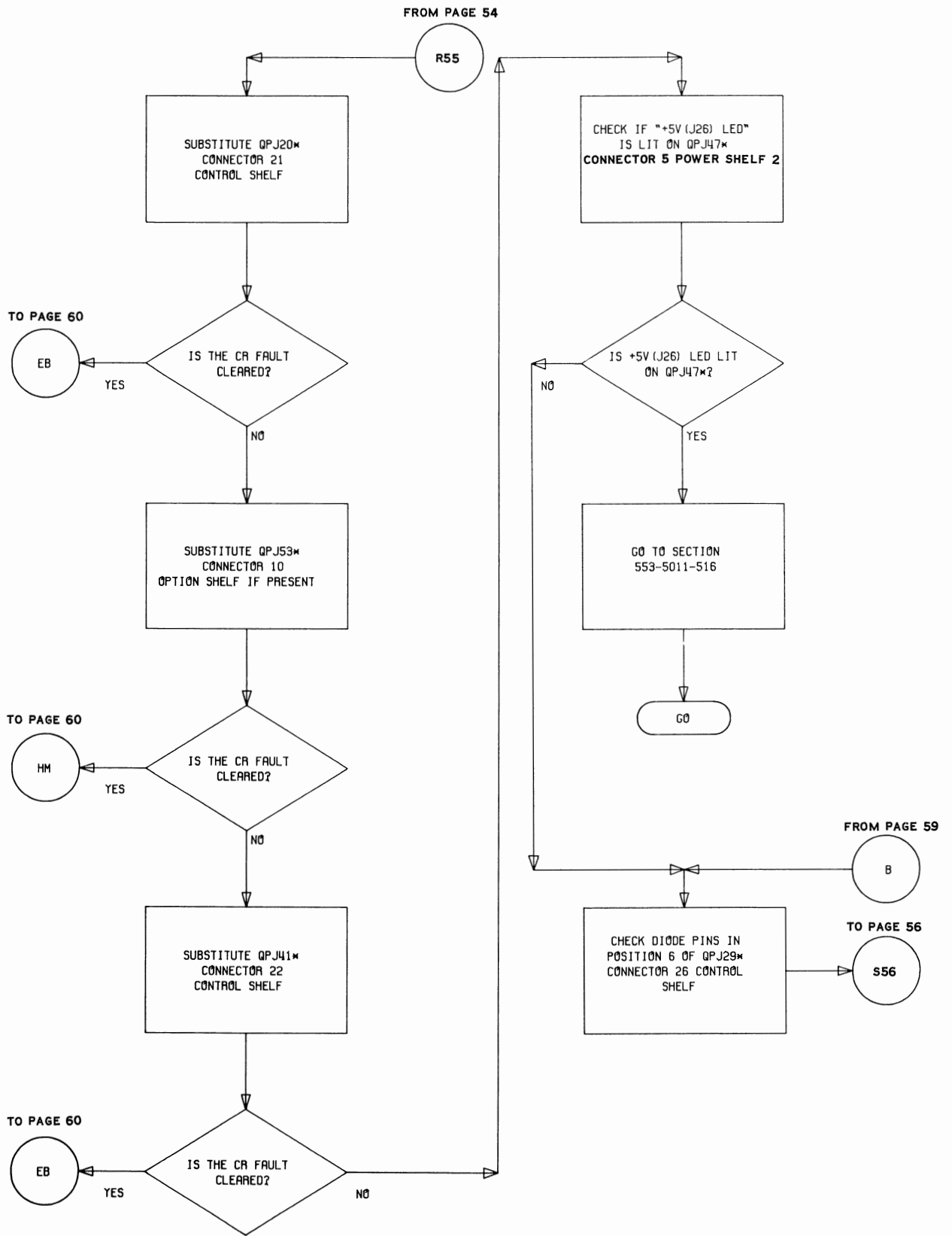
Flowchart 4 (Cont)



Flowchart 4 (Cont)

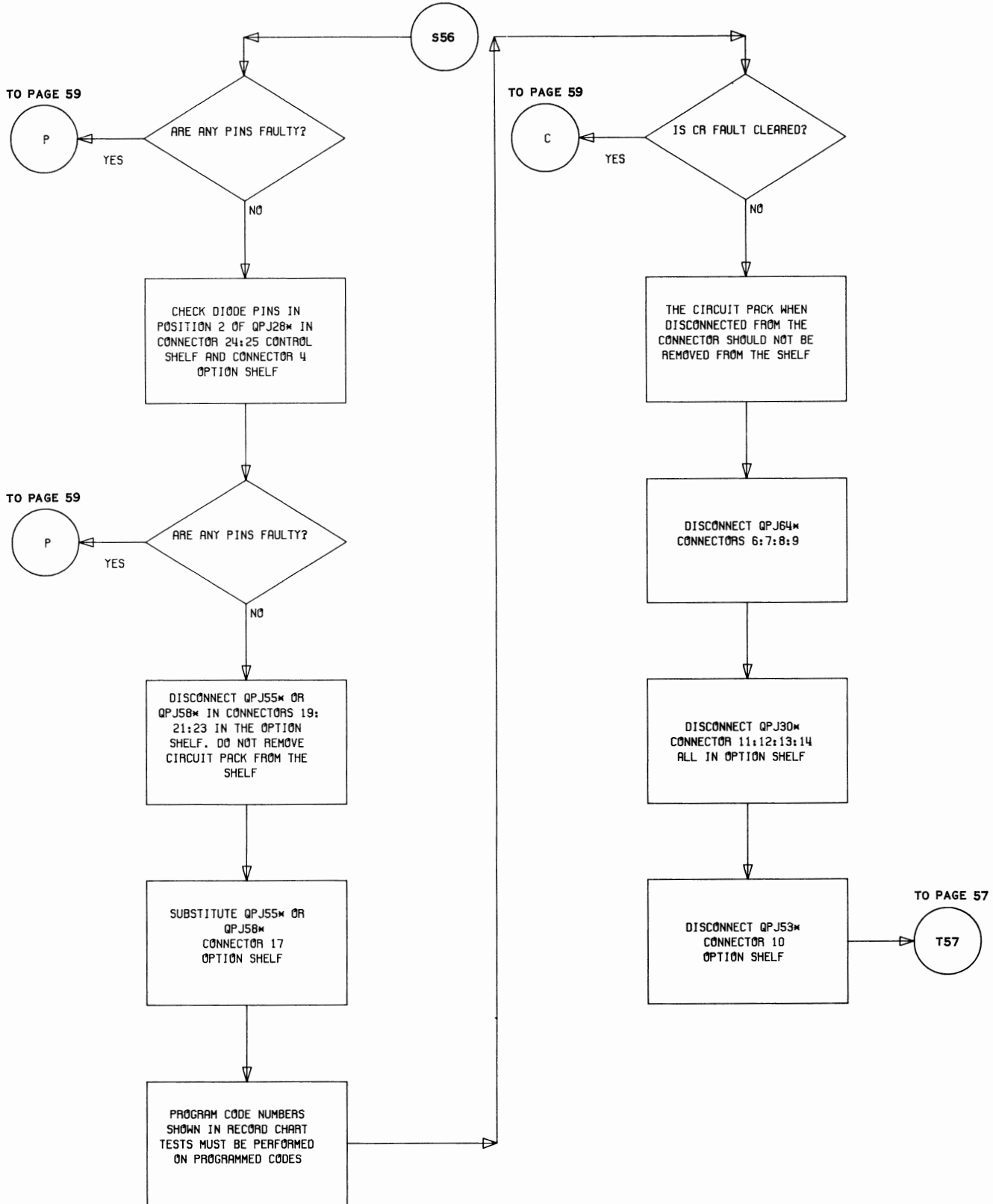


Flowchart 5 – Code Restriction Fault Clearing Procedure

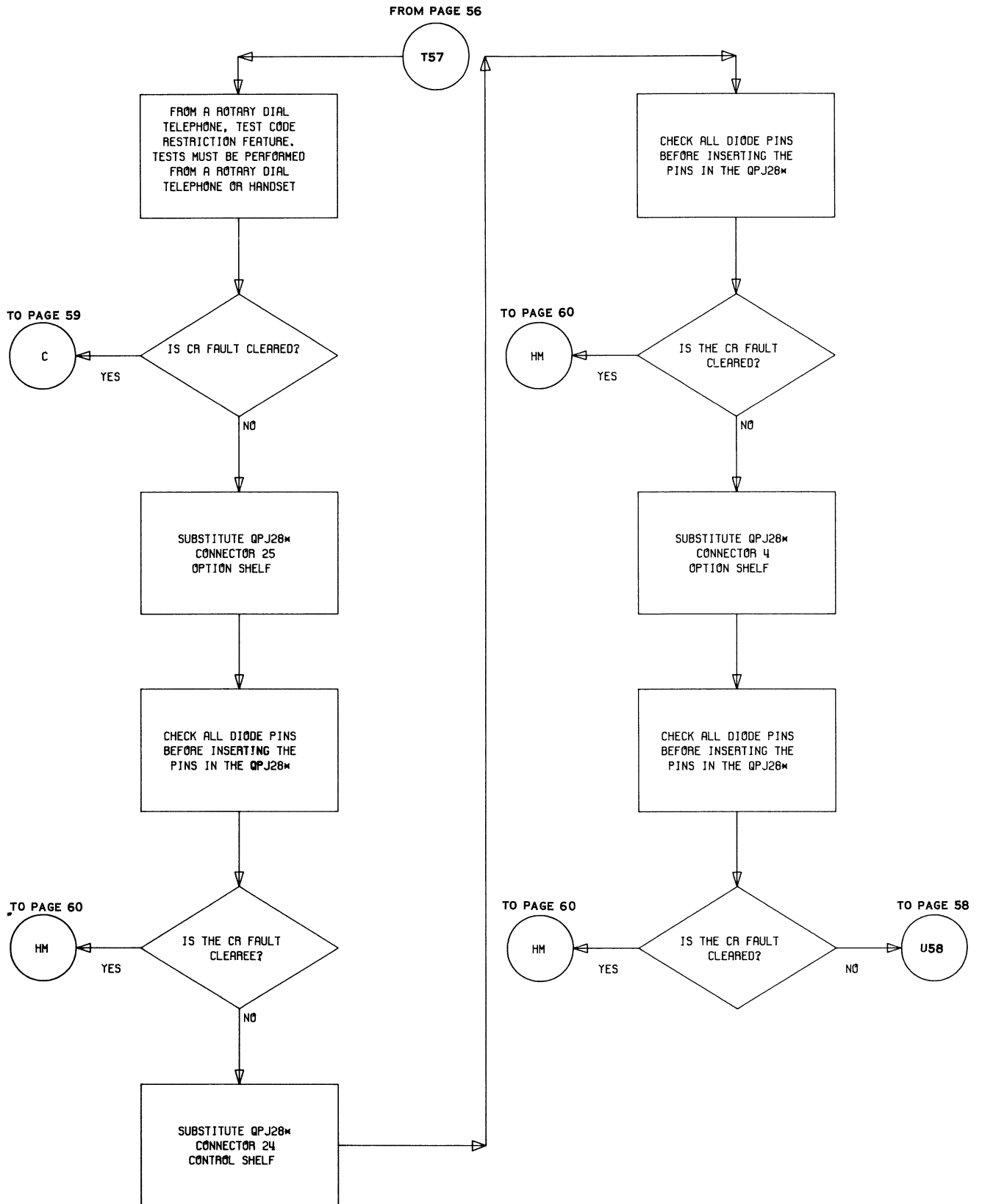


Flowchart 5 (Cont)

FROM PAGE 55

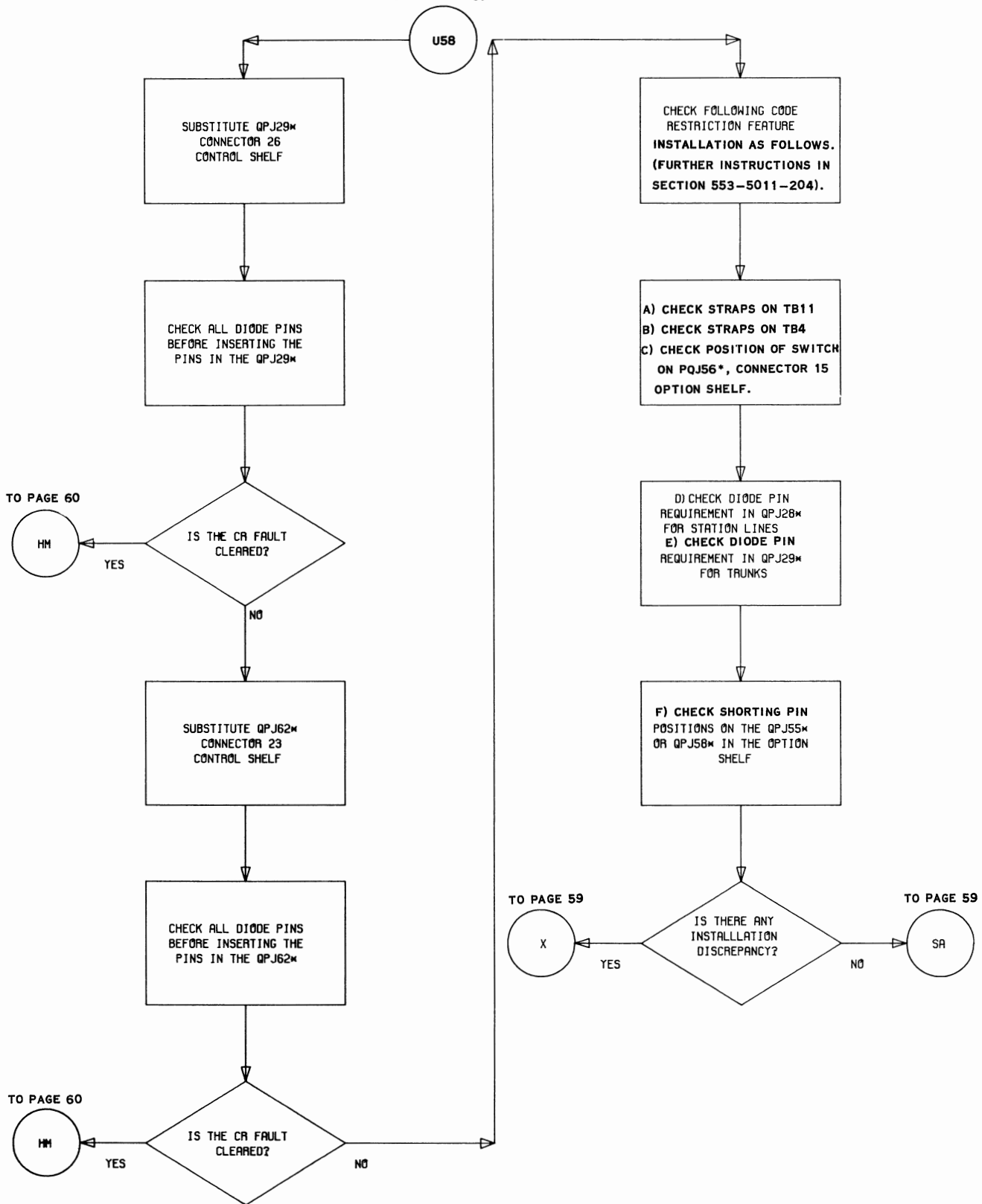


Flowchart 5 (Cont)



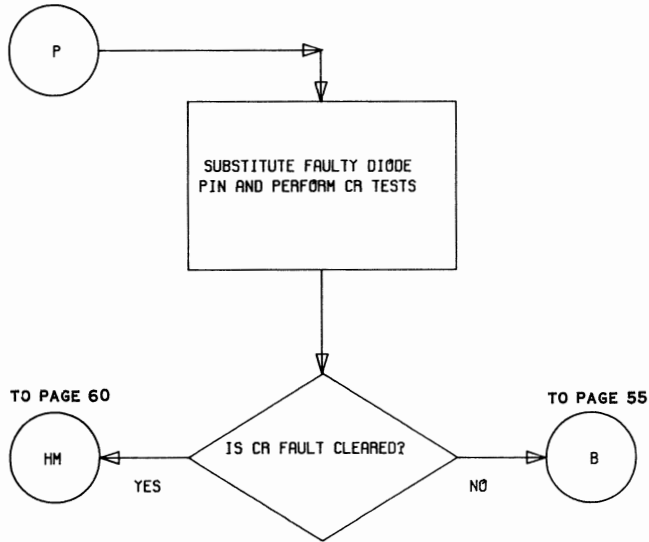
Flowchart 5 (Cont)

FROM PAGE 57

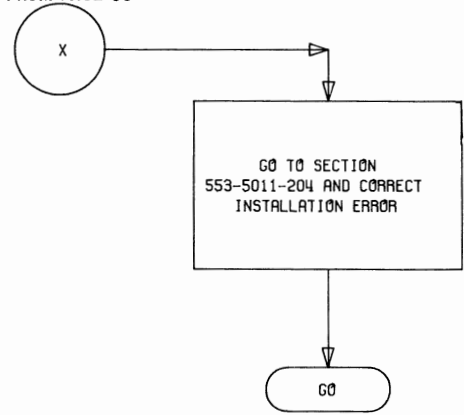


Flowchart 5 (Cont)

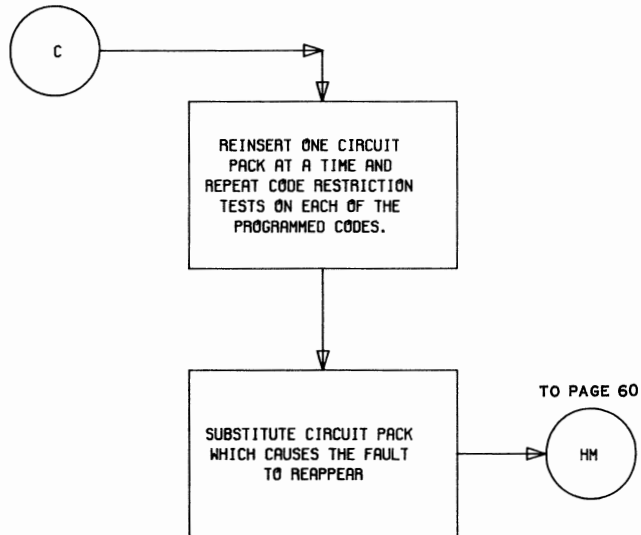
FROM PAGE 56



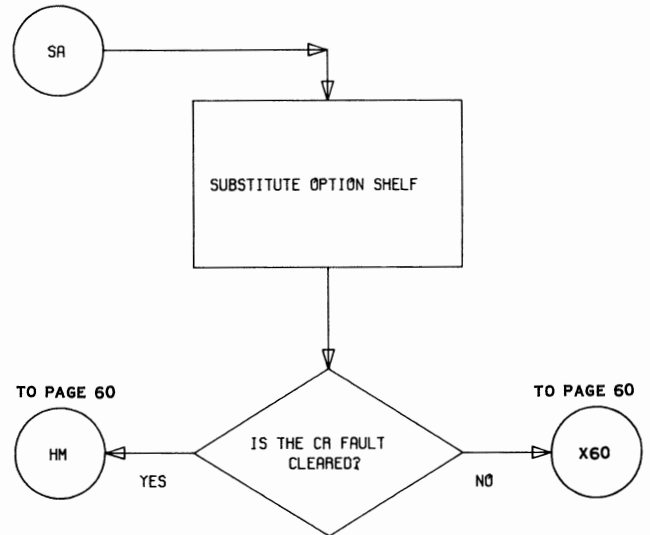
FROM PAGE 58



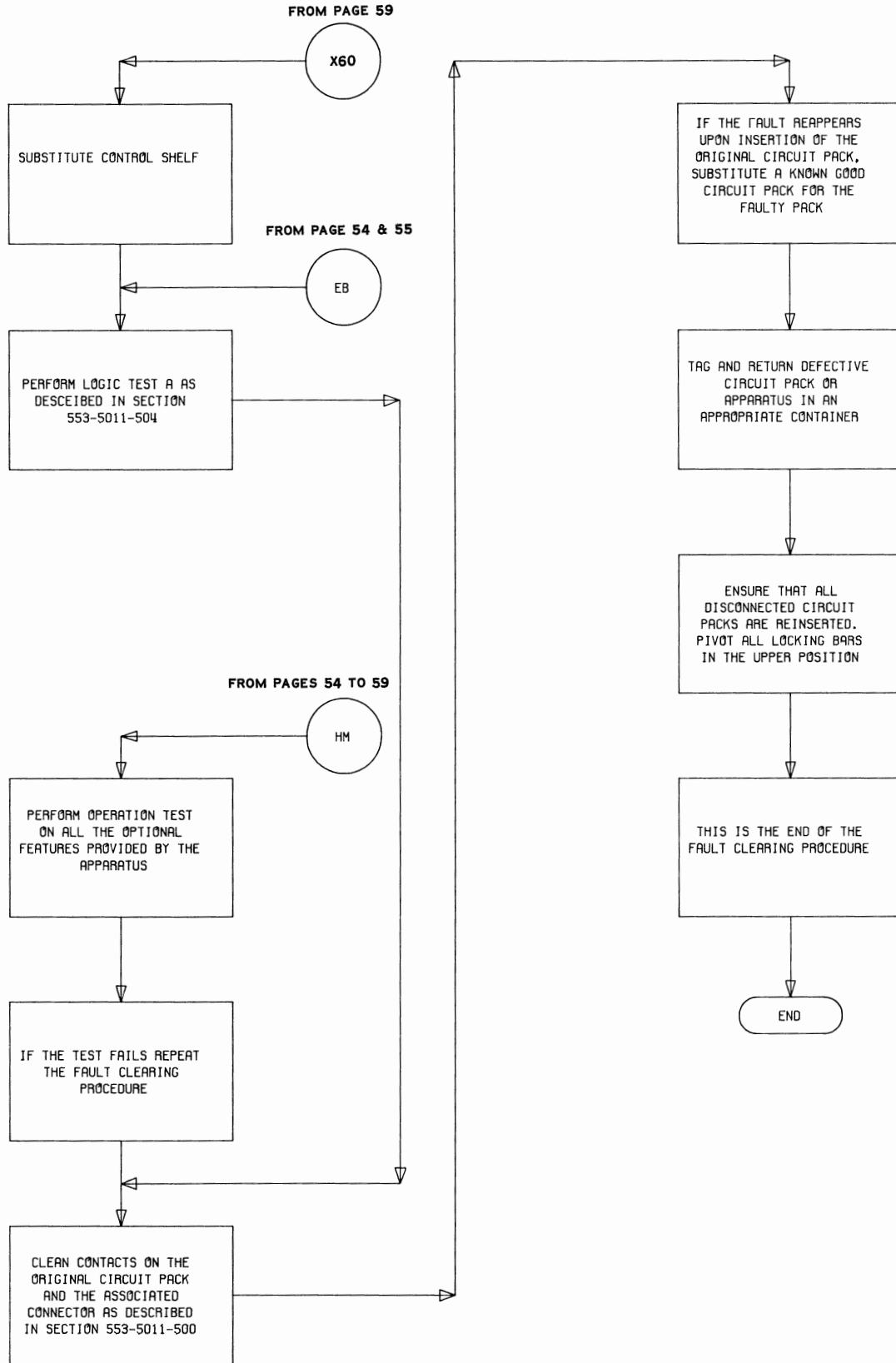
FROM PAGES 56 & 57



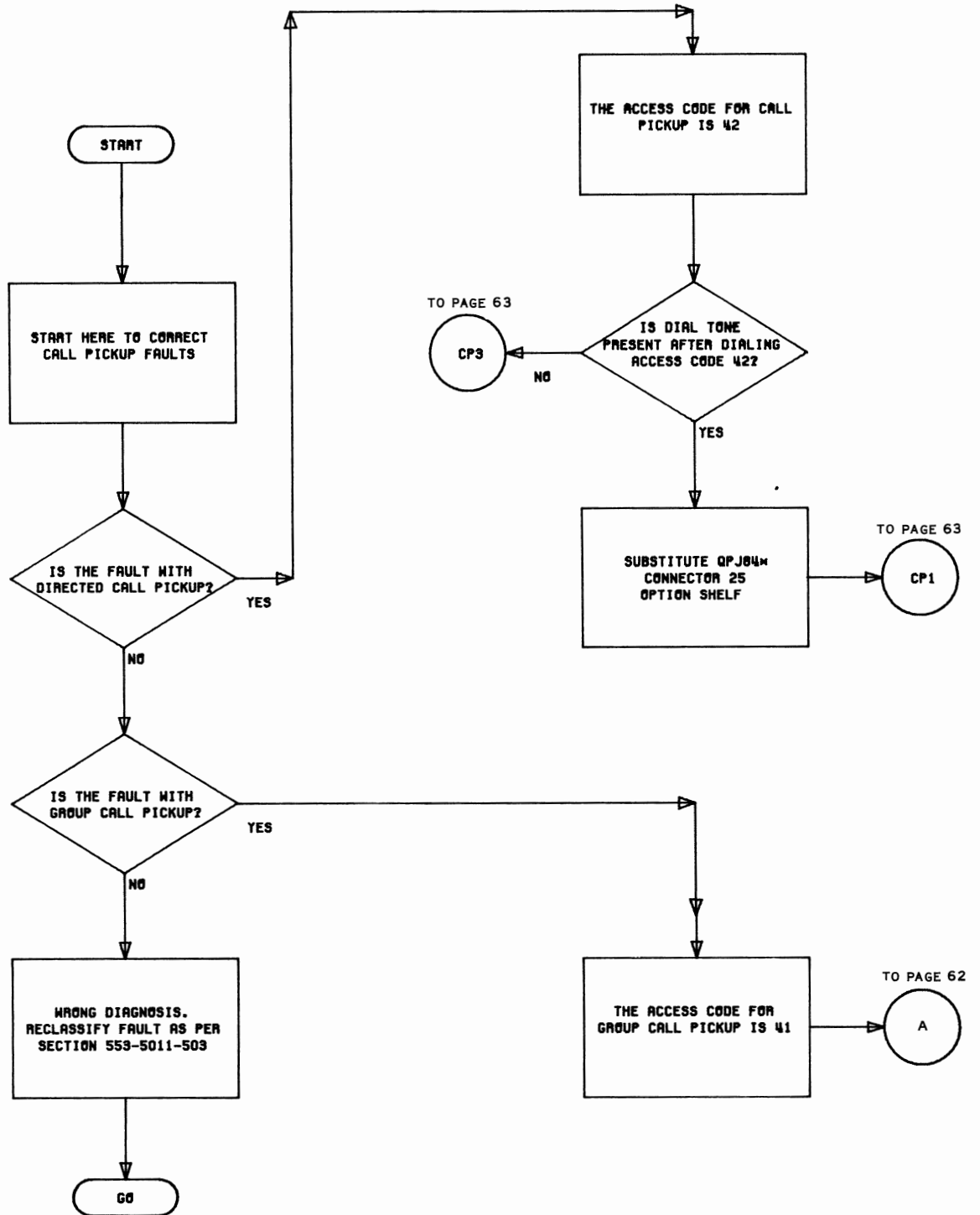
FROM PAGE 58



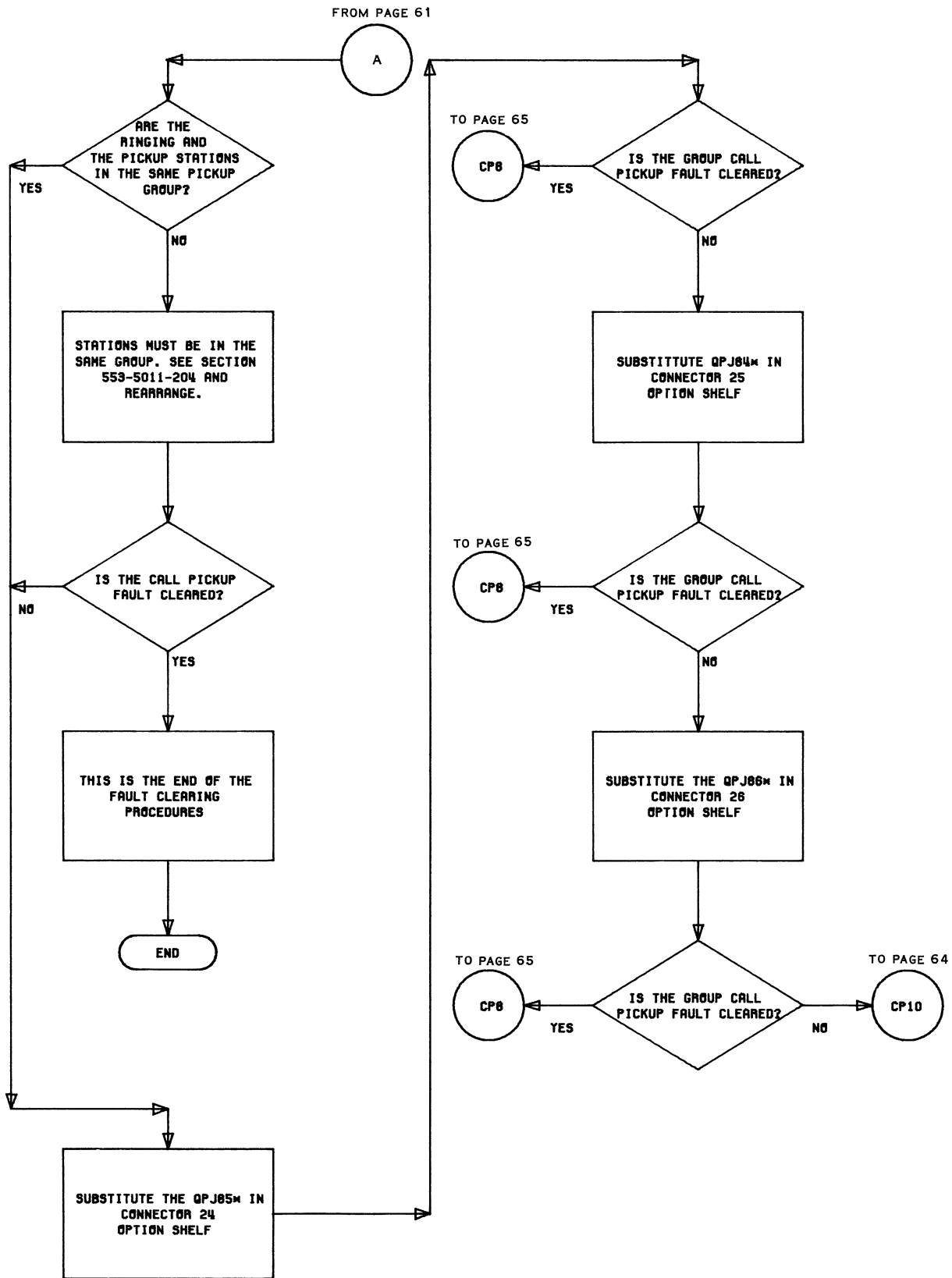
Flowchart 5 (Cont)



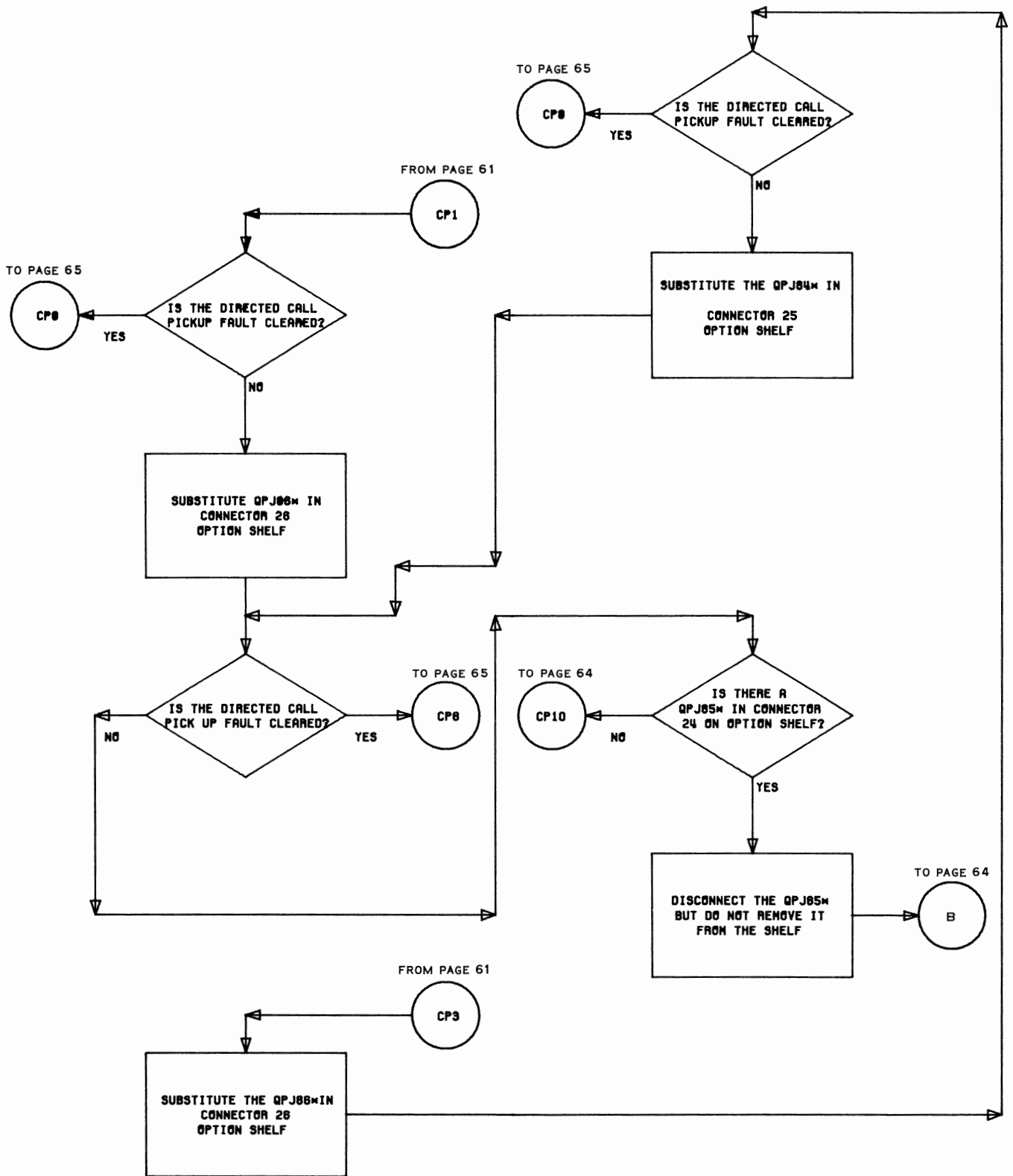
Flowchart 5 (Cont)



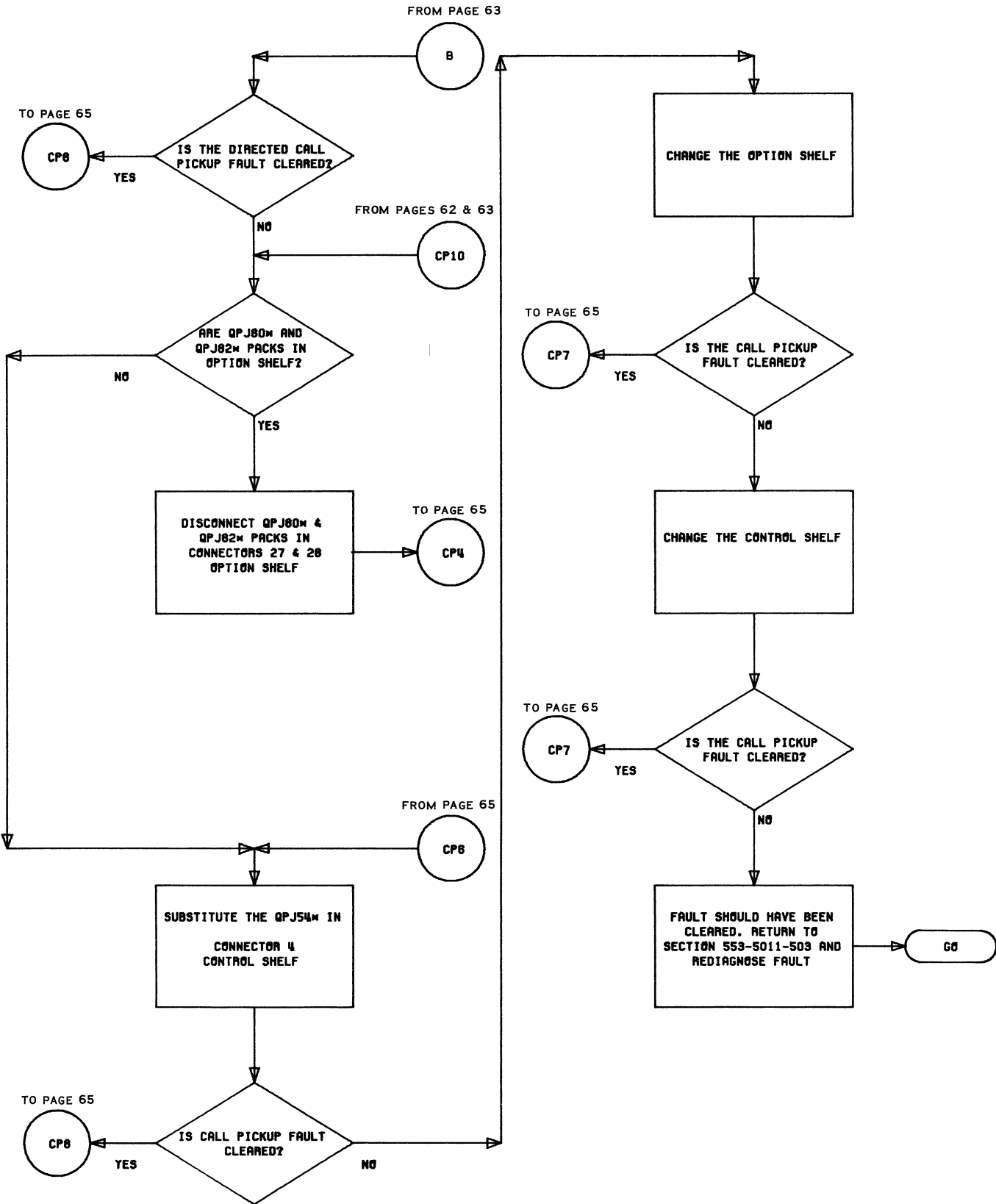
Flowchart 6 – Call Pickup Fault Clearing Procedure



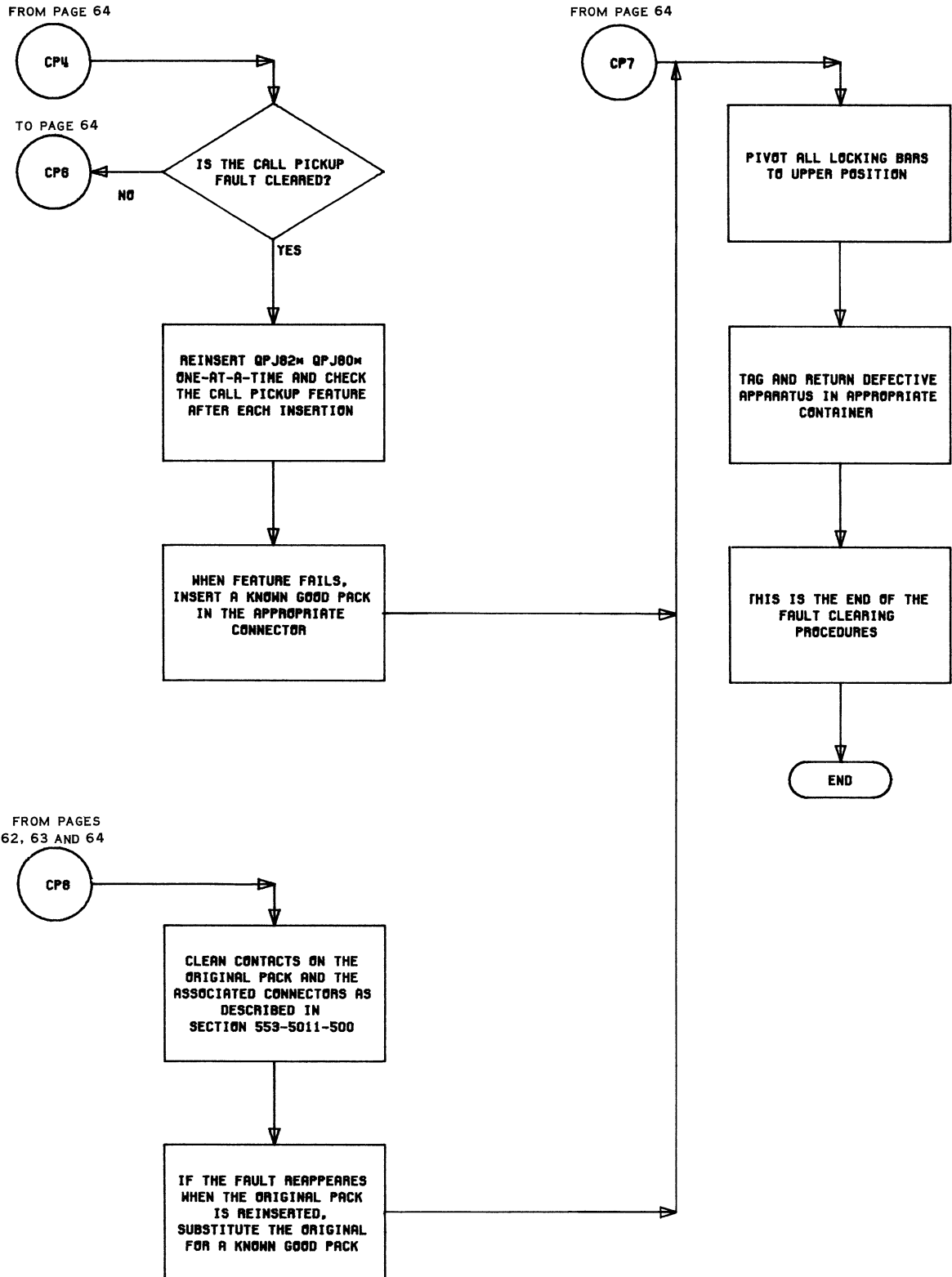
Flowchart 6 (Cont)



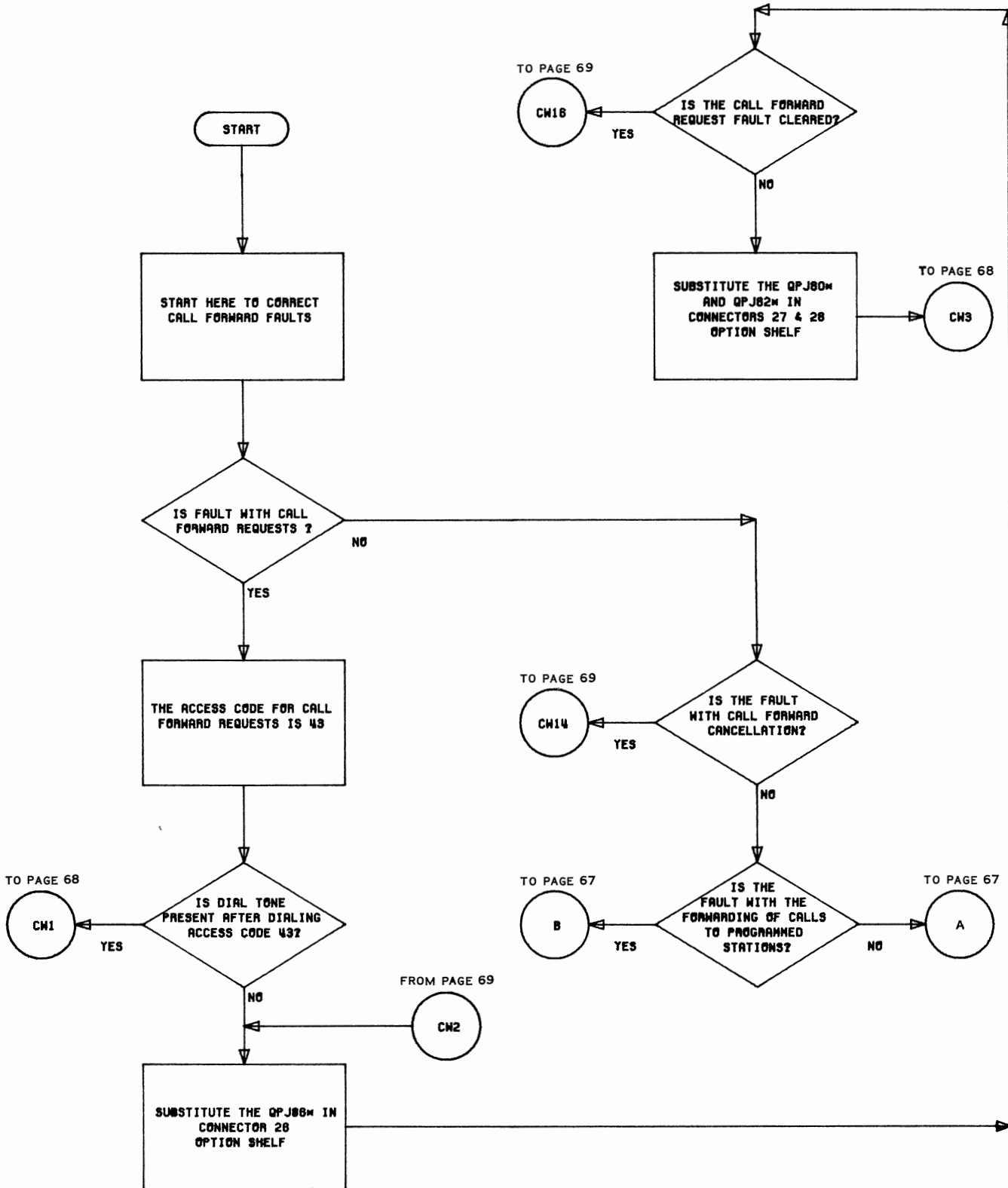
Flowchart 6 (Cont)



Flowchart 6 (Cont)

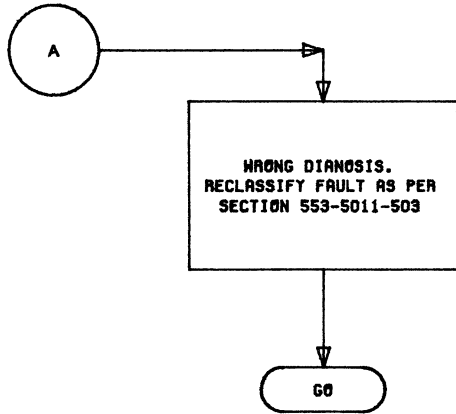


Flowchart 6 (Cont)

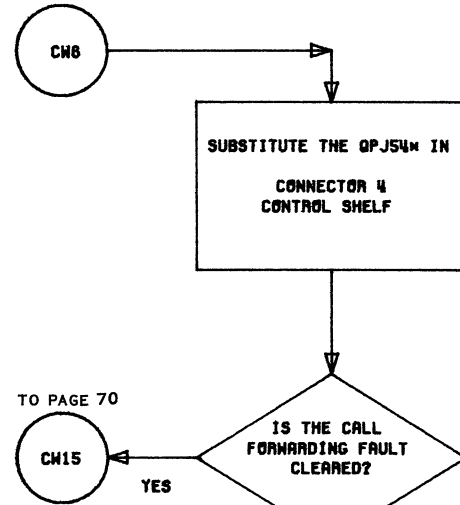


Flowchart 7 – Call Forward Fault Clearing Procedure

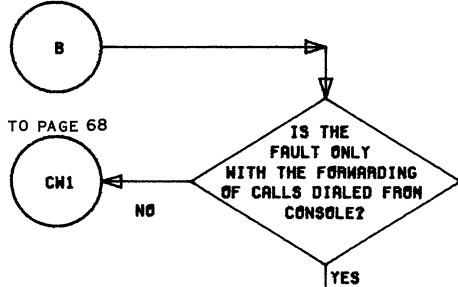
FROM PAGE 66



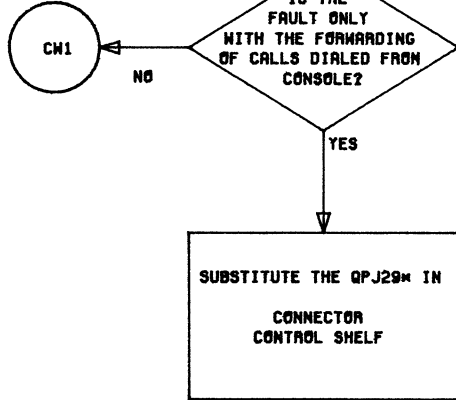
FROM PAGE 69



FROM PAGE 66



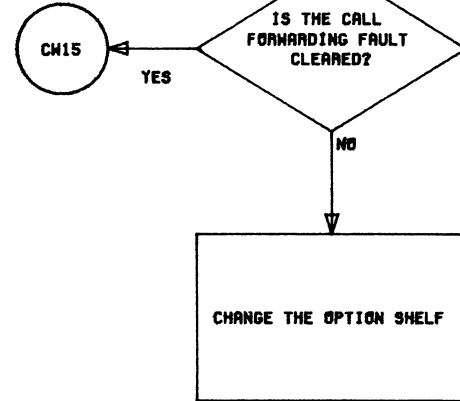
TO PAGE 68



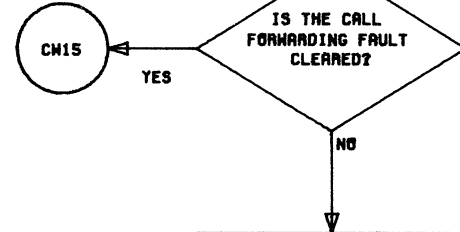
TO PAGE 69



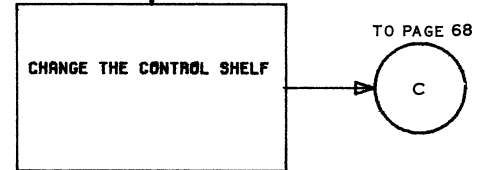
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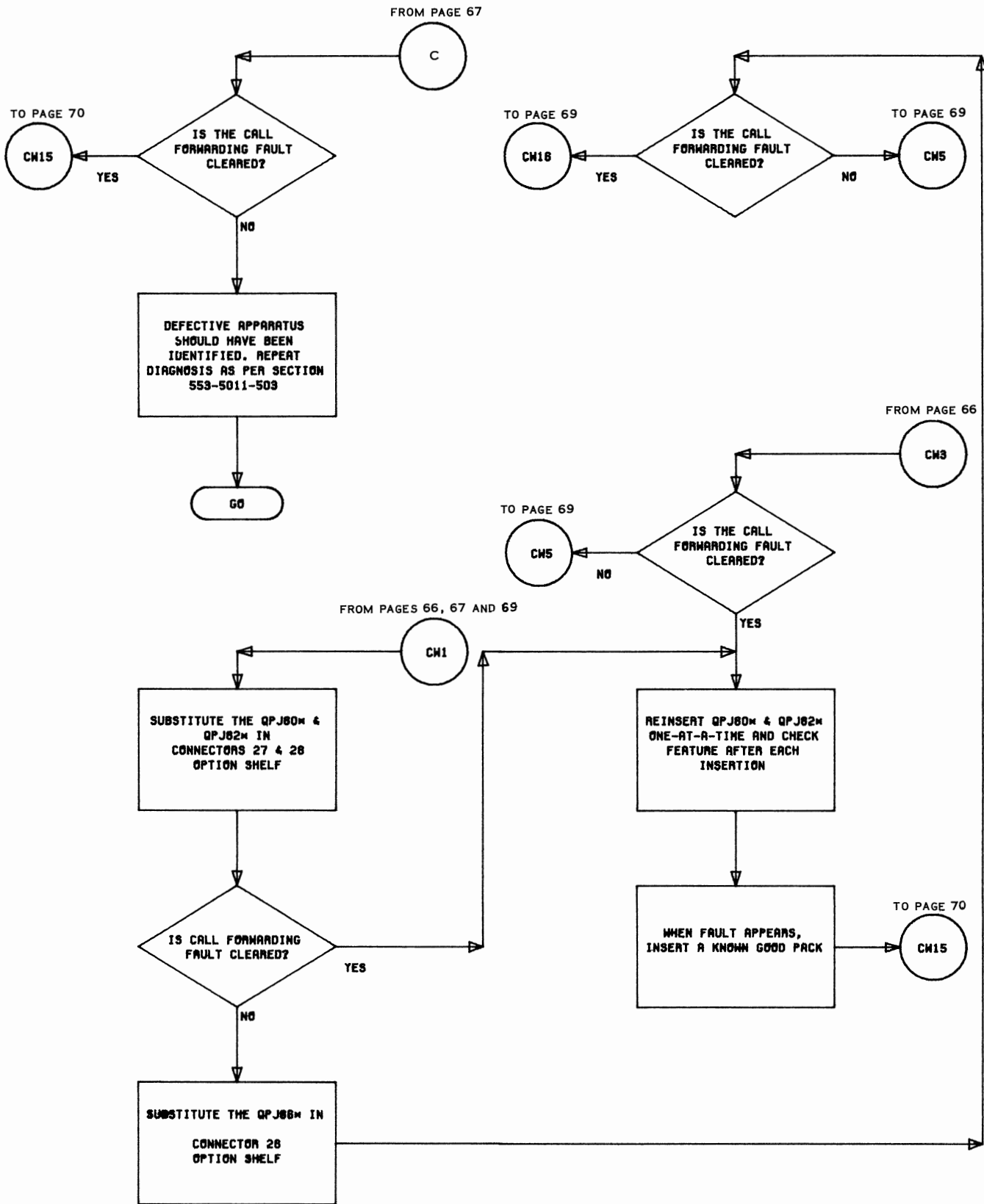
TO PAGE 70



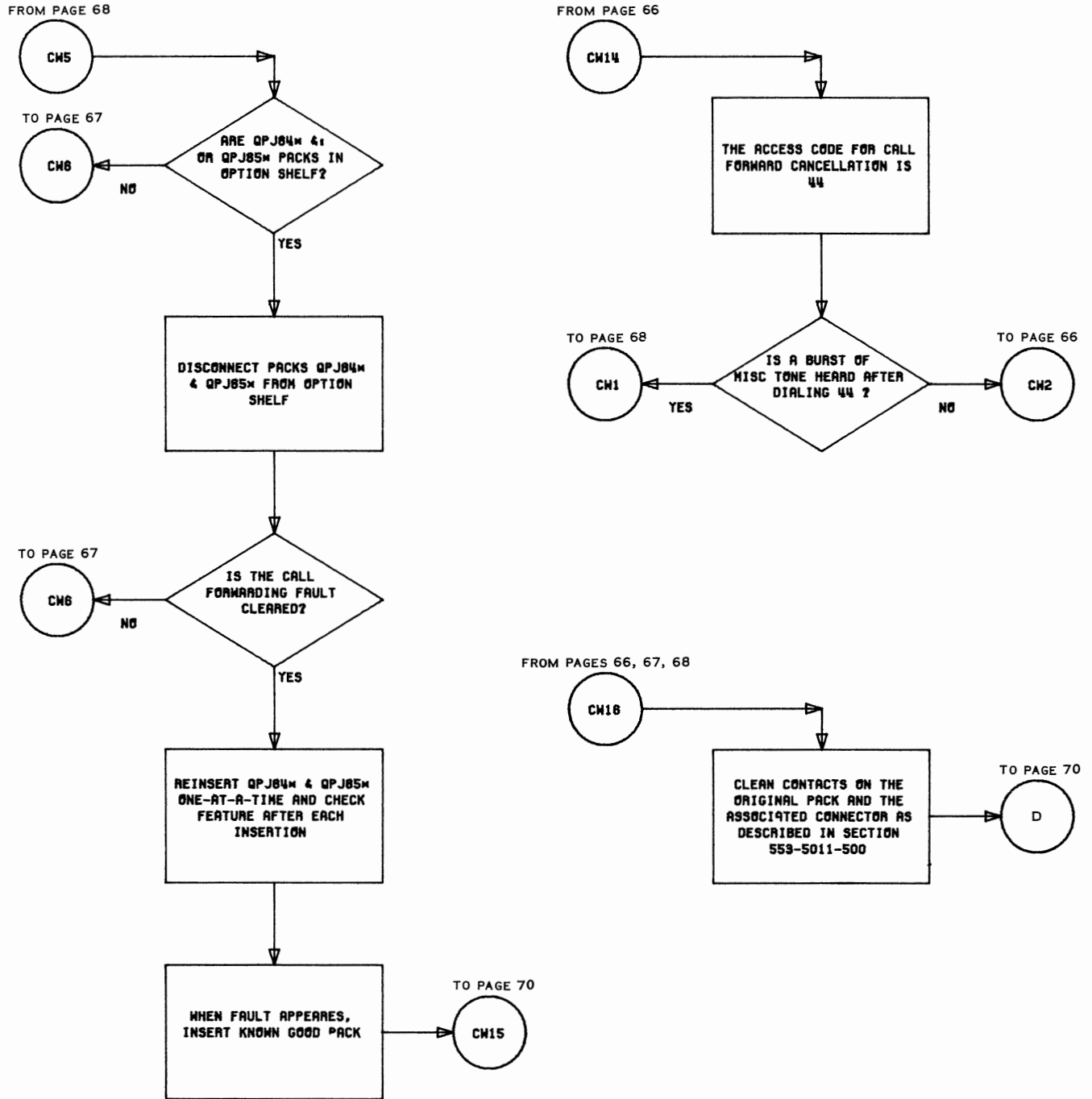
TO PAGE 68



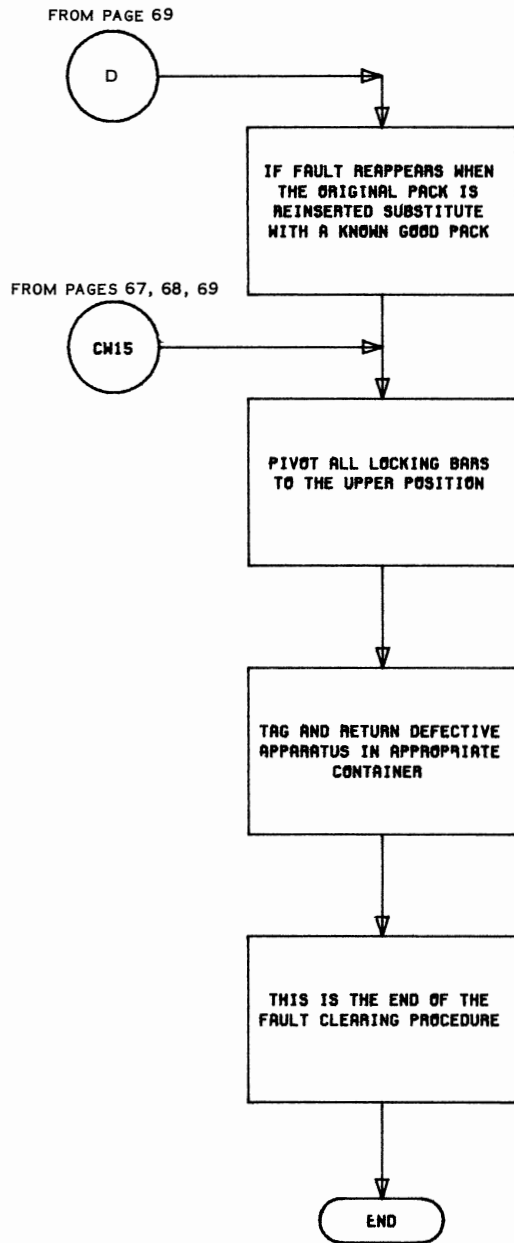
Flowchart 7 (Cont)



Flowchart 7 (Cont)



Flowchart 7 (Cont)



Flowchart 7 (Cont)