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AUTH.NAME AUTHOR AFFILIATION
 TUCKMAN, M.S. Duke Power Co.
 RECIP.NAME RECIPIENT AFFILIATION
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SUBJECT: Forwards simplified electrical diagrams & detailed fault trees of plant AC power switching logic for info & use.
 Documents requested by NRC staff during 940517 telcon.

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Duke Power Company
P.O. Box 1006
Charlotte, NC 28201-1006

M. S. TUCKMAN
Senior Vice President
Nuclear Generation
(704)382-2200 Office
(704)382-4360 Fax



DUKE POWER

May 18, 1994

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555
Attention: Document Control Desk

Subject: Oconee Nuclear Station
Docket Numbers 50-269, -270, and -287
Keowee PRA

Attached for your information and use are simplified electrical diagrams and detailed fault trees (1989 version) of the Oconee Nuclear Station AC power switching logic. These documents were requested by the NRC staff during a May 17, 1994 telephone call between P. M. Abraham (Duke) and Len Wiens and Stacy Rosenberg (NRC).

If you have any questions, or would like more information, please call P. M. Abraham at (704) 382-4520 or Scott Gewehr at (704) 382-7581.

Very truly yours,

M. S. Tuckman

M. S. Tuckman

cc (w/ attachments):

Mr. L. A. Wiens, Project Manager
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop 14H25, OWFN
Washington, D. C. 20555

(w/o attachments):

Mr. S. D. Ebnetter, Regional Administrator
U.S. Nuclear Regulatory Commission - Region II
101 Marietta Street, NW - Suite 2900
Atlanta, Georgia 30323

Mr. P. E. Harmon
Senior Resident Inspector
Oconee Nuclear Station

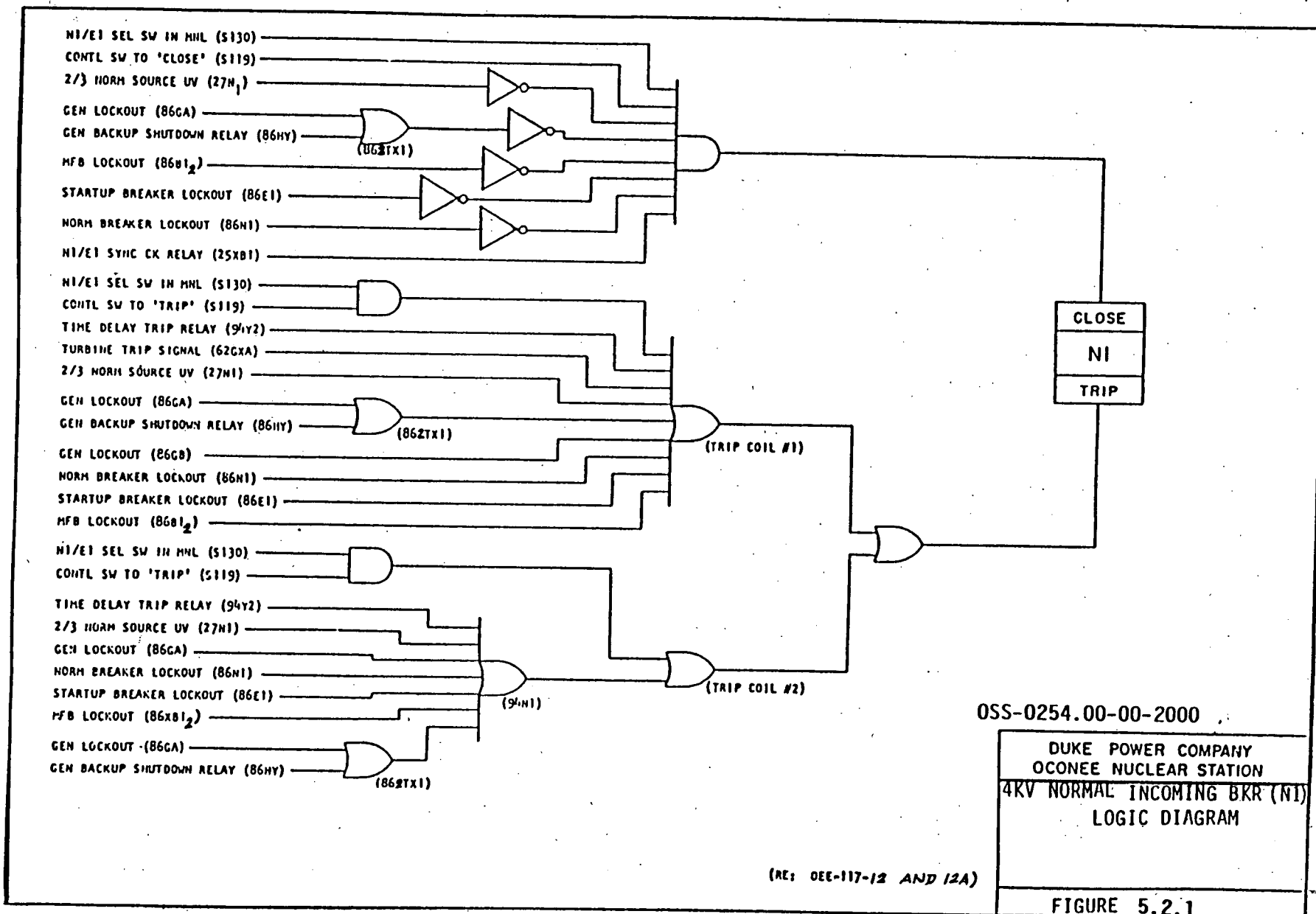
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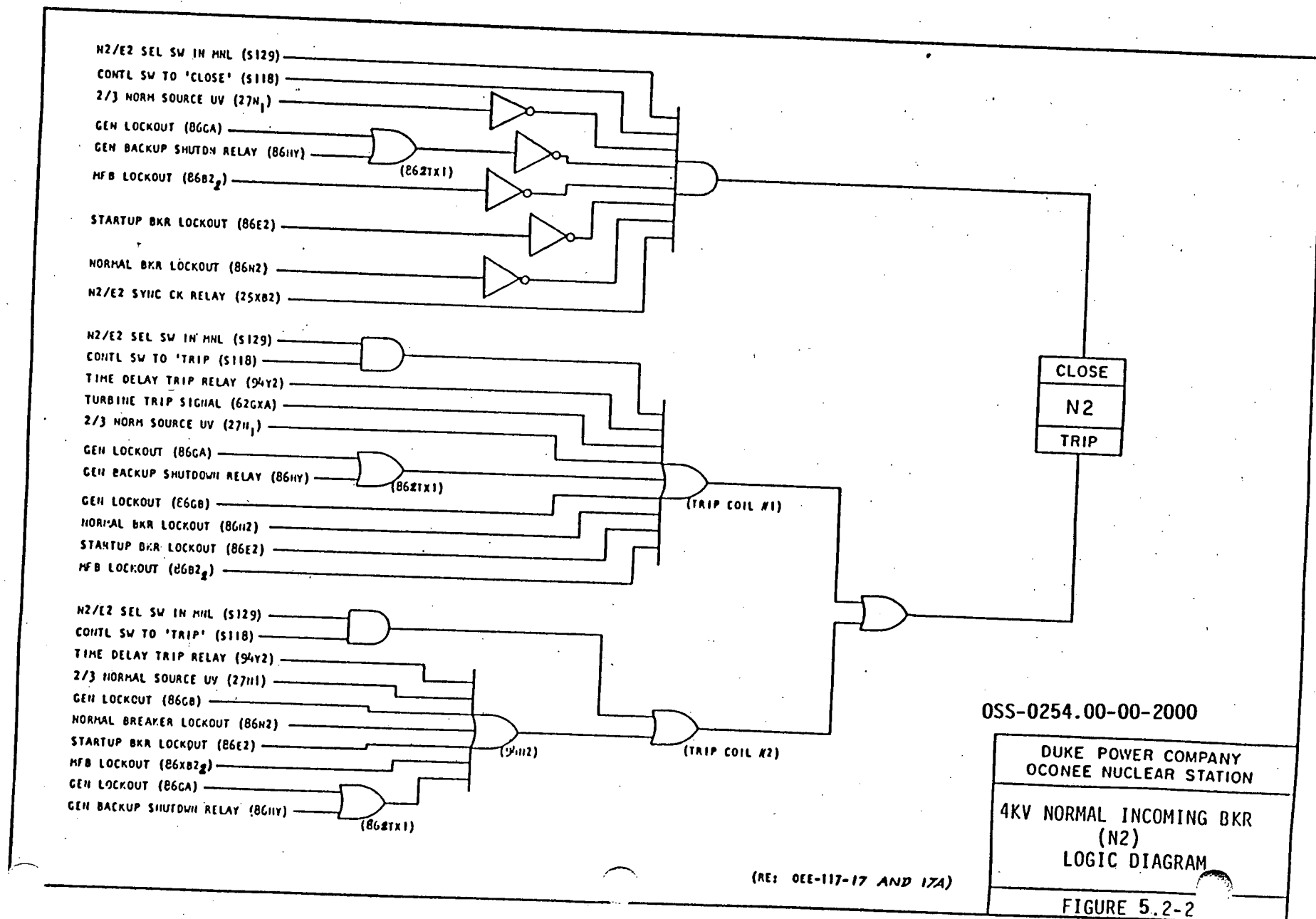
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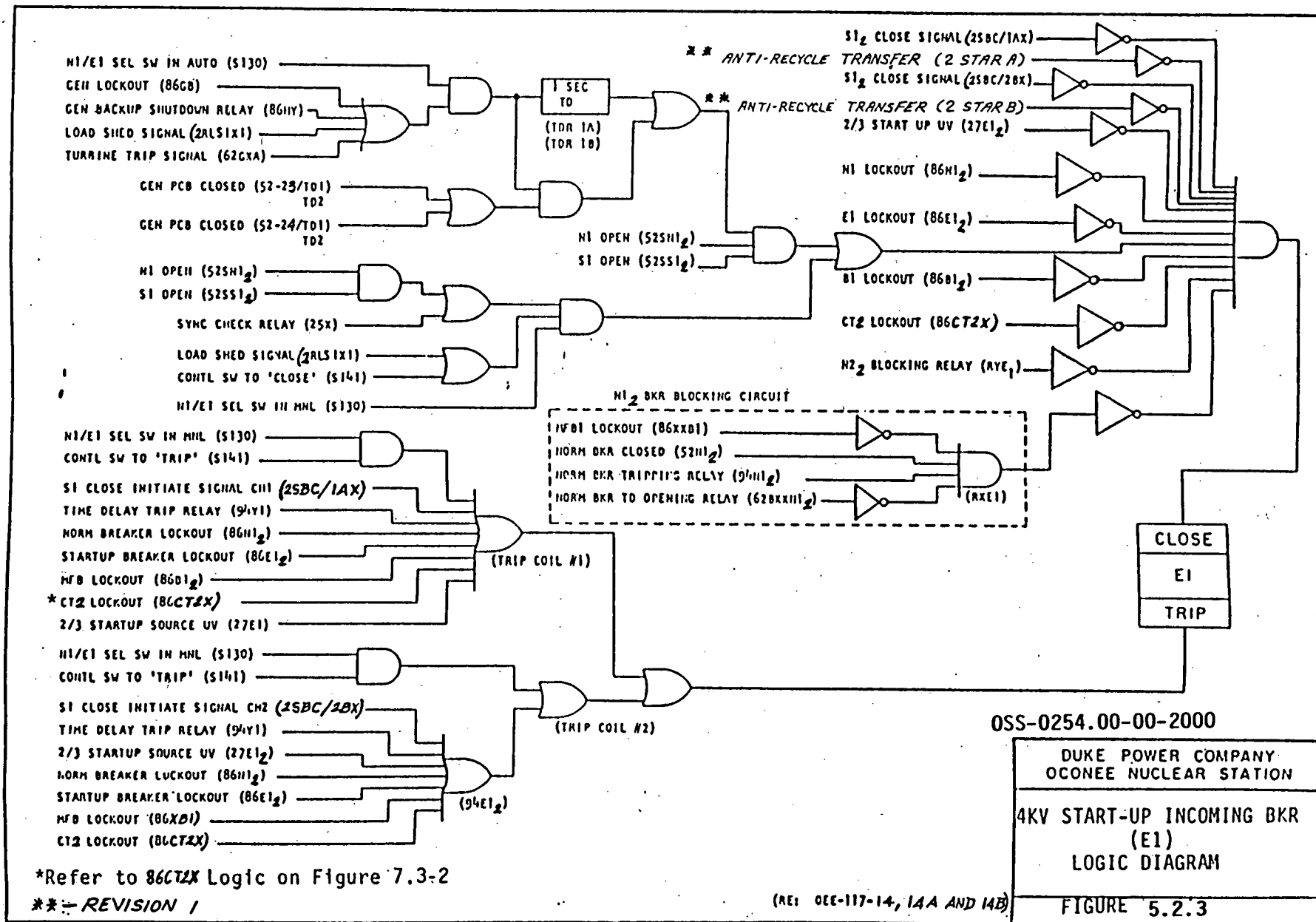
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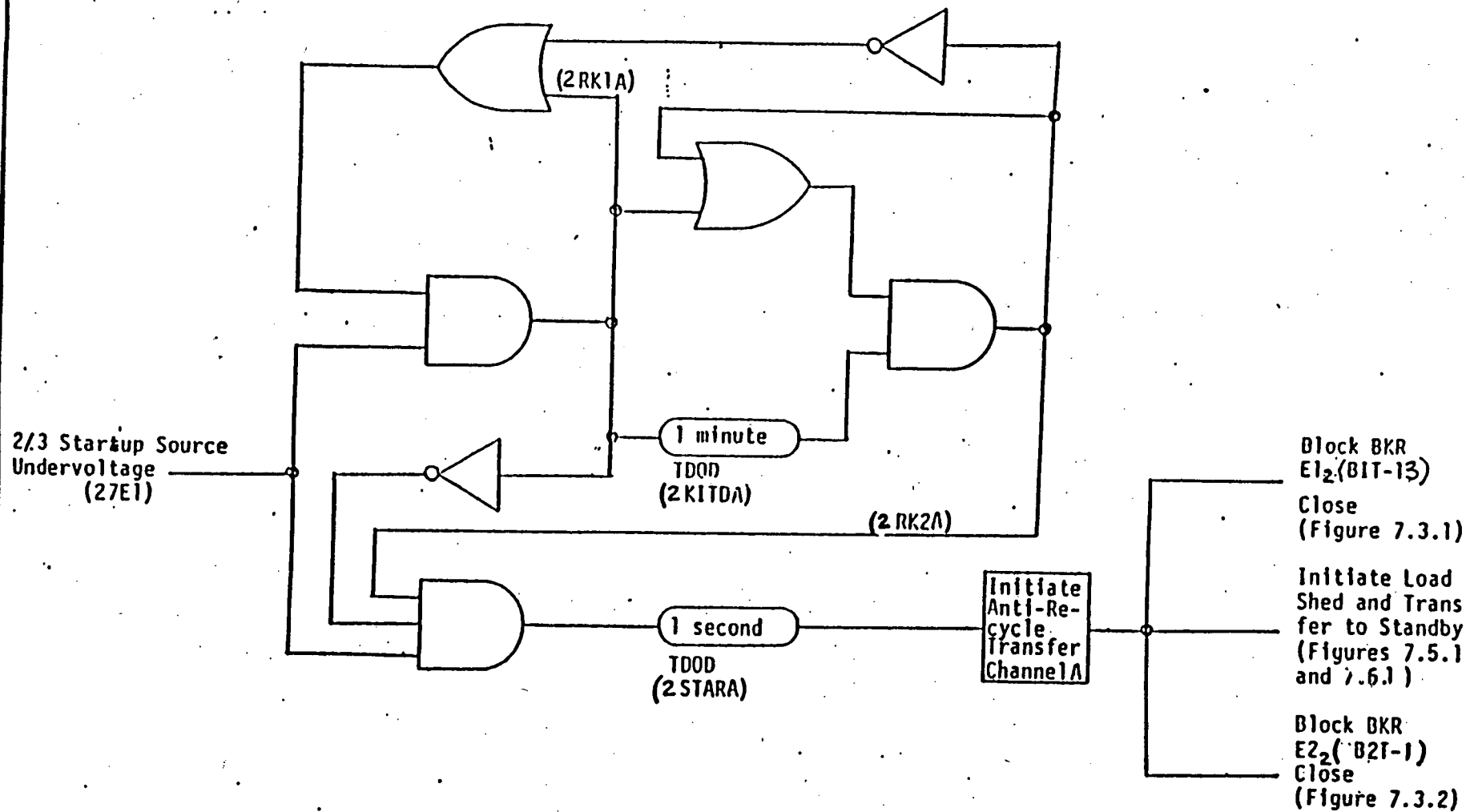
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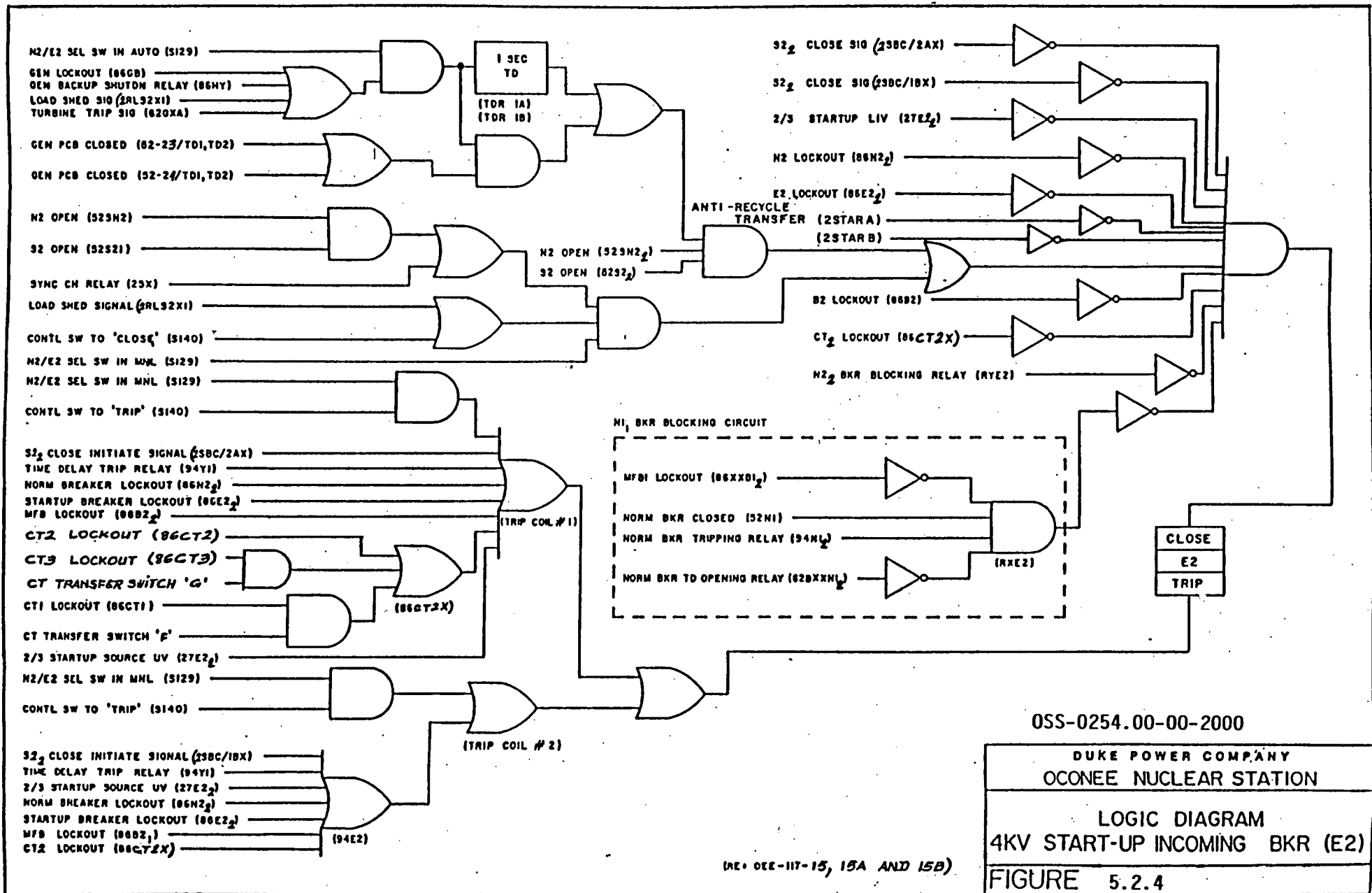
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DUKE POWER COMPANY
OCONEE NUCLEAR STATION

STARTUP
ANTI-RECYCLE TRANSFER
CHANNEL A
LOGIC DIAGRAM

FIGURE 5.2.3A

(RE: OEE-217-111-1)



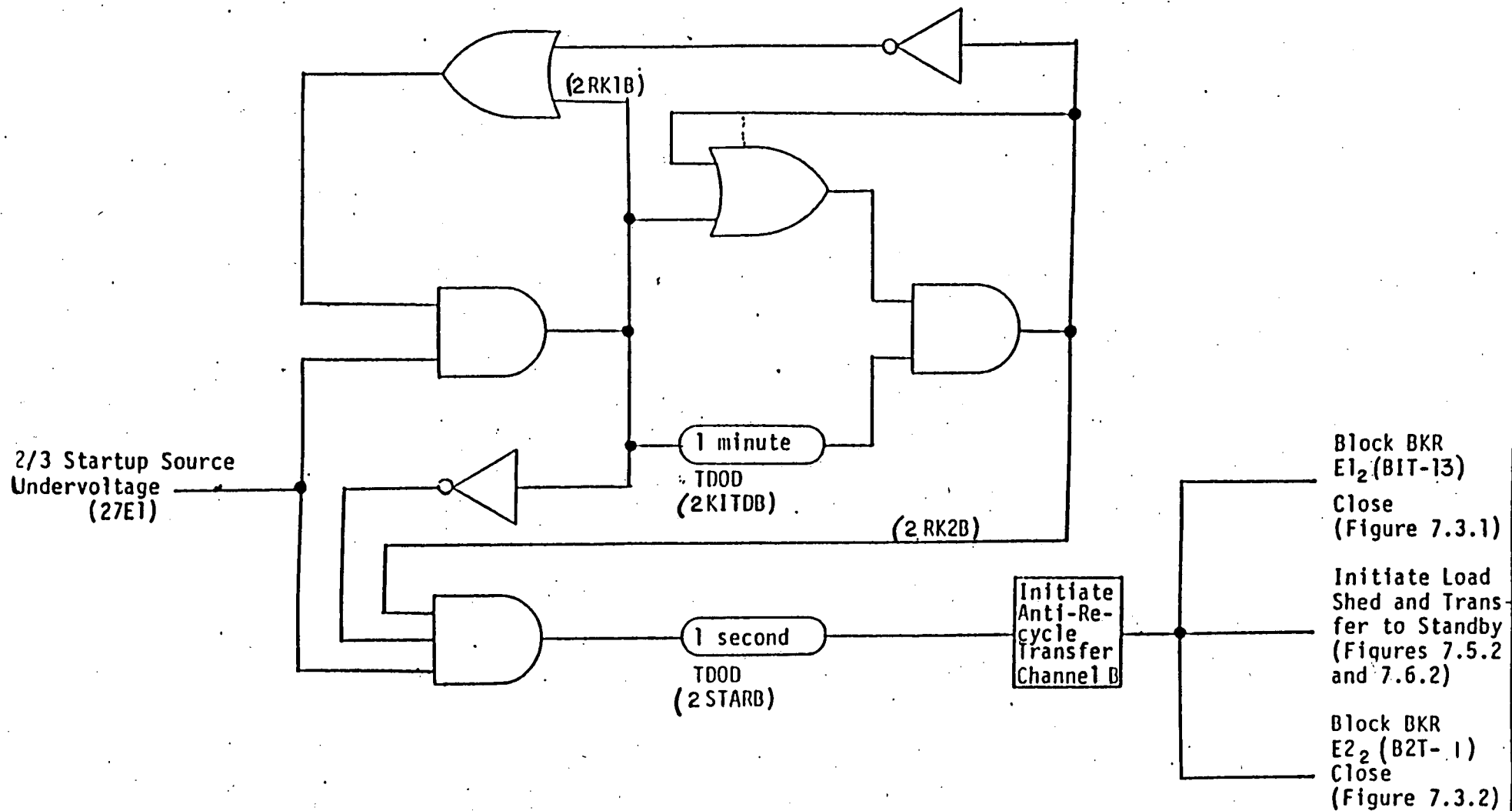
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OCONEE NUCLEAR STATION

LOGIC DIAGRAM
4KV START-UP INCOMING BKR (E2)

FIGURE 5.2.4

(REF: OEE-117-15, 15A AND 15B)



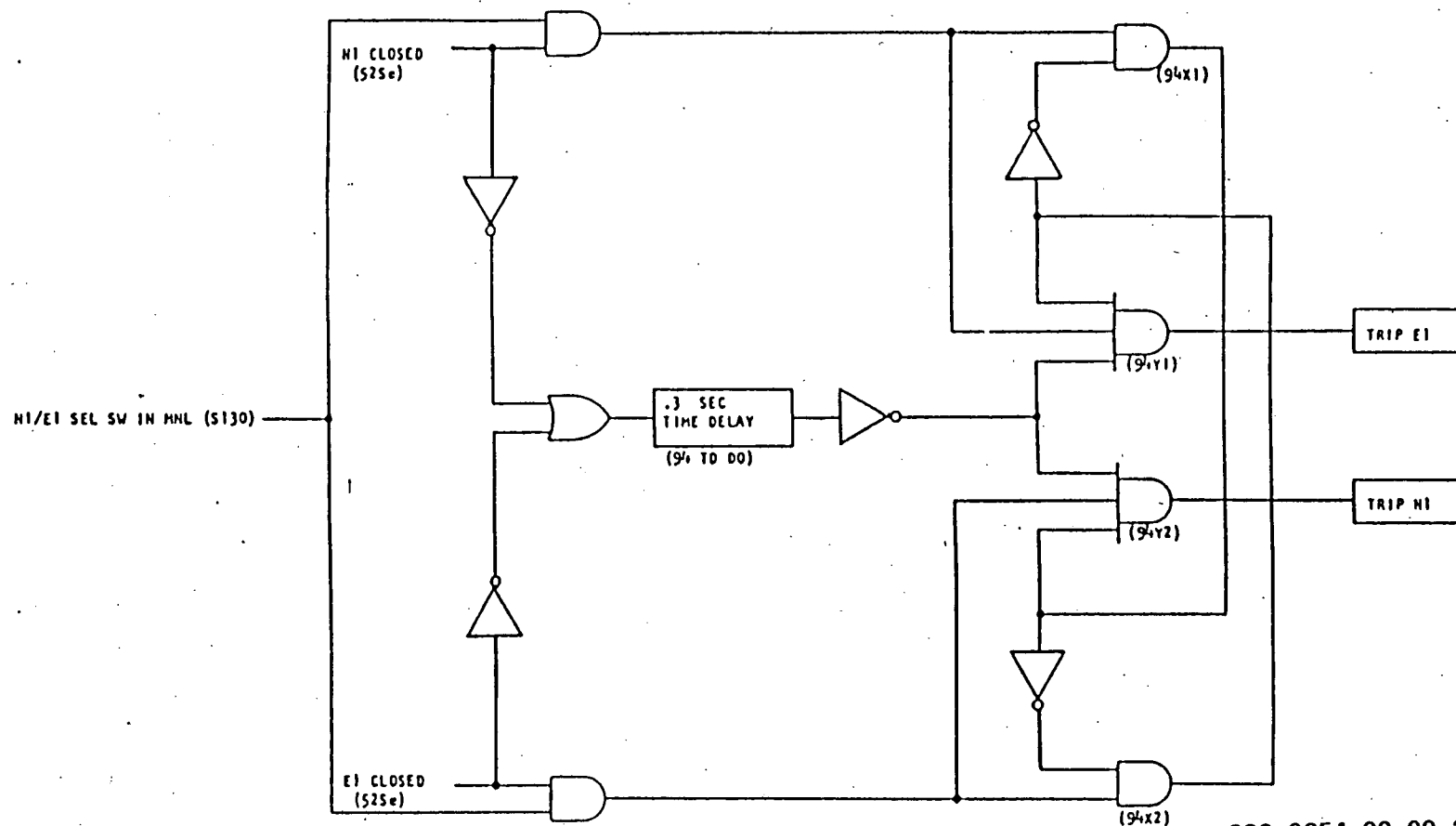
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DUKE POWER COMPANY
OCONEE NUCLEAR STATION

STARTUP
ANTI-RECYCLE TRANSFER
CHANNEL B
LOGIC DIAGRAM

FIGURE 5.2.4A

(RE: OEE-217-11-1)



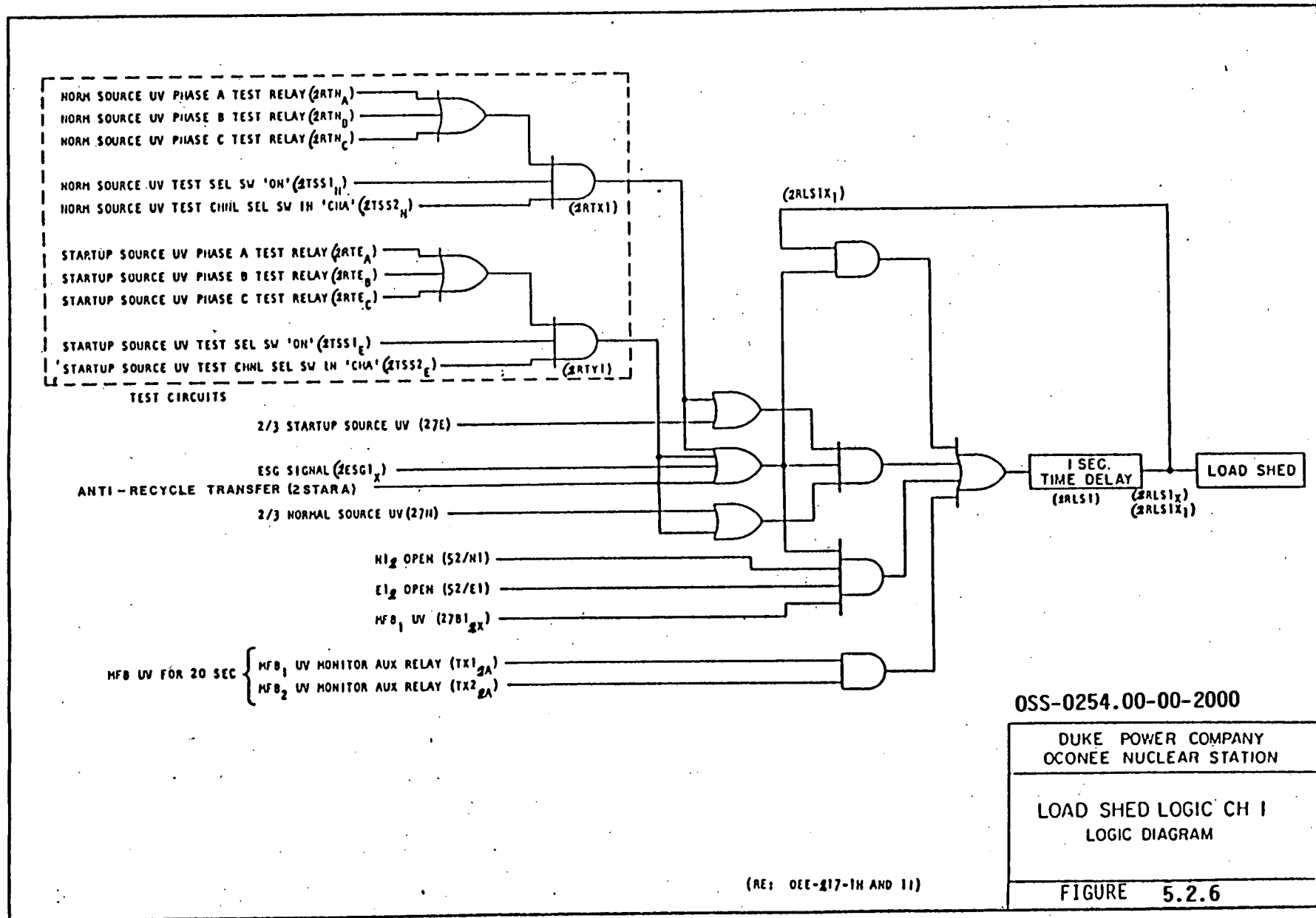
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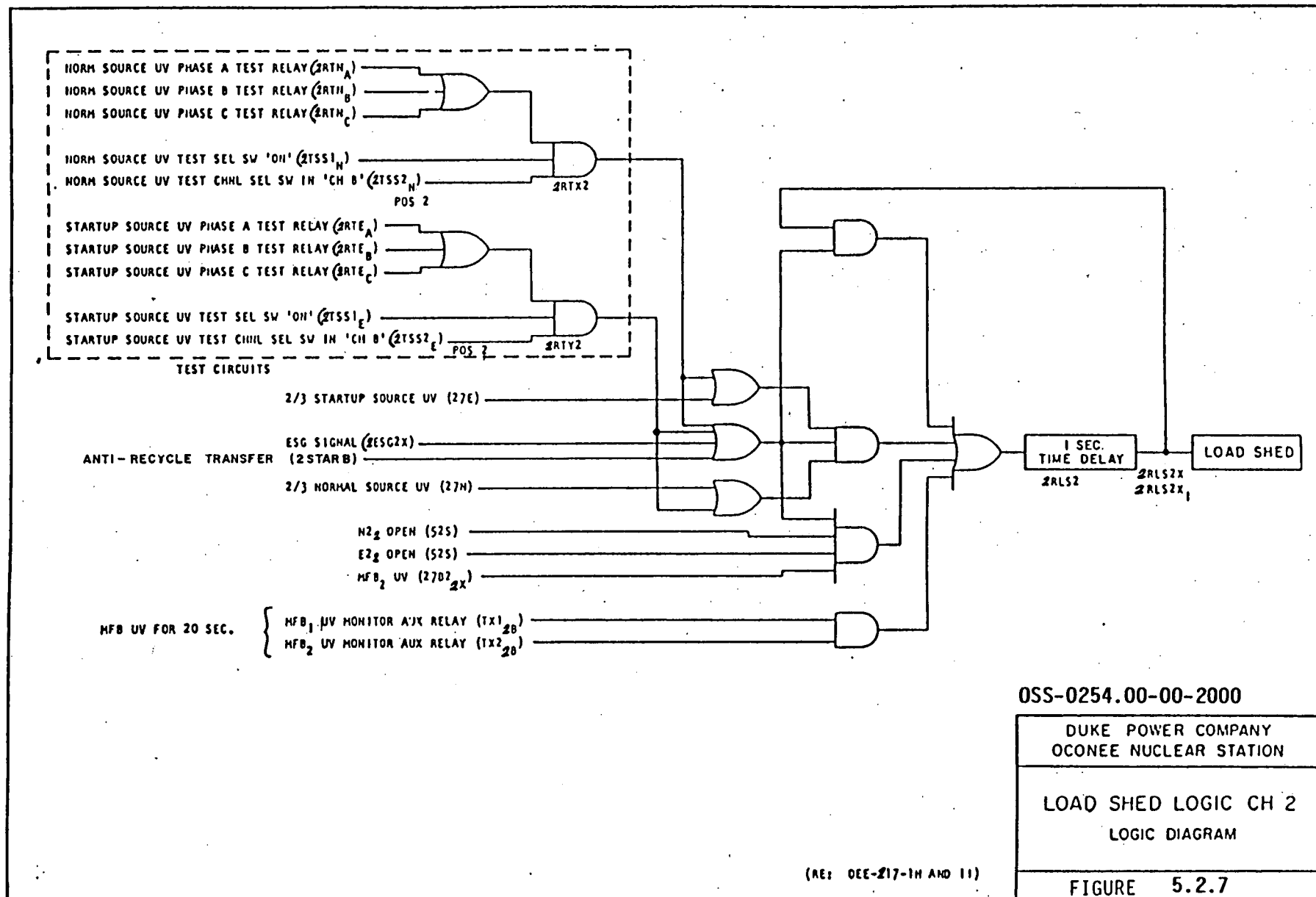
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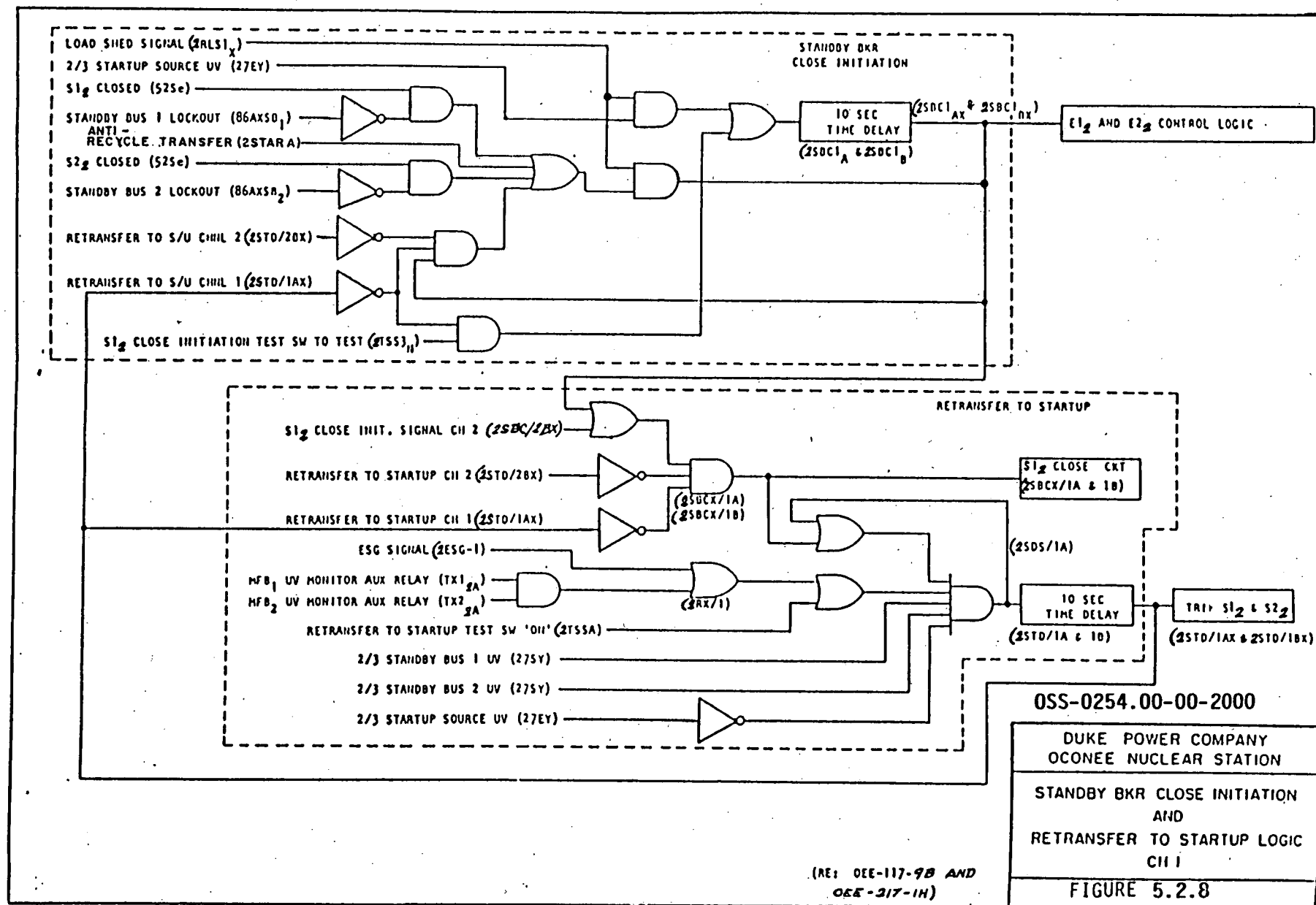
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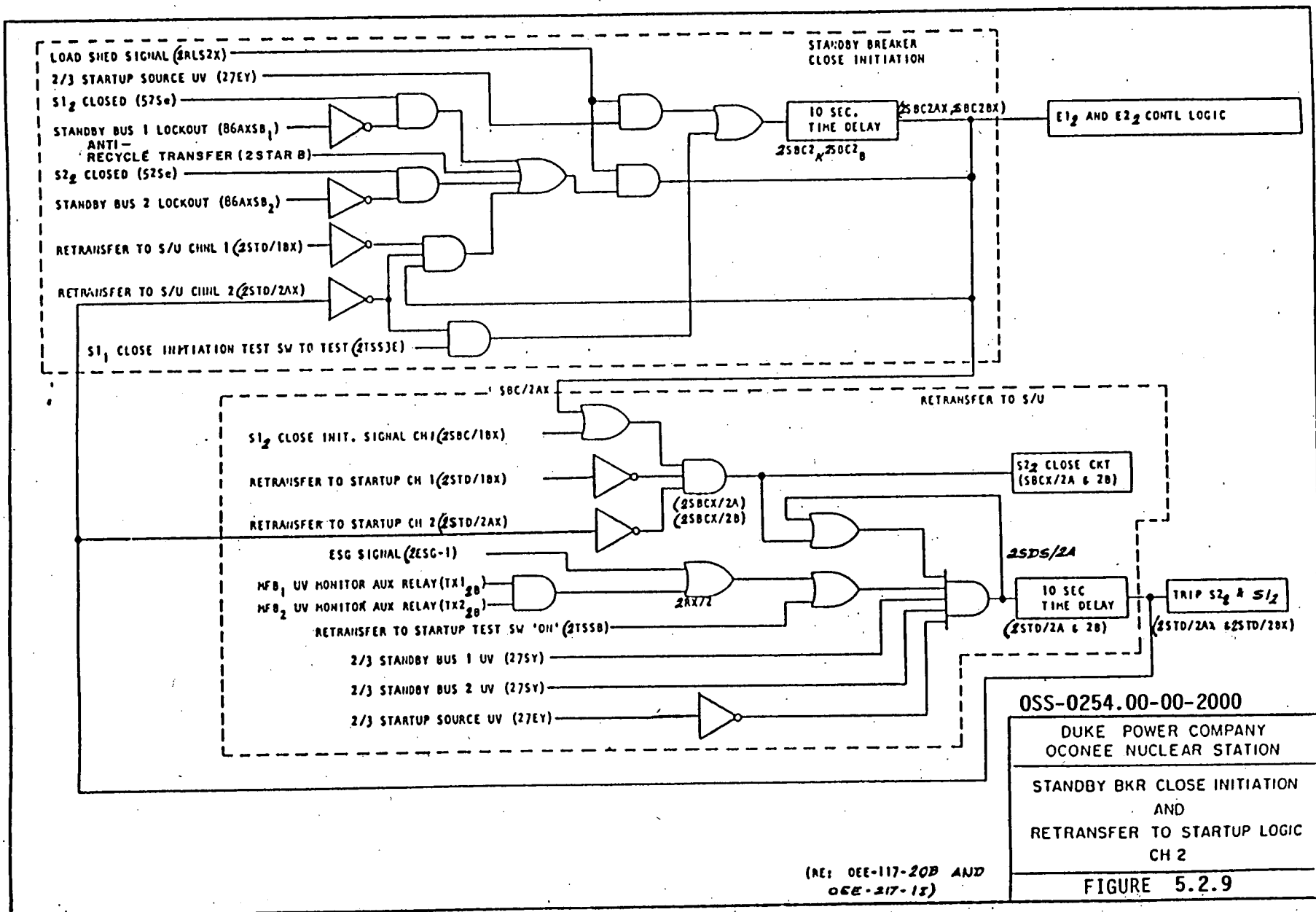
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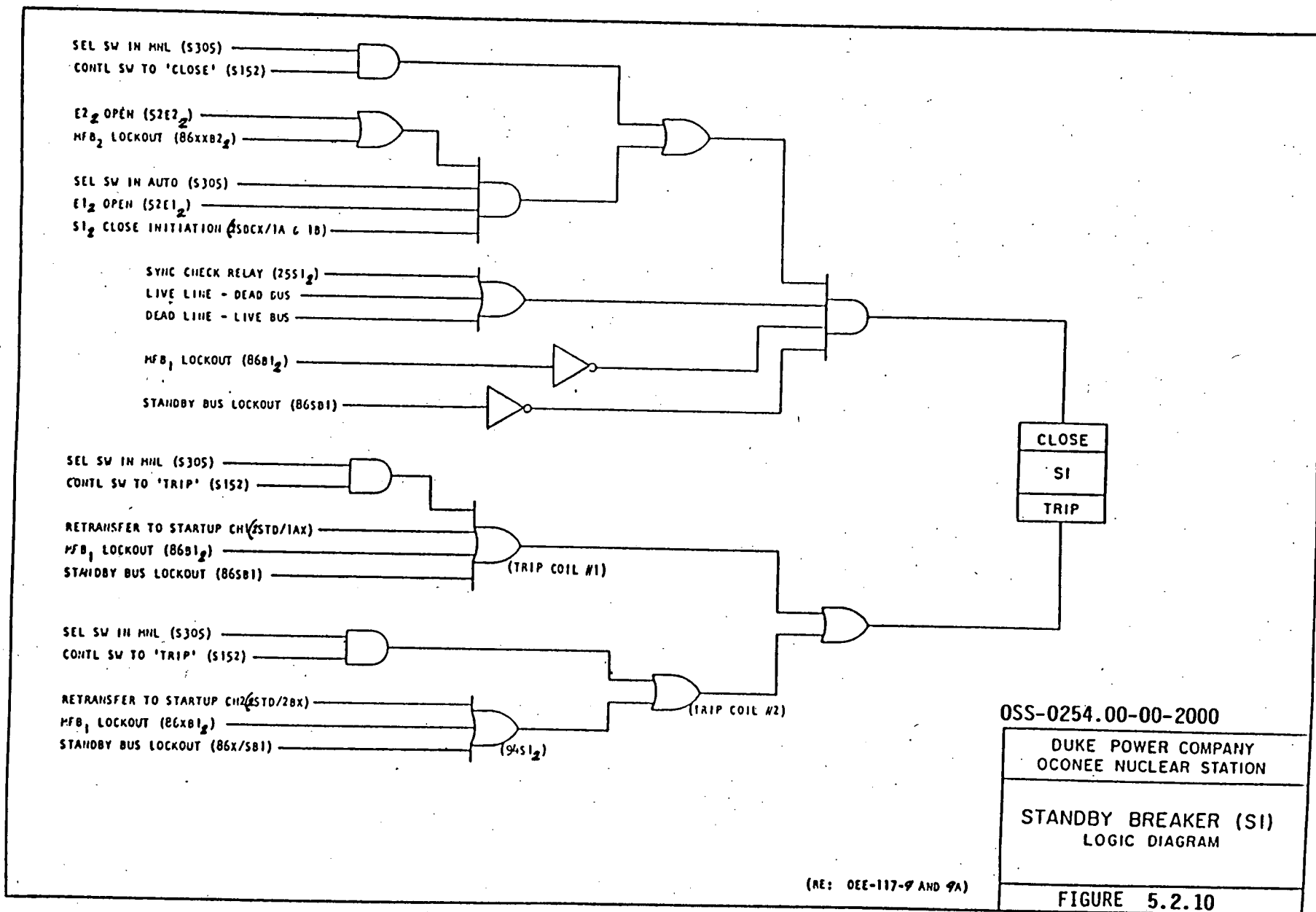
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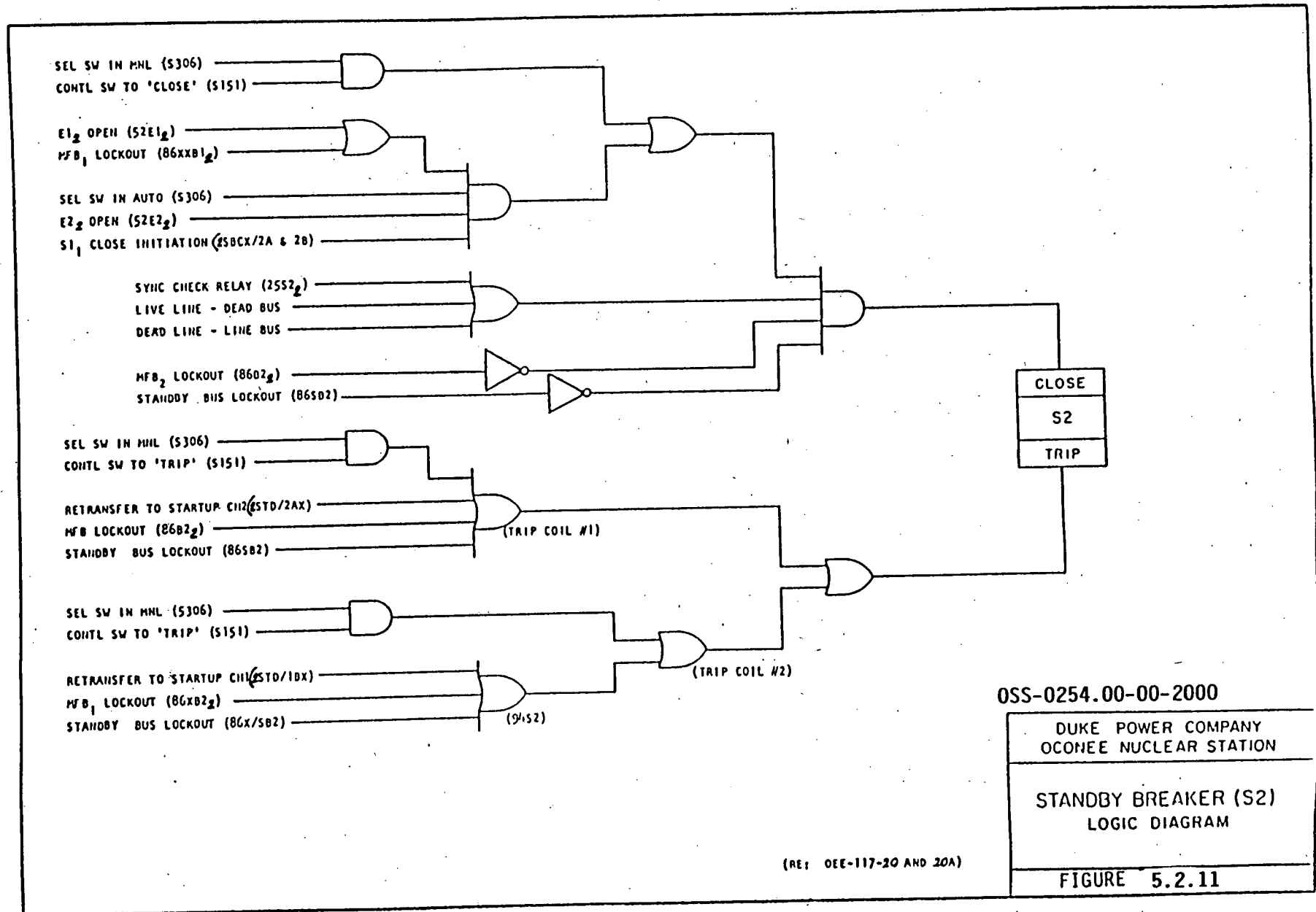


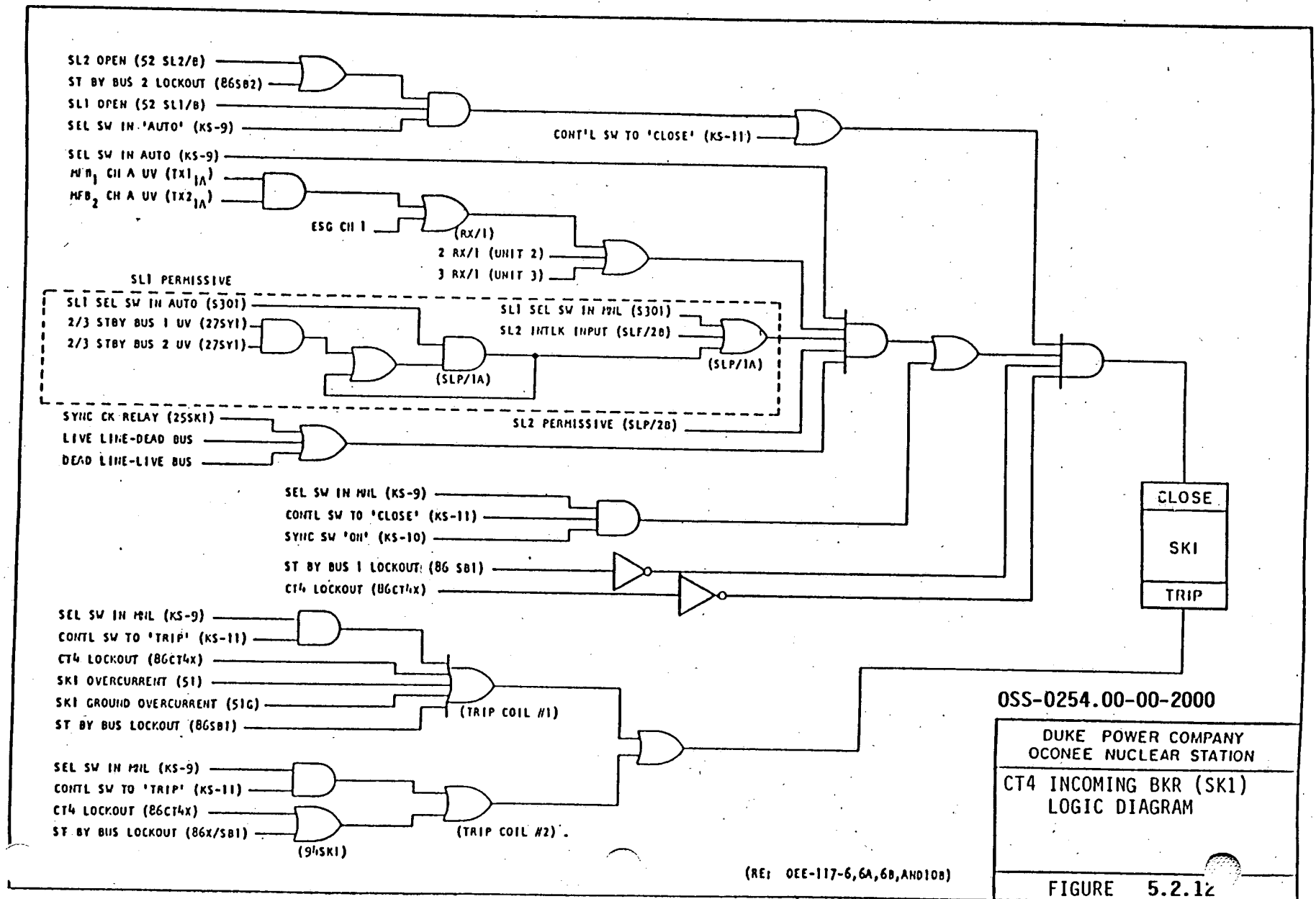










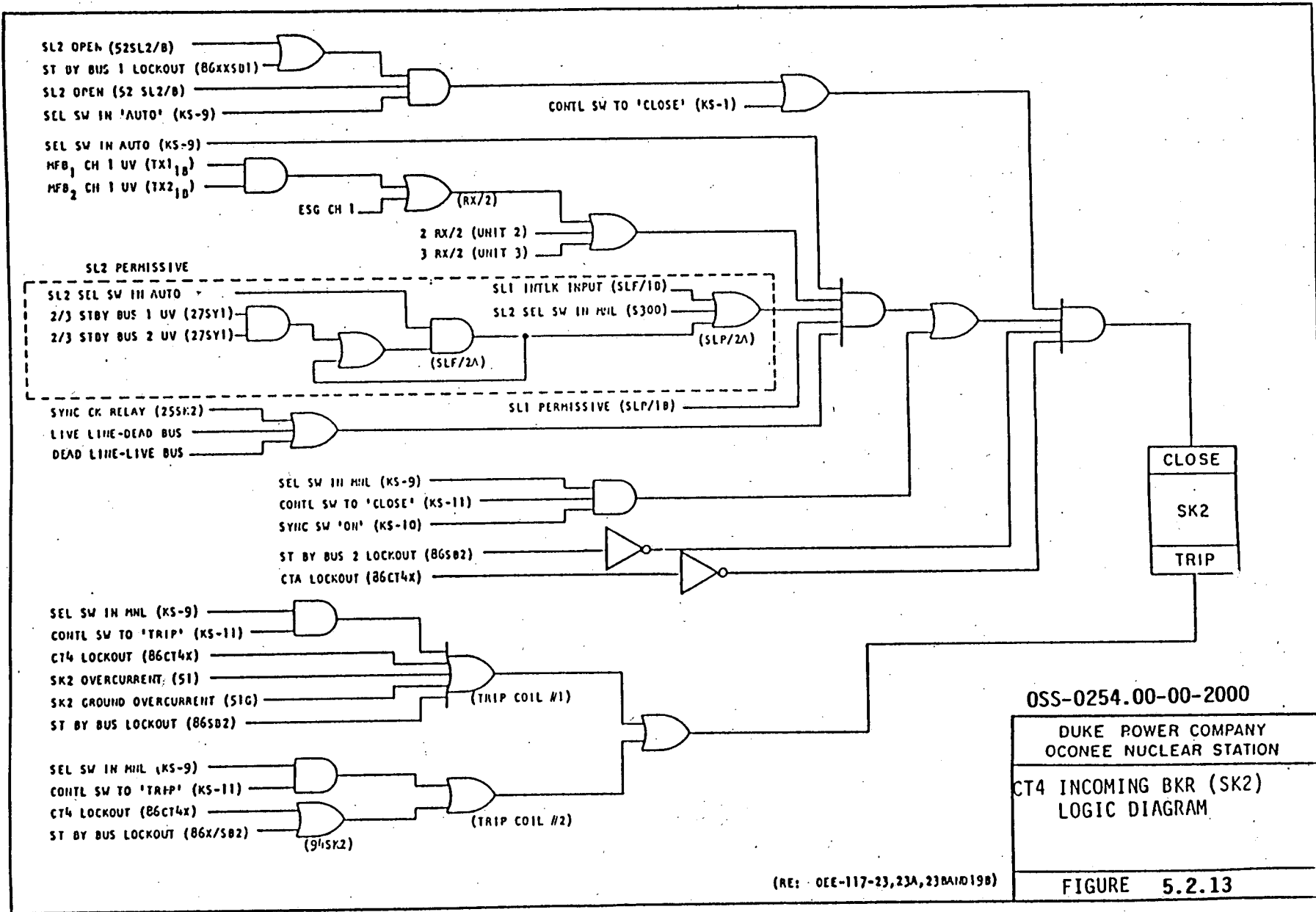


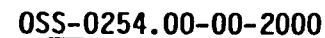
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OCONEE NUCLEAR STATION

CT4 INCOMING BKR (SK1)
LOGIC DIAGRAM

FIGURE 5.2.12

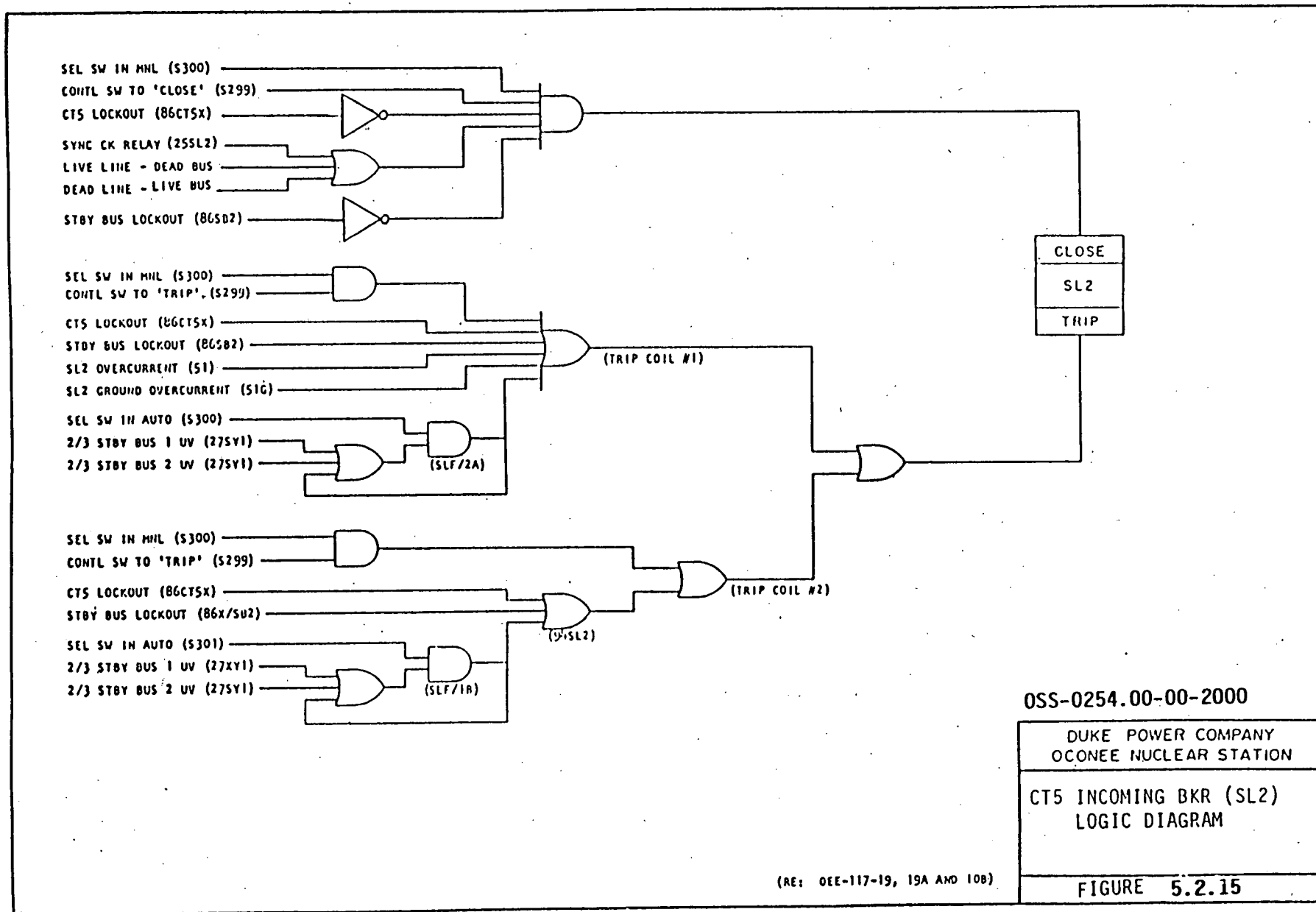


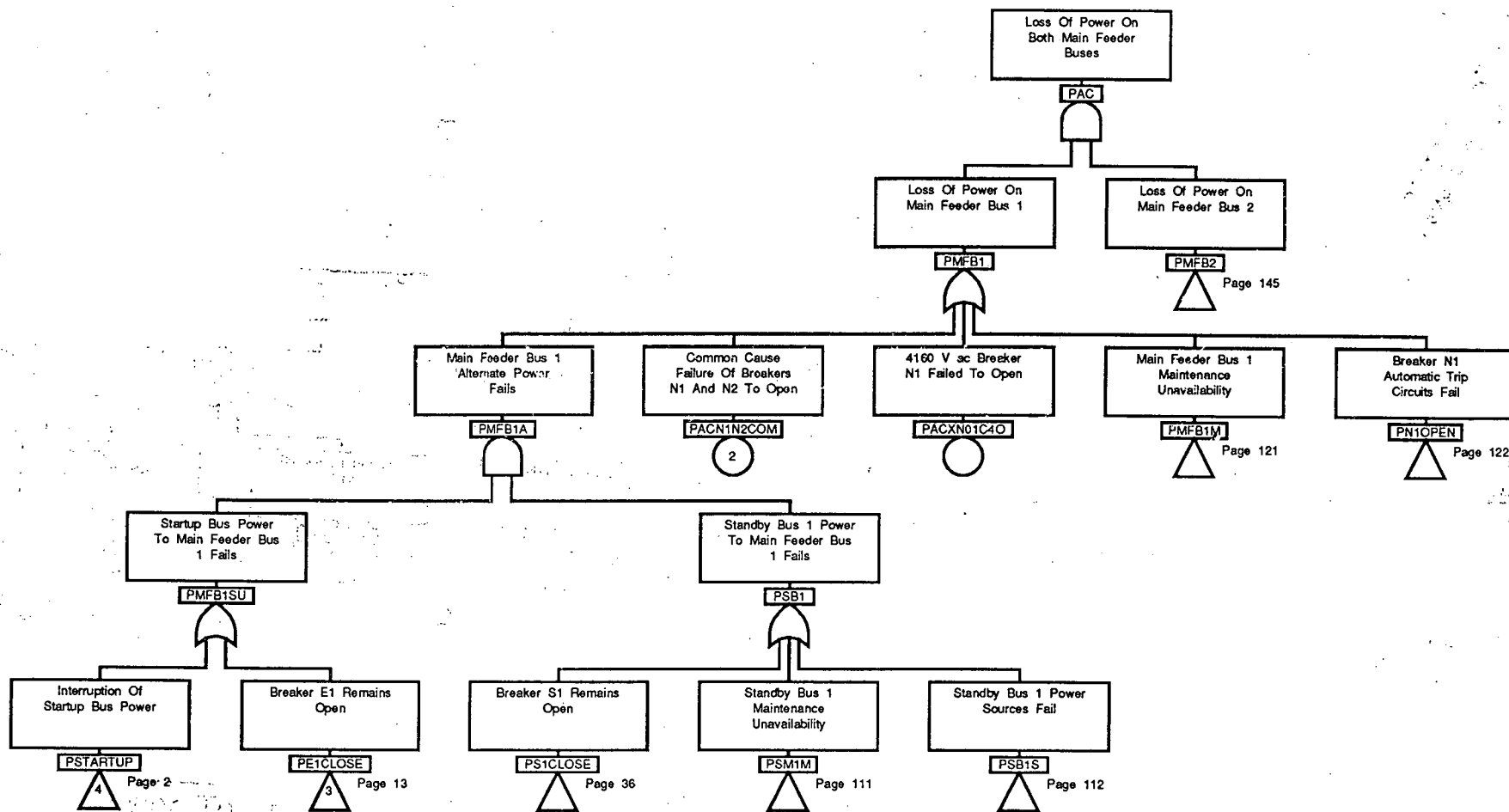


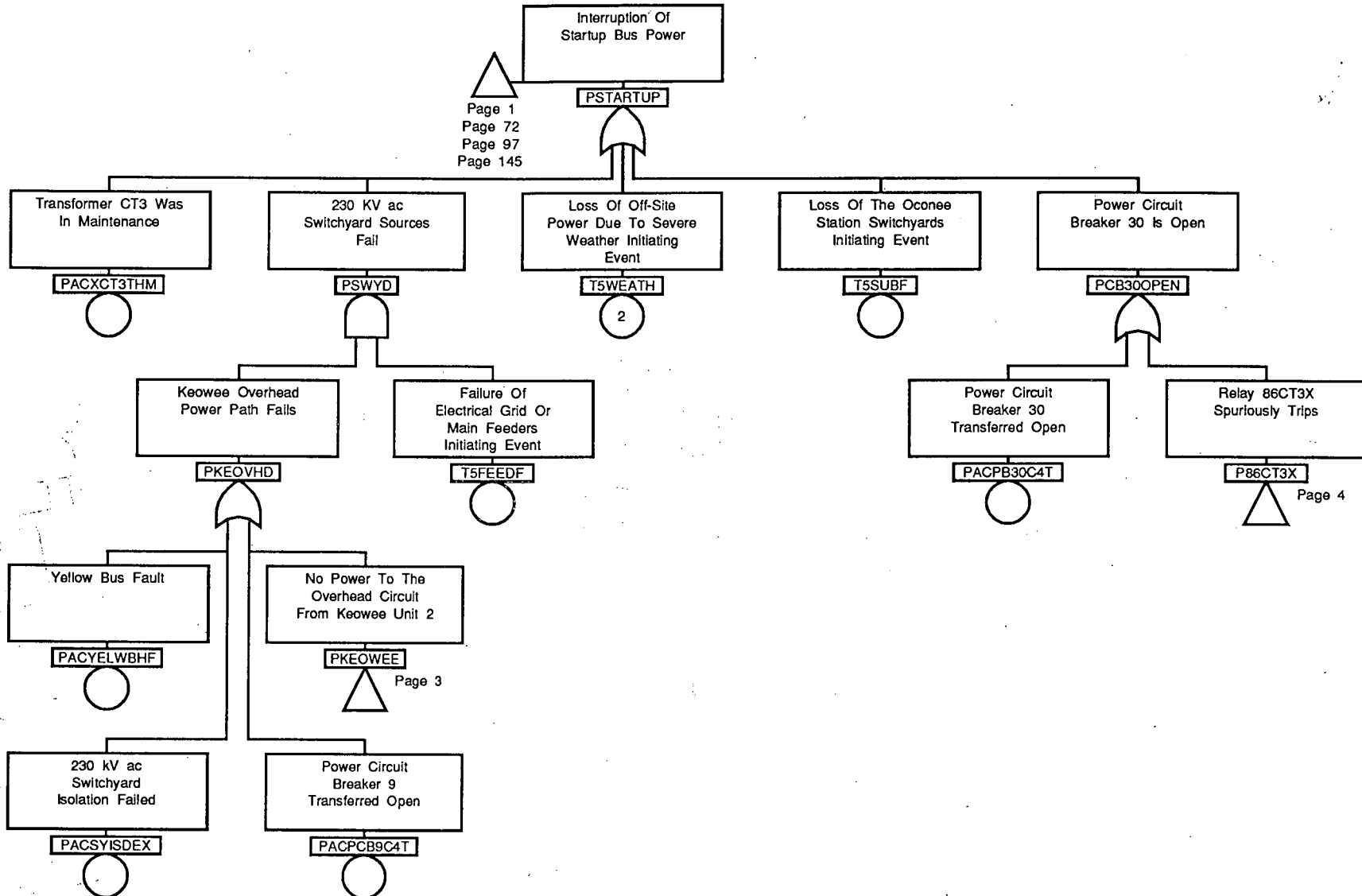
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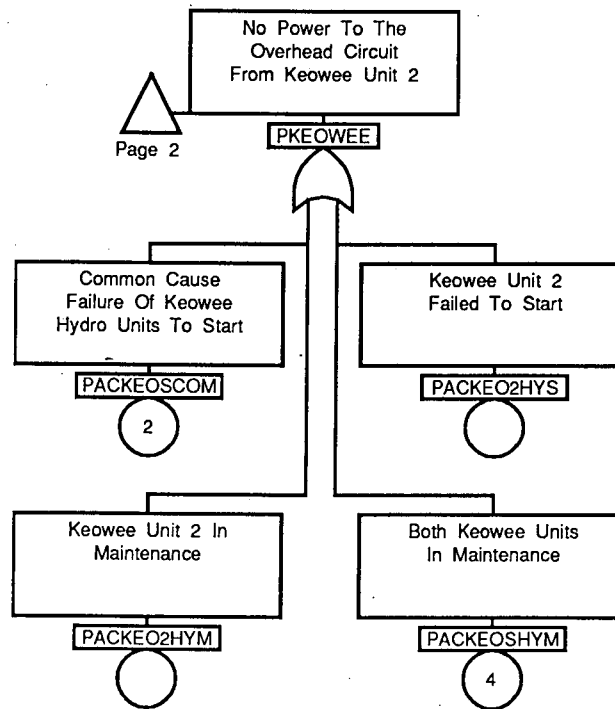
CT5 INCOMING BKR (SL1)
LOGIC DIAGRAM

FIGURE 5.2.14

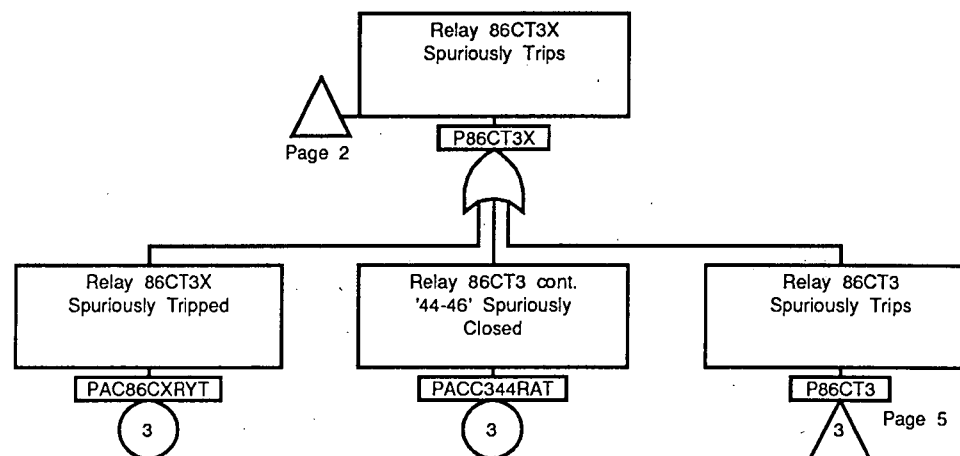


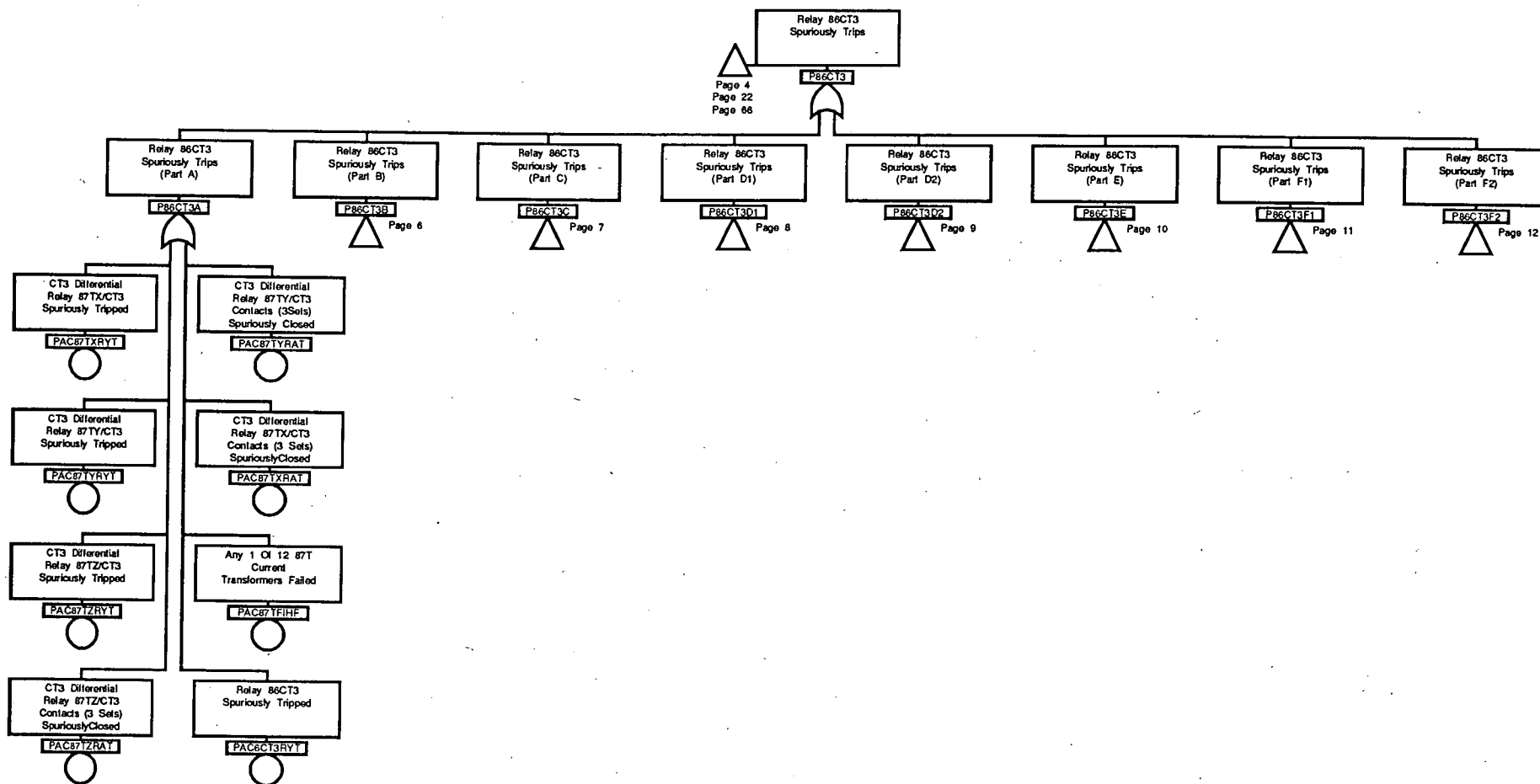


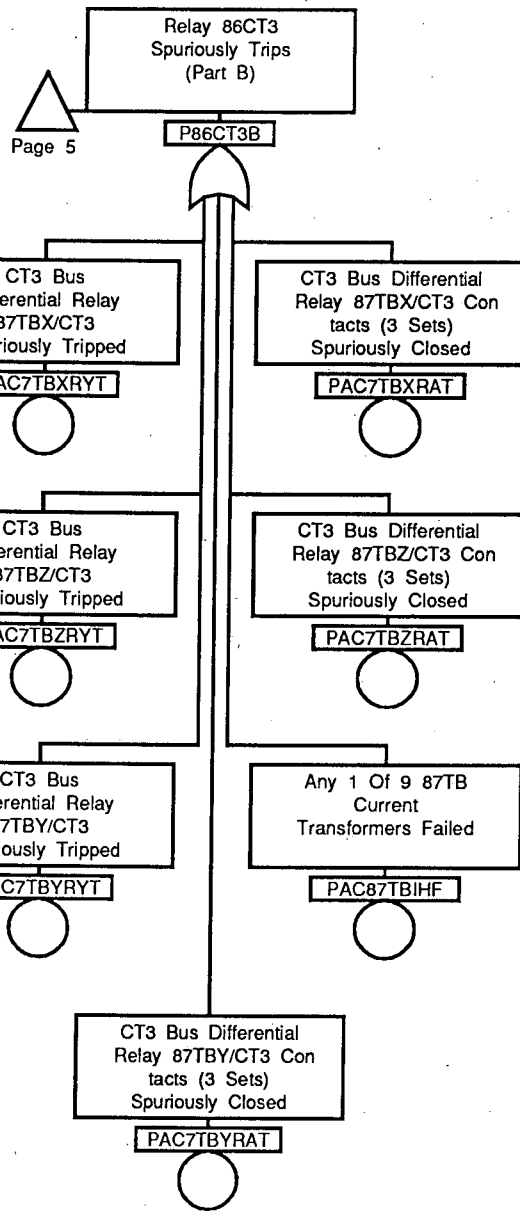




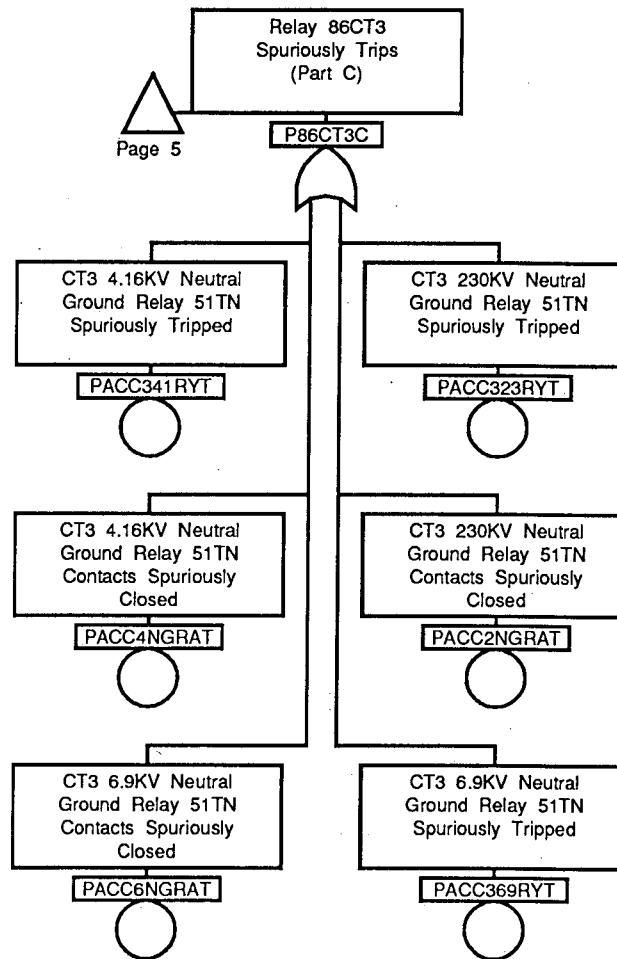
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KEORCOM
PACKEOMTHF



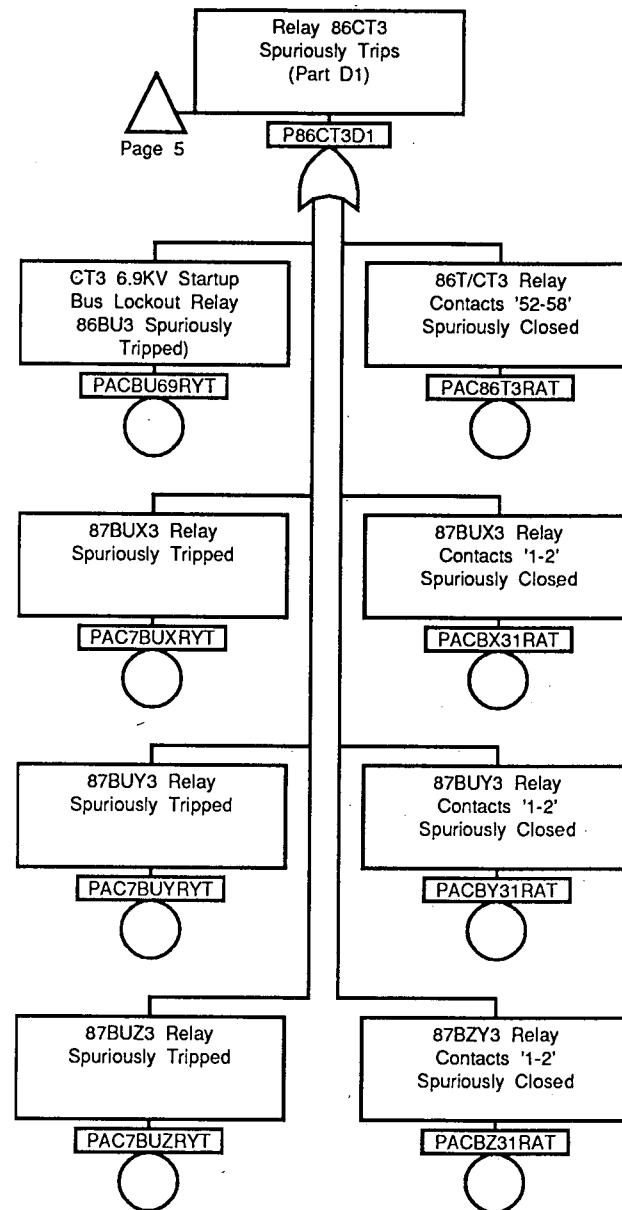


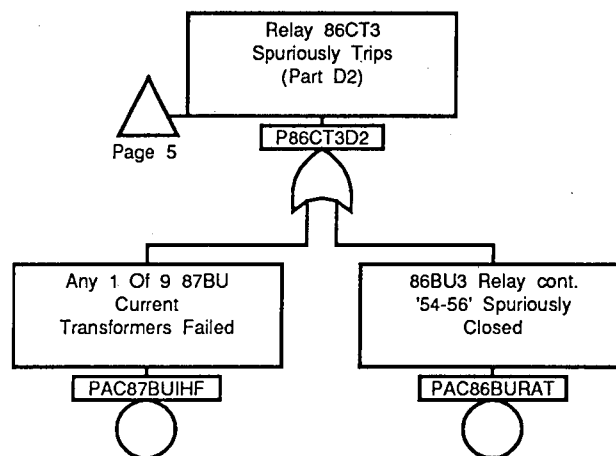


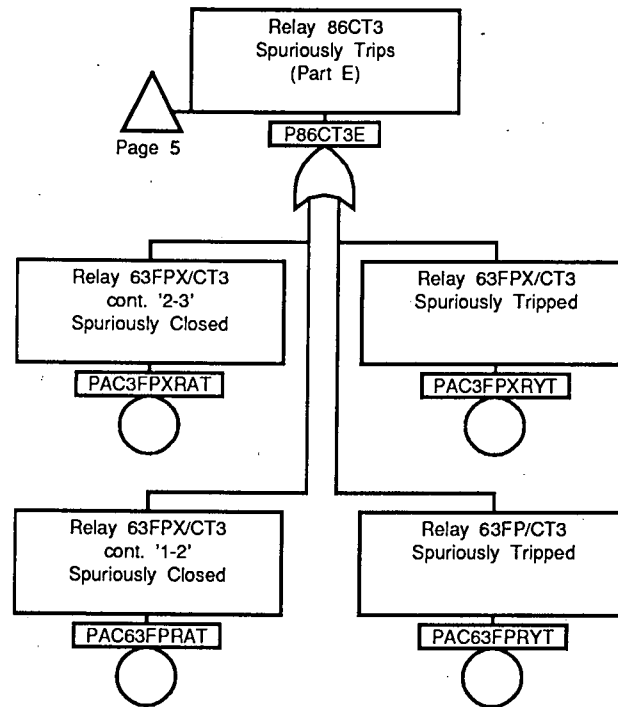
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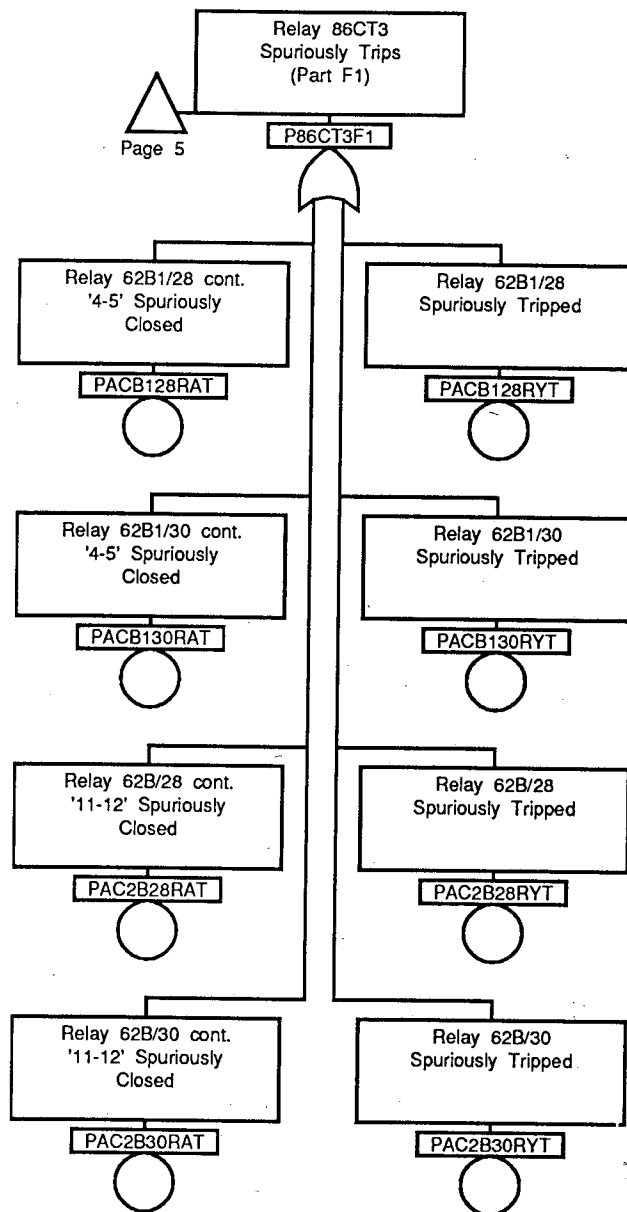
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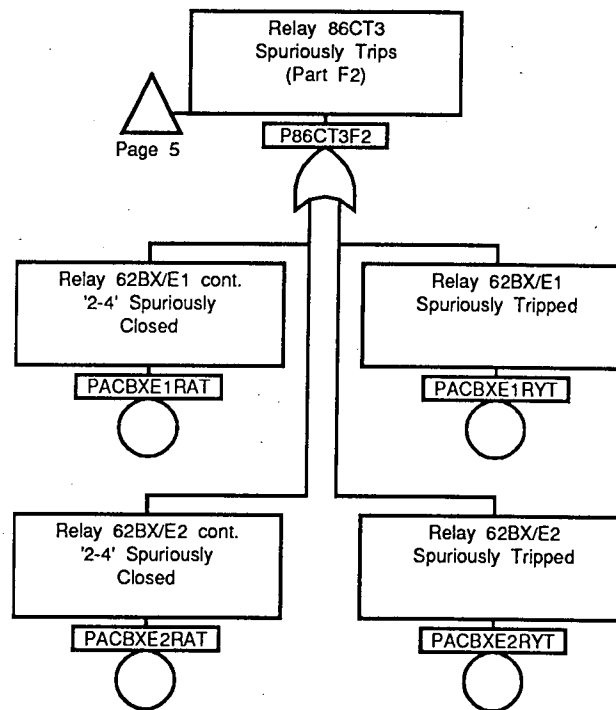


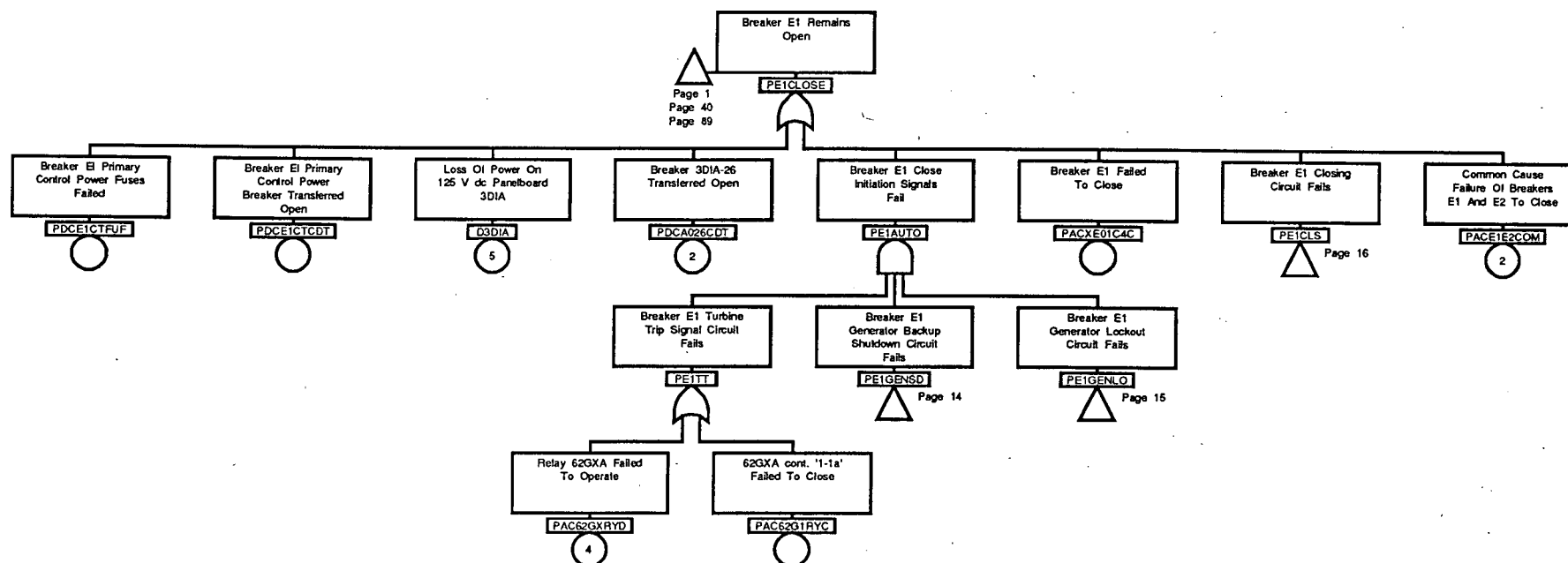


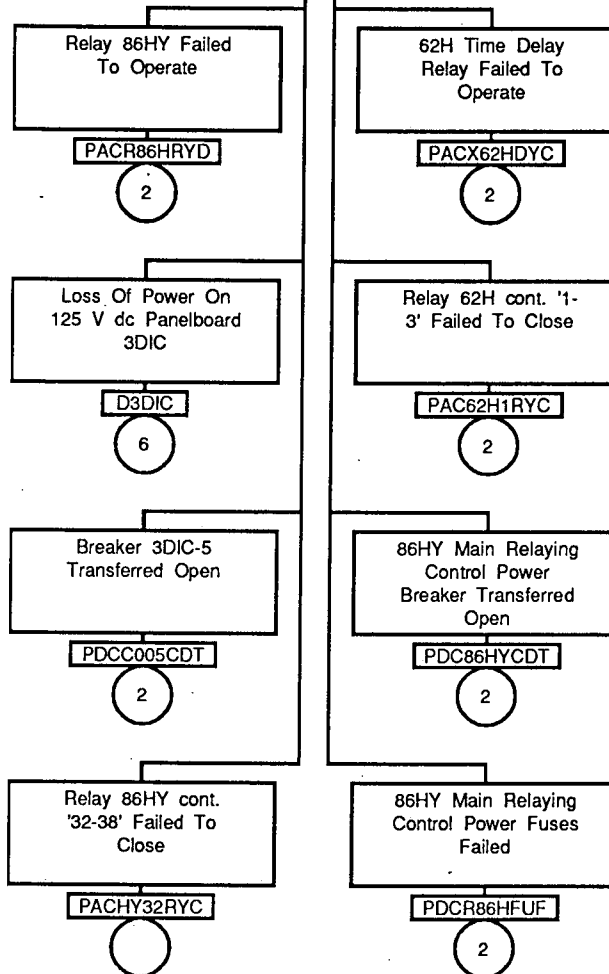
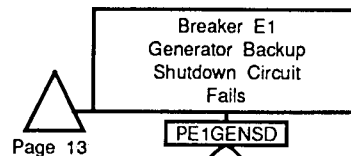


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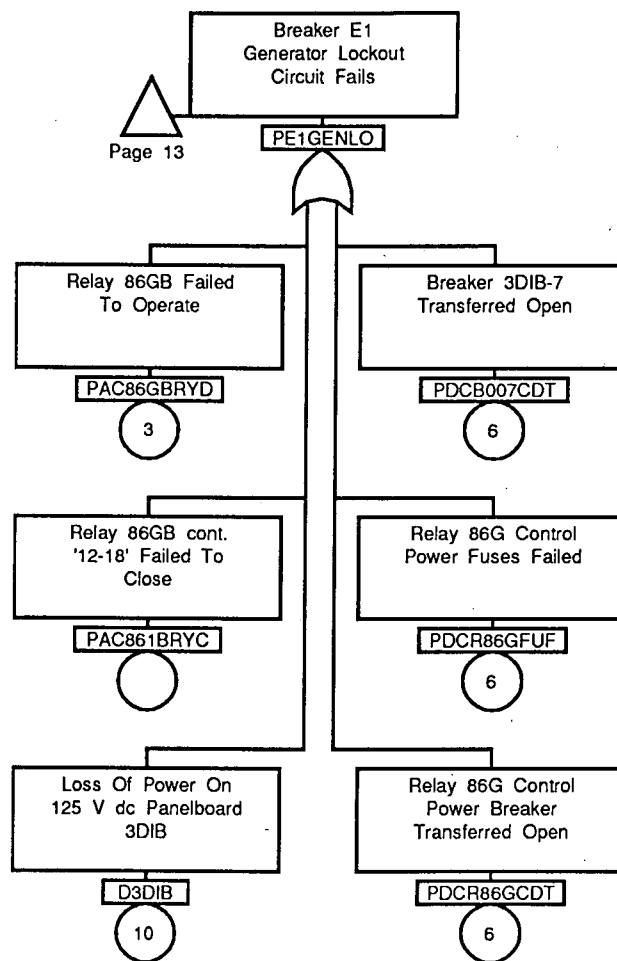


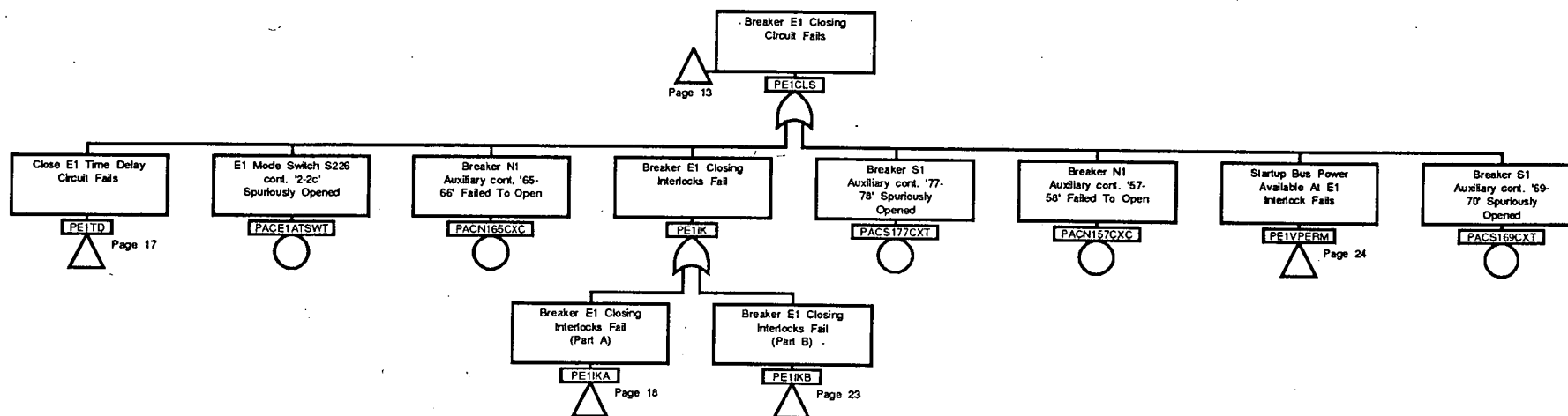


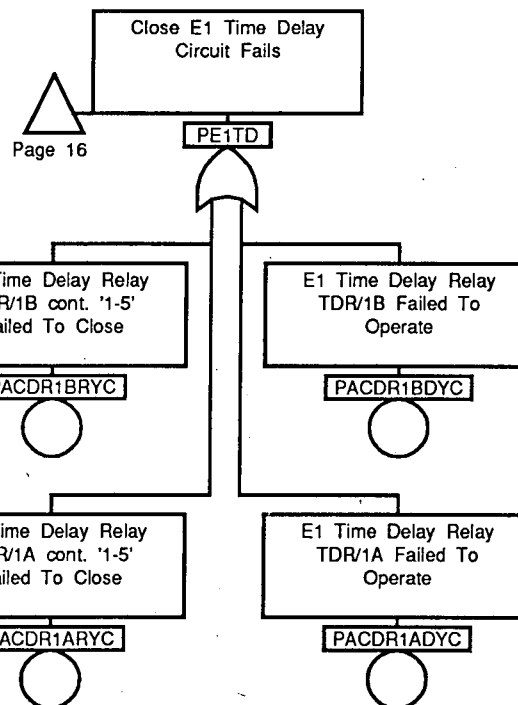


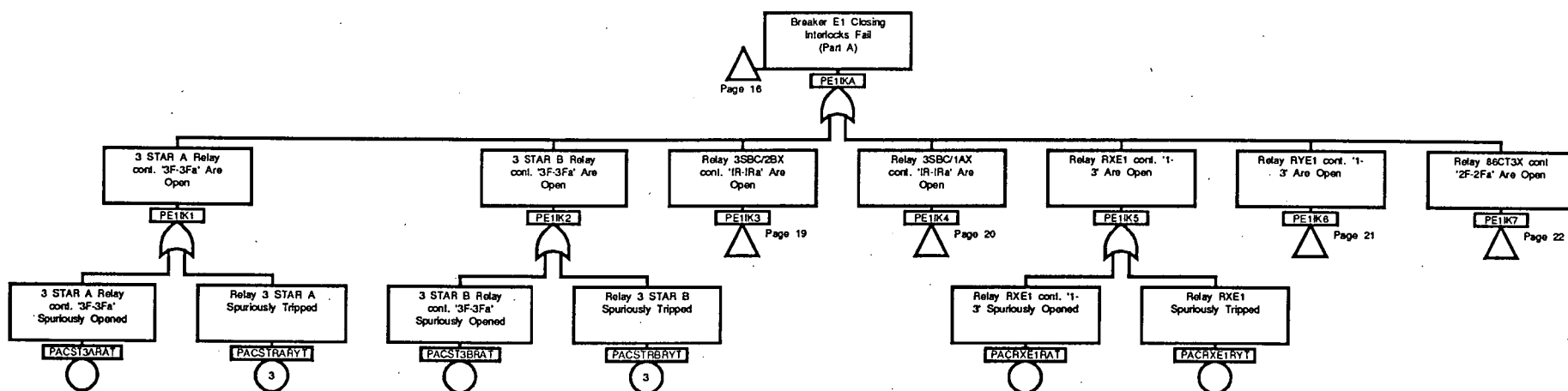


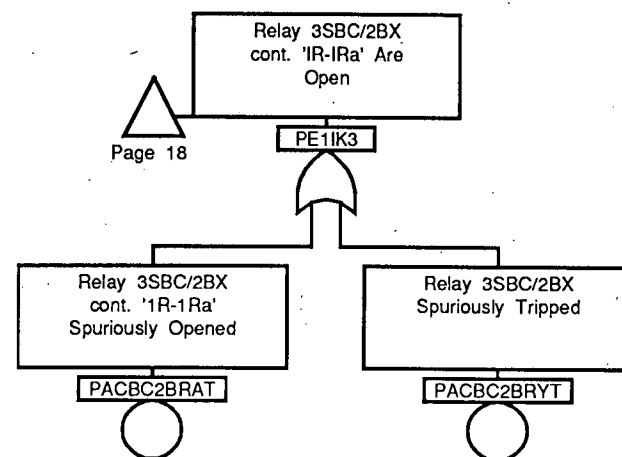
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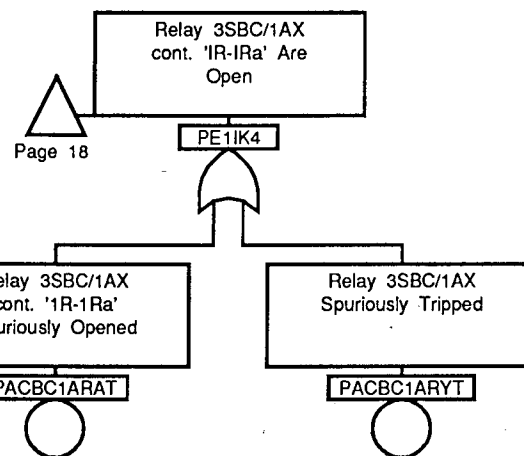


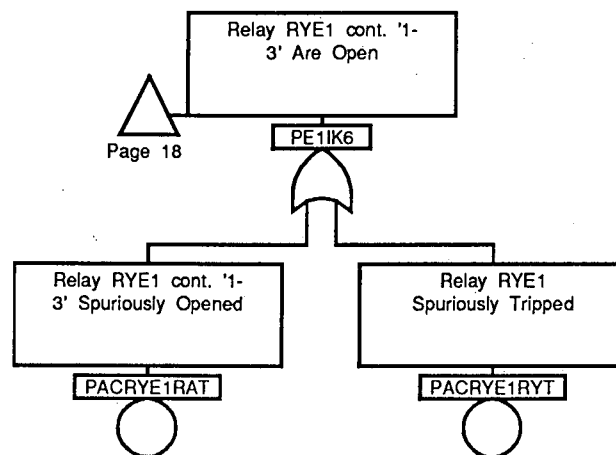


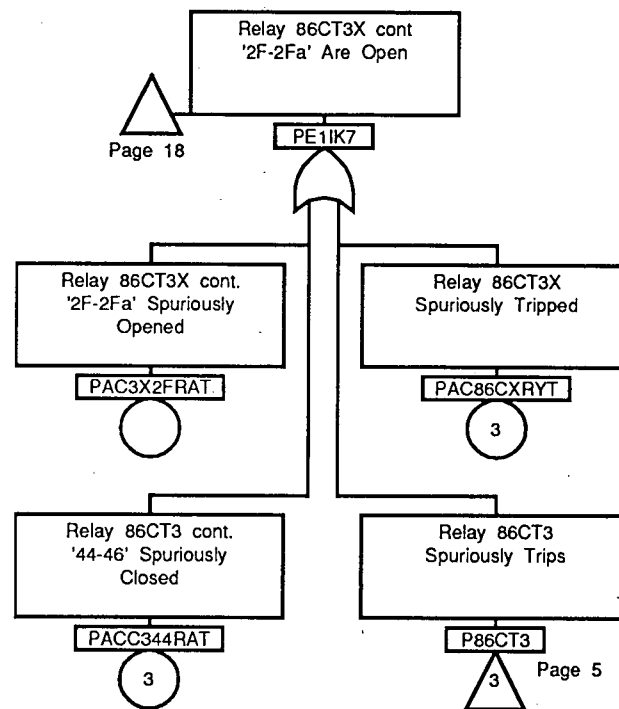




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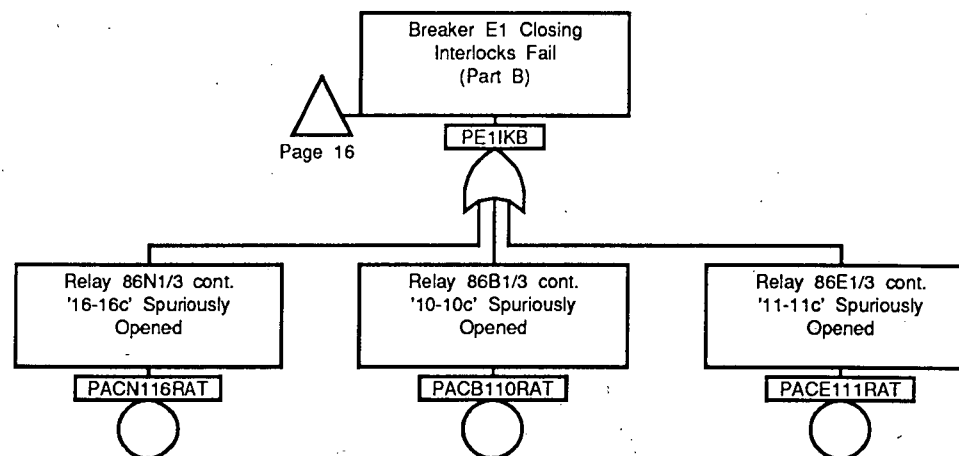


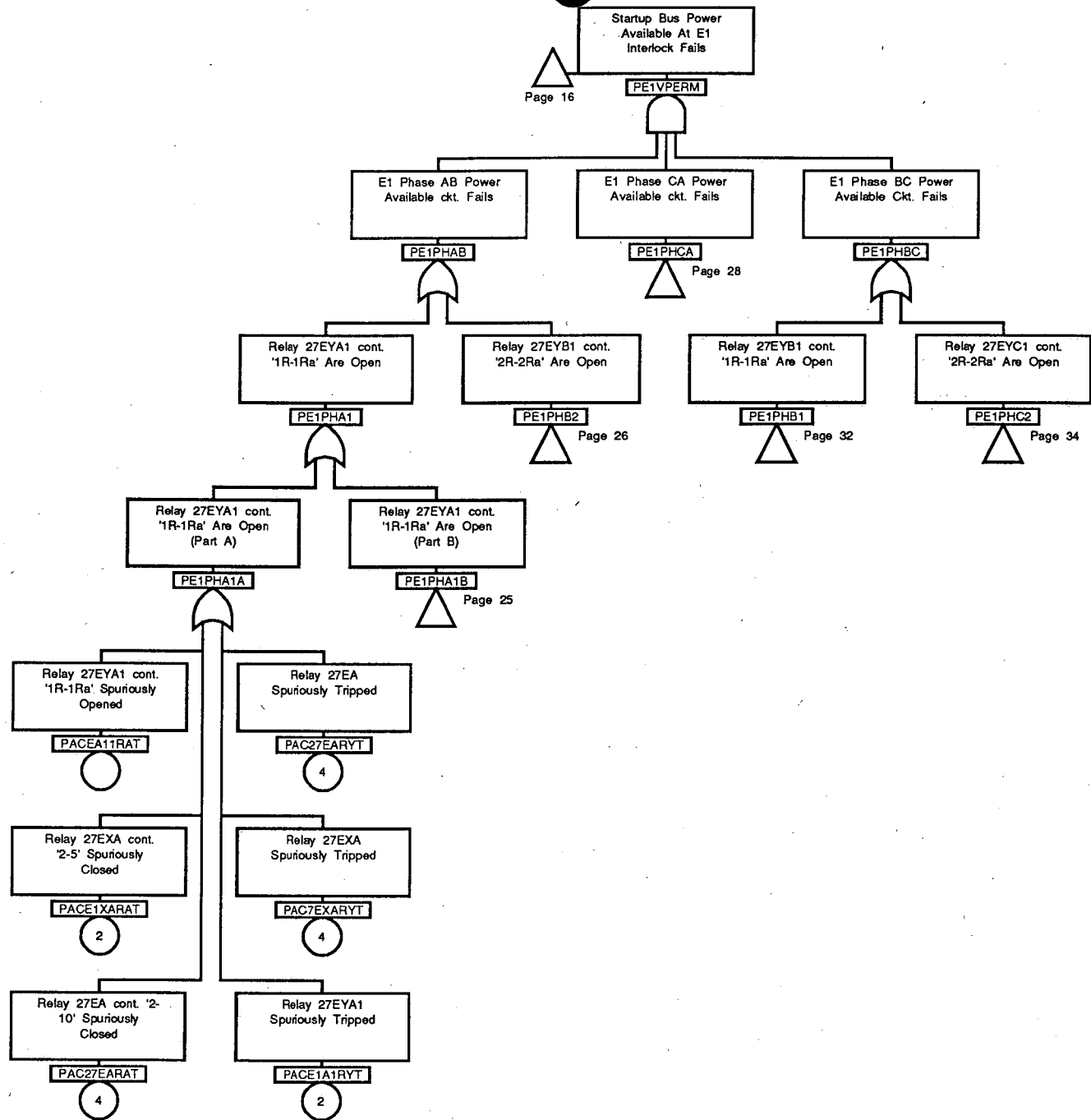




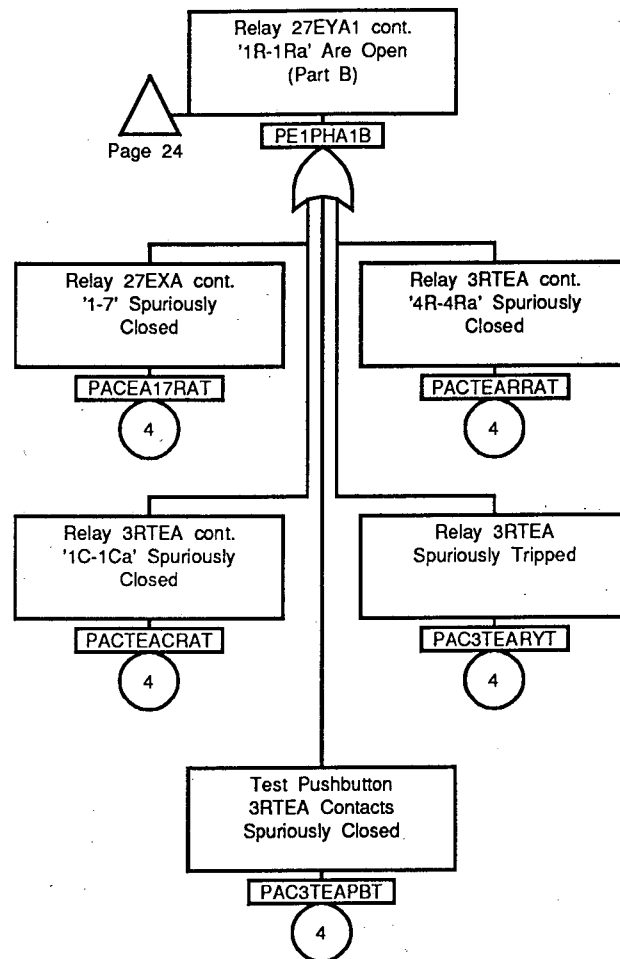
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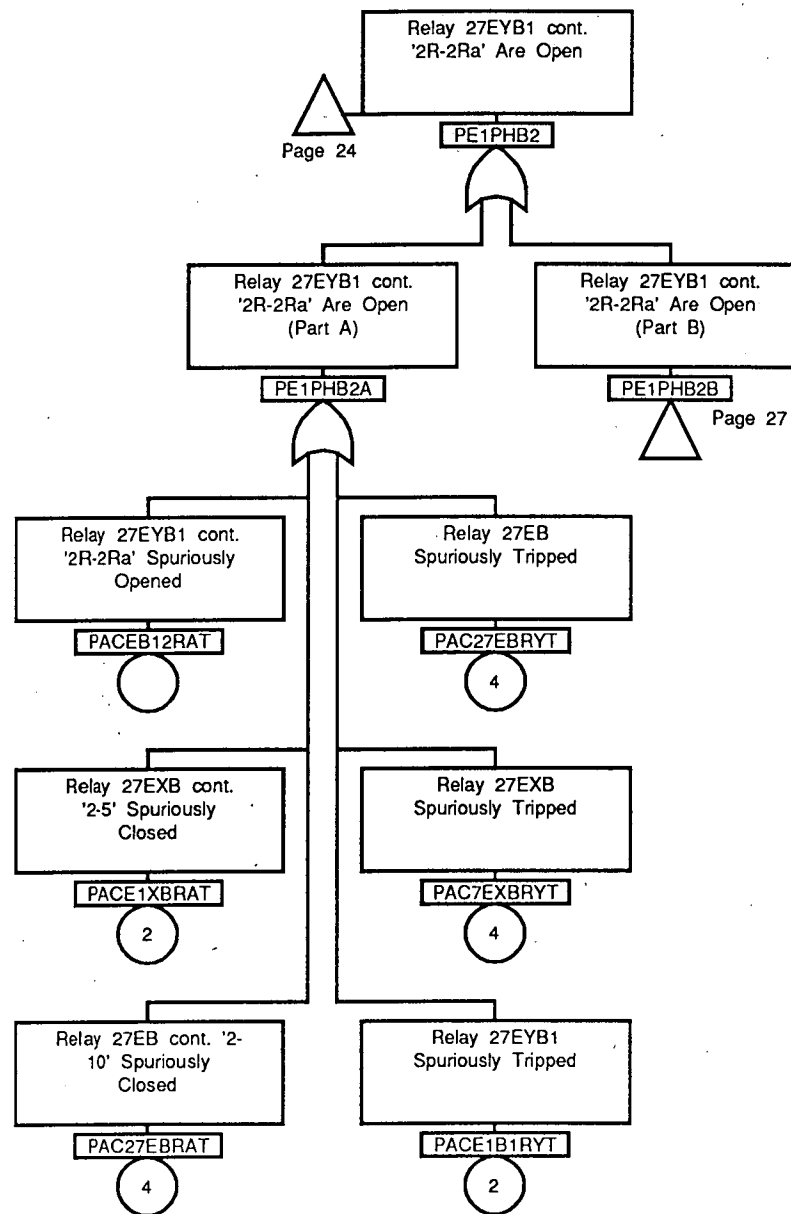
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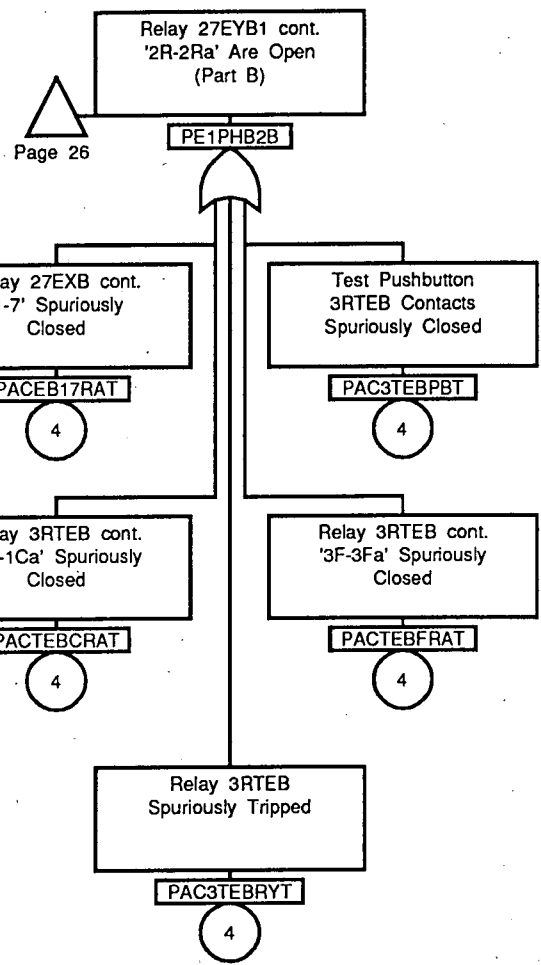




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E1 Phase CA Power
Available ckt. Fails

Page 24

PE1PHCA

Relay 27EYC1 cont.
'1R-1Ra' Are Open

PE1PHC1

Relay 27EYA1 cont.
'2R-2Ra' Are Open

PE1PHA2

Page 30

Relay 27EYC1 cont.
'1R-1Ra' Are Open
(Part A)

PE1PHC1A

Relay 27EYC1 cont.
'1R-1Ra' Are Open
(Part B)

PE1PHC1B

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Relay 27EYC1 cont.
'1R-1Ra' Spuriously
Opened

PACEC11RAT

Relay 27EYC1
Spuriously* Tripped

PACE1C1RYT

Relay 27EXC cont.
'2-5' Spuriously
Closed

PACE1XCRAT

Relay 27EXC
Spuriously Tripped

PAC7EXCRYT

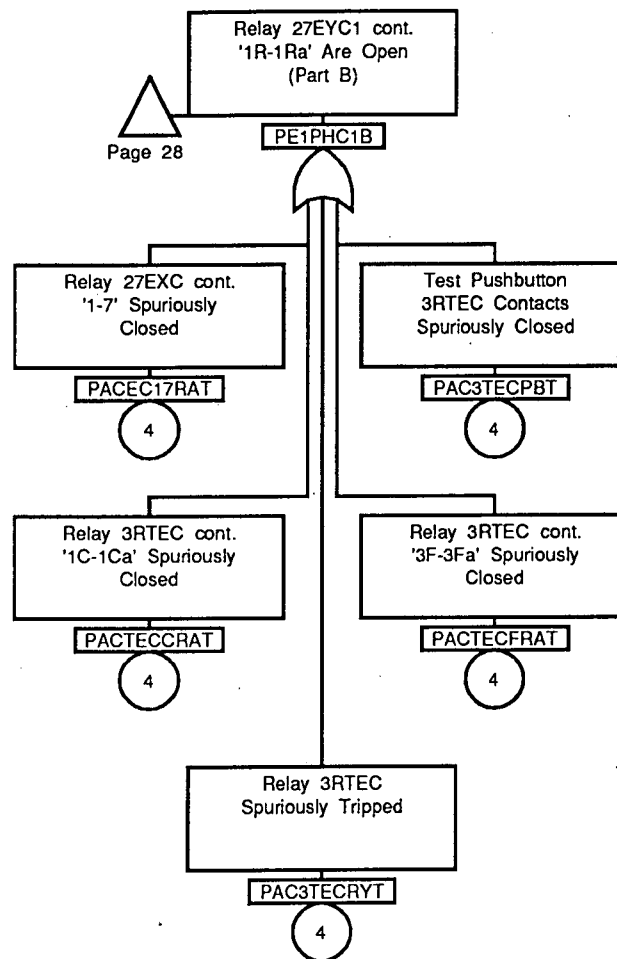
Relay 27EC cont. '2-
10' Spuriously
Closed

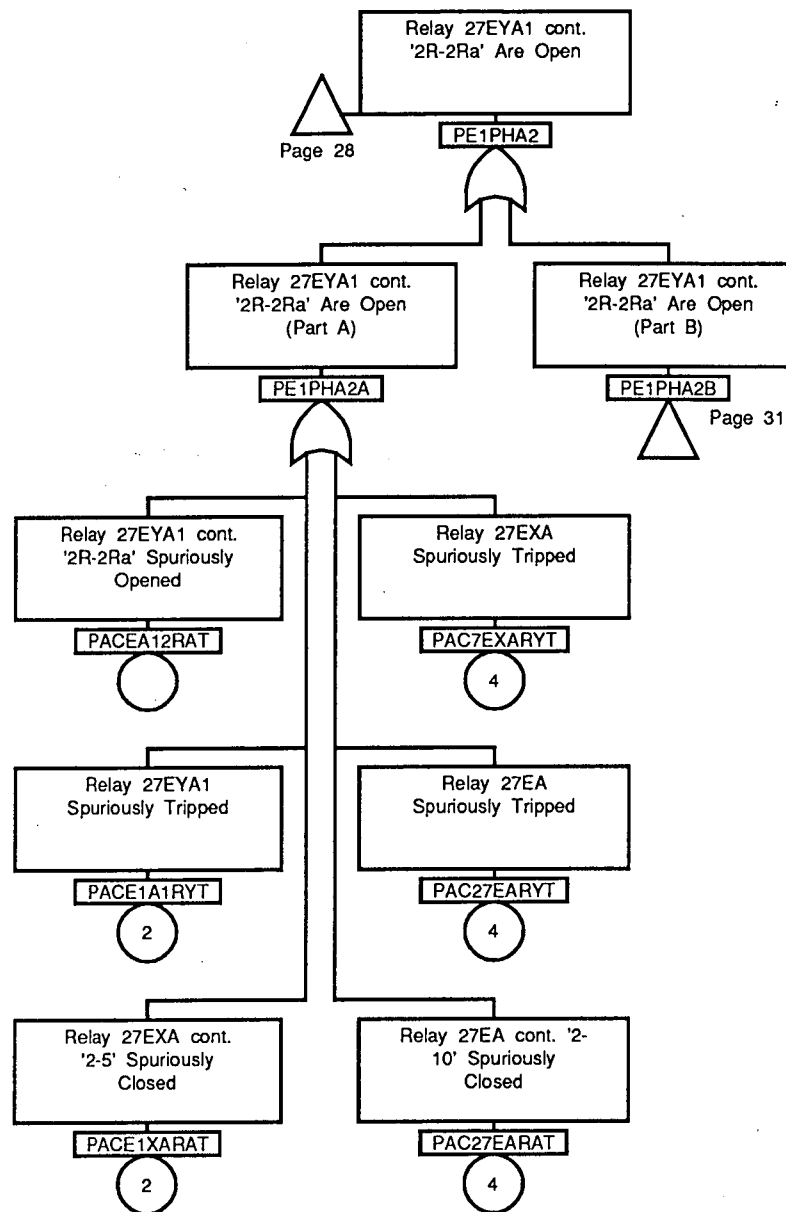
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Relay 27EC
Spuriously Tripped

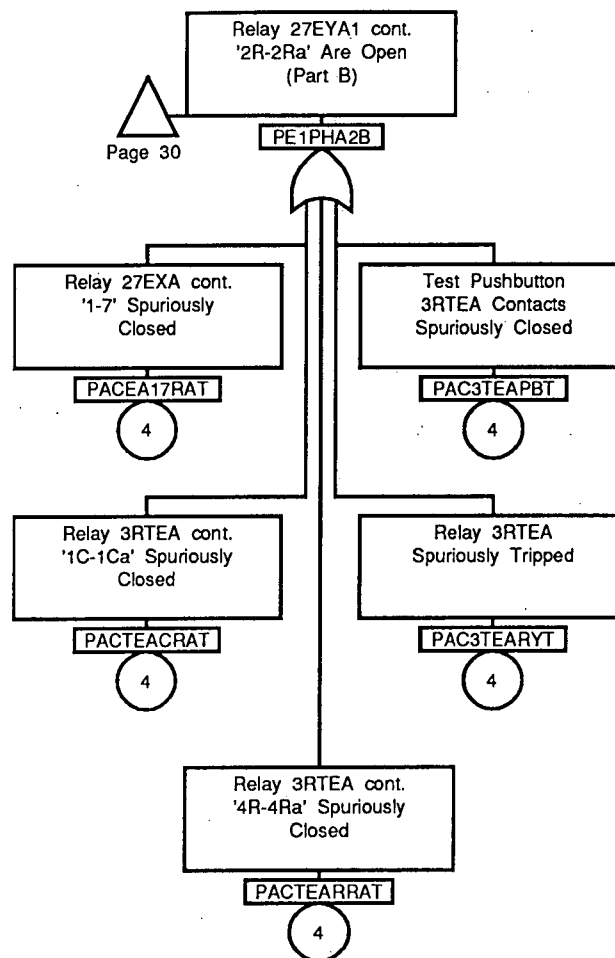
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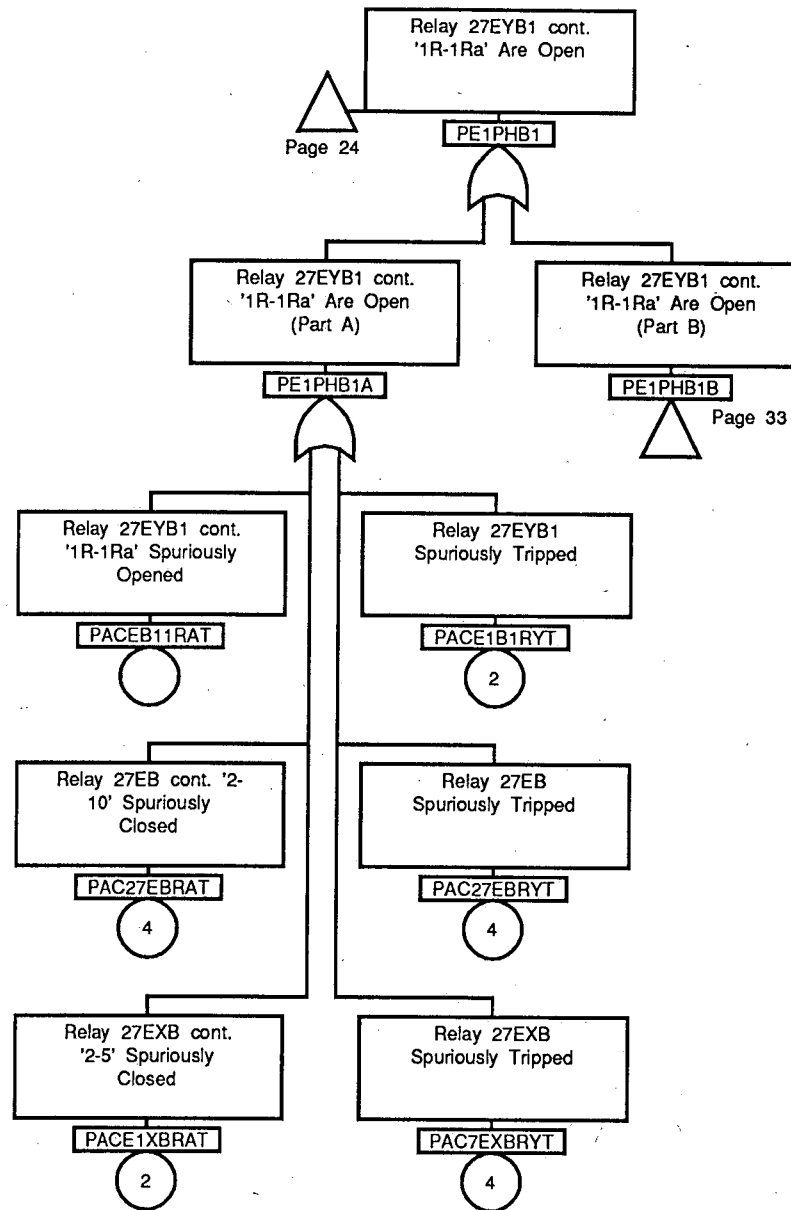
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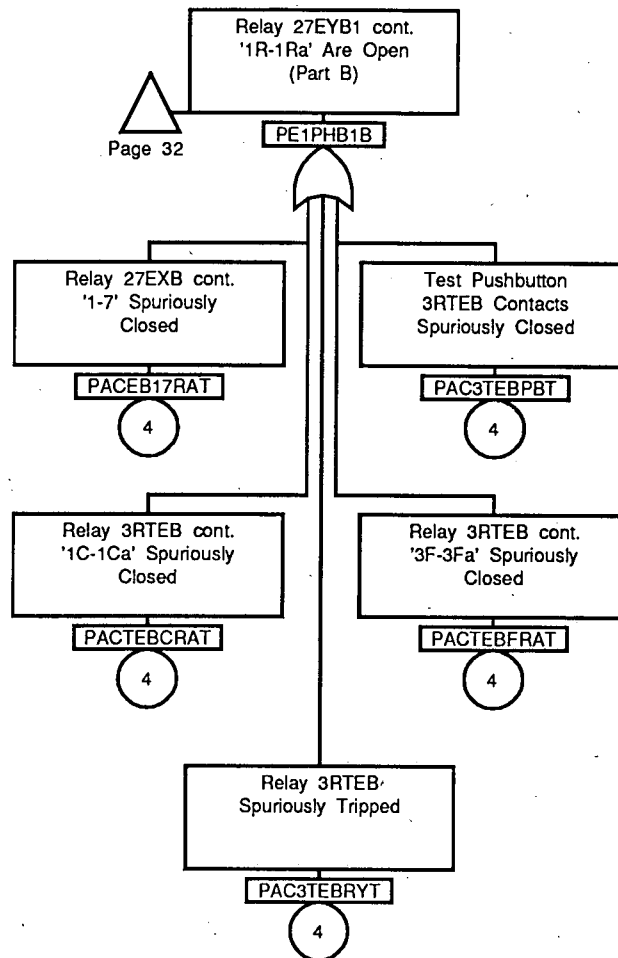


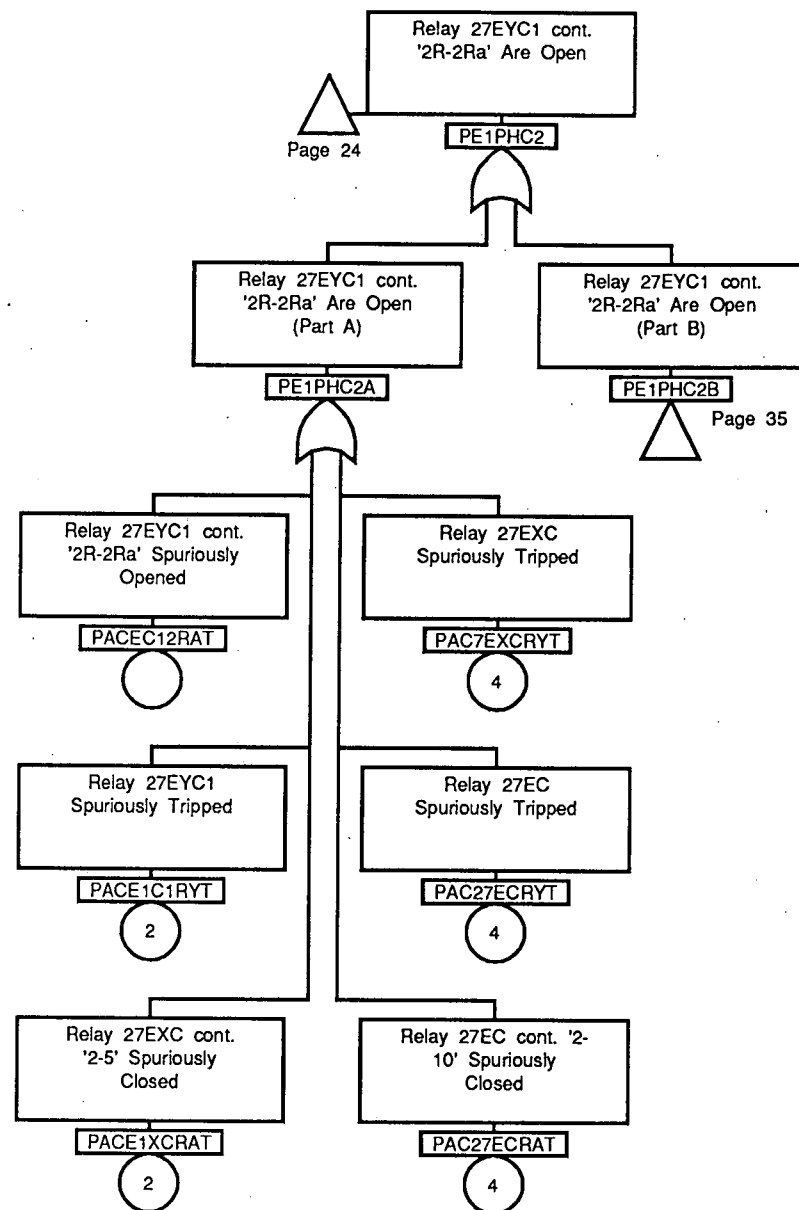
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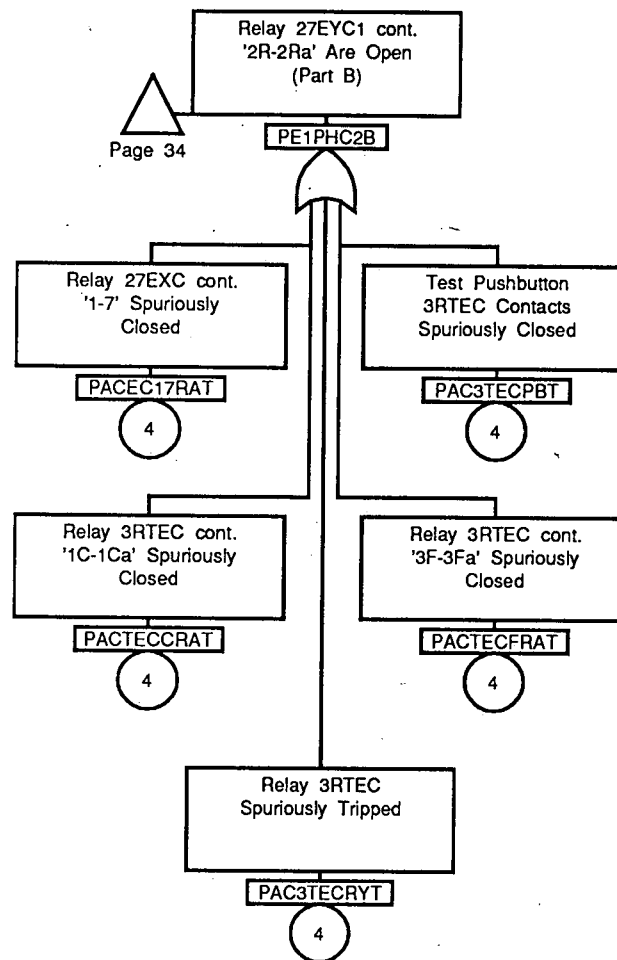


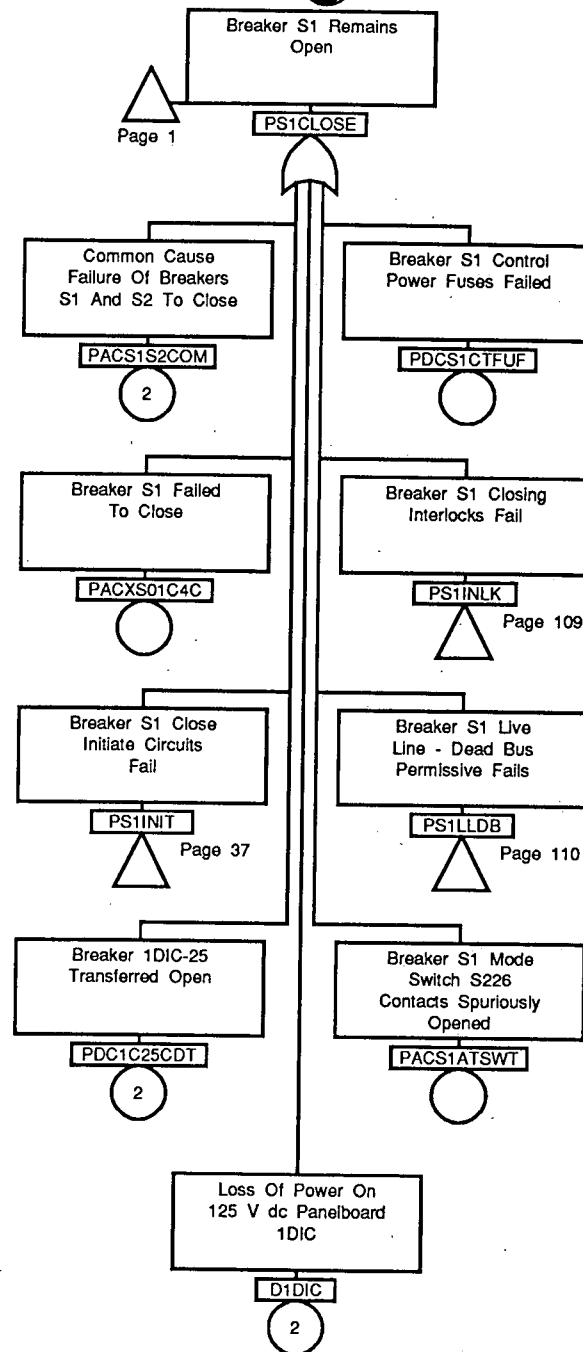
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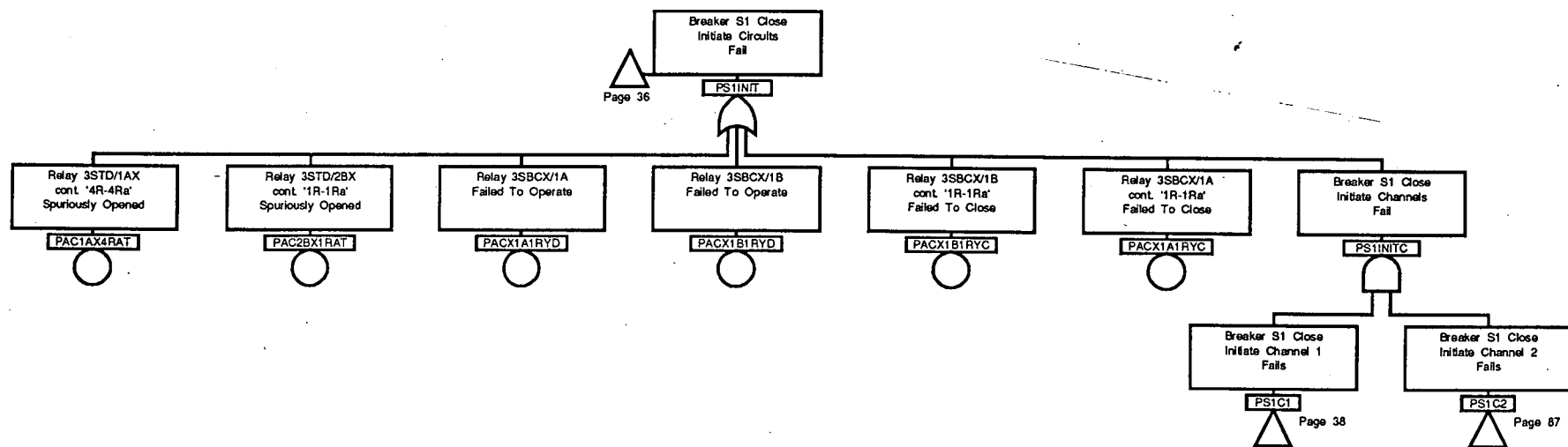


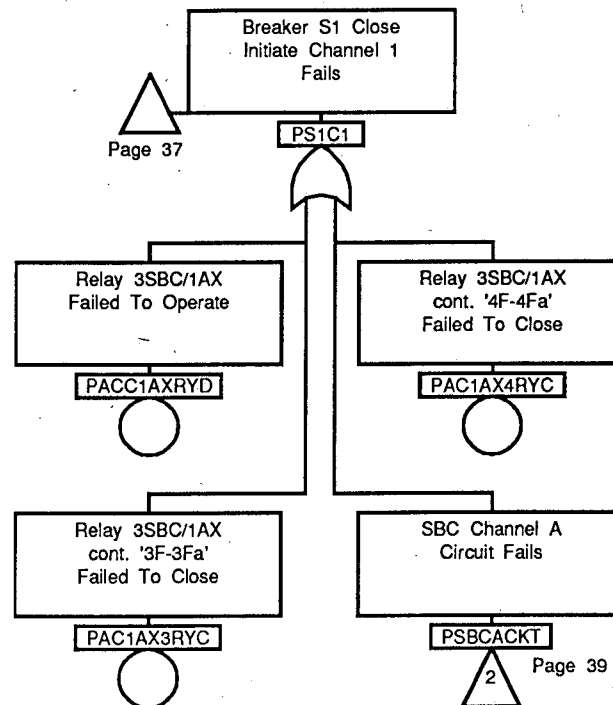
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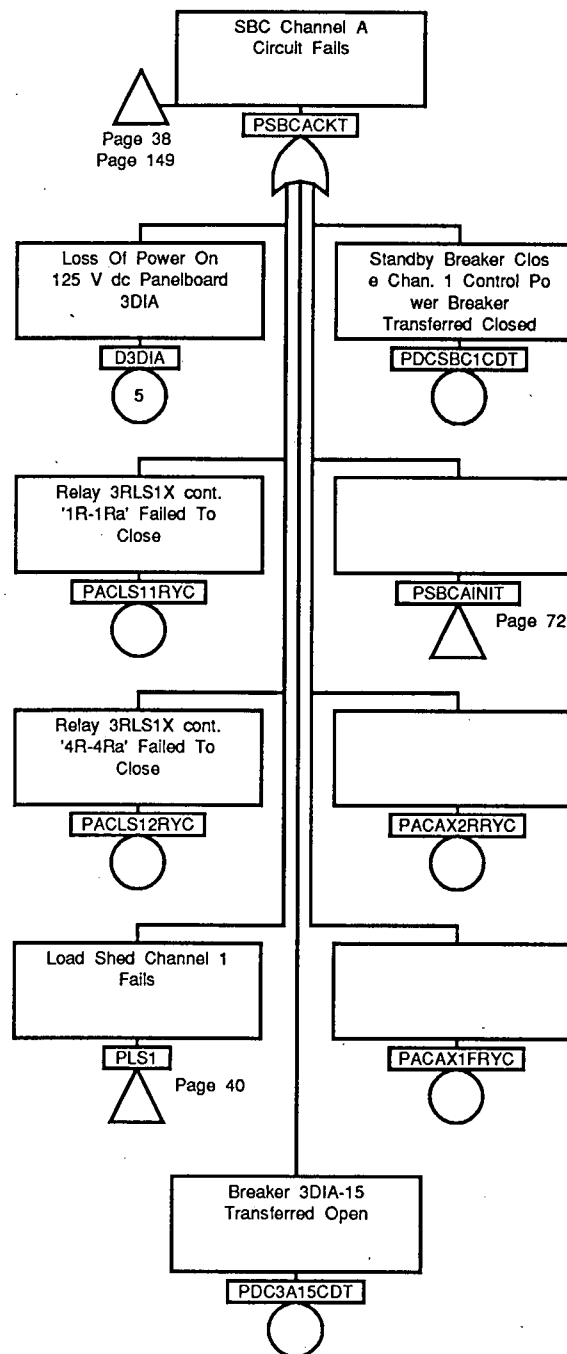


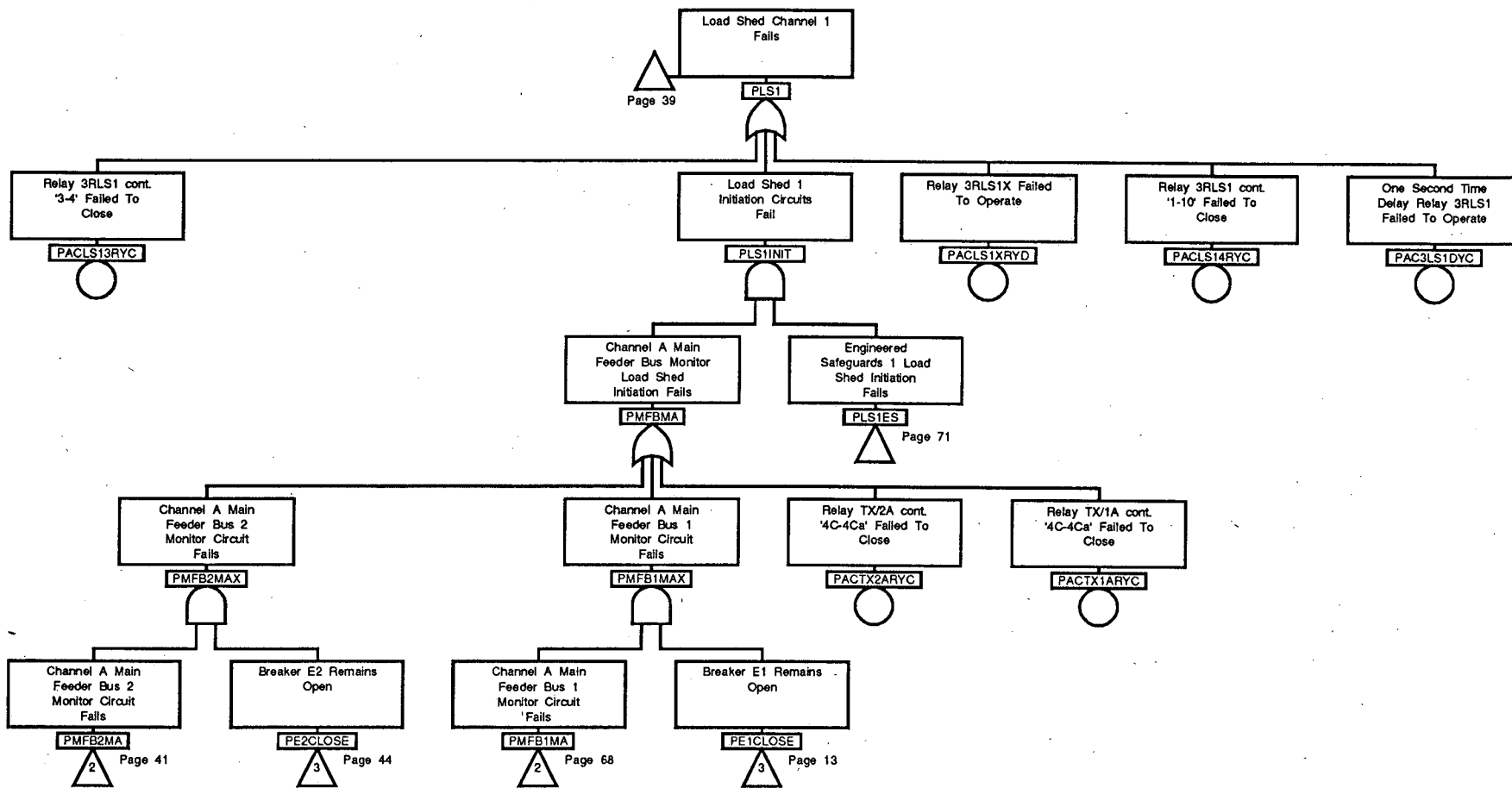


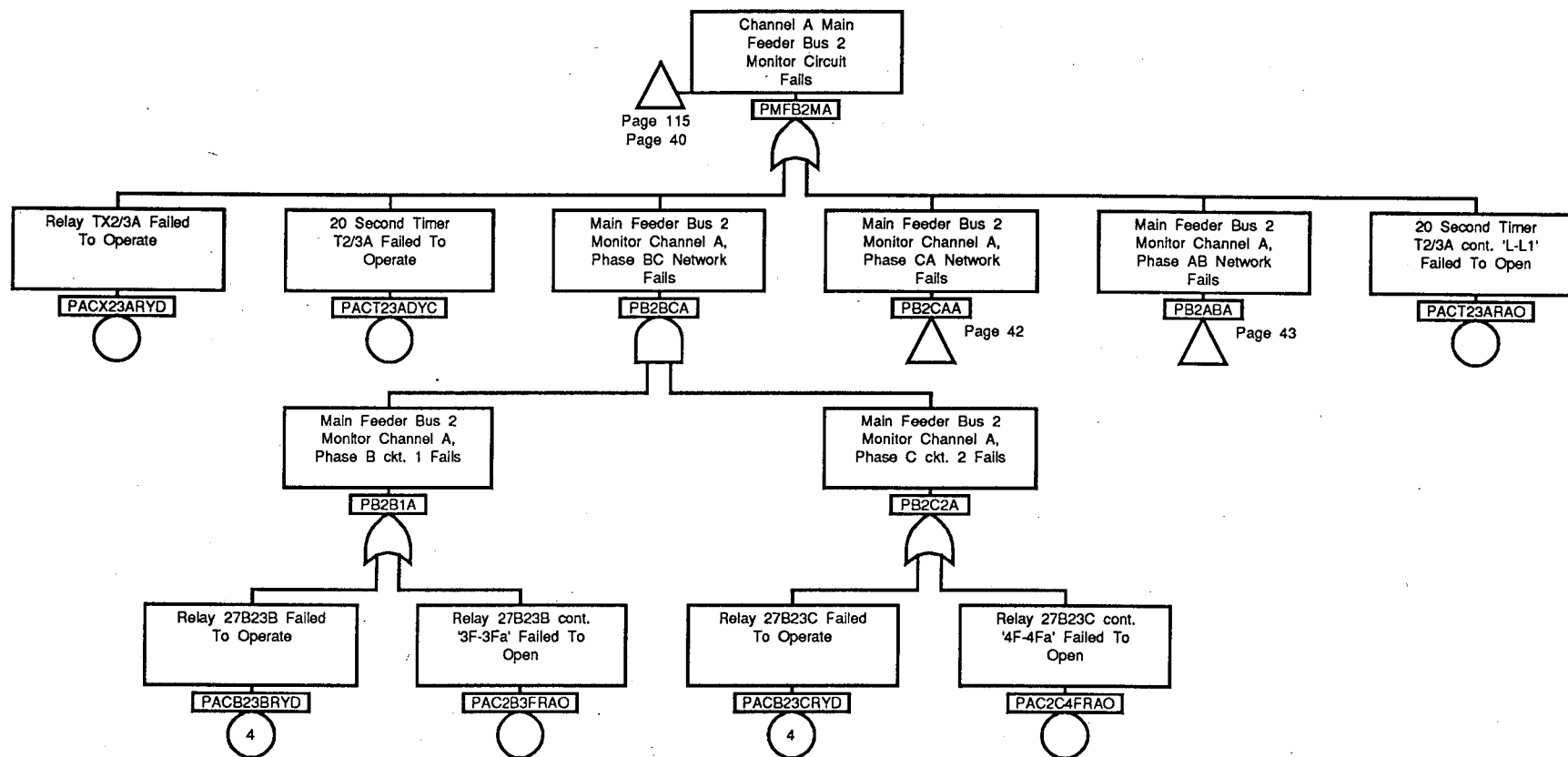
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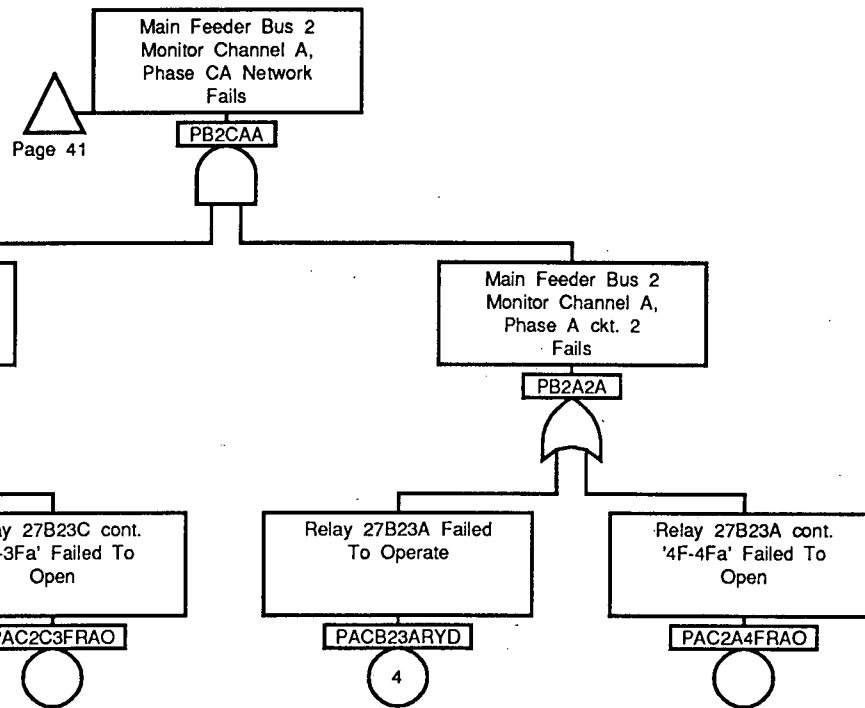


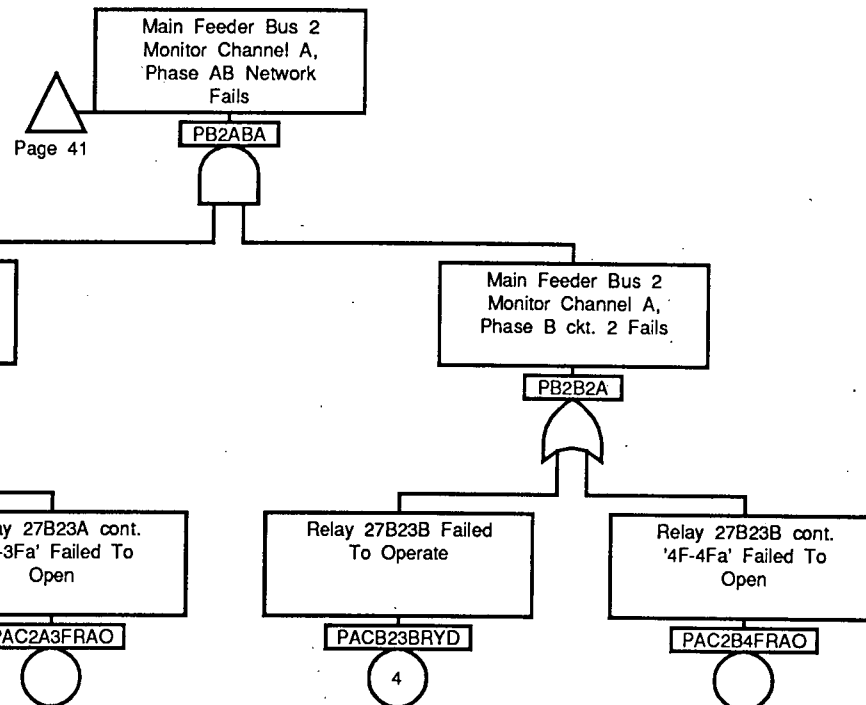


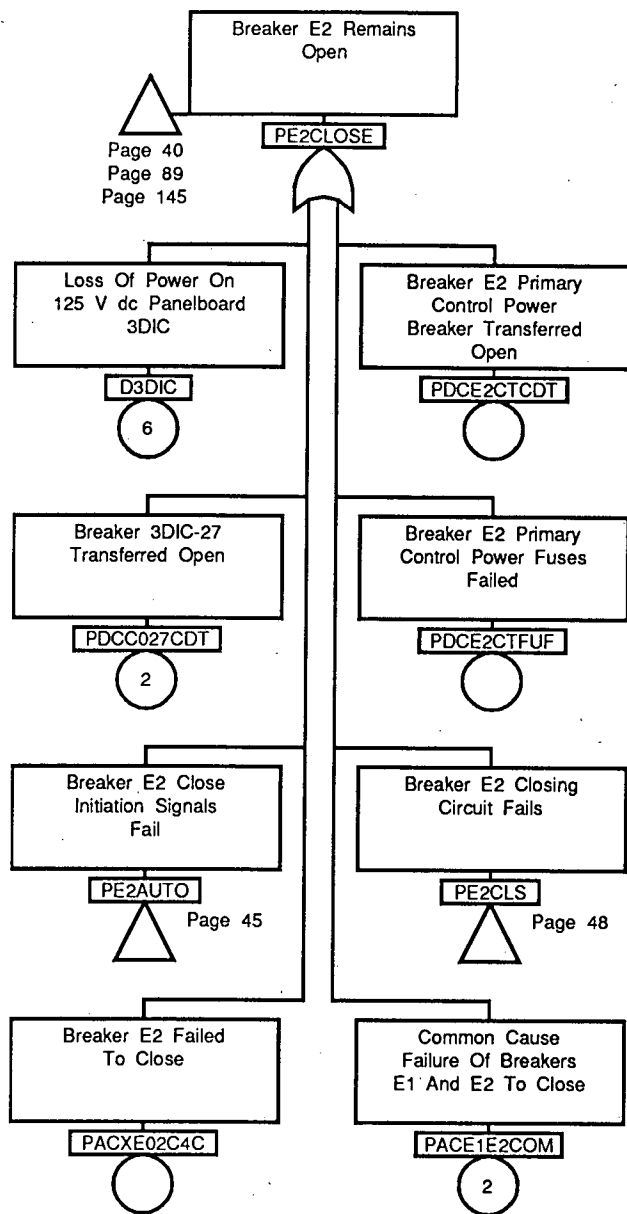


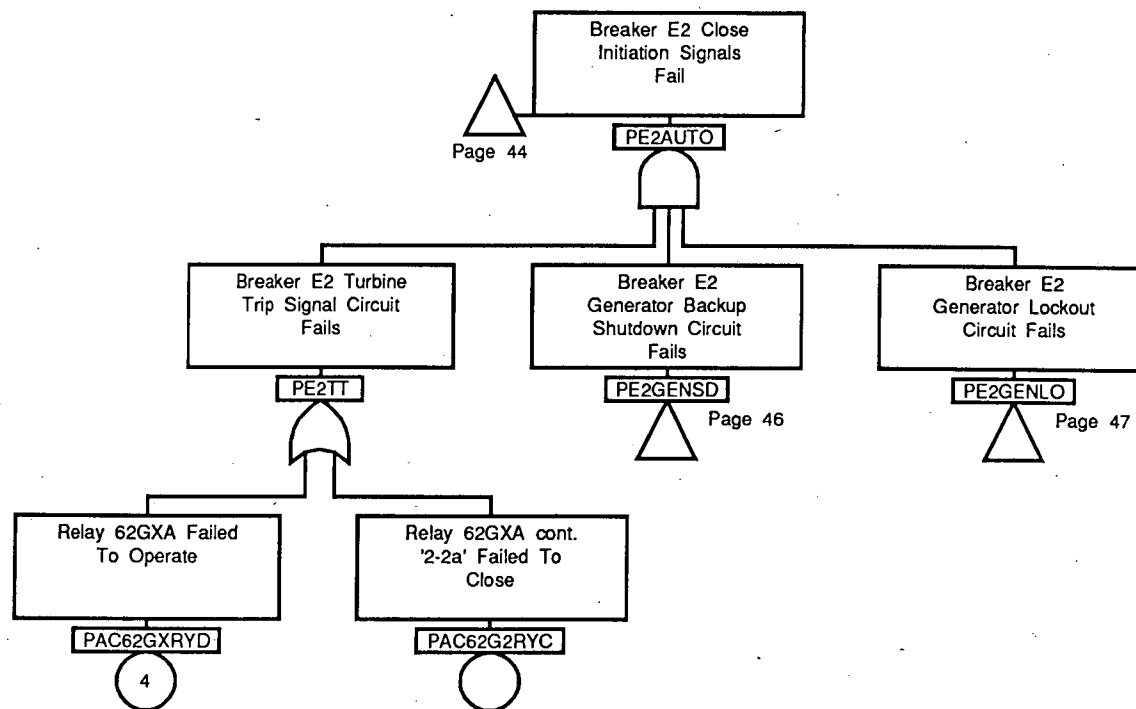




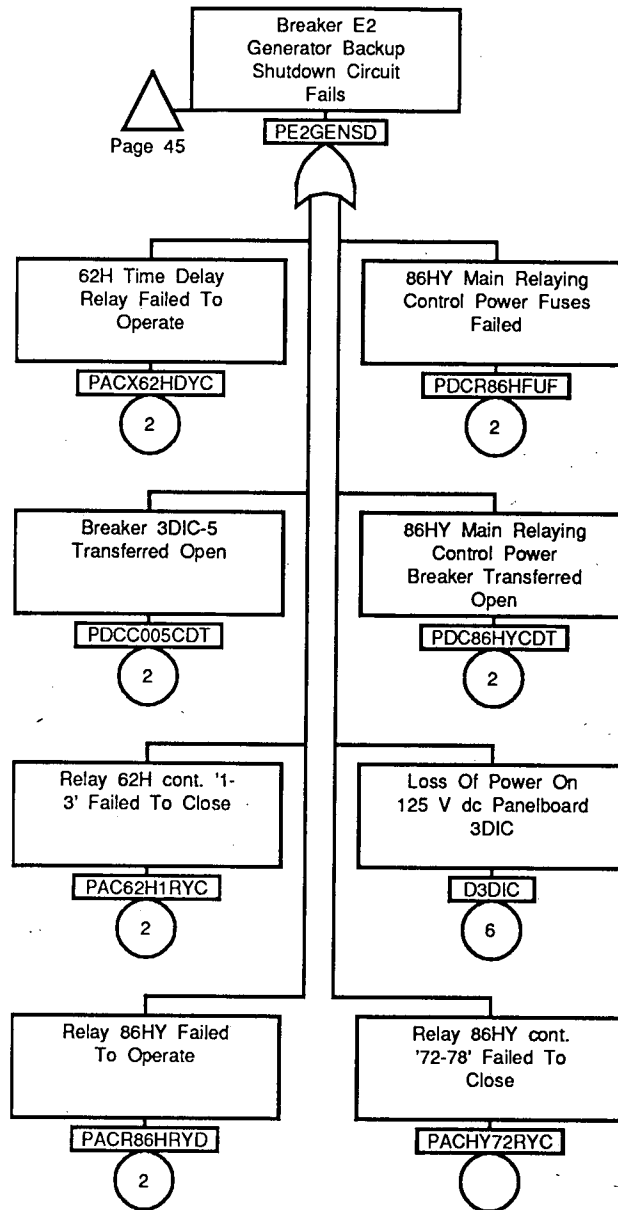


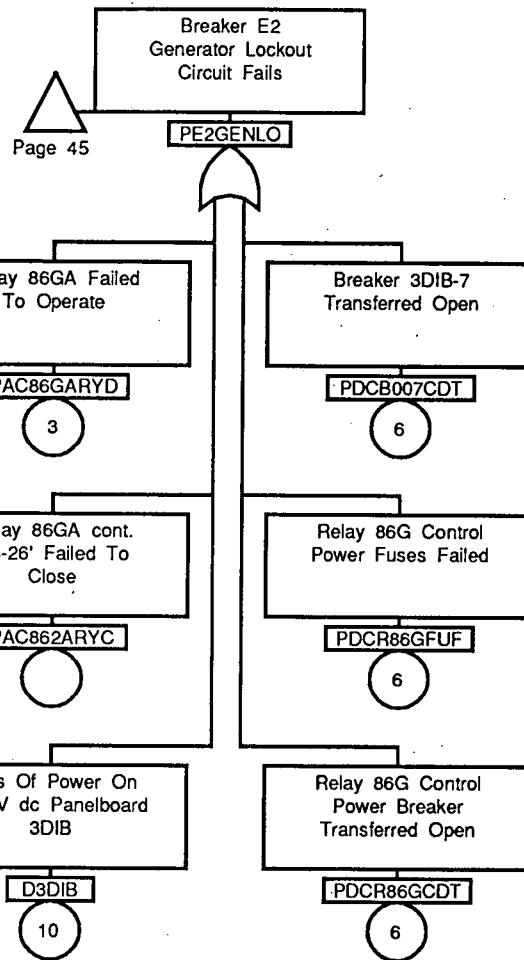


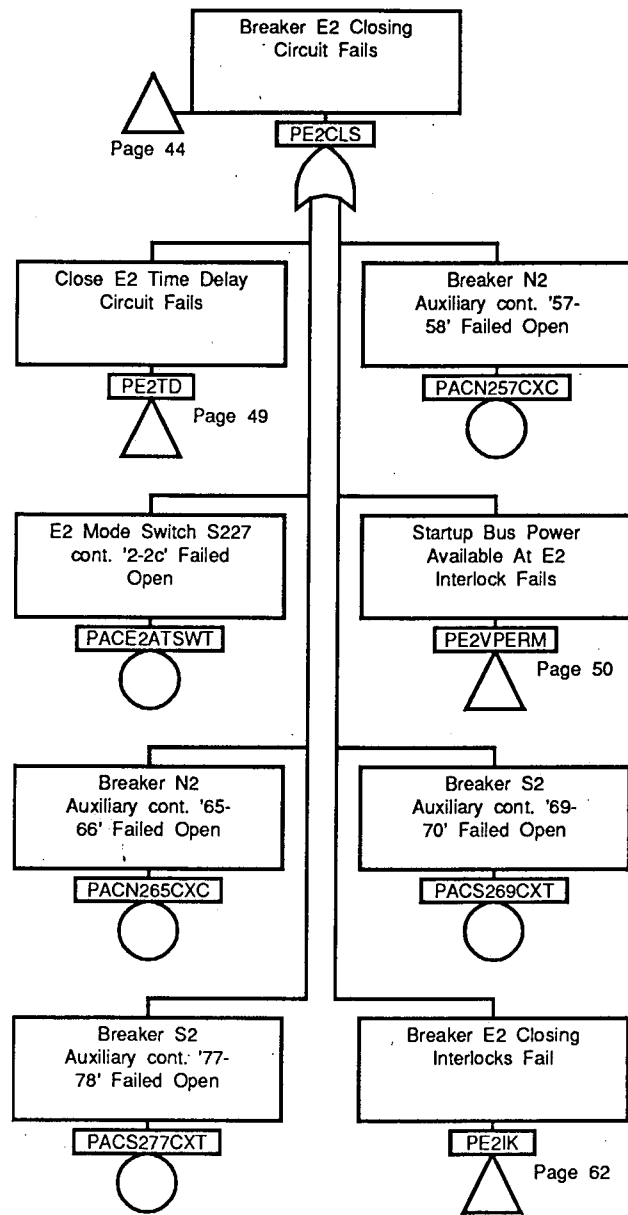




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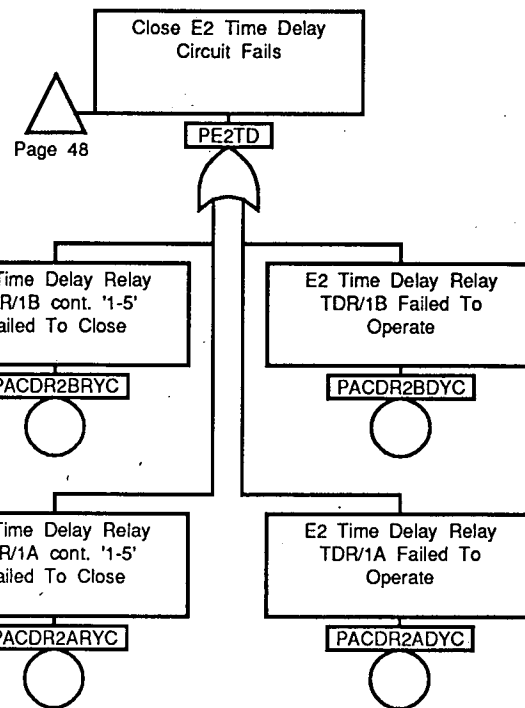


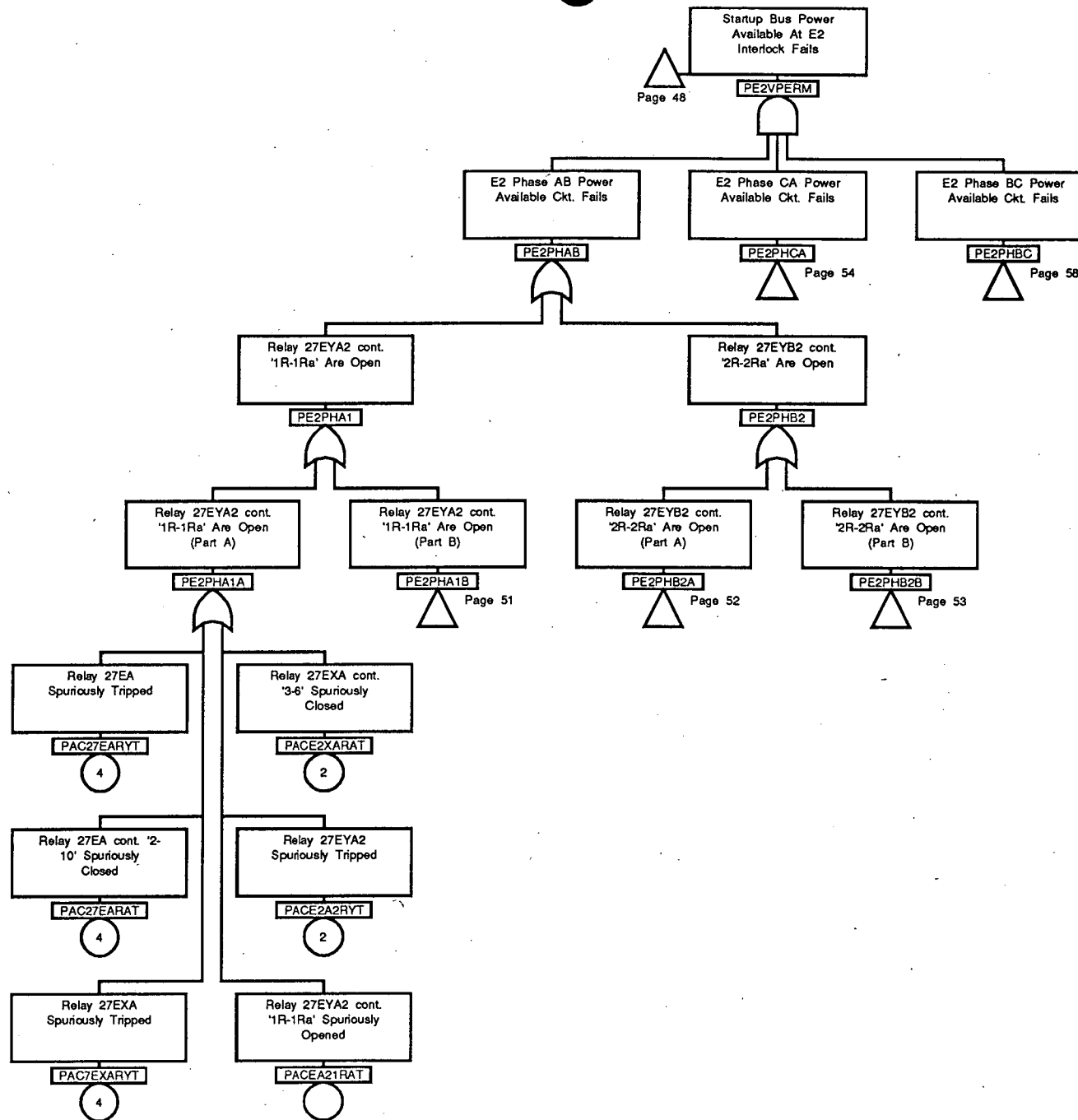
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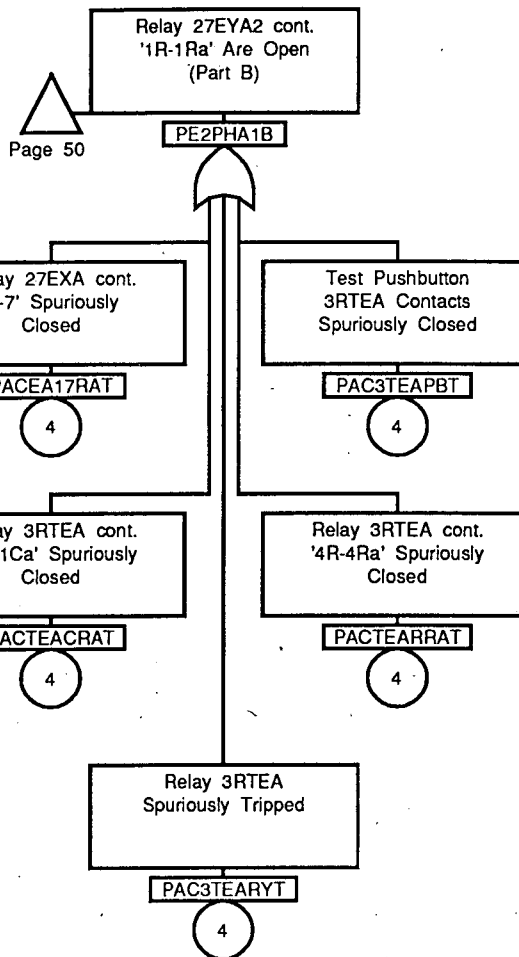
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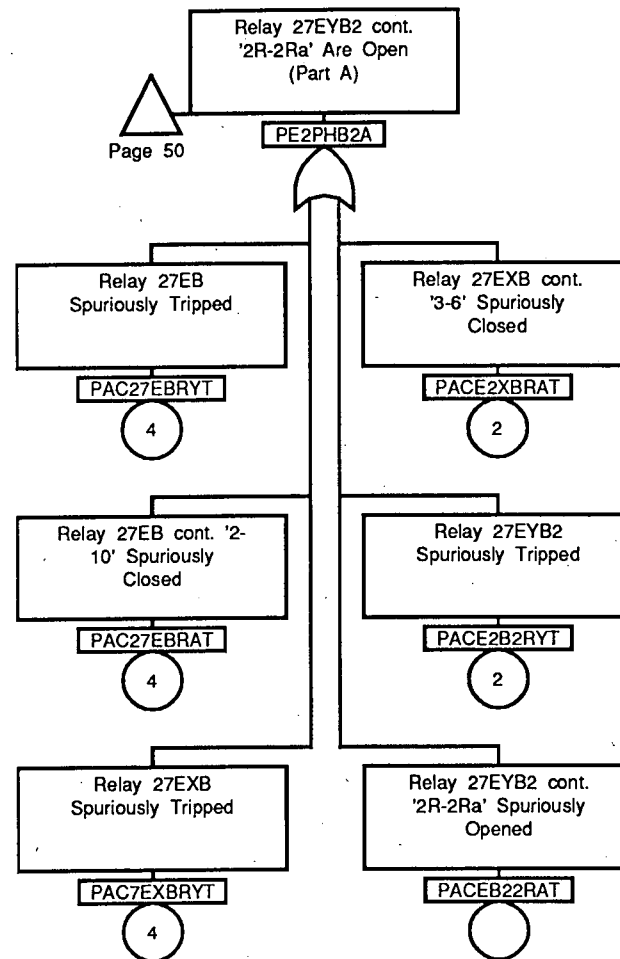


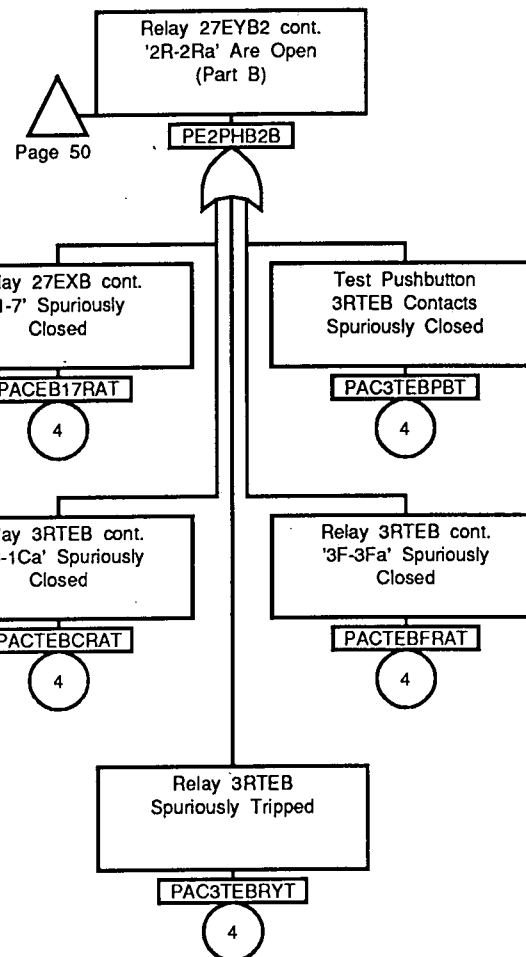




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Page 50





E2 Phase CA Power
Available Ckt. Fails

Page 50

PE2PHCA

Relay 27EYC2 cont.
'1R-1Ra' Are Open

PE2PHC1

Relay 27EYA2 cont.
'2R-2Ra' Are Open

PE2PHA2

Relay 27EYC2 cont.
'1R-1Ra' Are Open
(Part A)

PE2PHC1A

Relay 27EYC2 cont.
'1R-1Ra' Are Open
(Part B)

PE2PHC1B

Page 55

Relay 27EYA2 cont.
'2R-2Ra' Are Open
(Part A)

PE2PHA2A

Page 56

Relay 27EYA2 cont.
'2R-2Ra' Are Open
(Part B)

PE2PHA2B

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Relay 27EC
Spuriously Tripped

PAC27ECRYT

4

Relay 27EXC cont.
'3-6' Spuriously
Closed

PACE2XCRAT

2

Relay 27EC cont. '2-
10' Spuriously
Closed

PAC27ECRAT

4

Relay 27EYC2
Spuriously Tripped

PACE2C2RYT

2

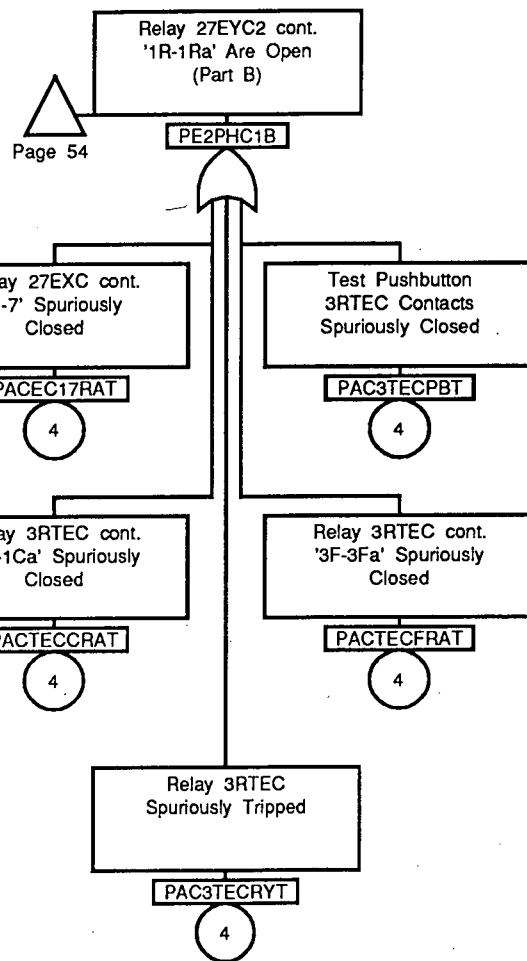
Relay 27EXC
Spuriously Tripped

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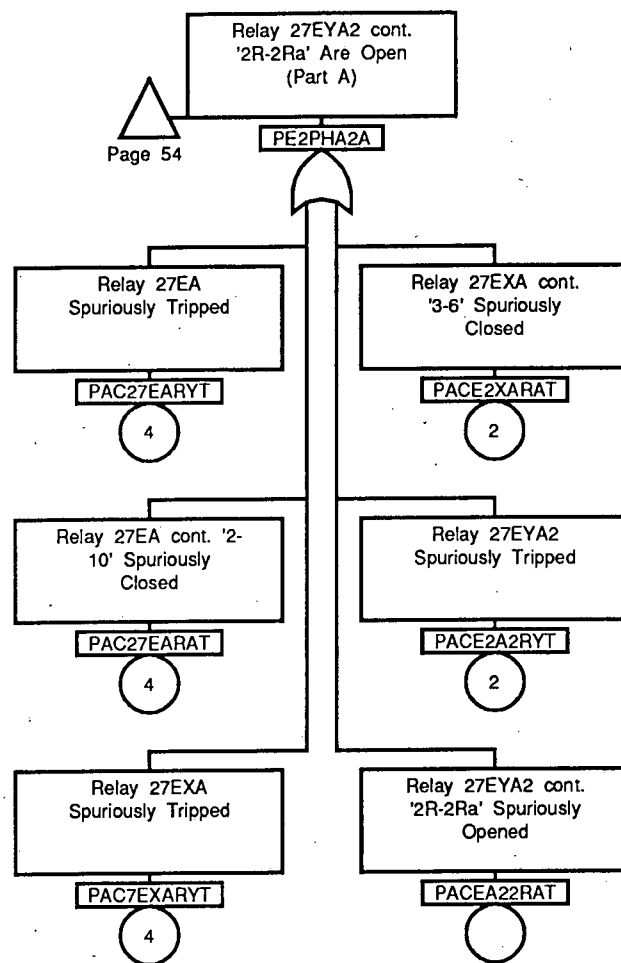
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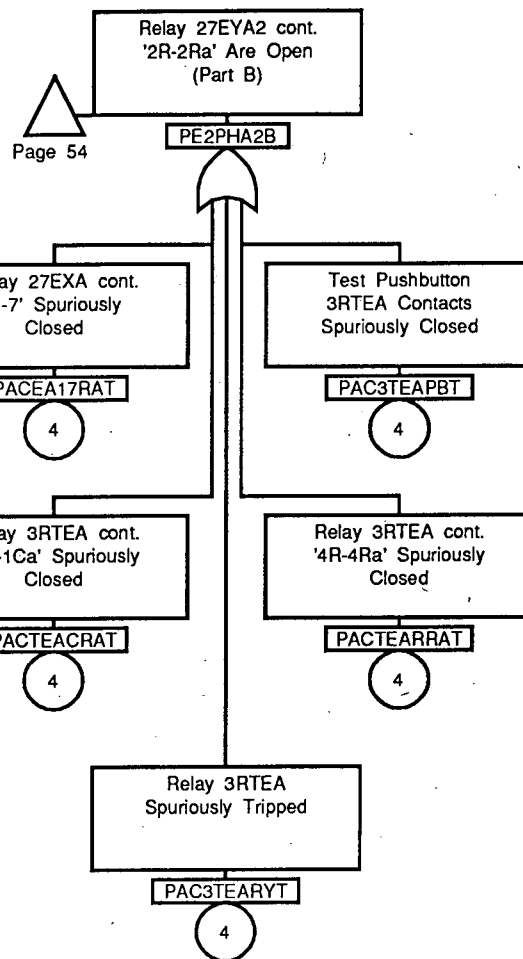
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'1R-1Ra' Spuriously
Opened

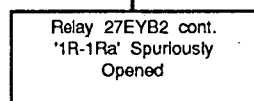
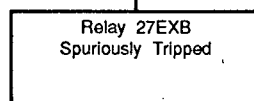
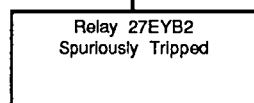
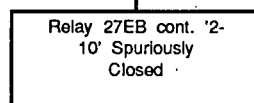
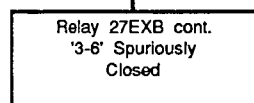
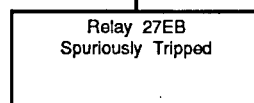
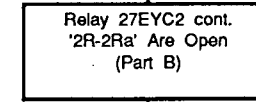
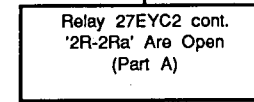
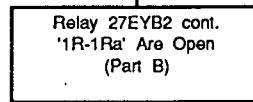
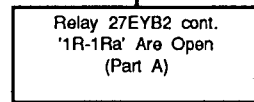
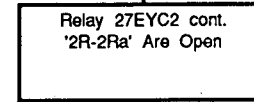
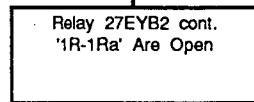
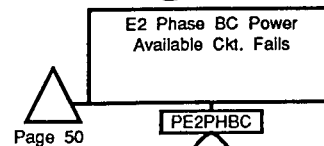
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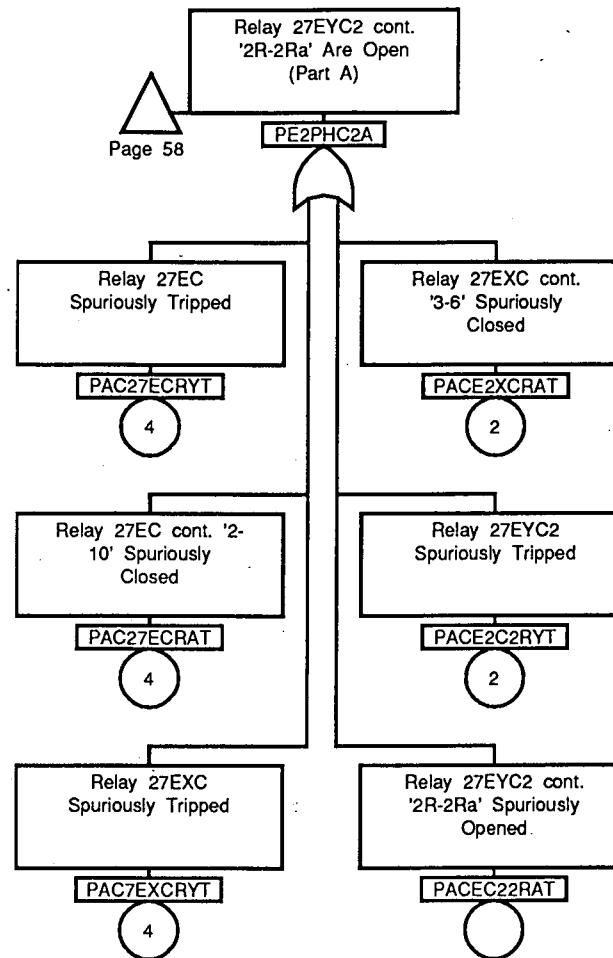


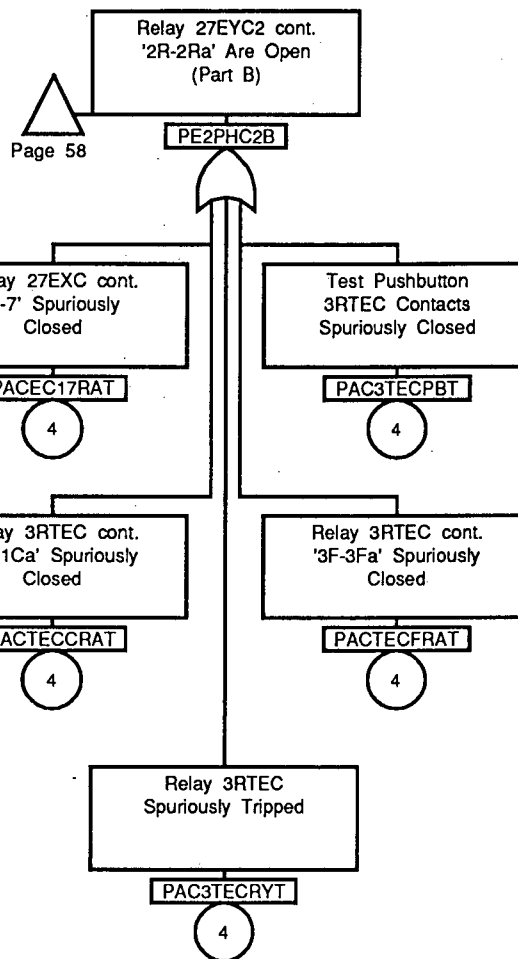


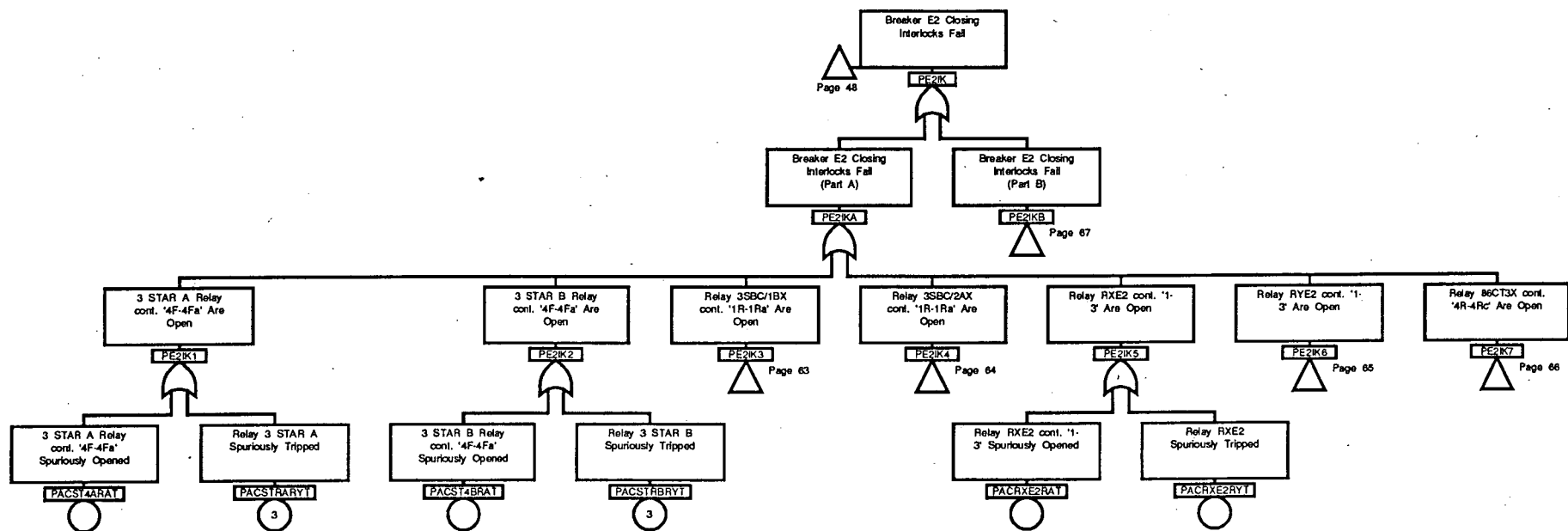


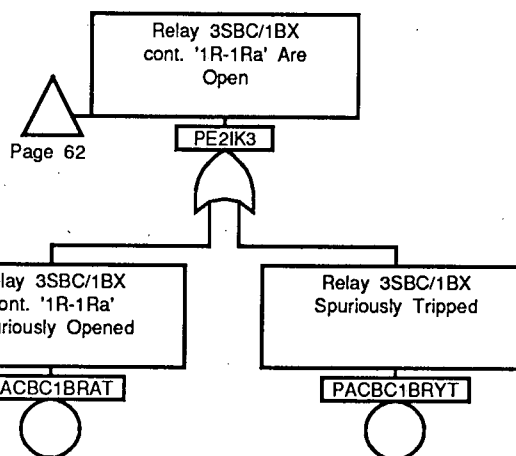


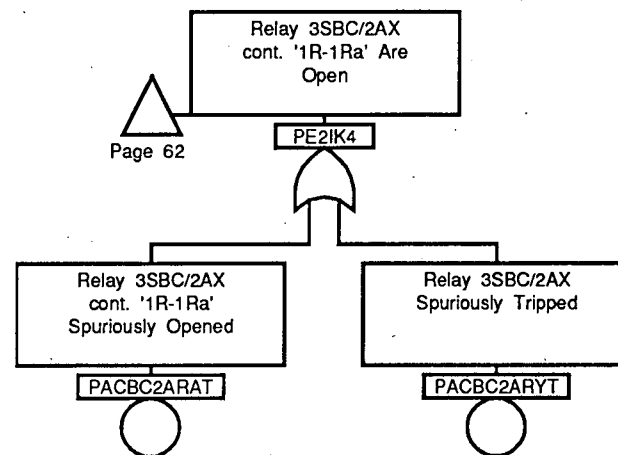
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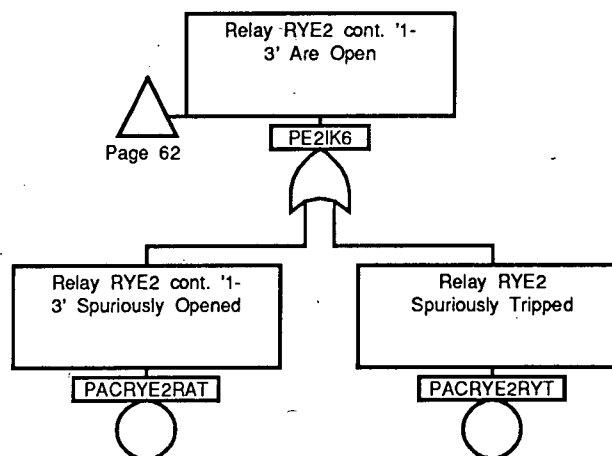


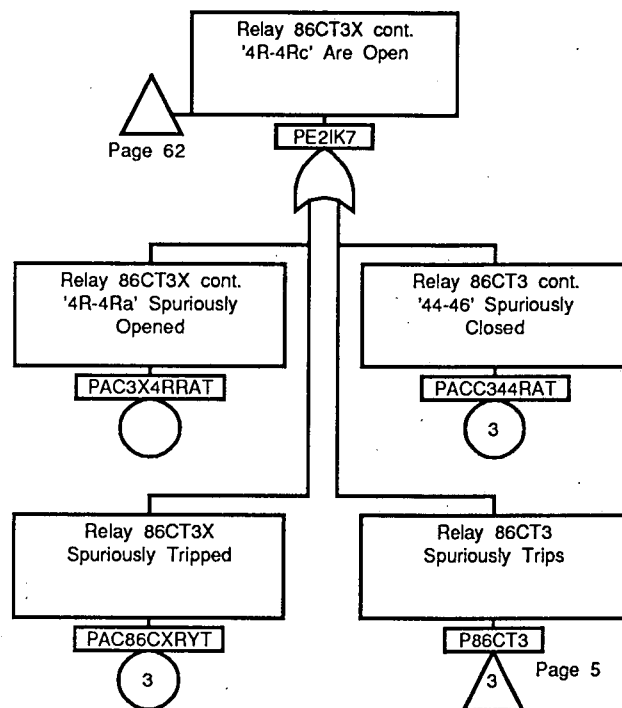


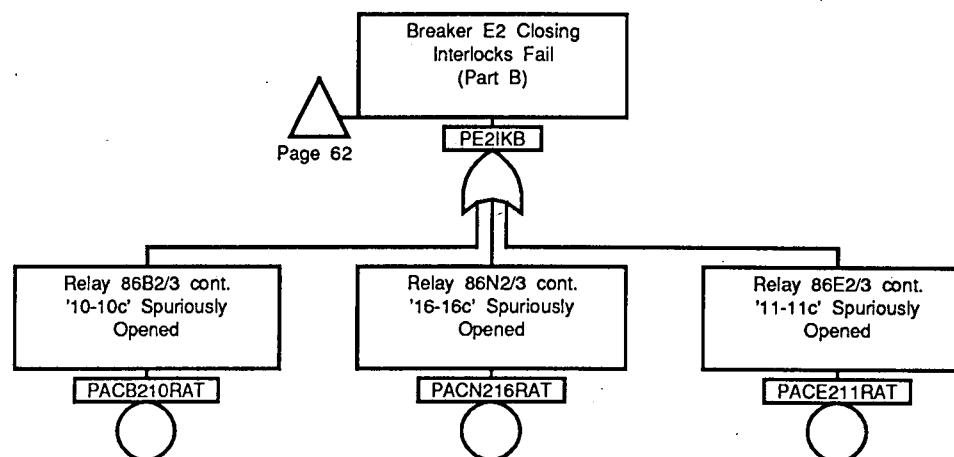


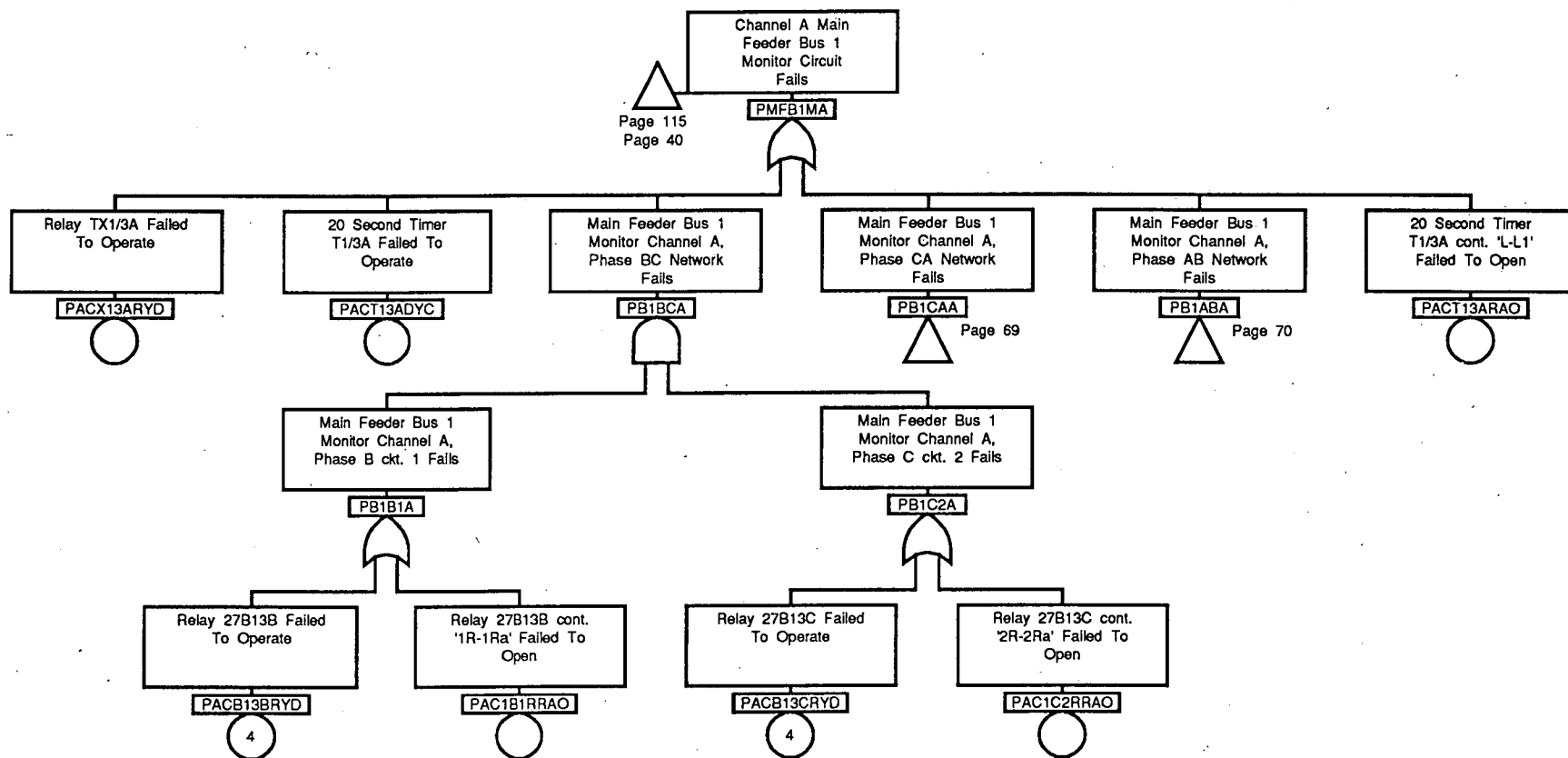




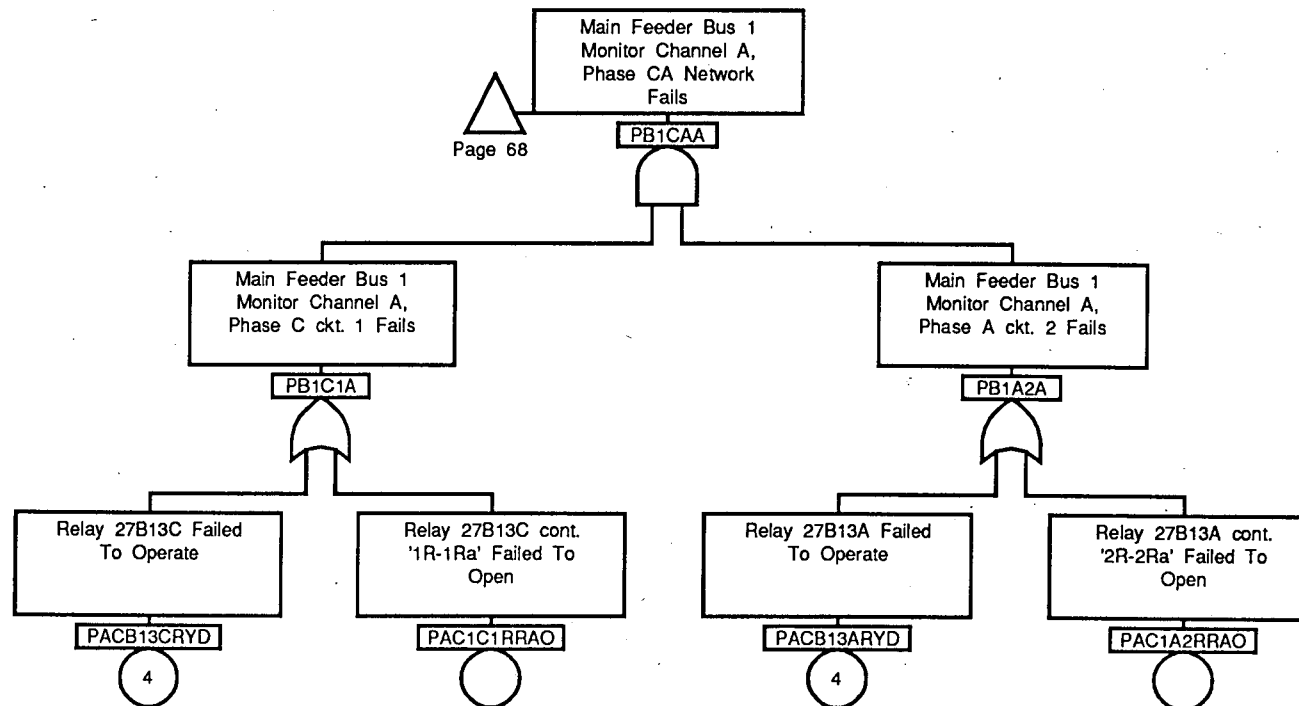


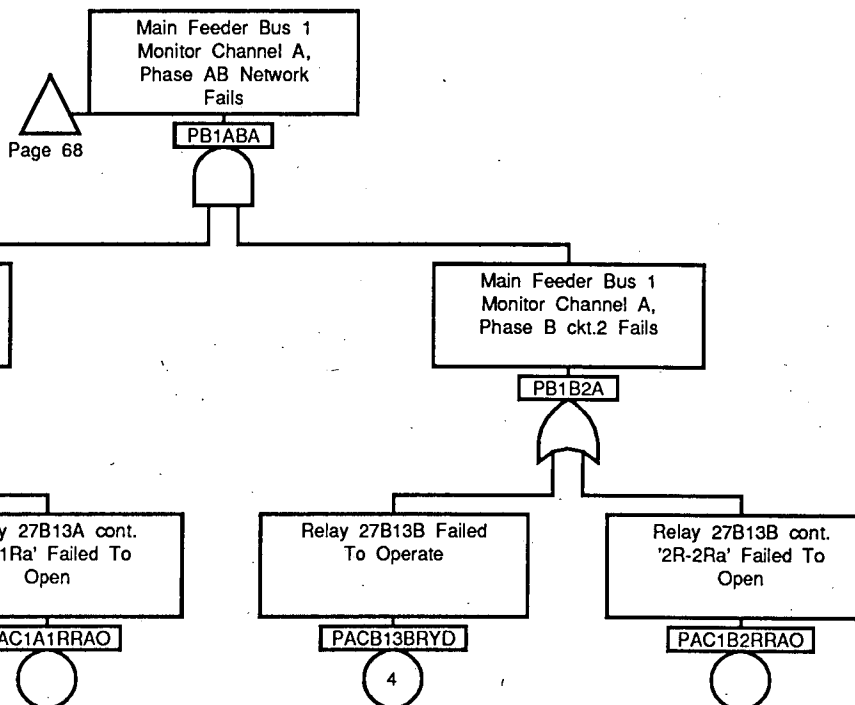


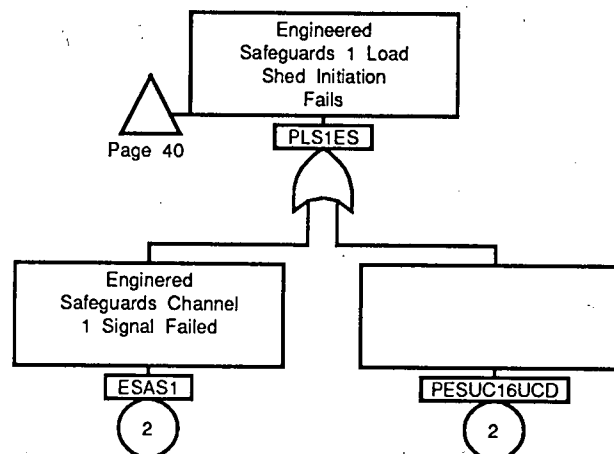


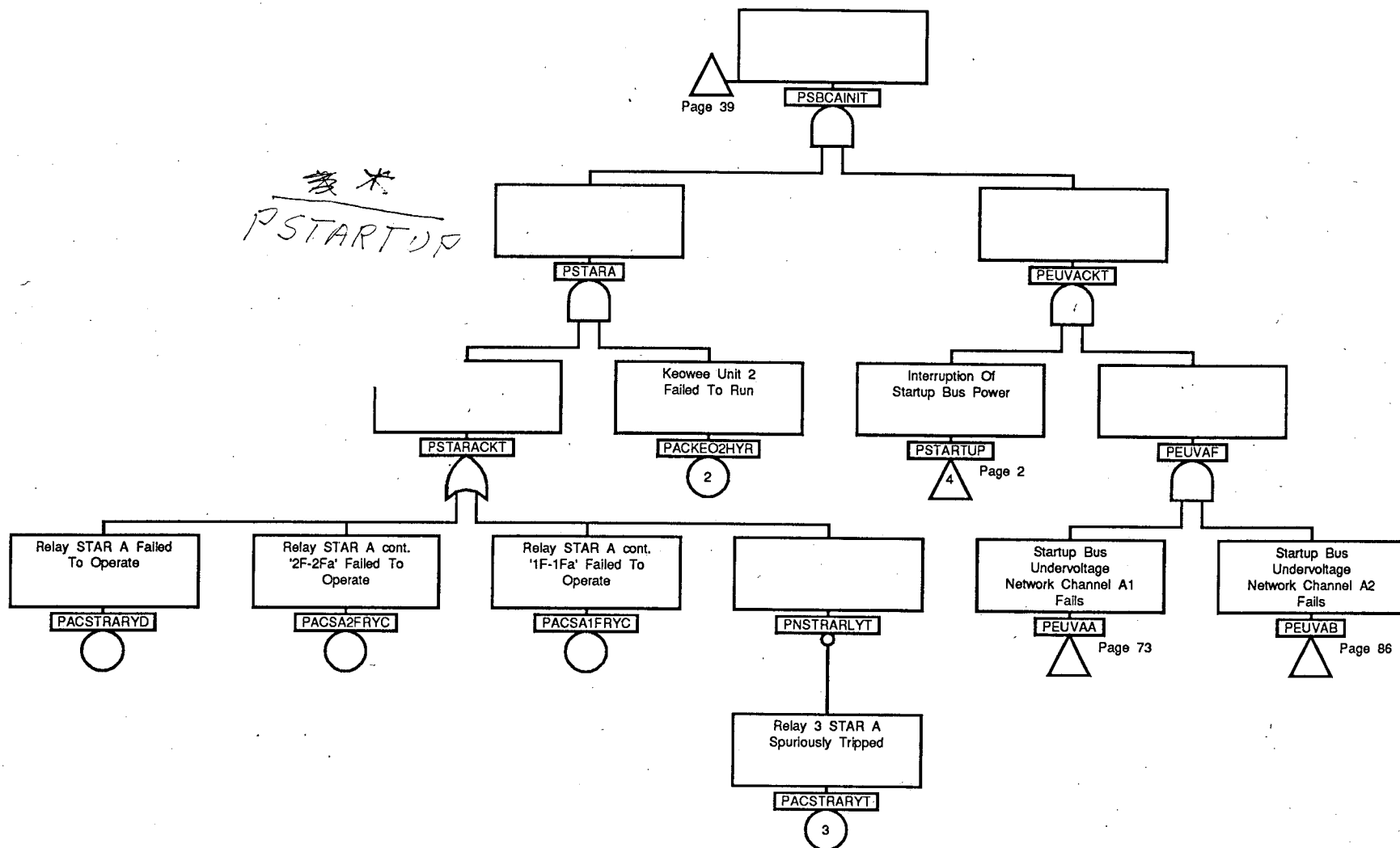


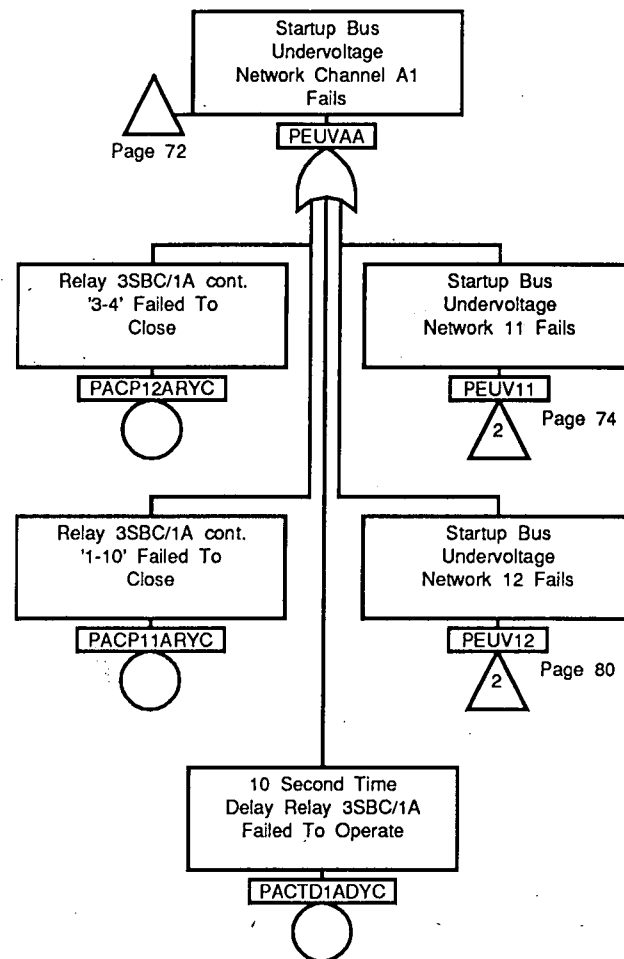
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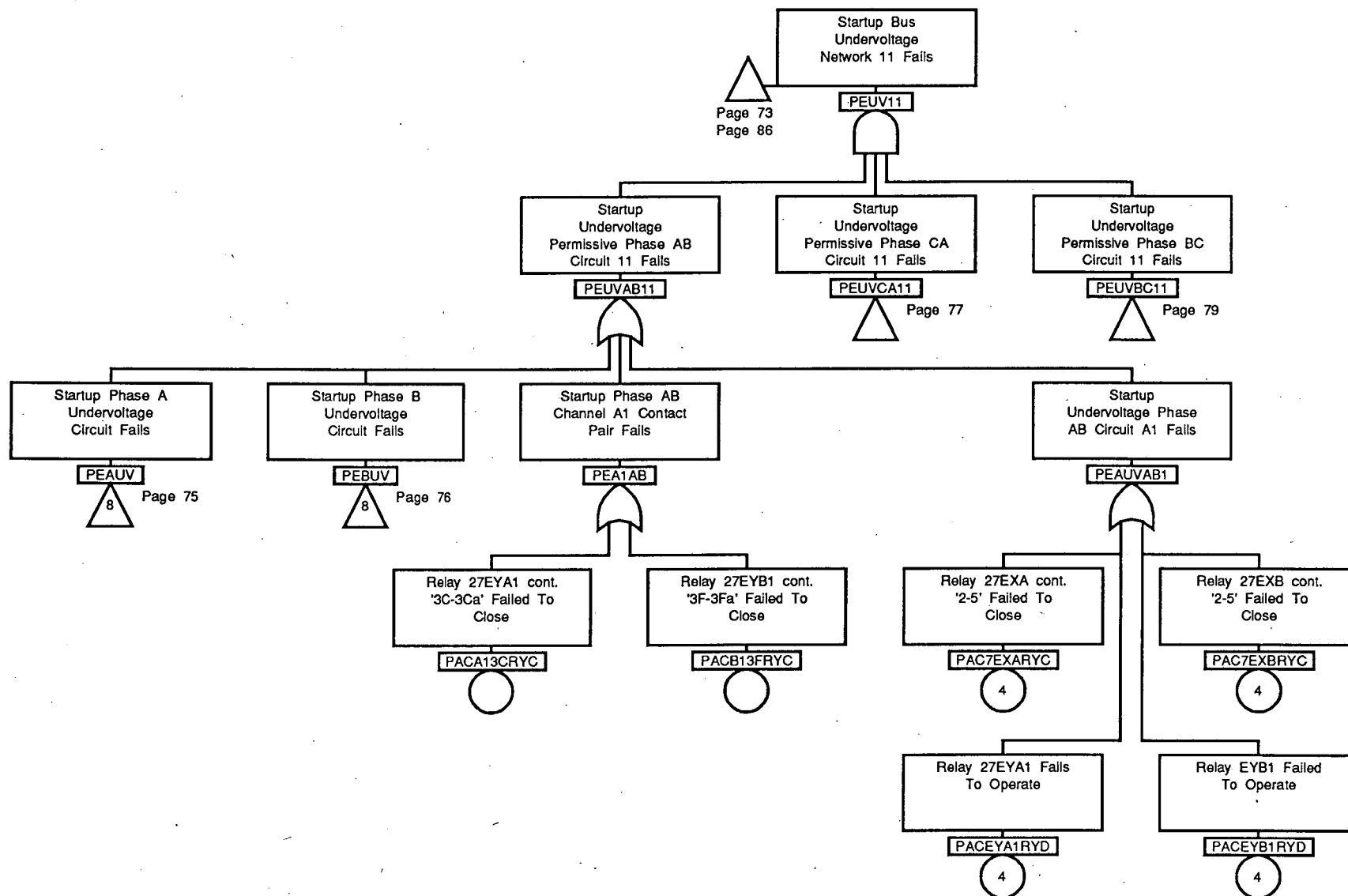


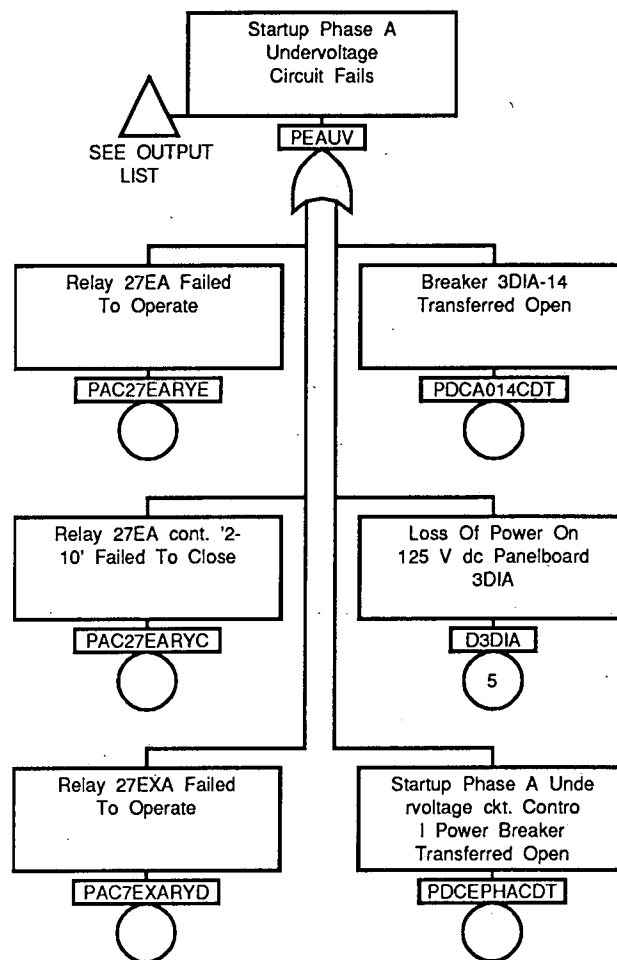






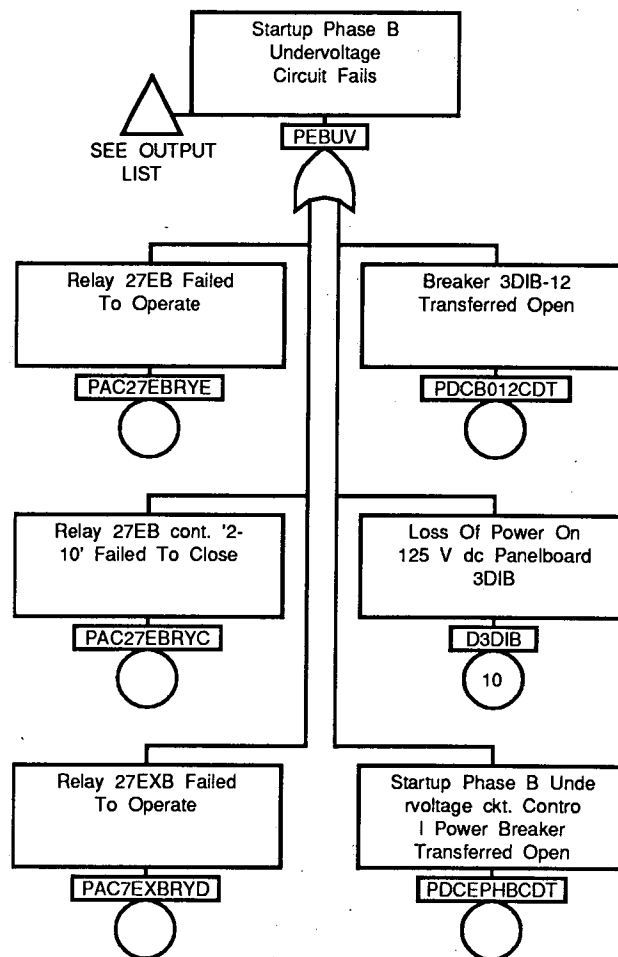


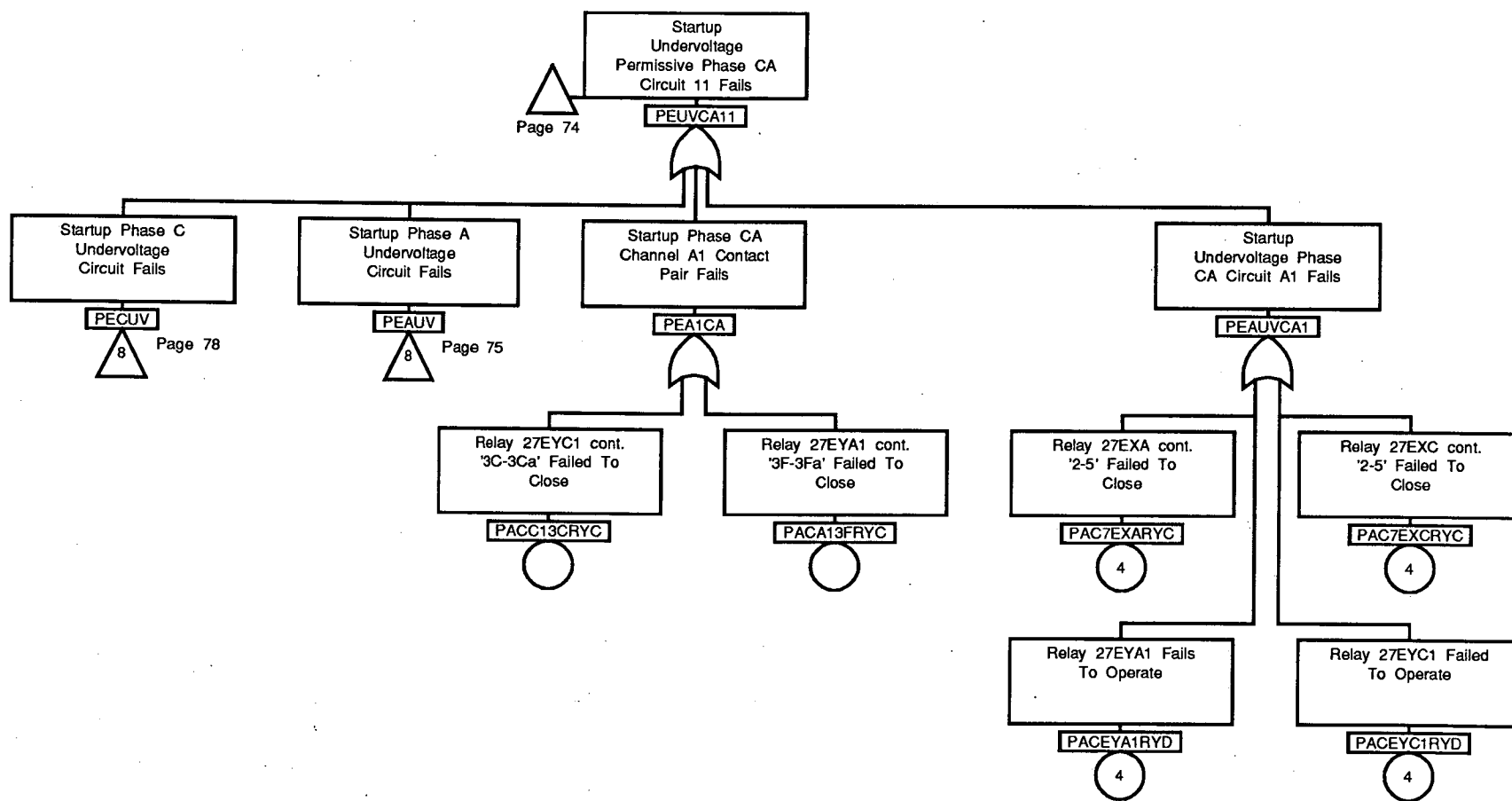


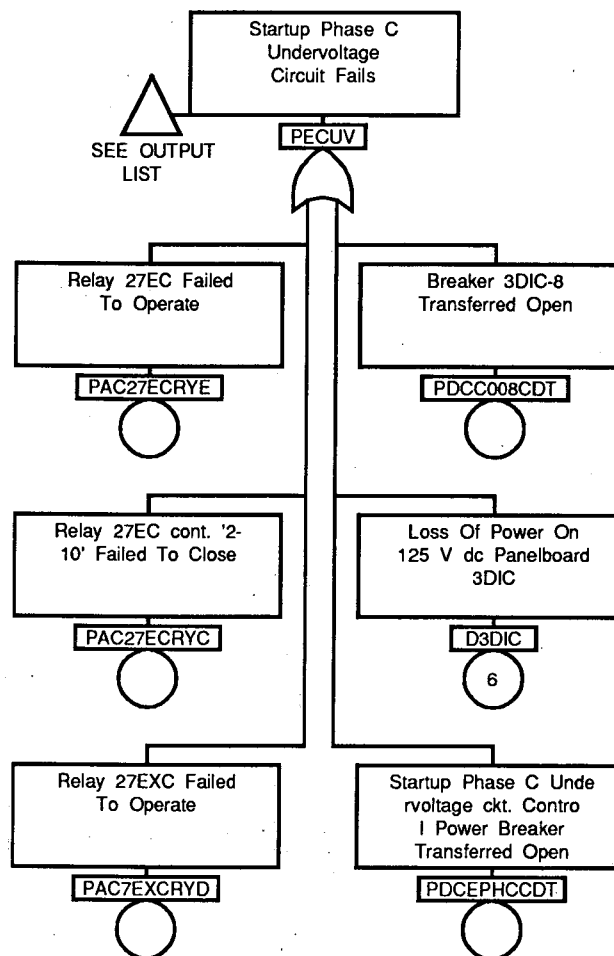


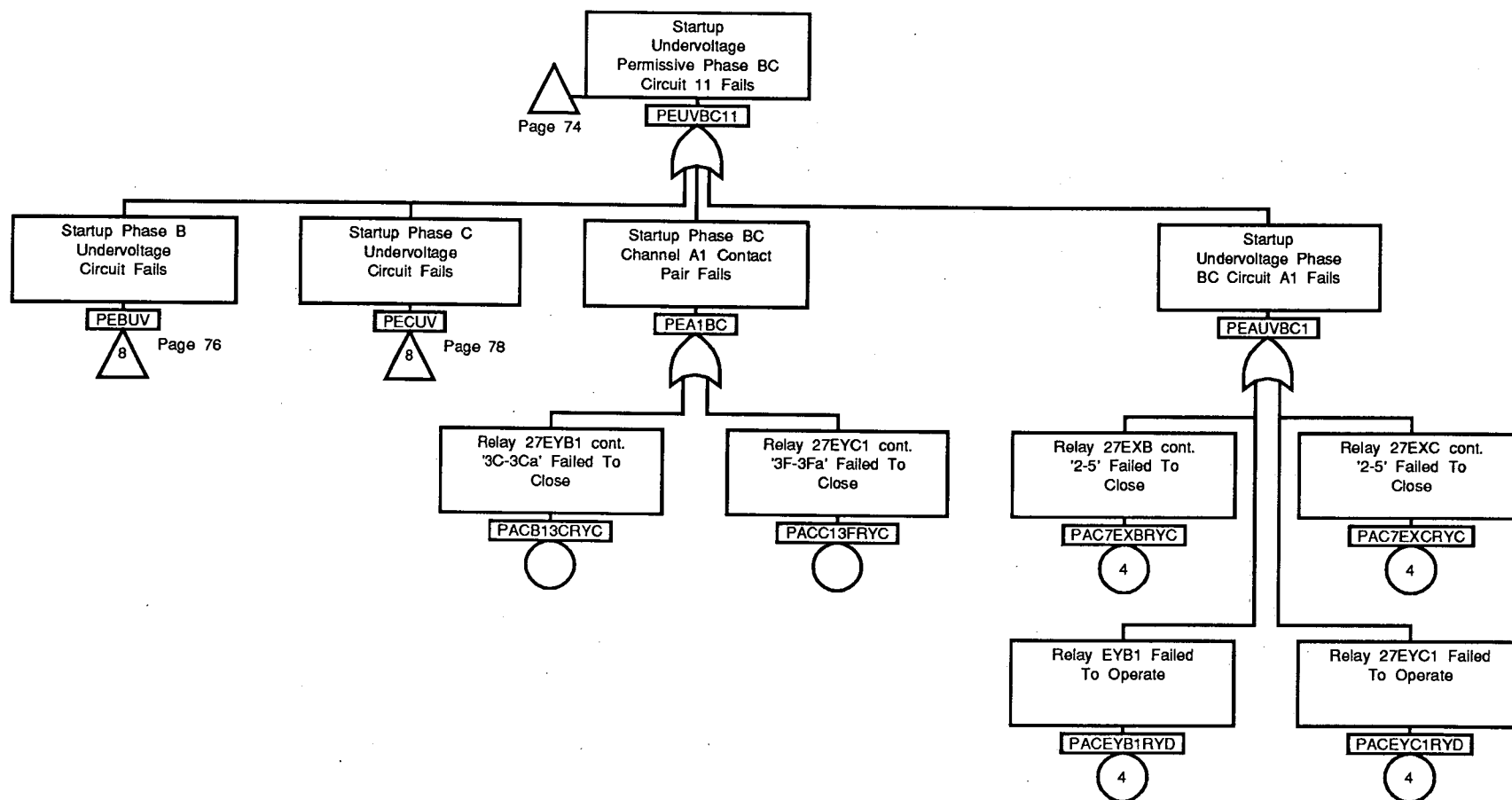
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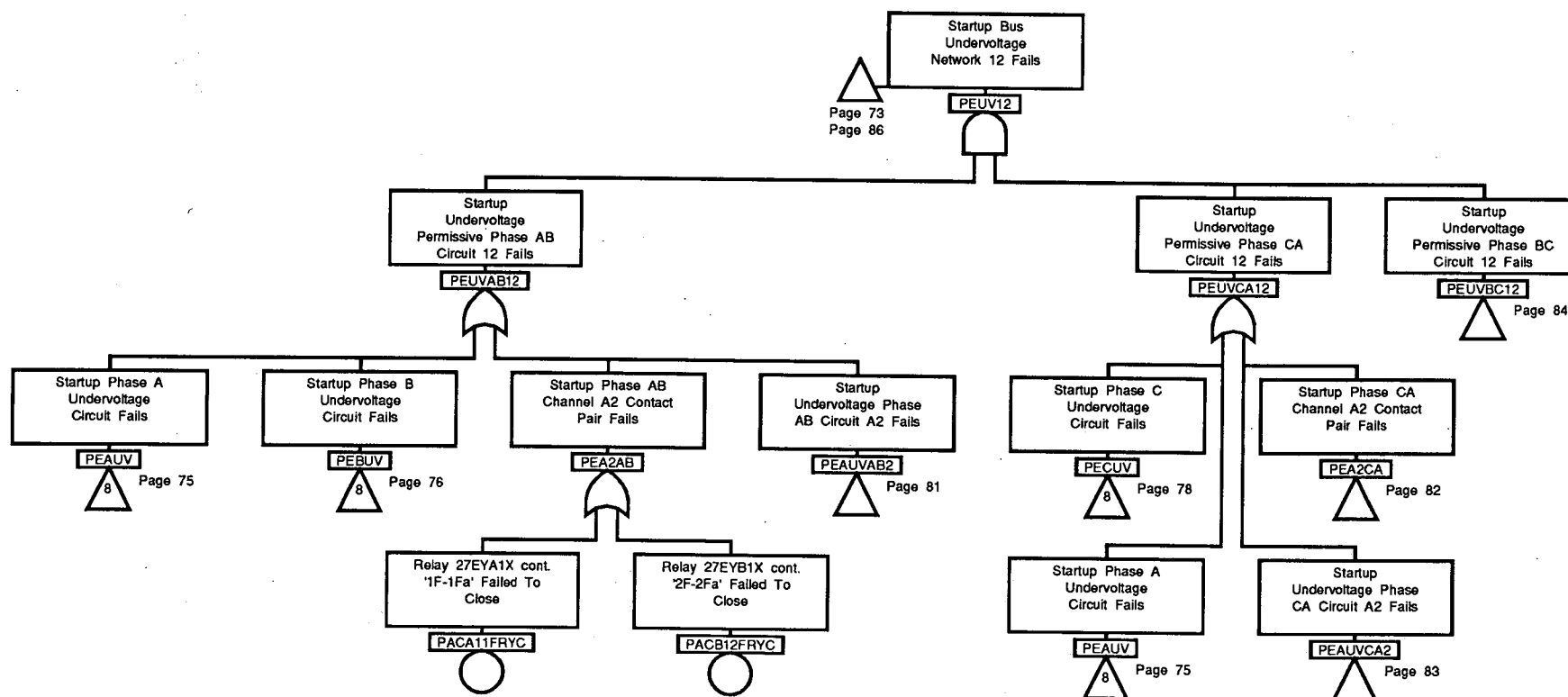
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Page 84, Page 99, Page 101
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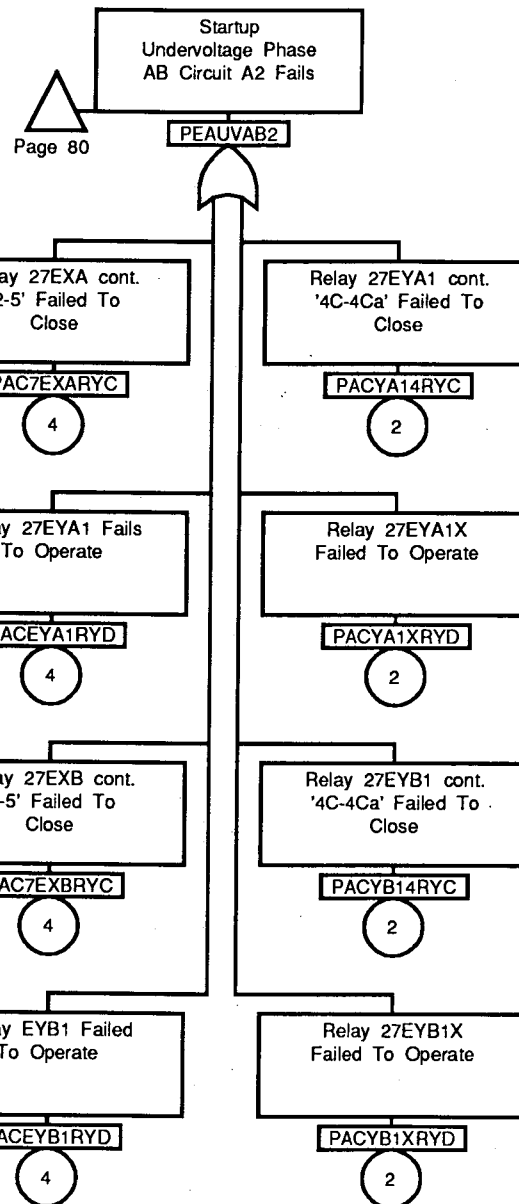


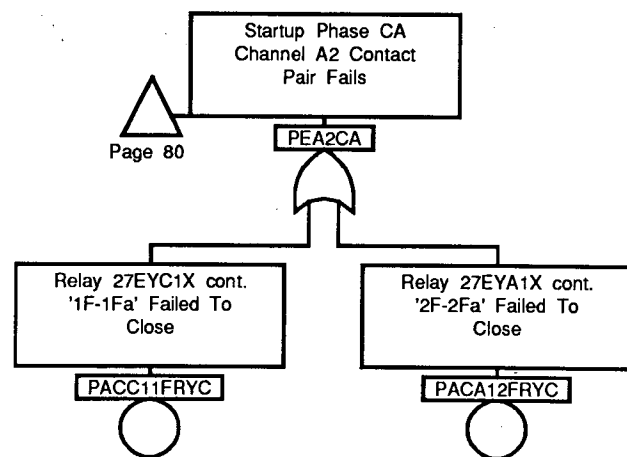






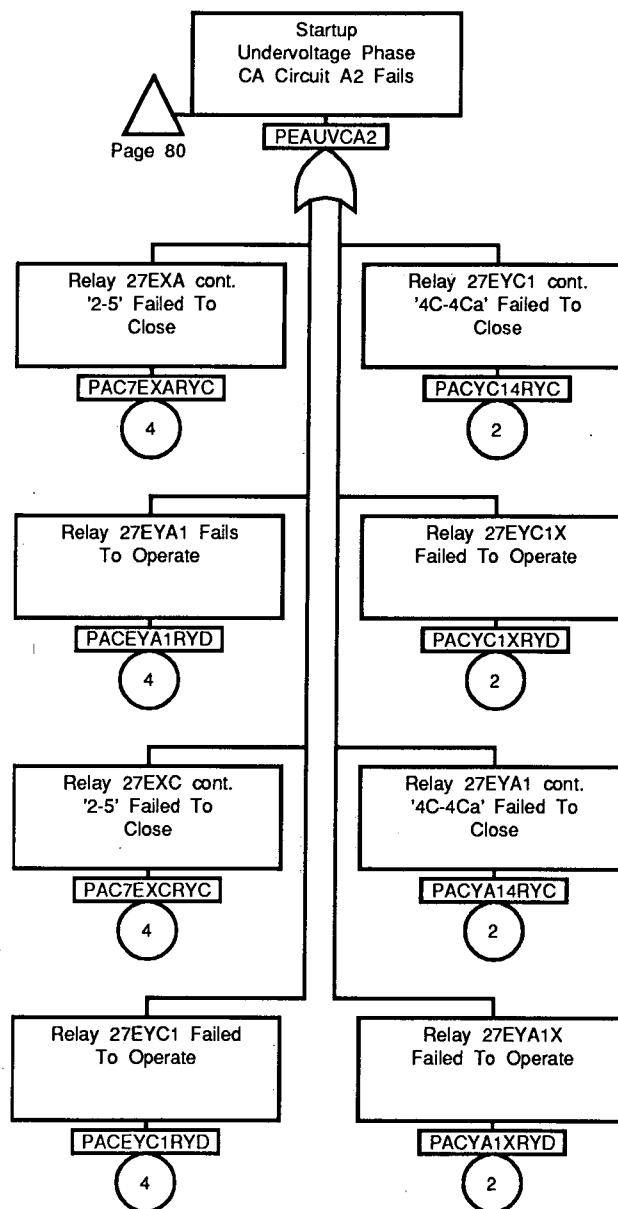


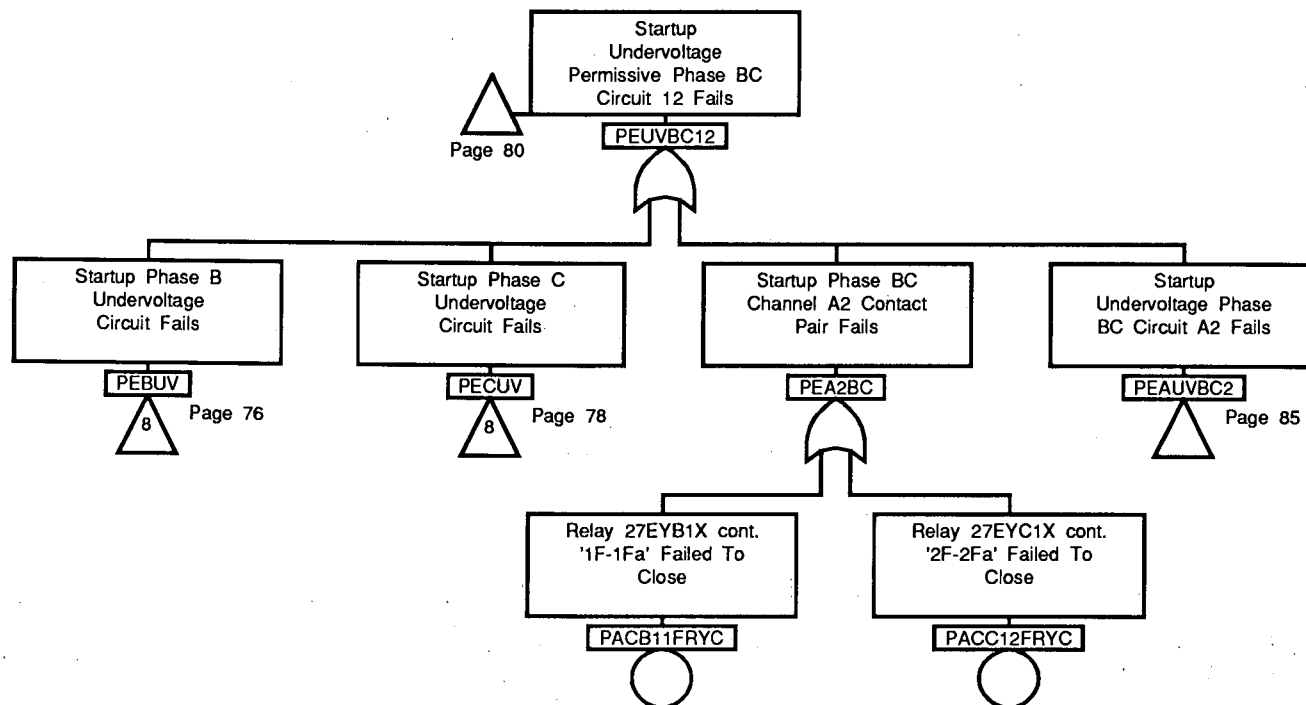




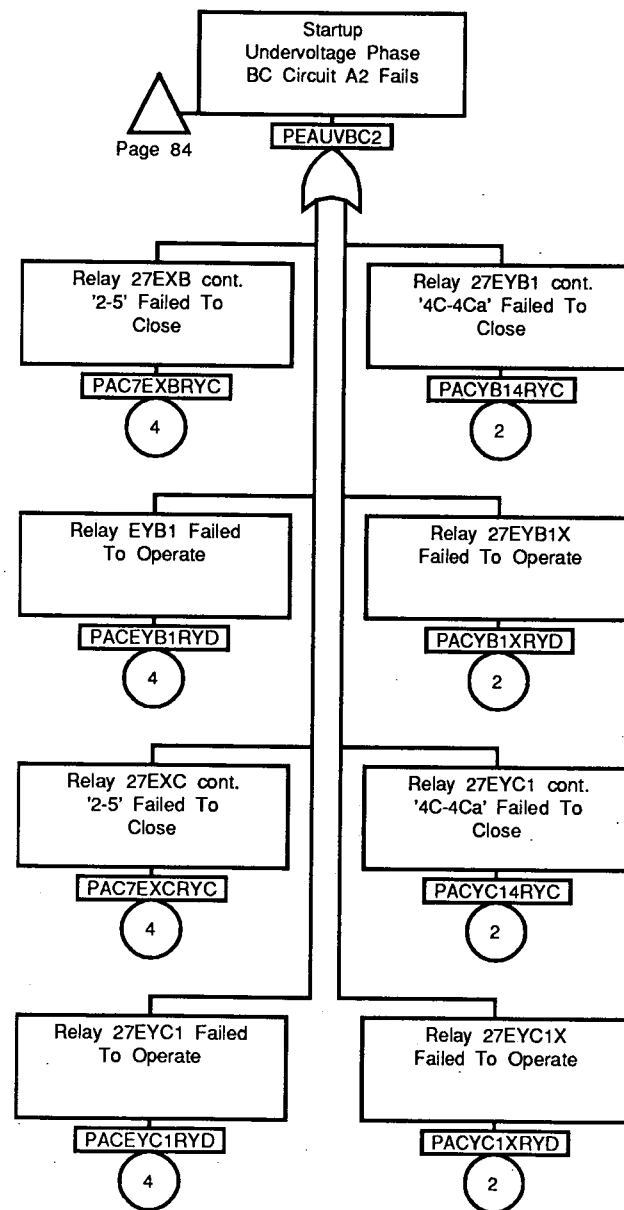
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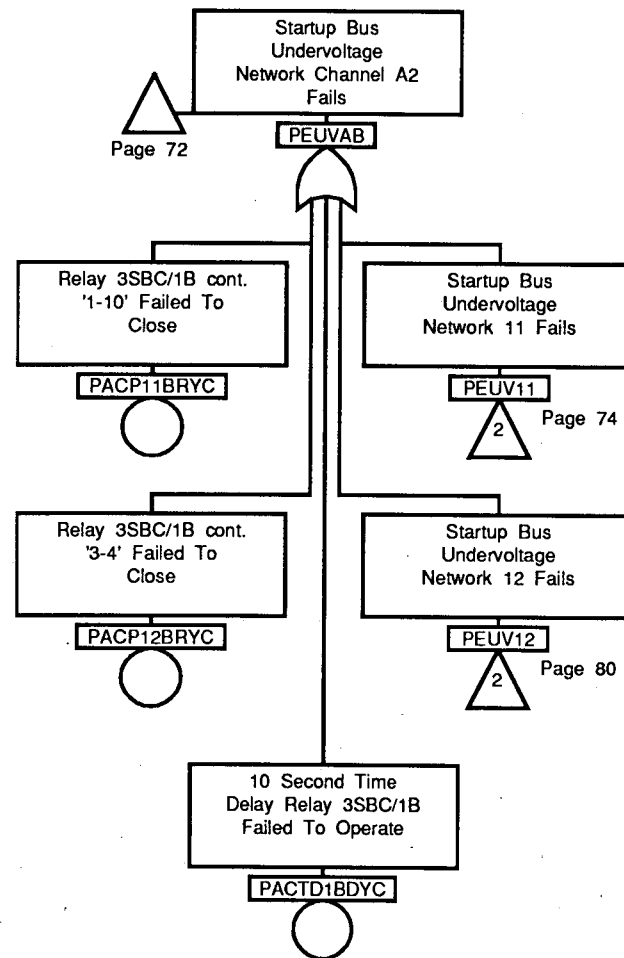
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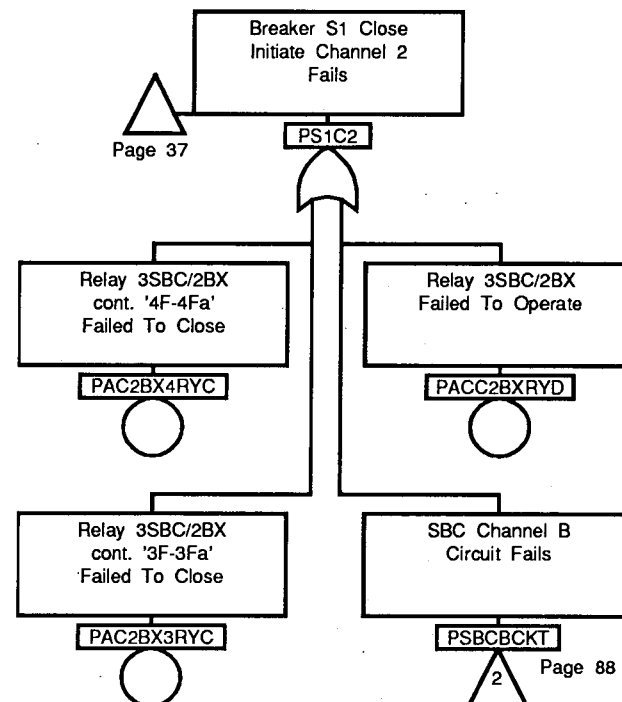


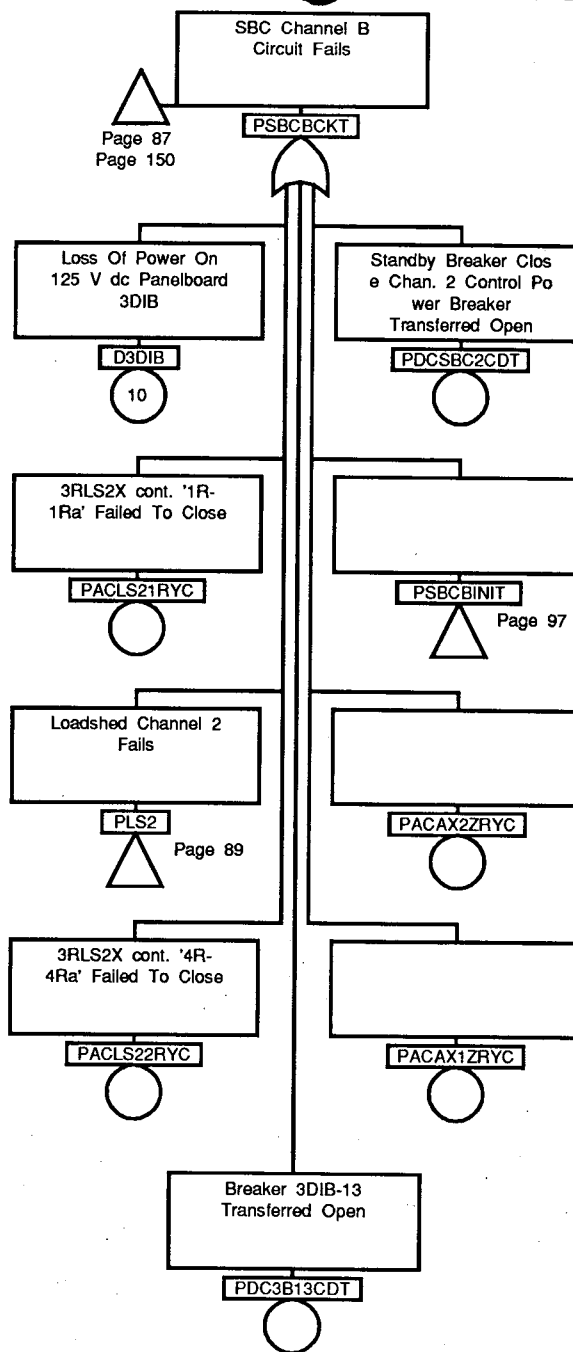


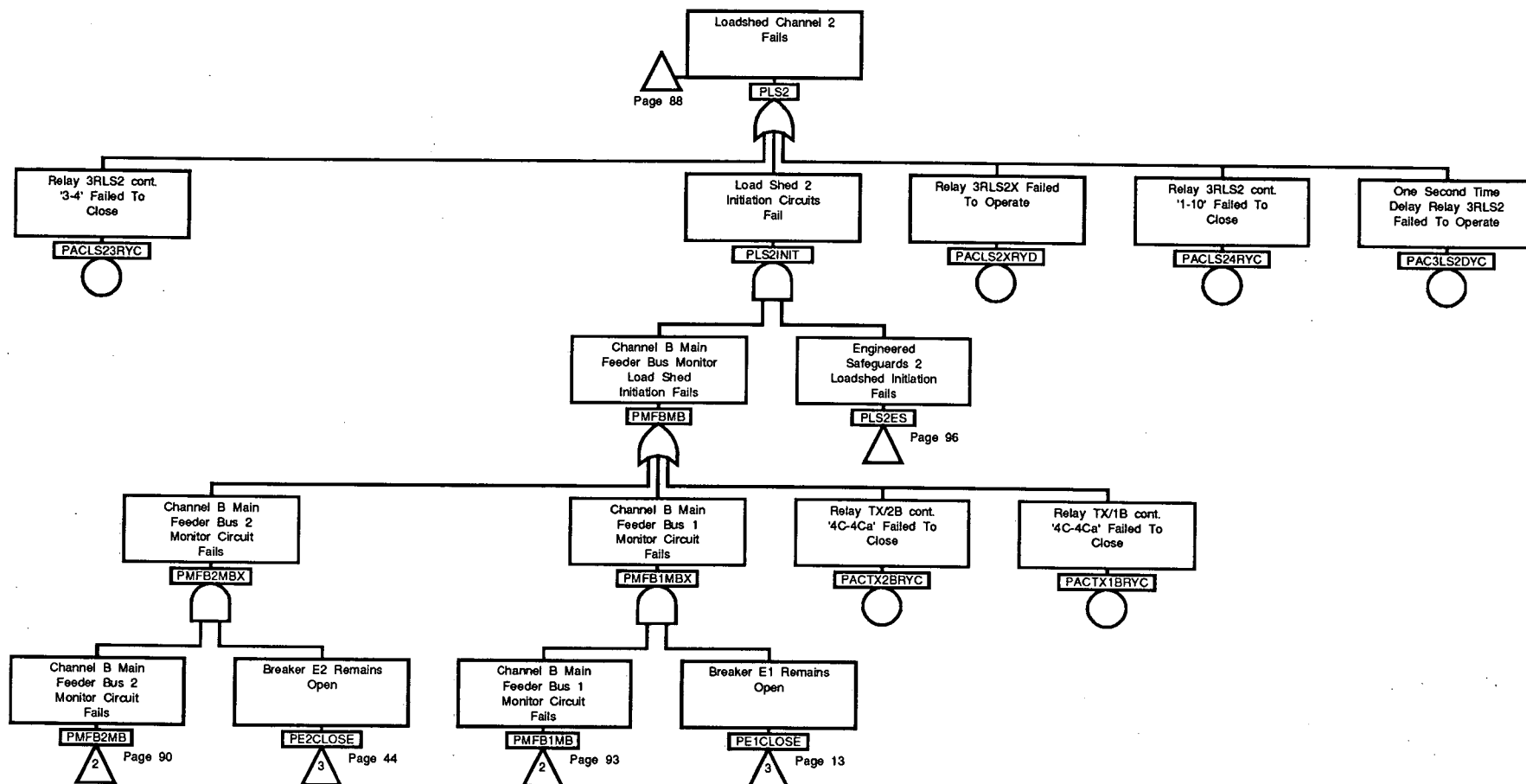
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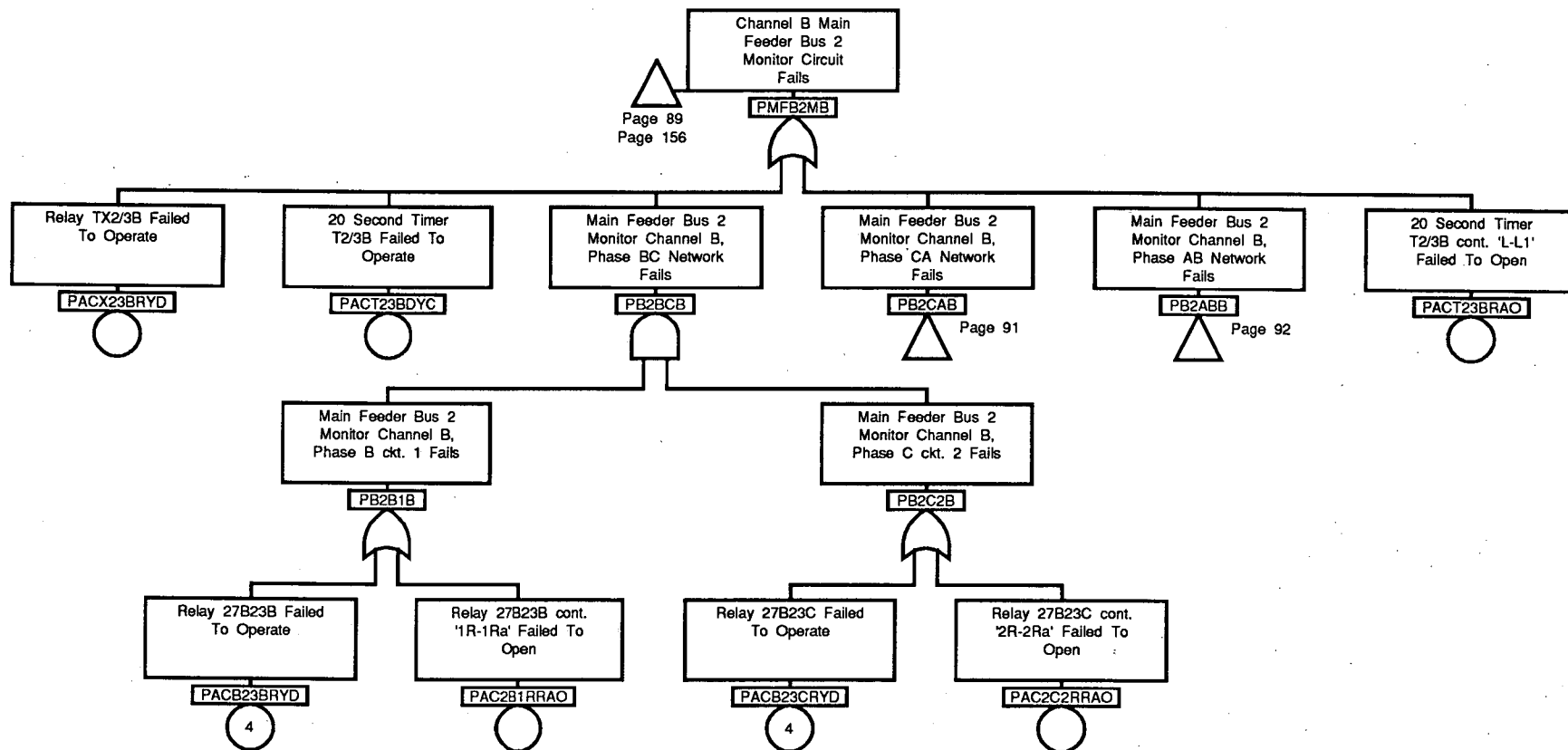




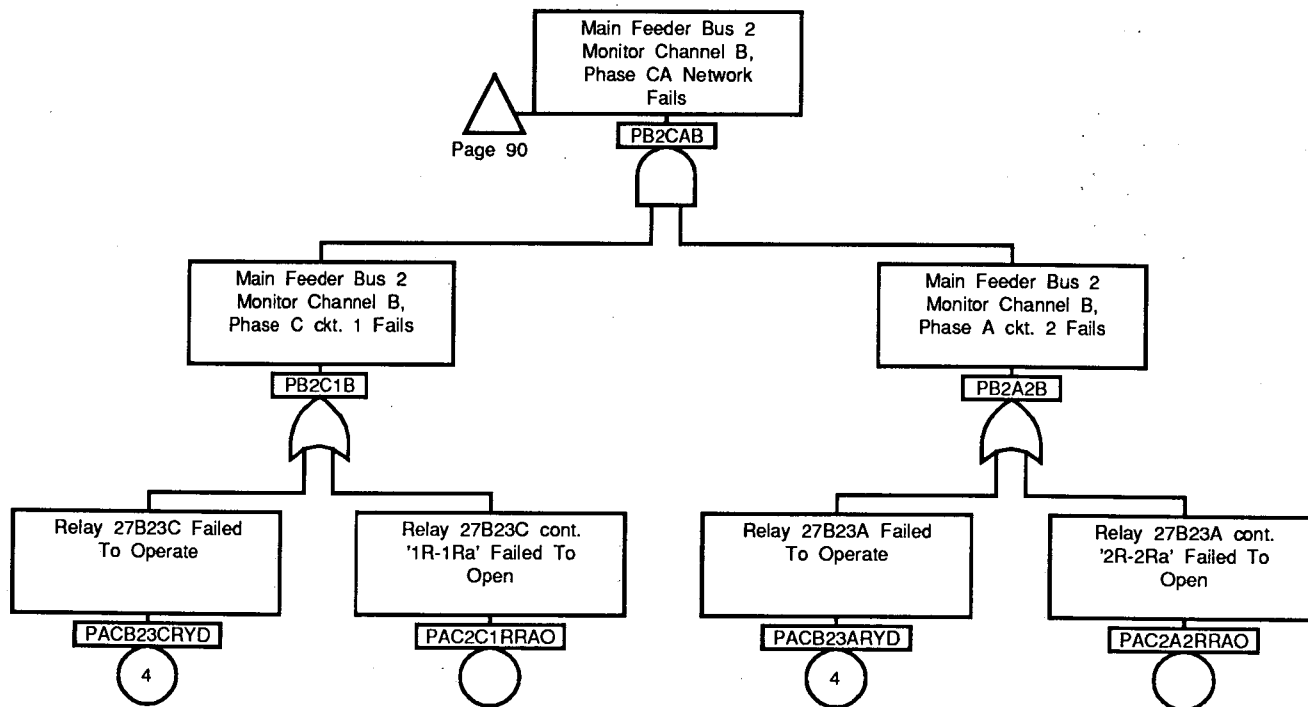




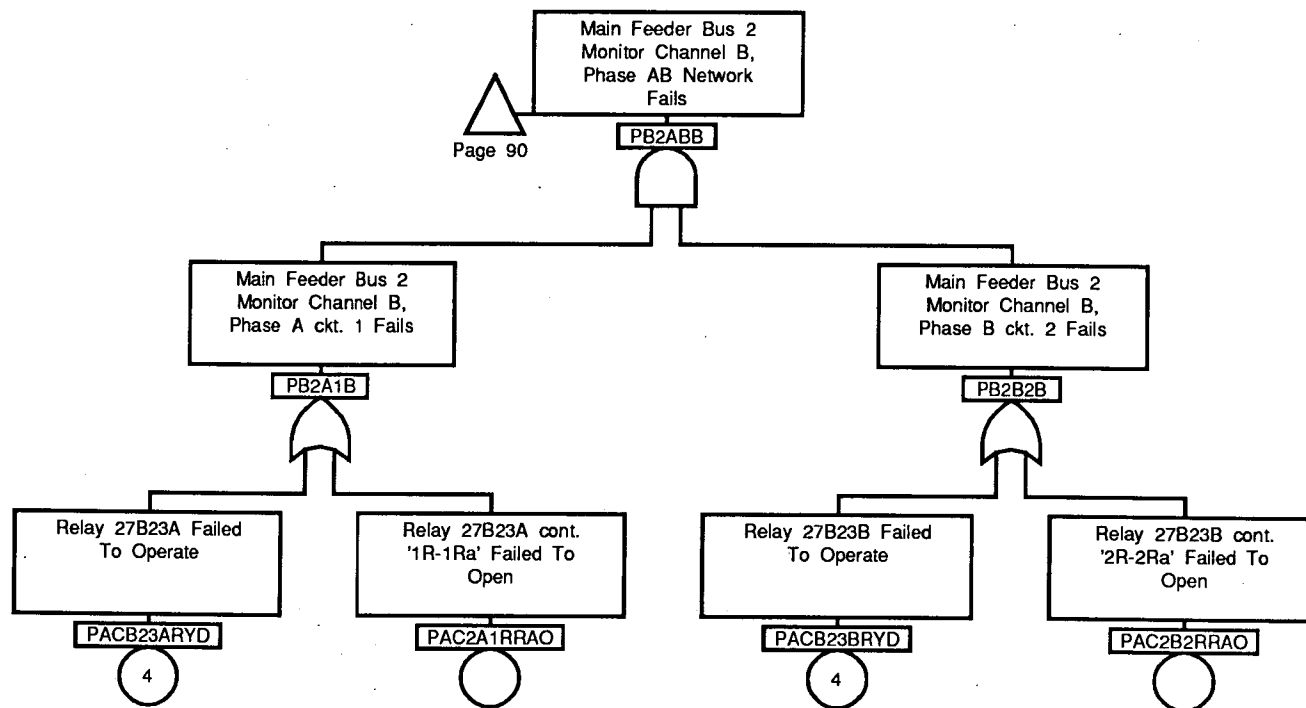


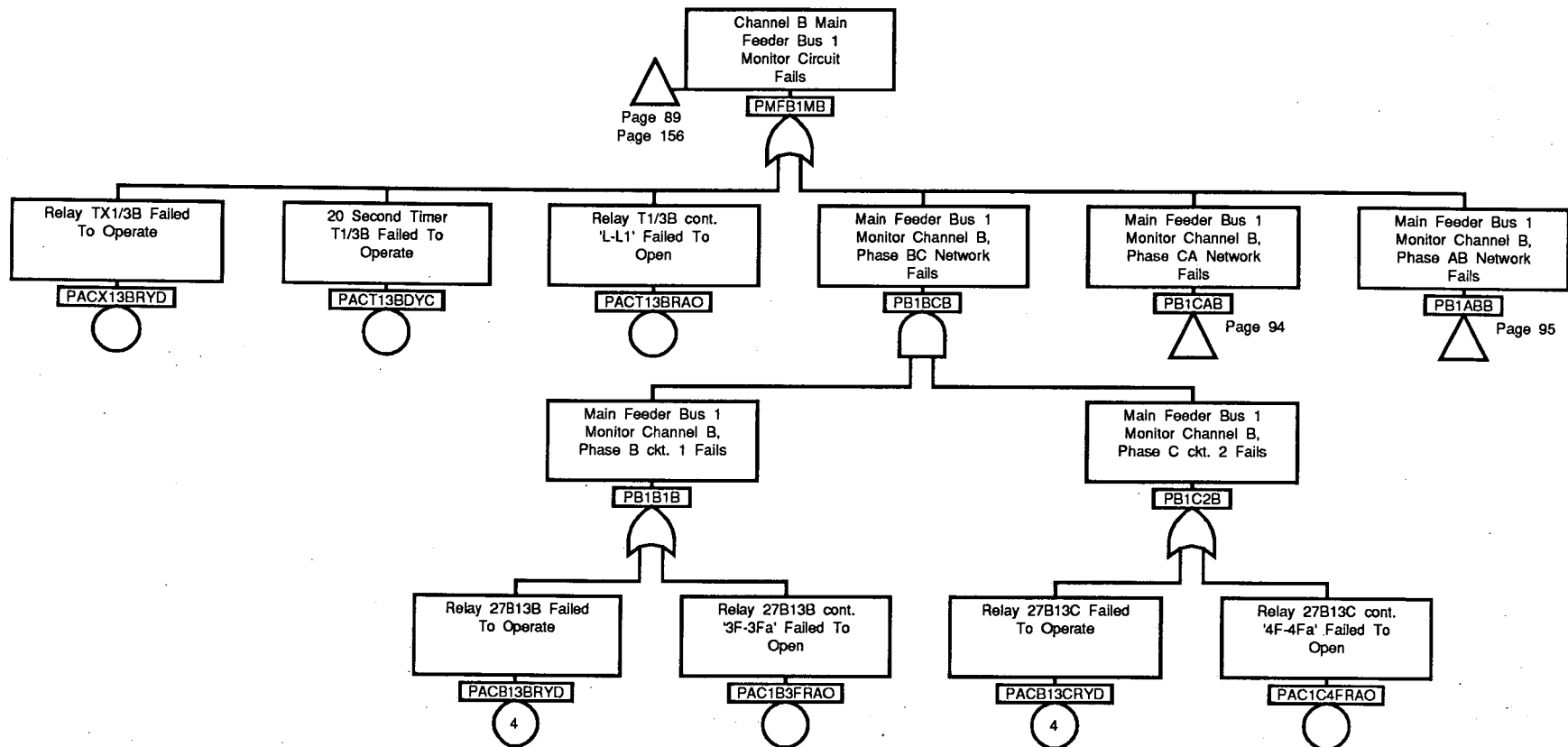


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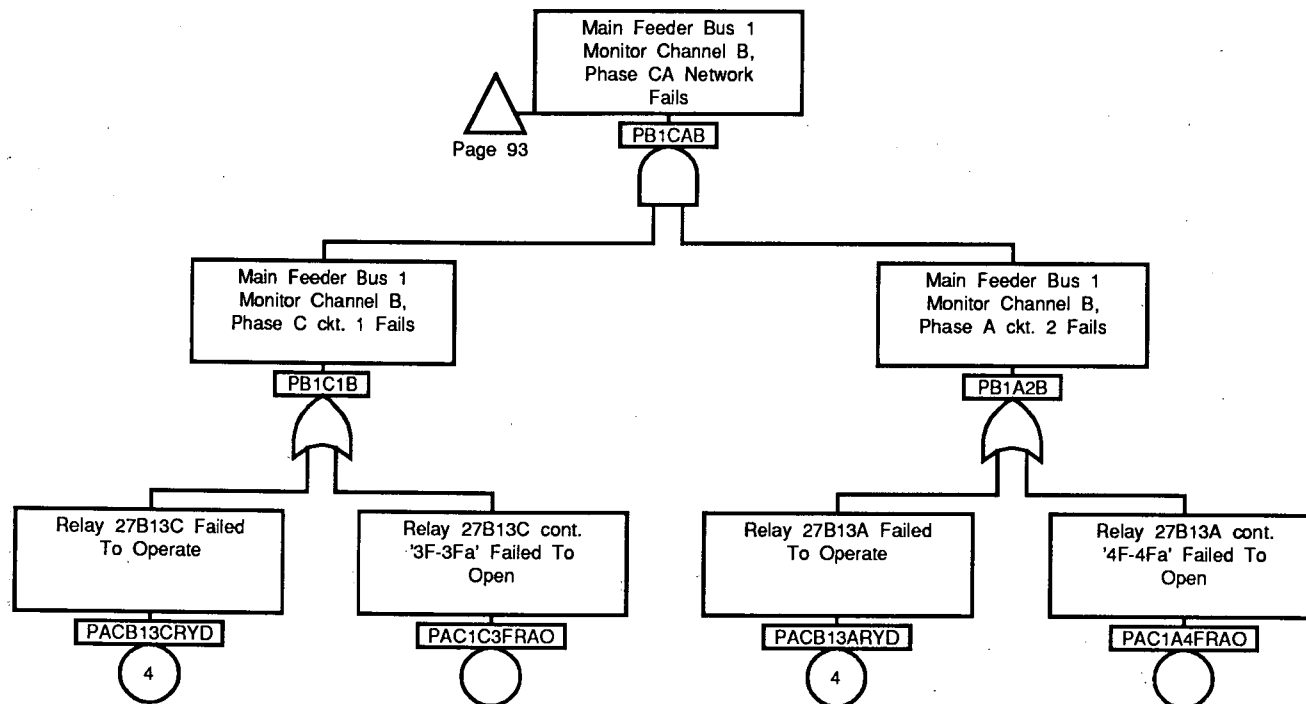


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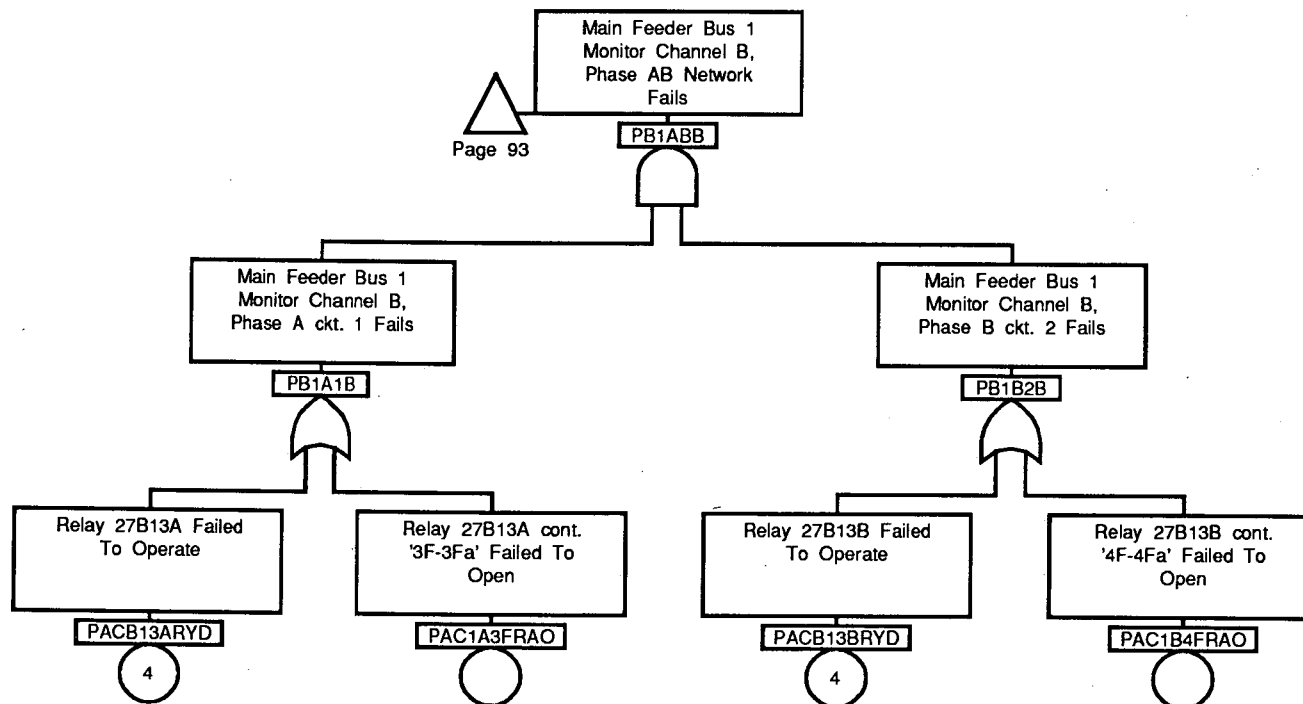


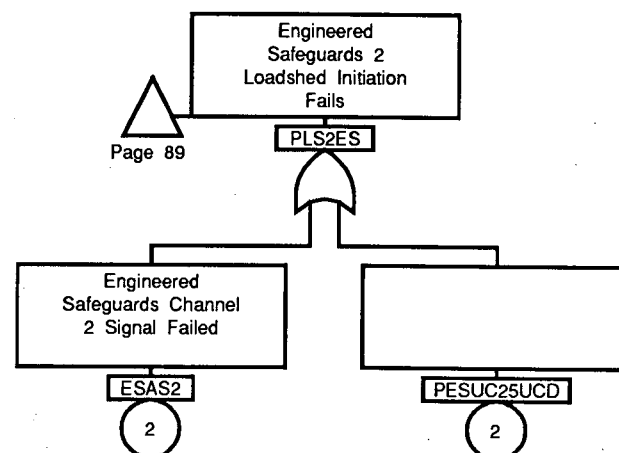


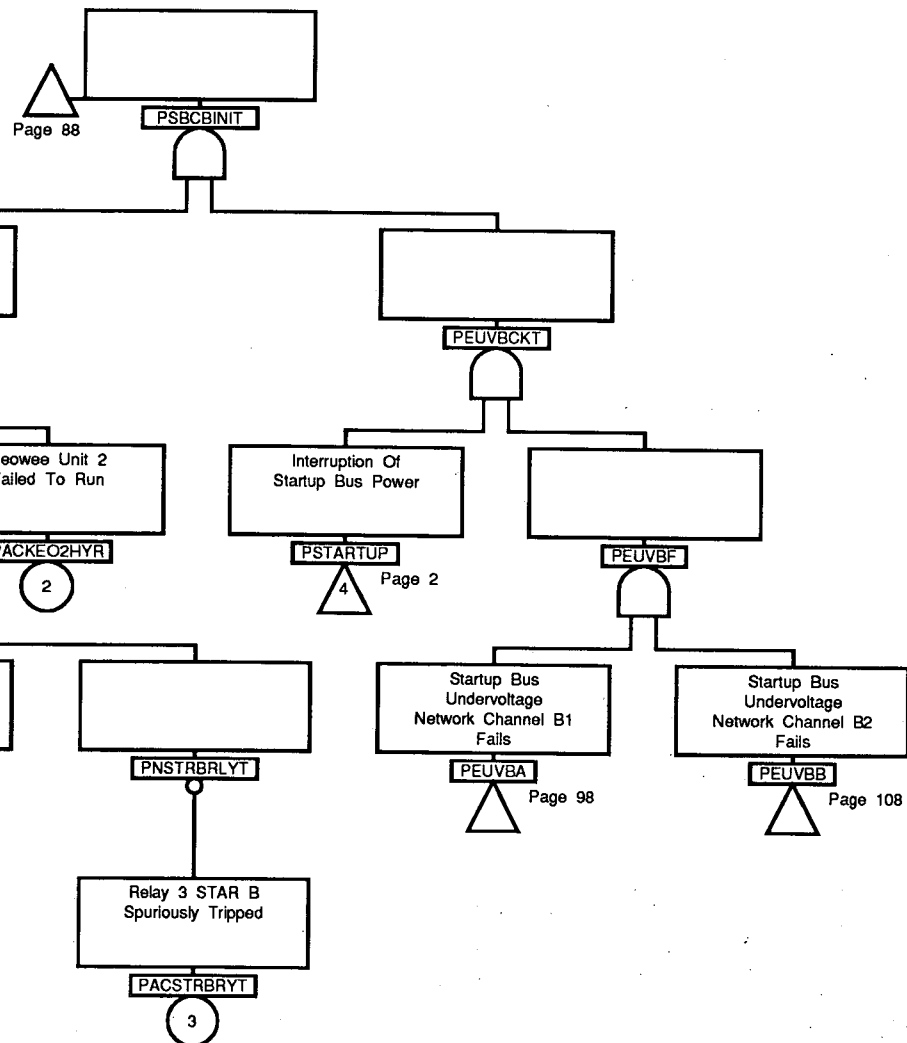
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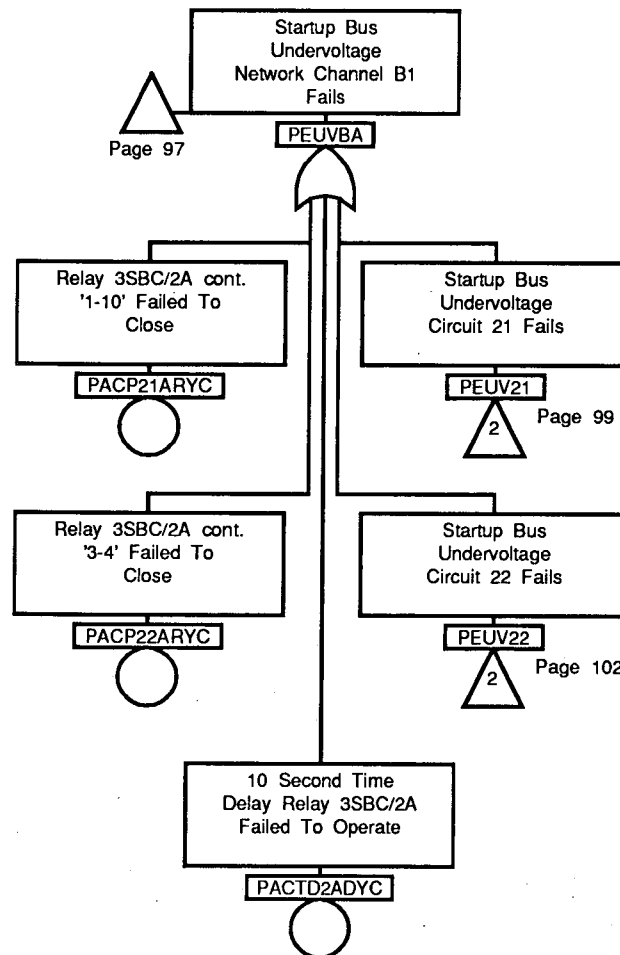


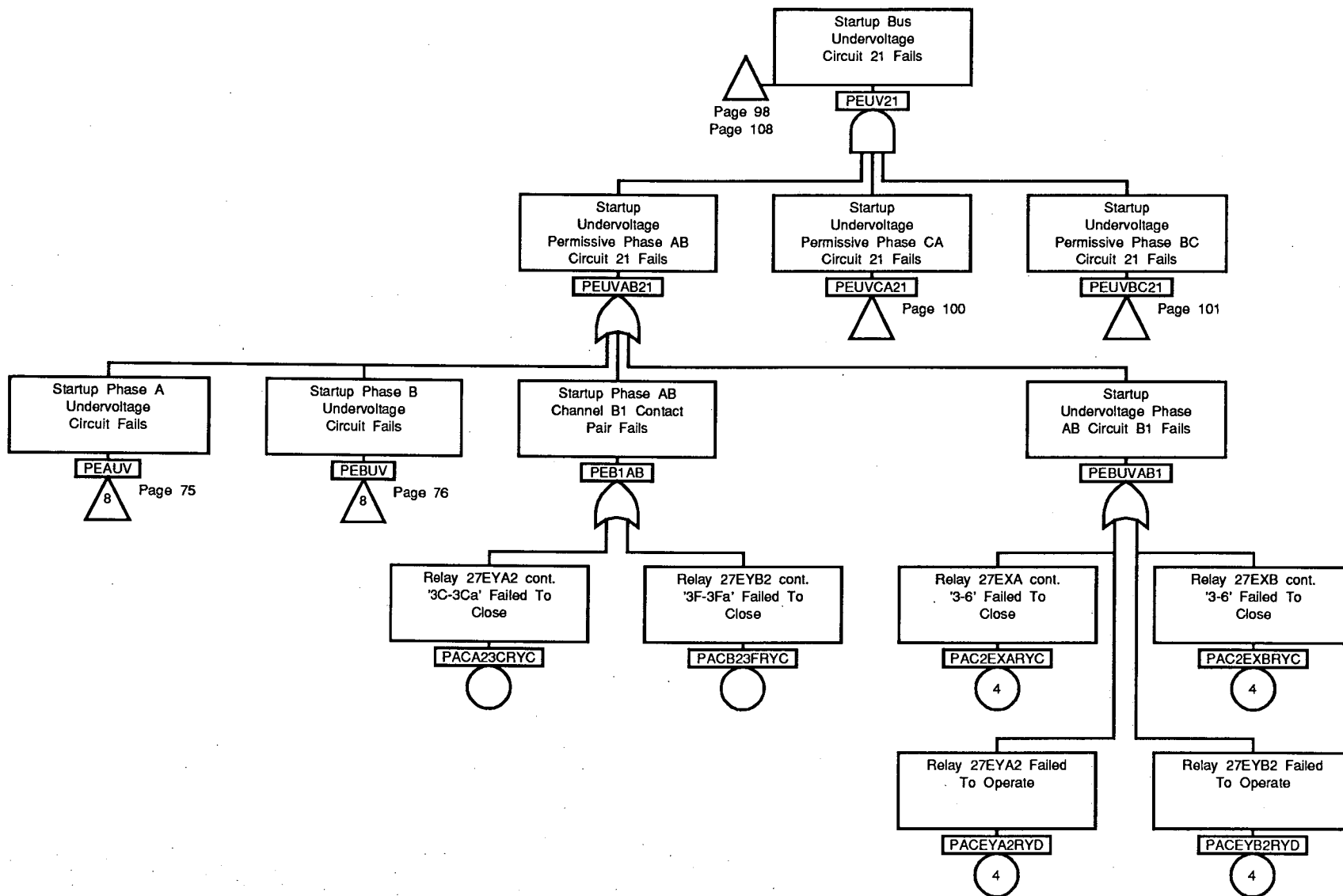
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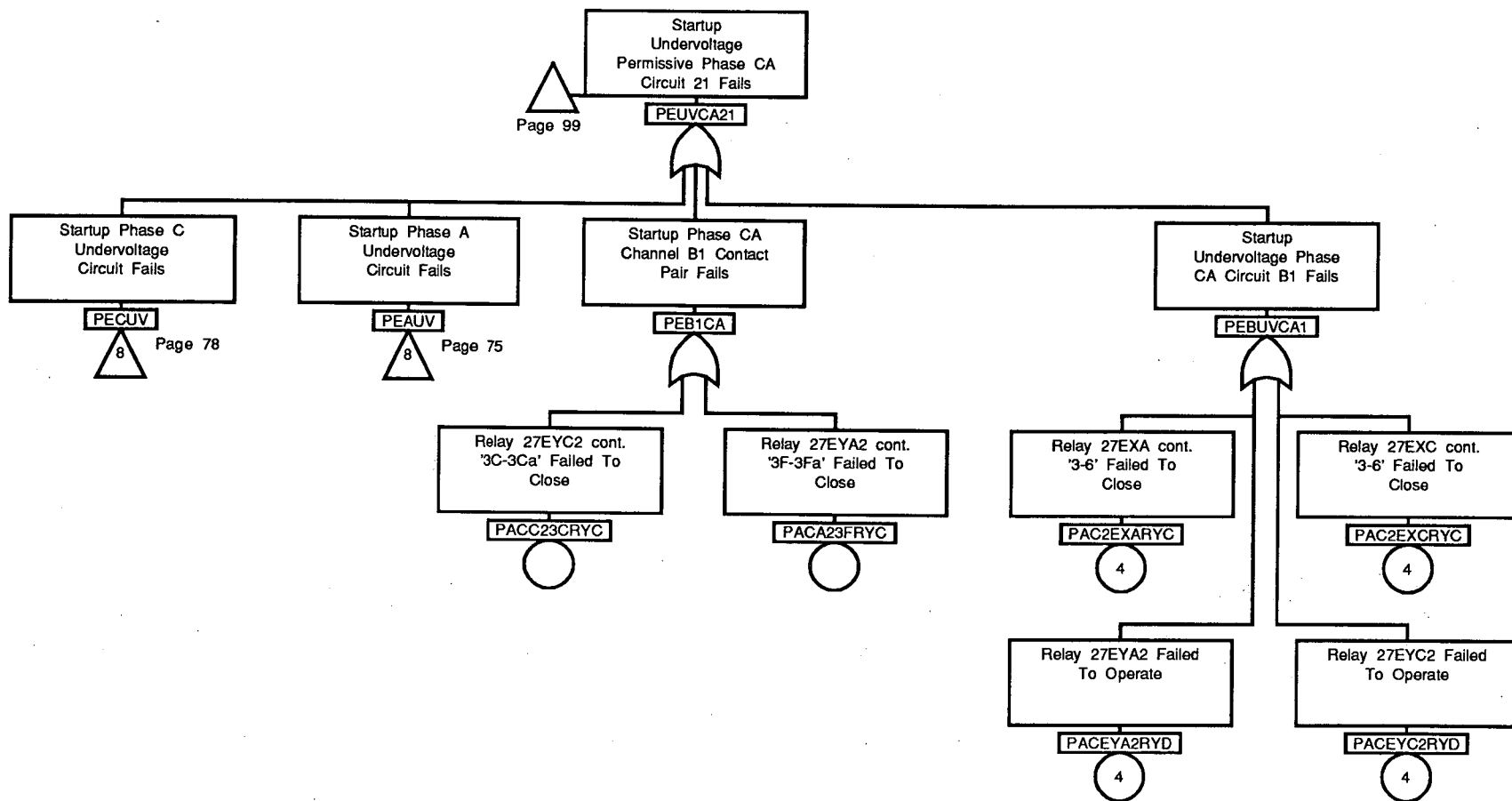


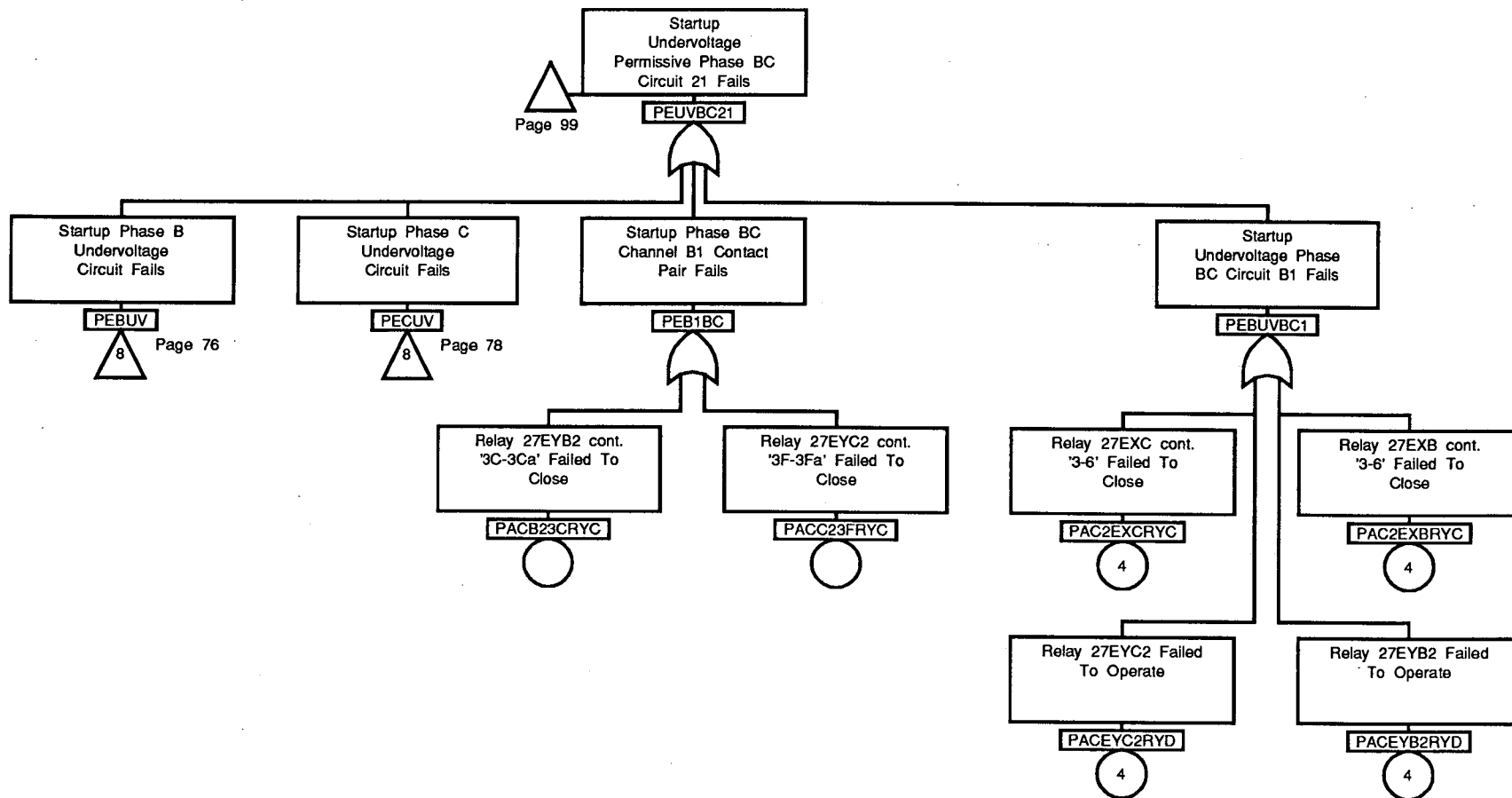


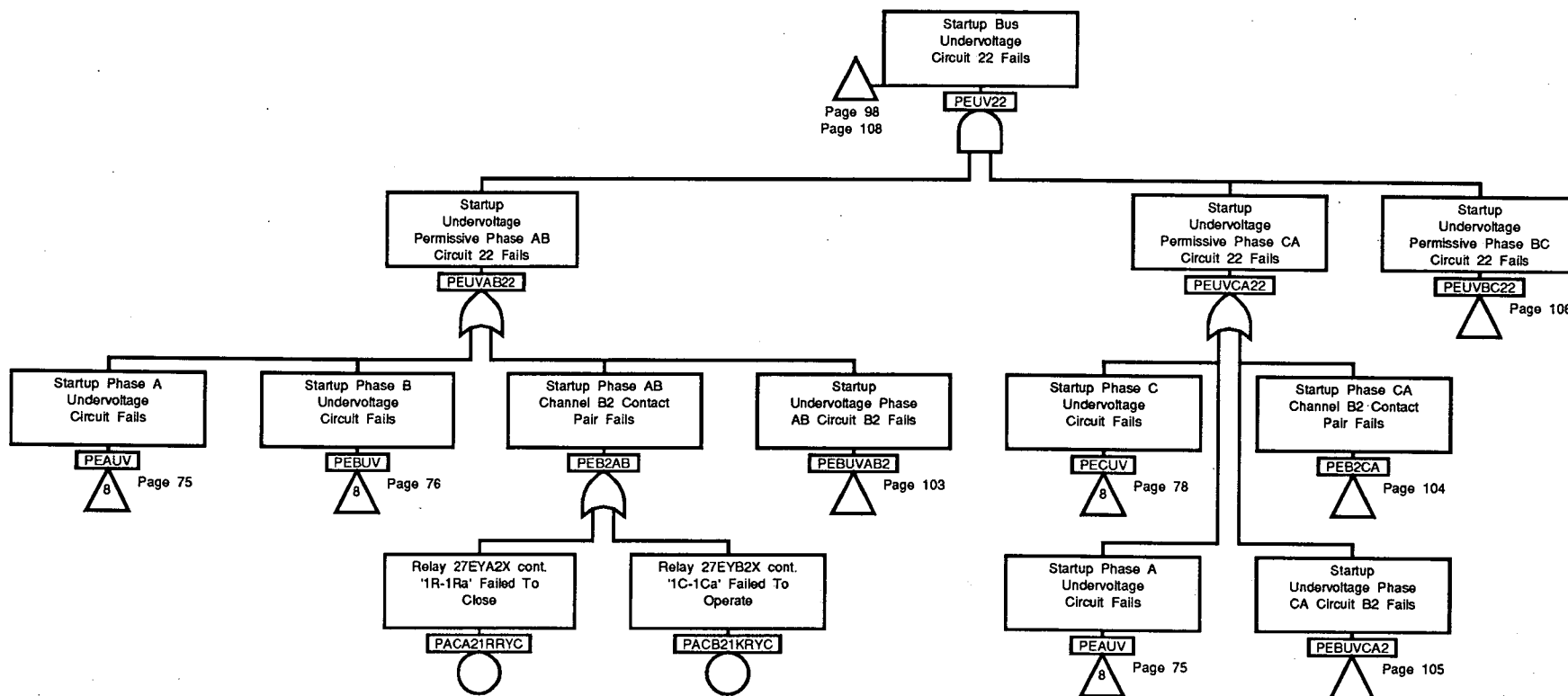




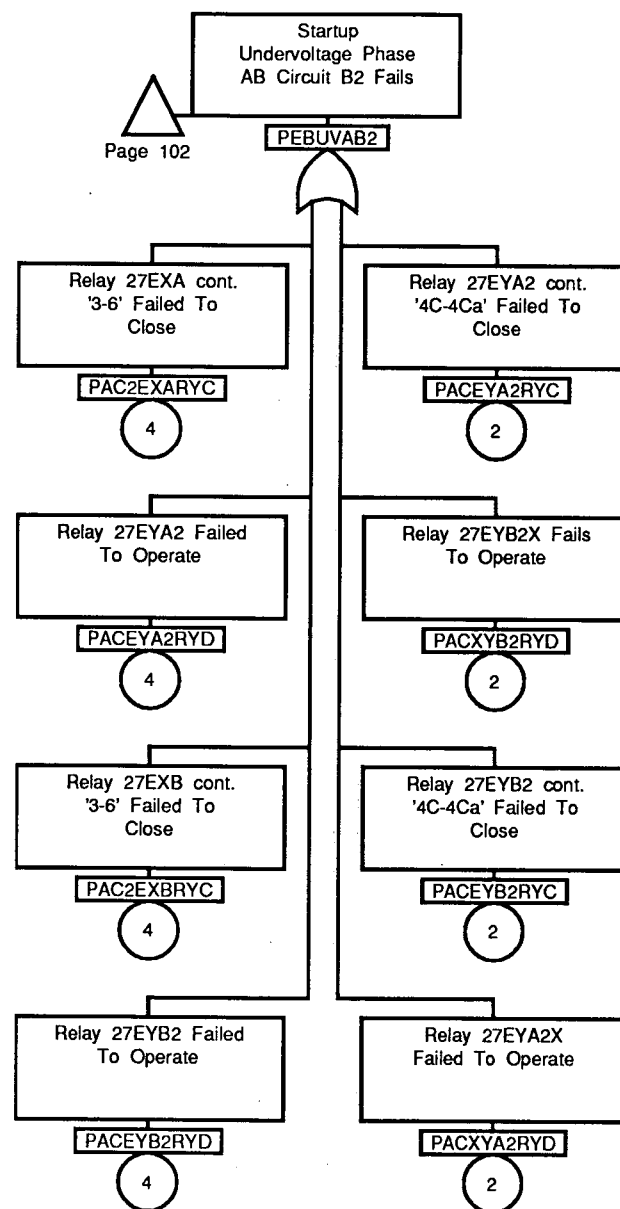


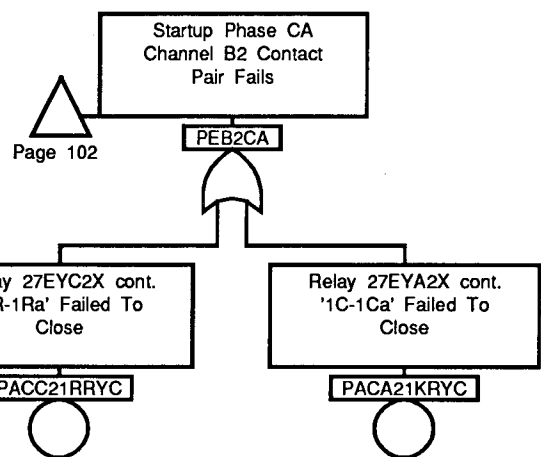




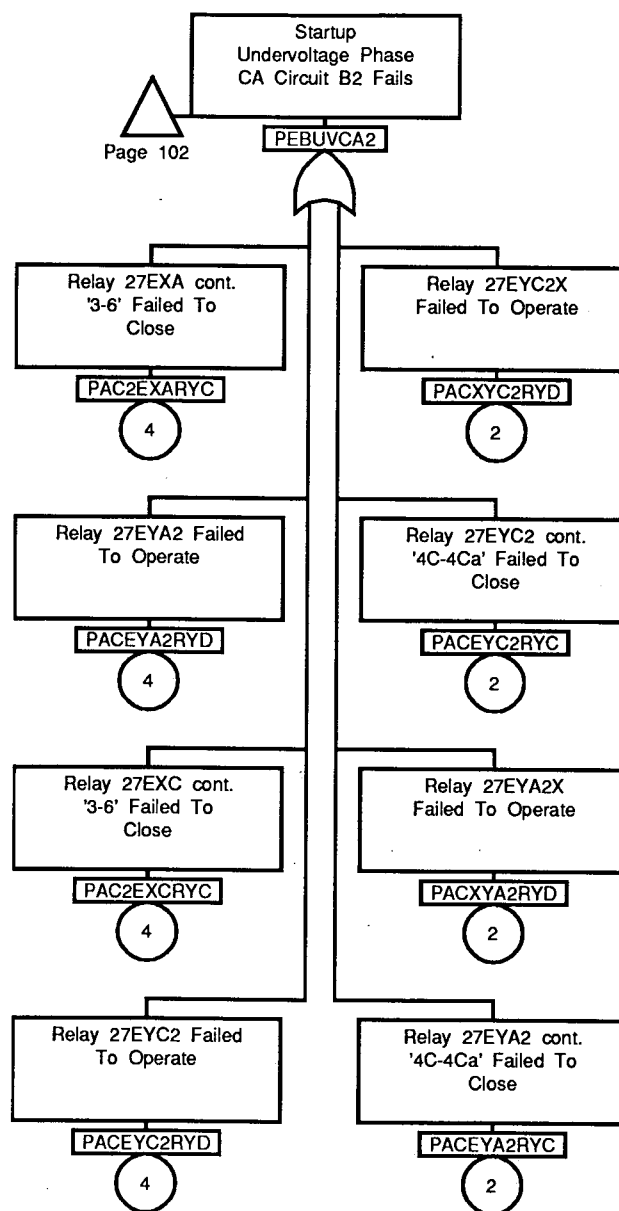


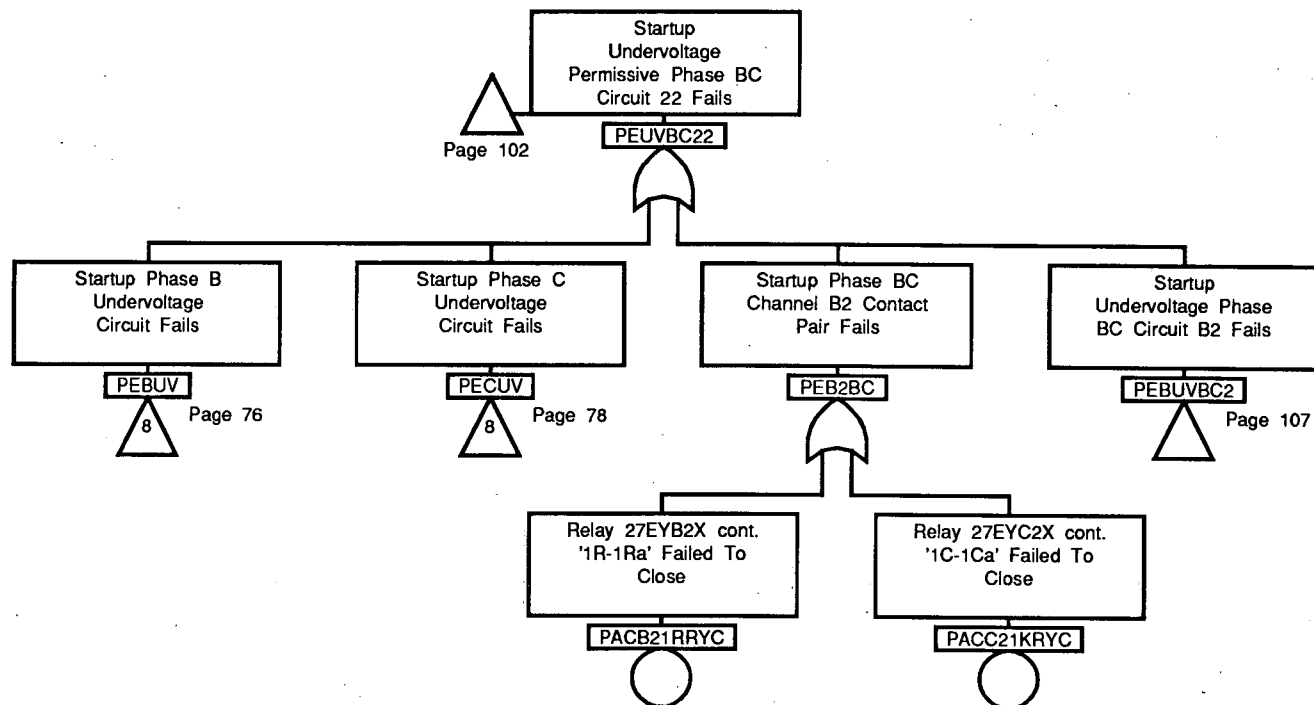
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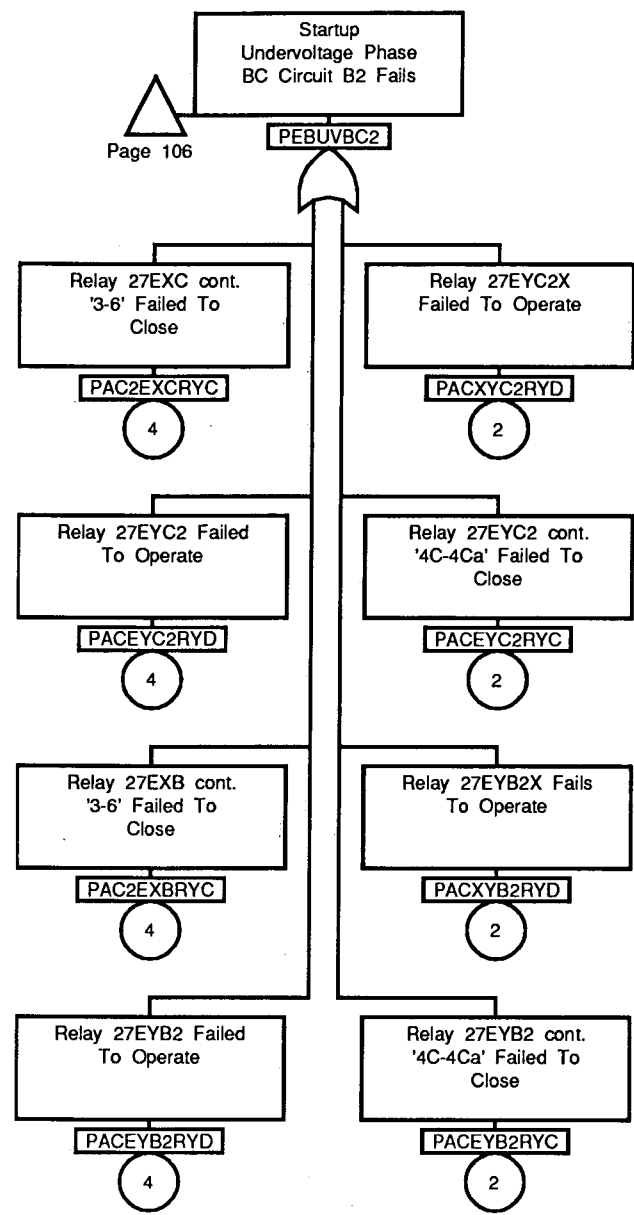


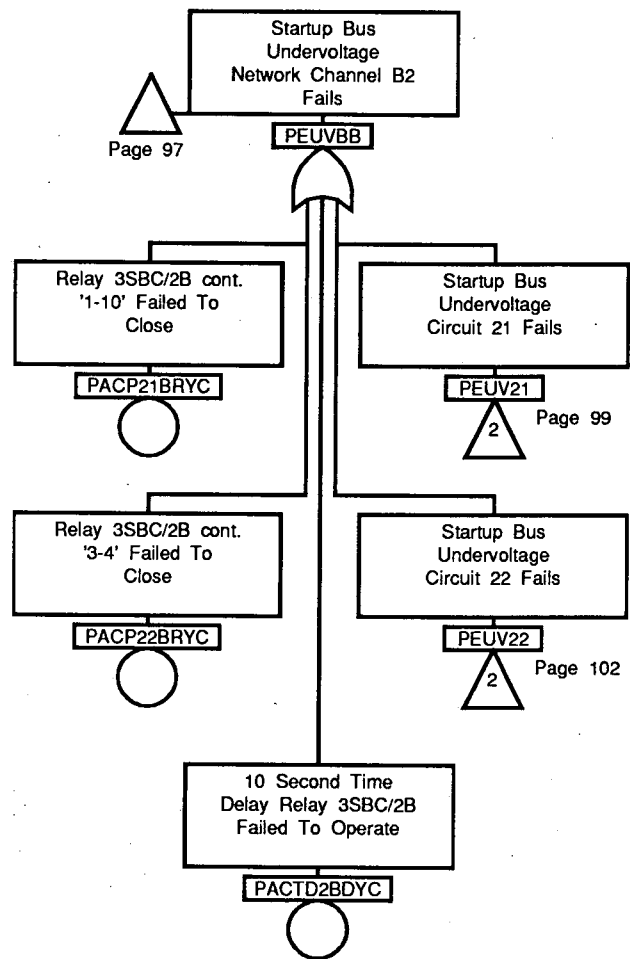


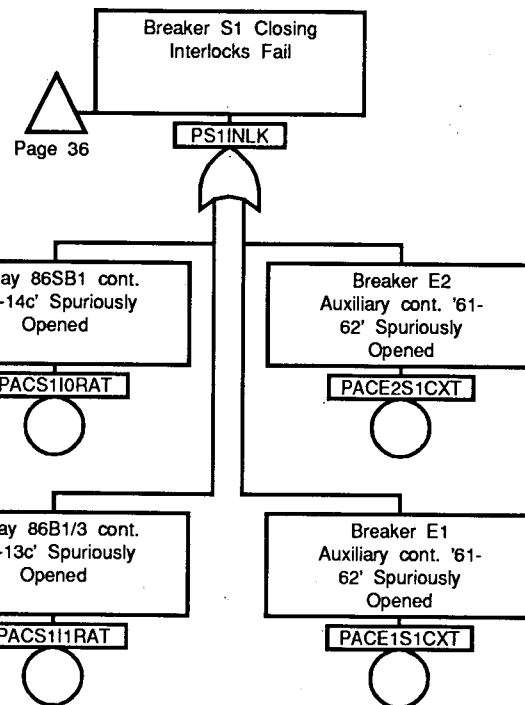
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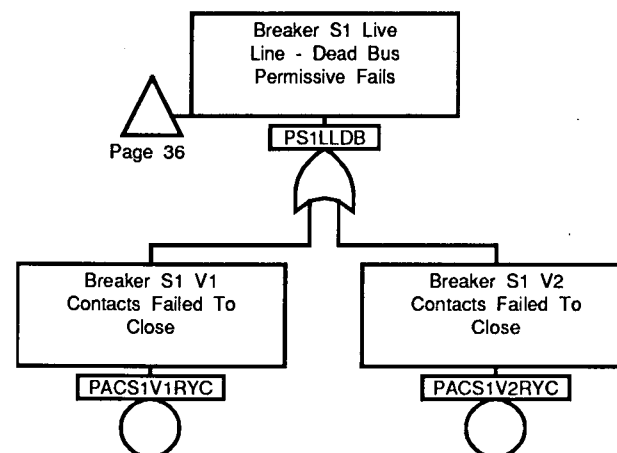


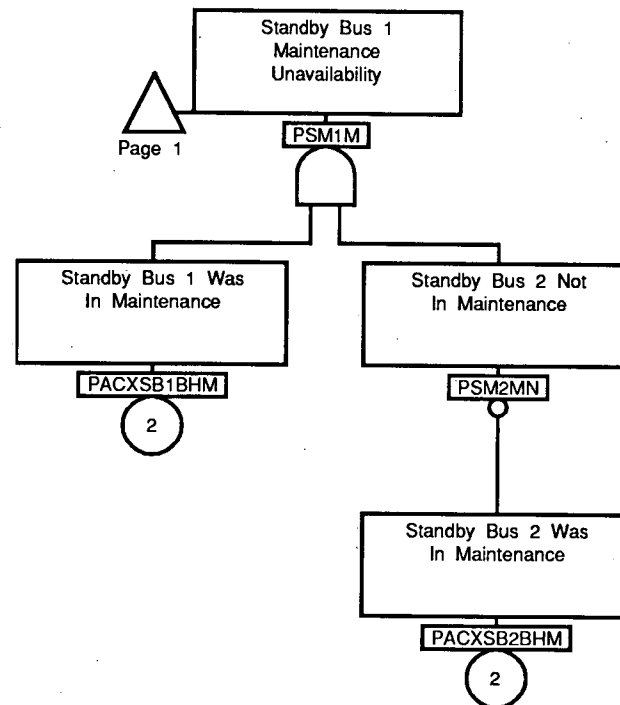


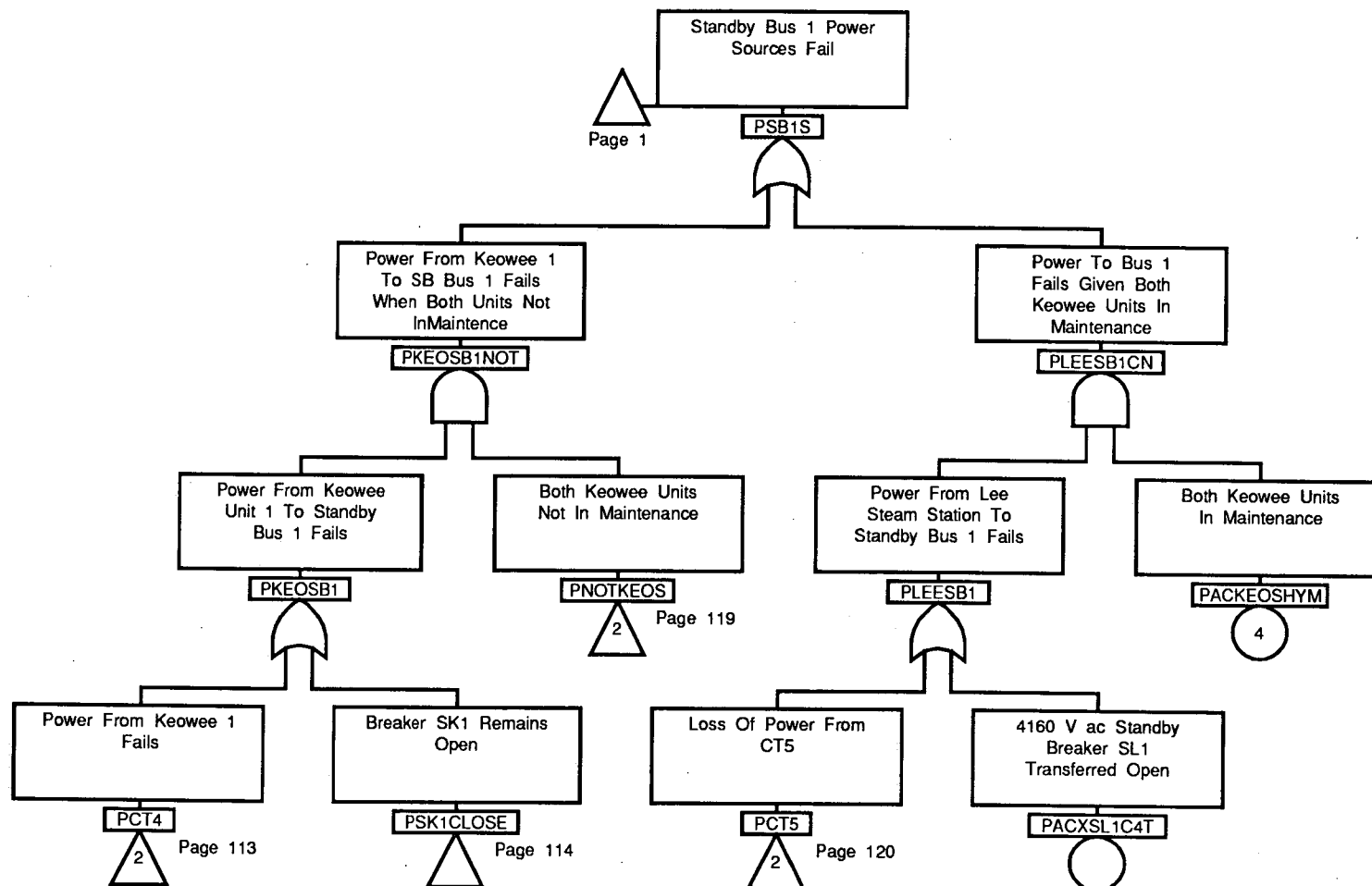


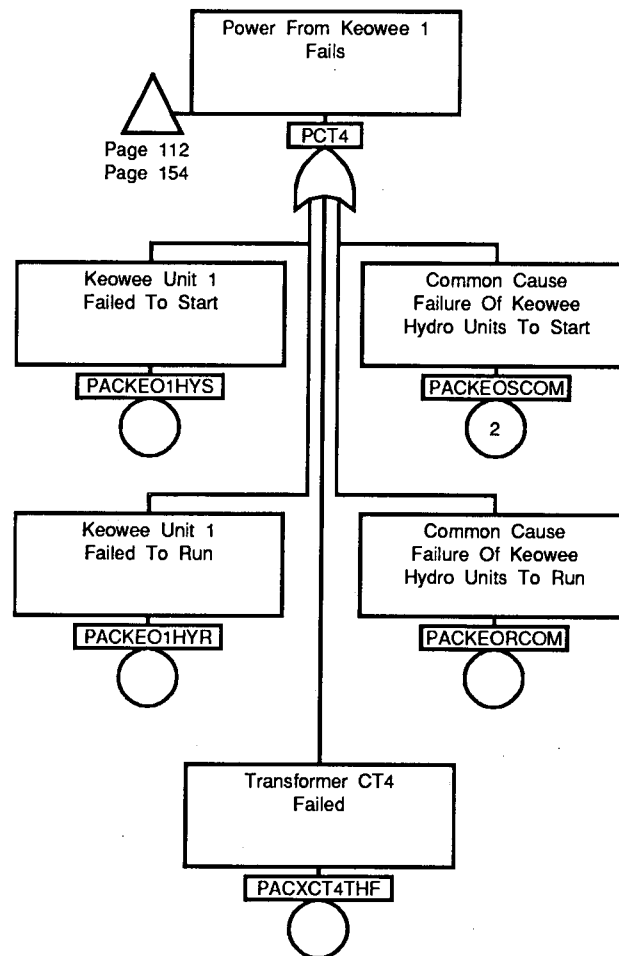


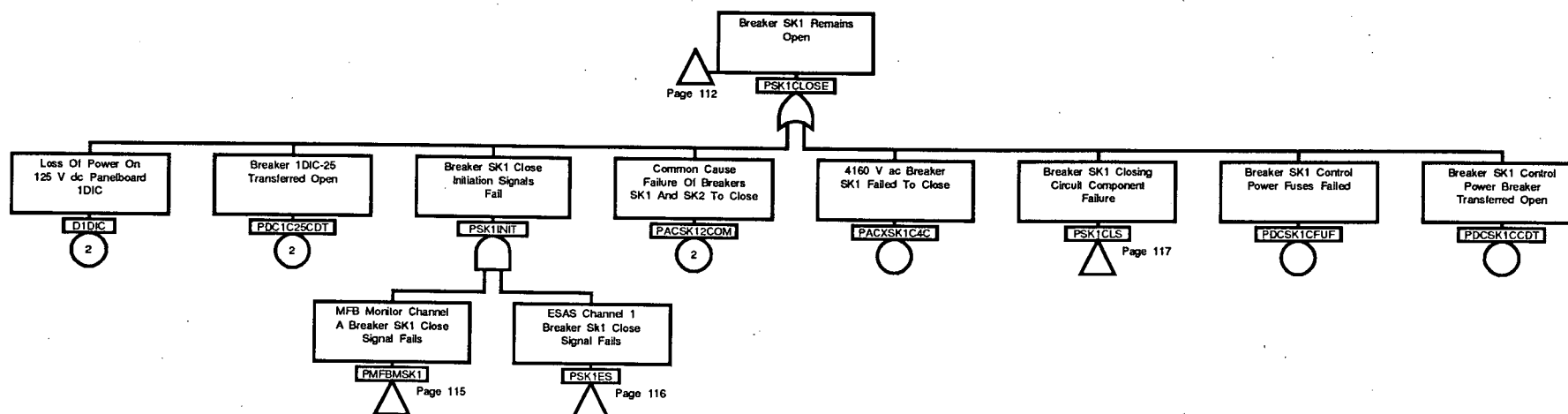


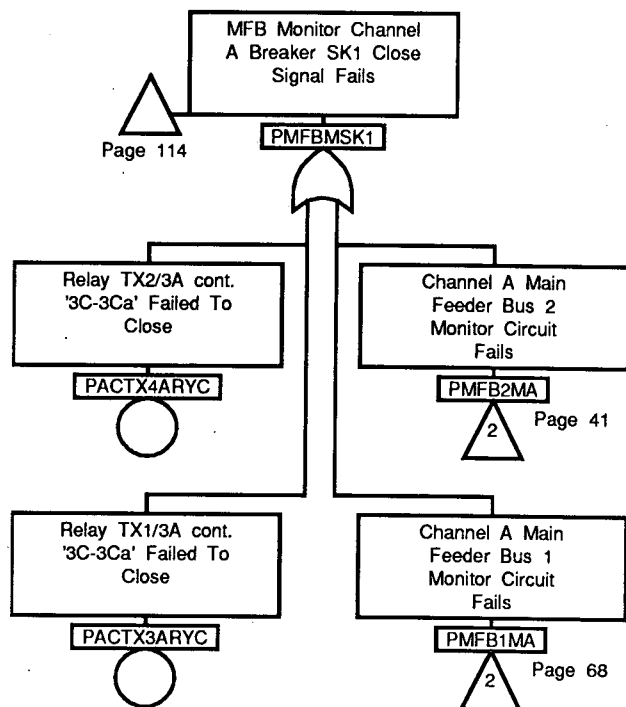


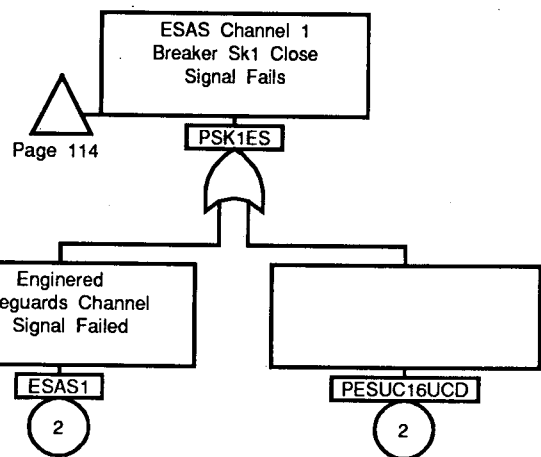


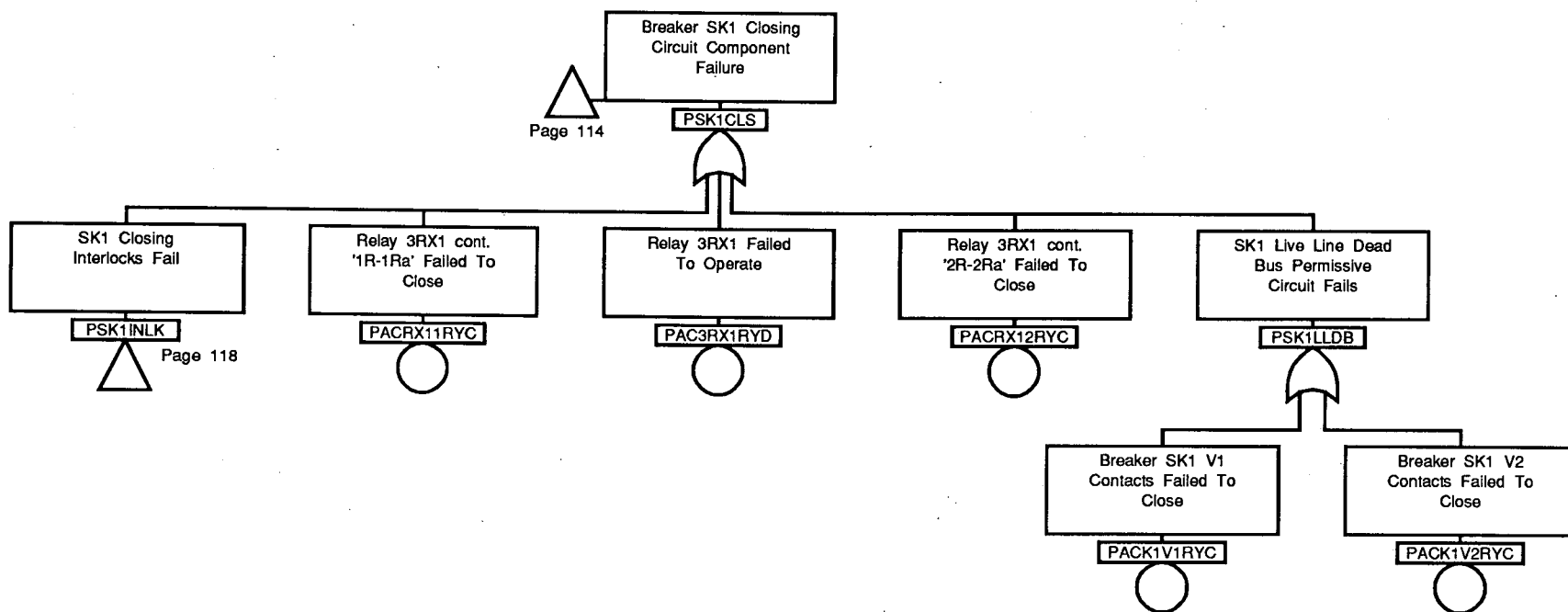


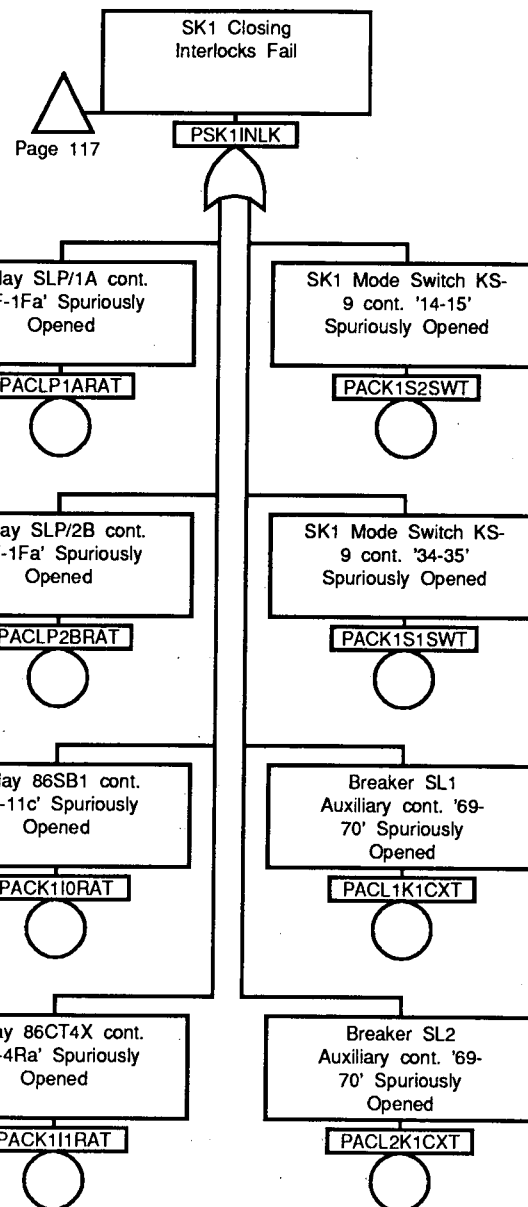


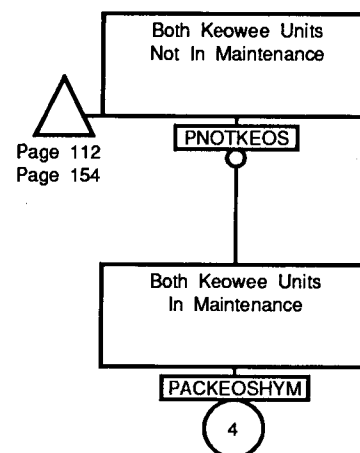


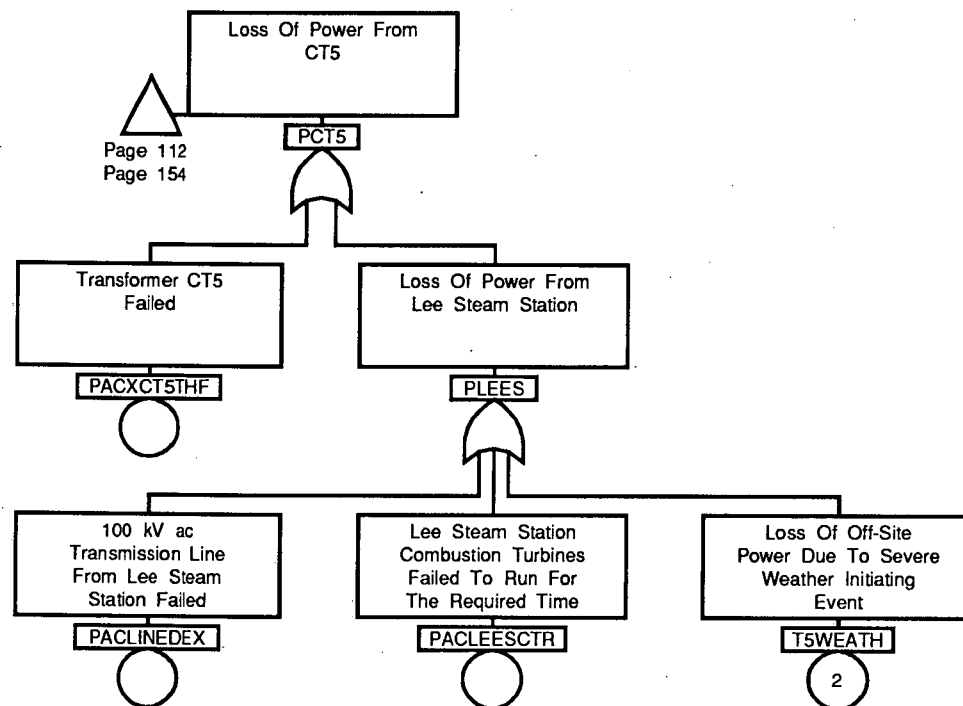


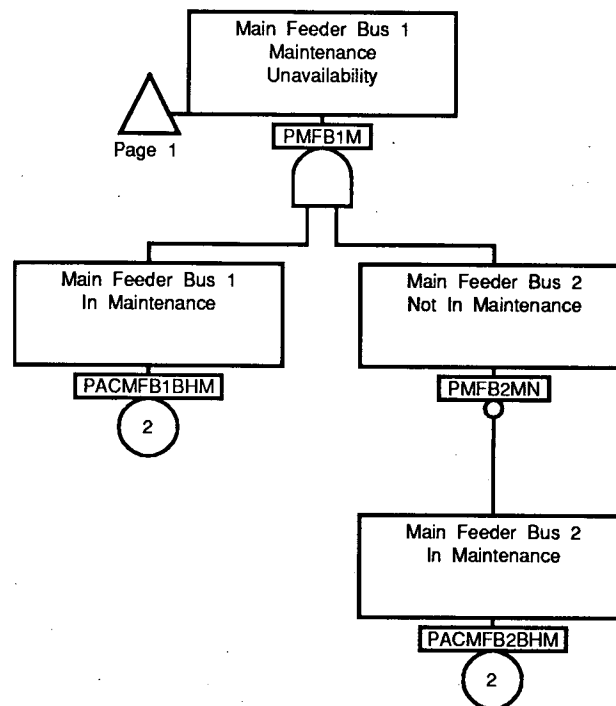


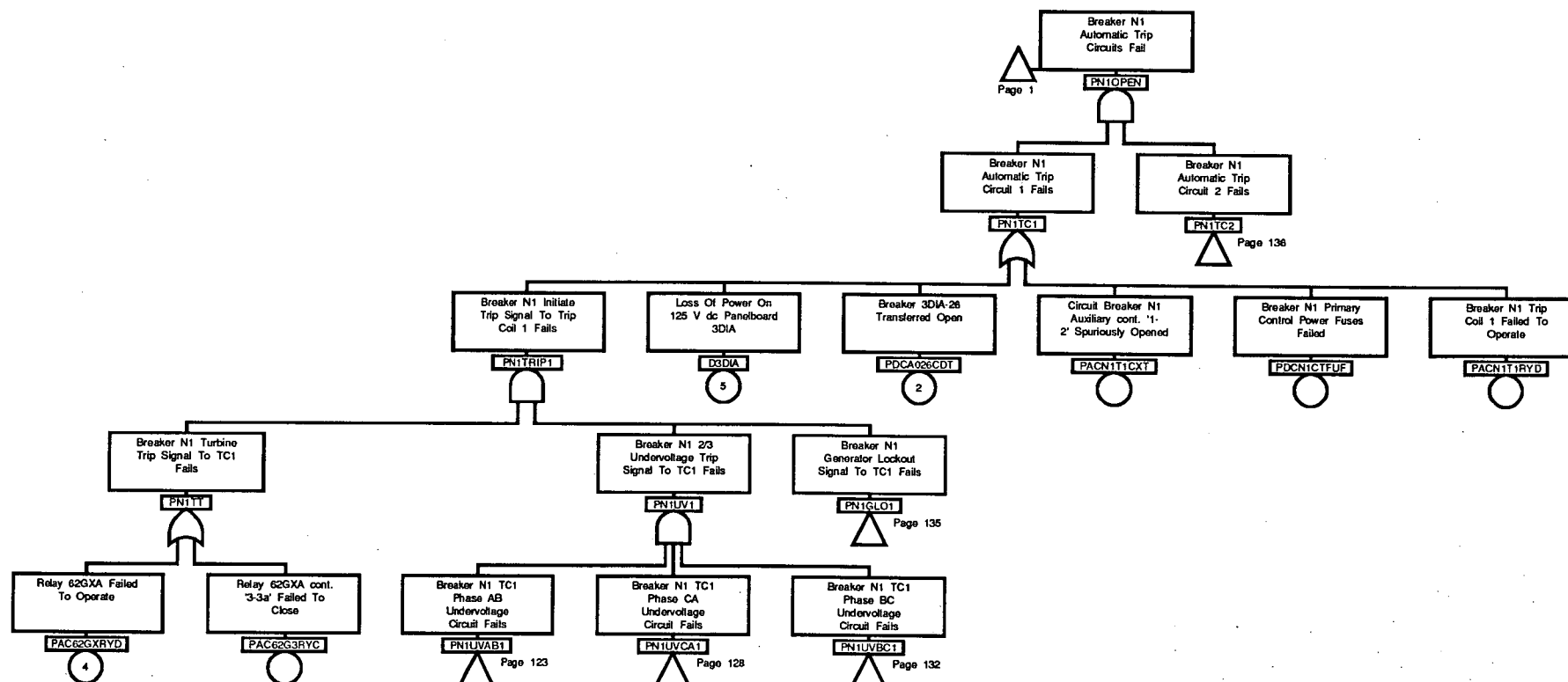


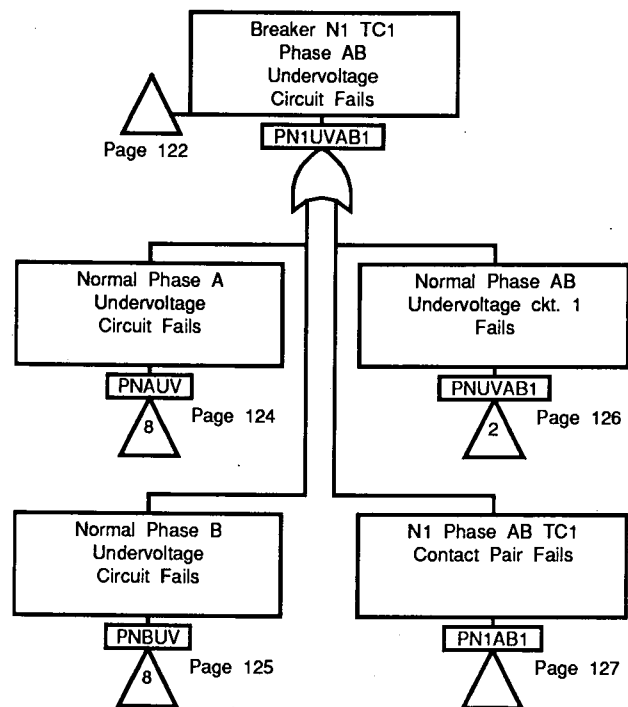


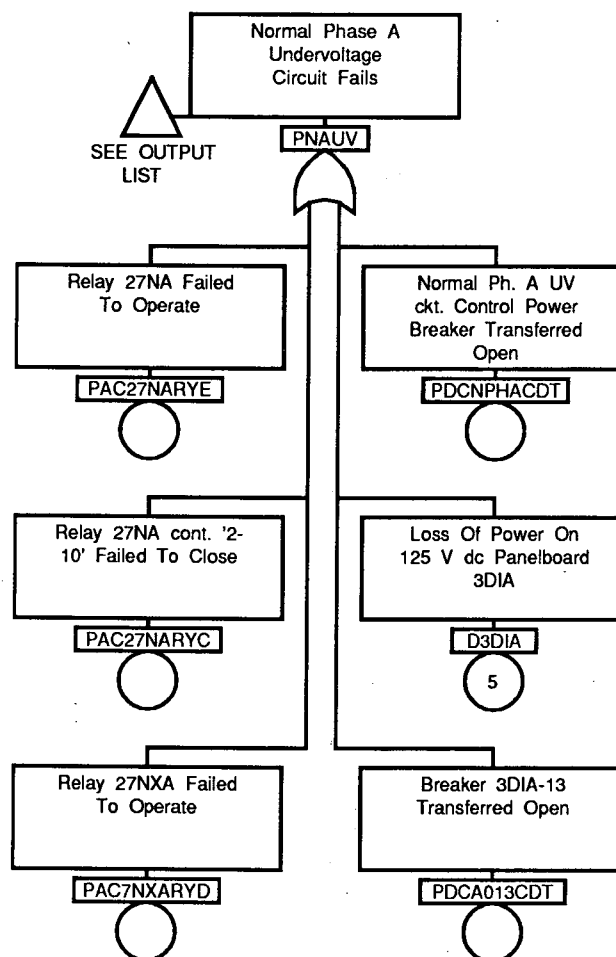


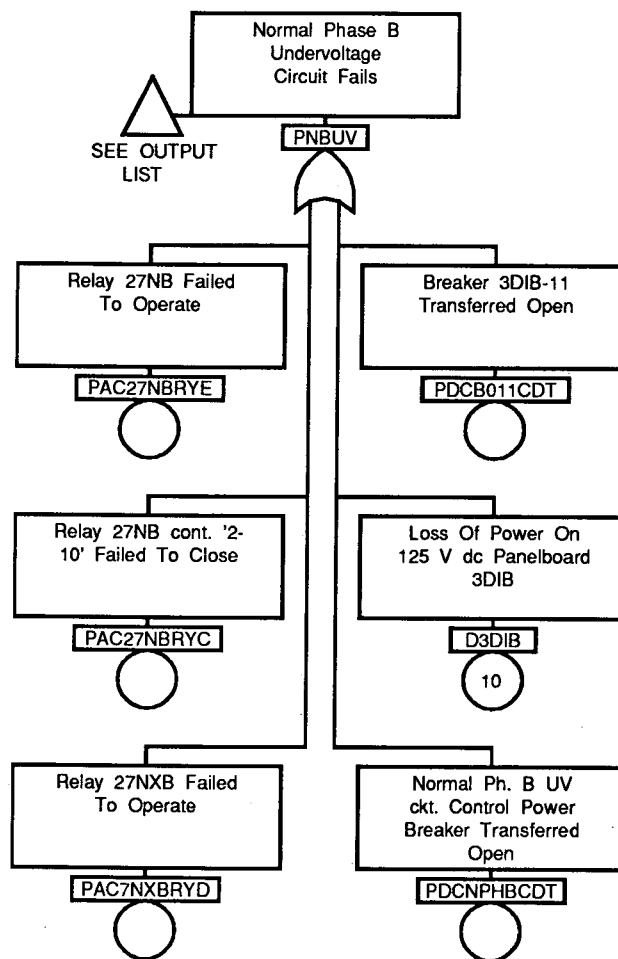


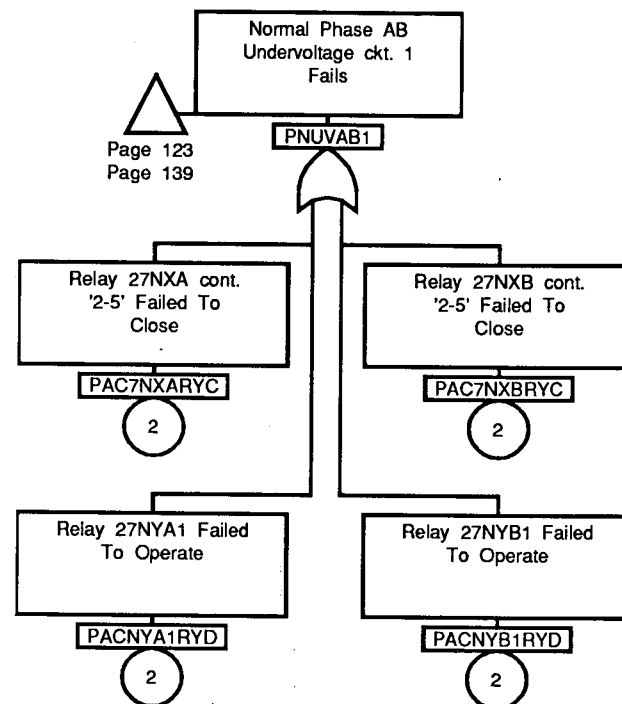




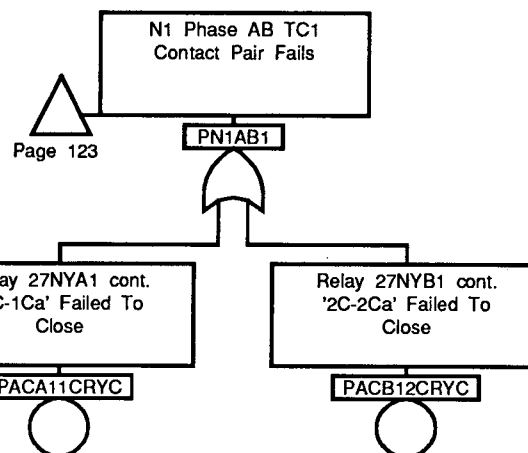


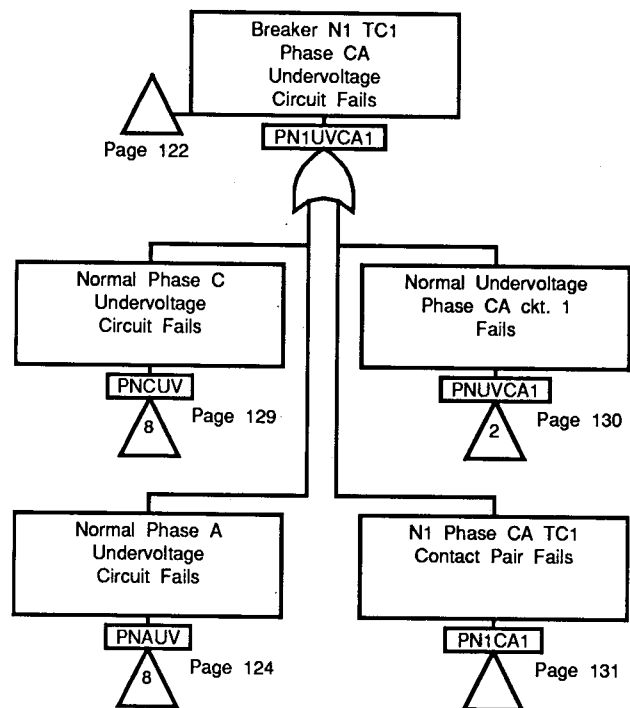


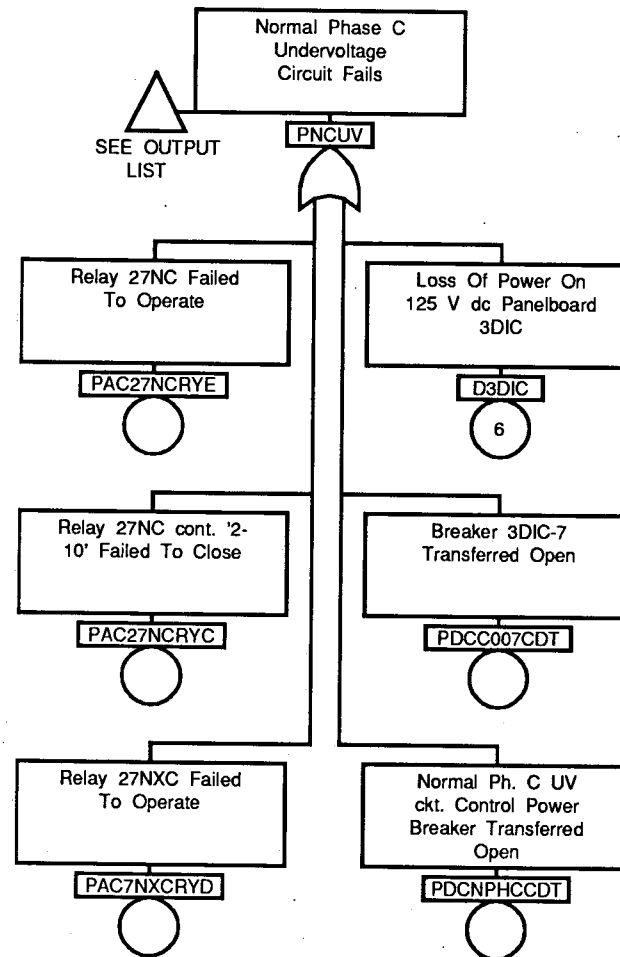


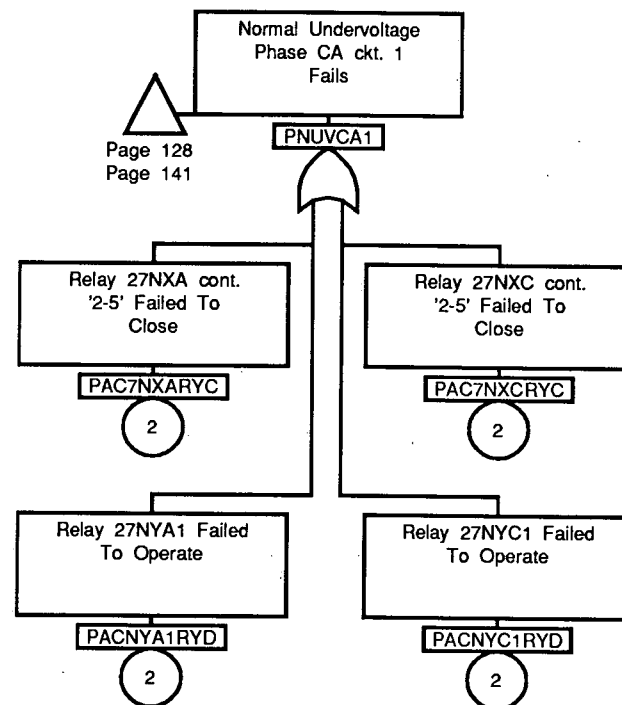


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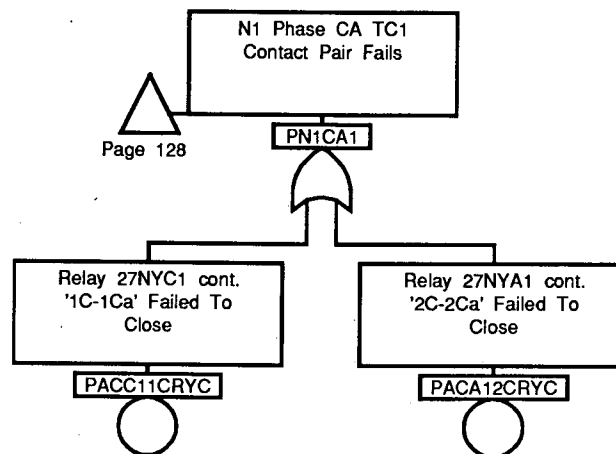


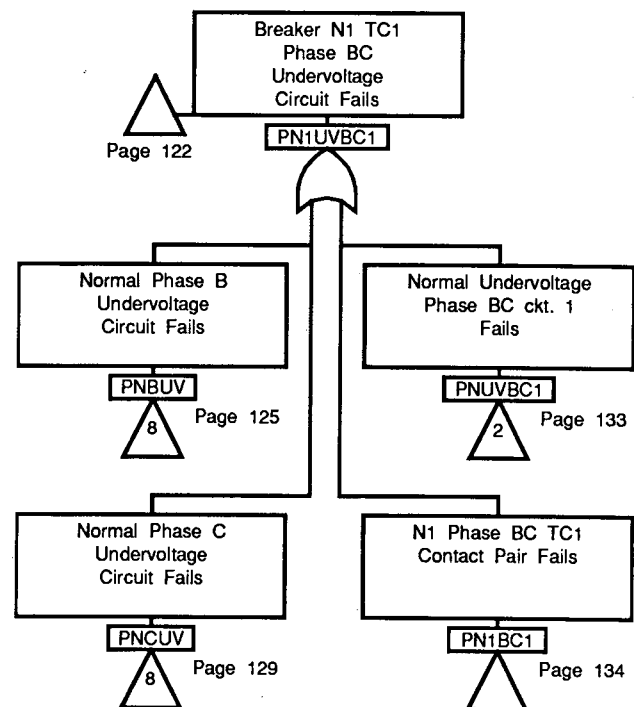


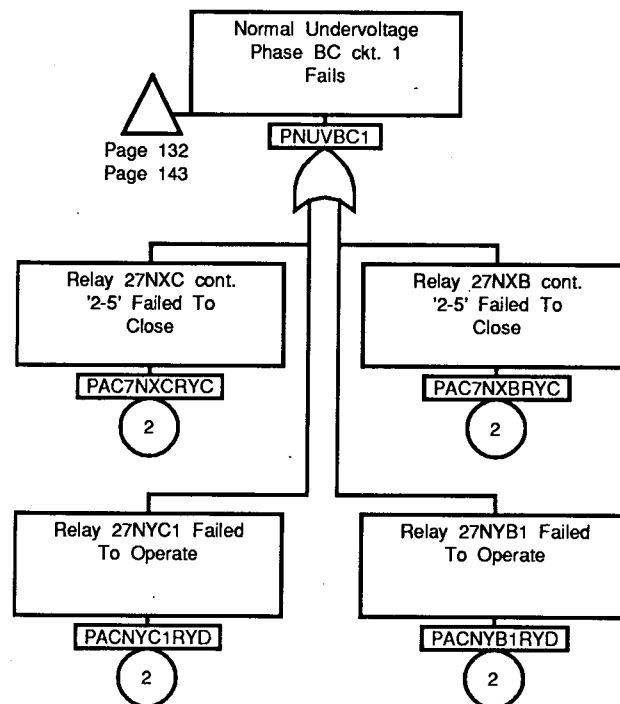


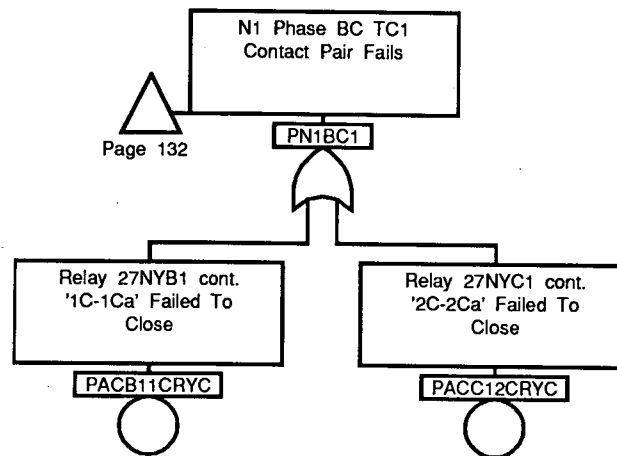


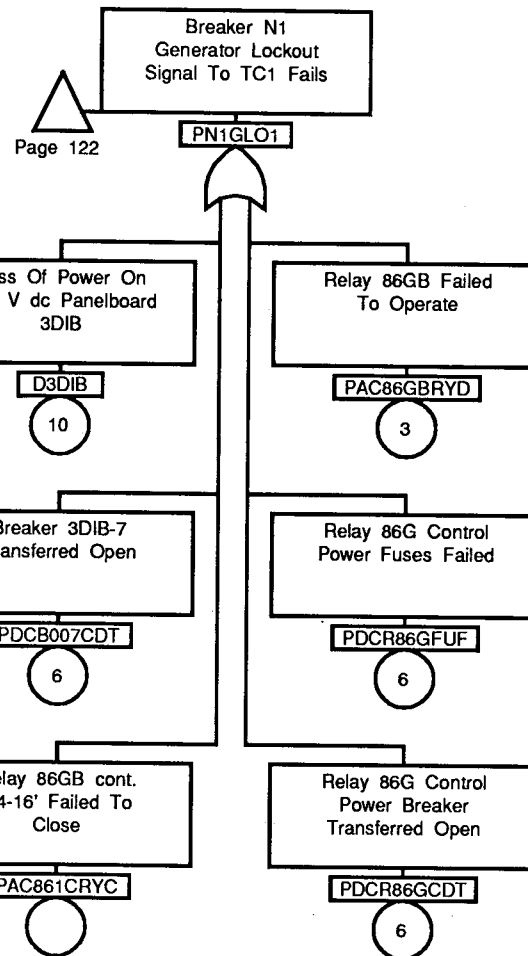
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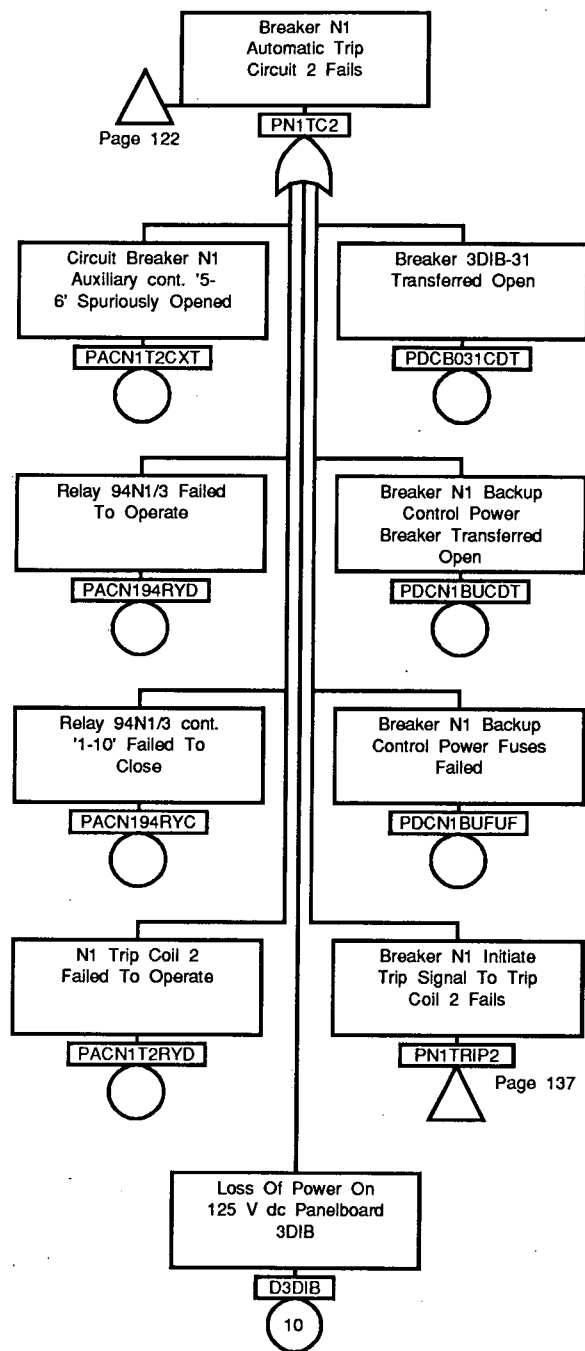




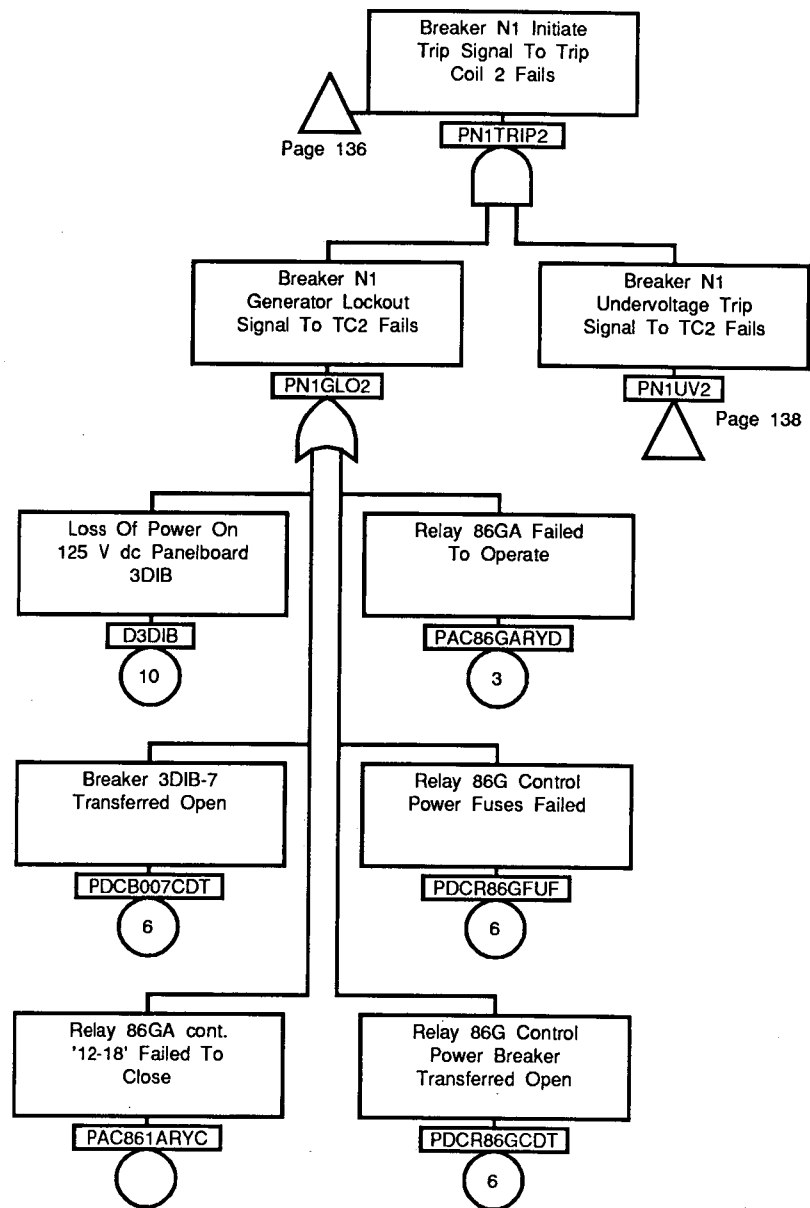


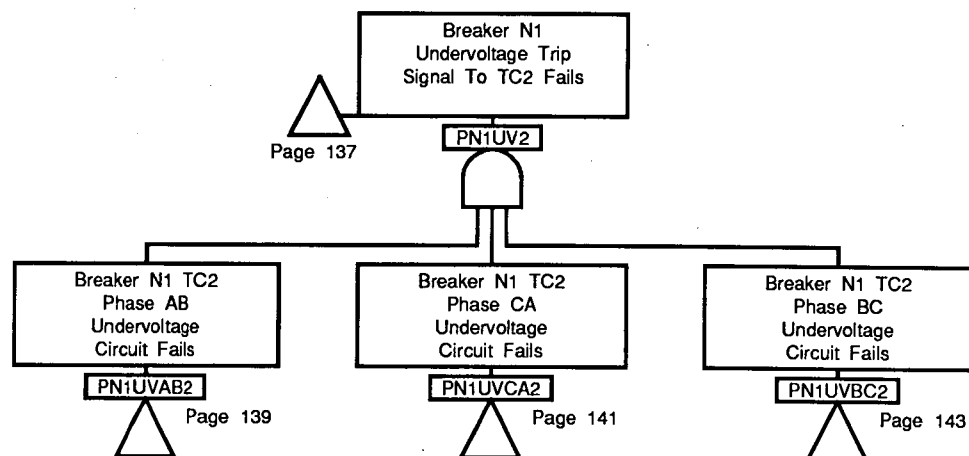


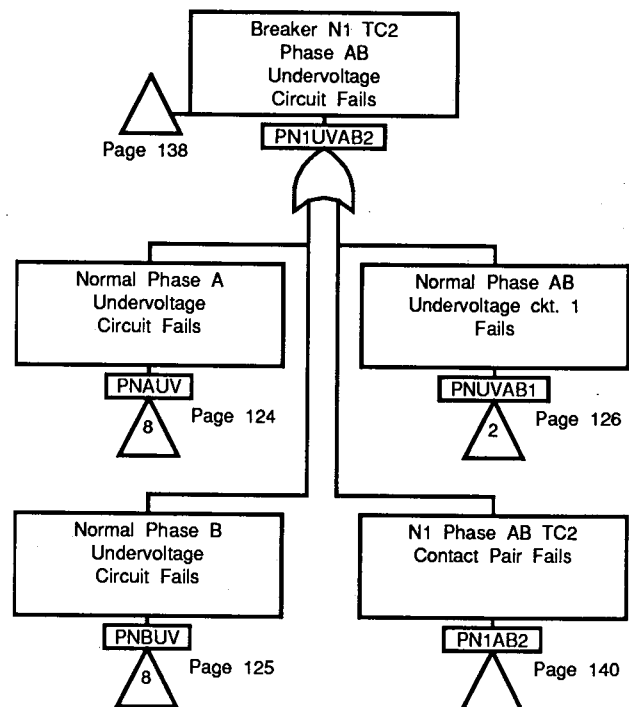
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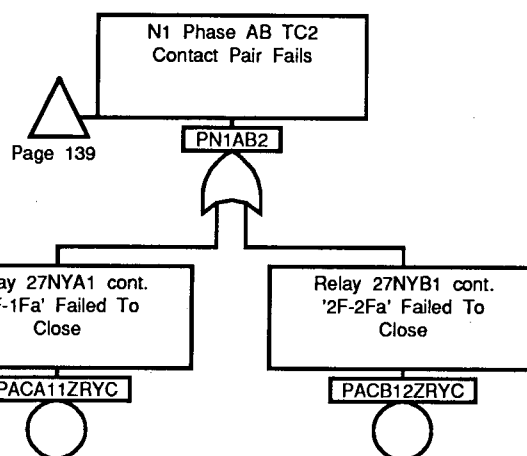


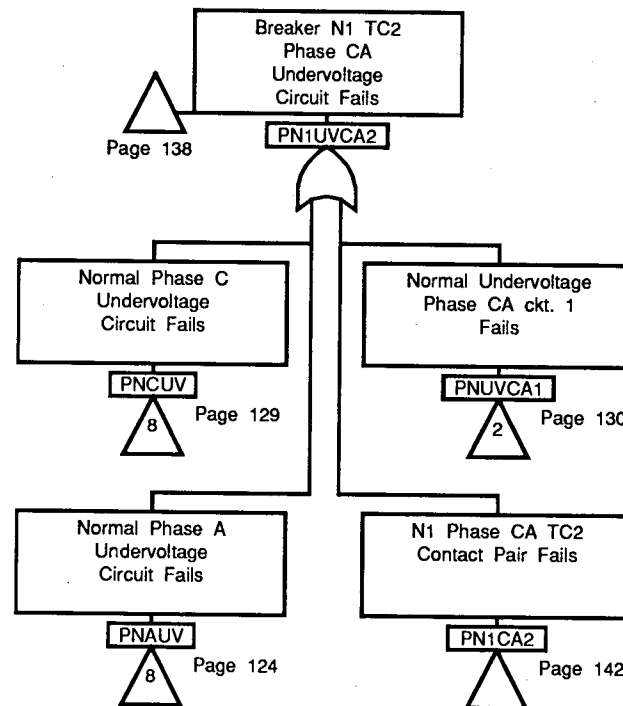
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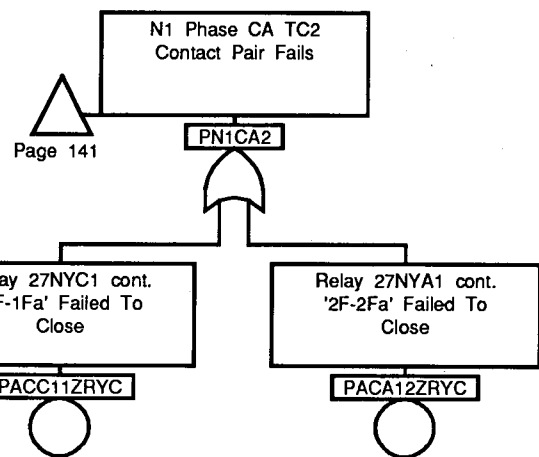




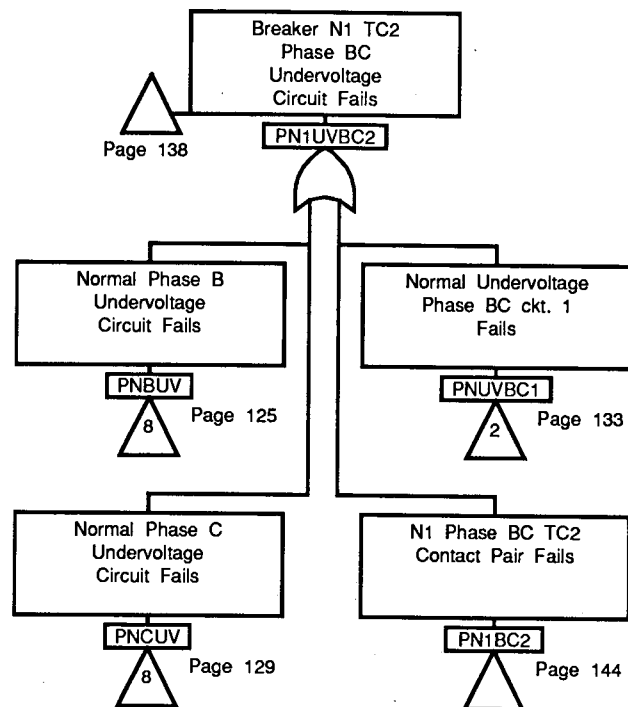


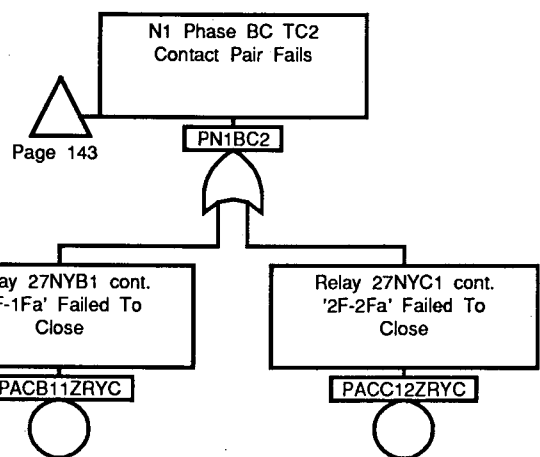


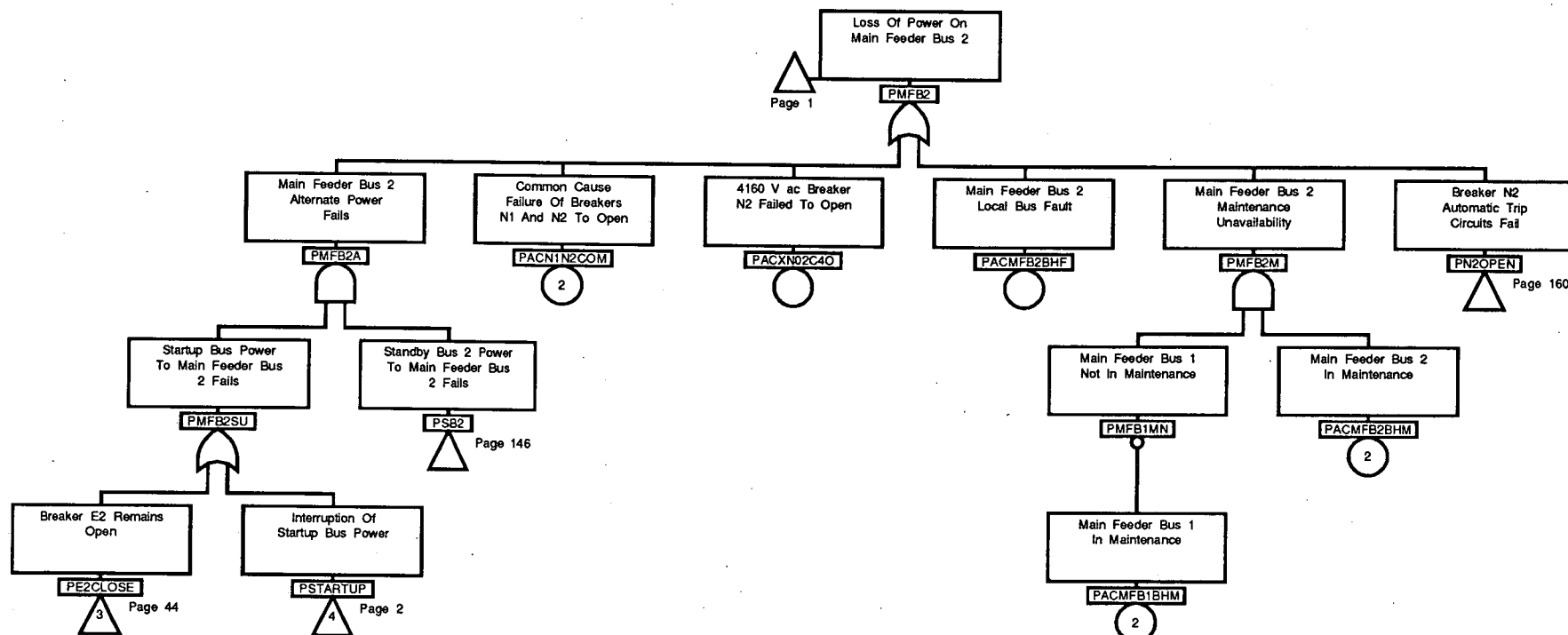


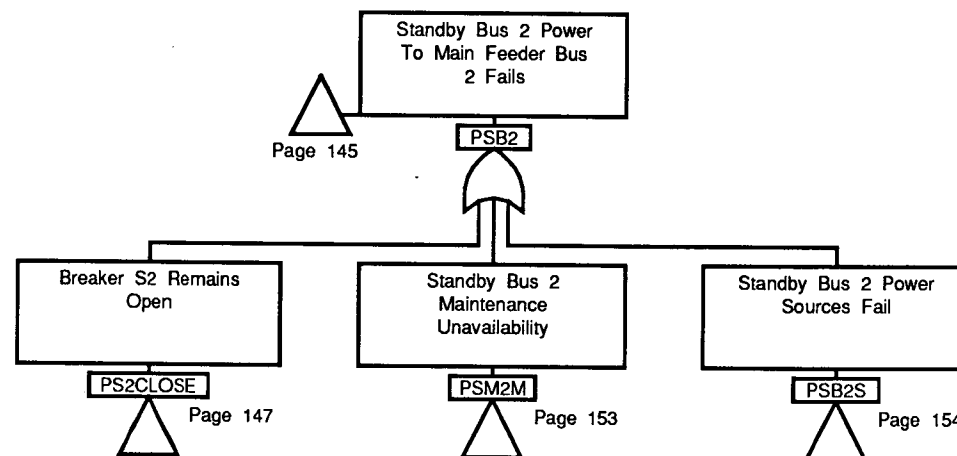


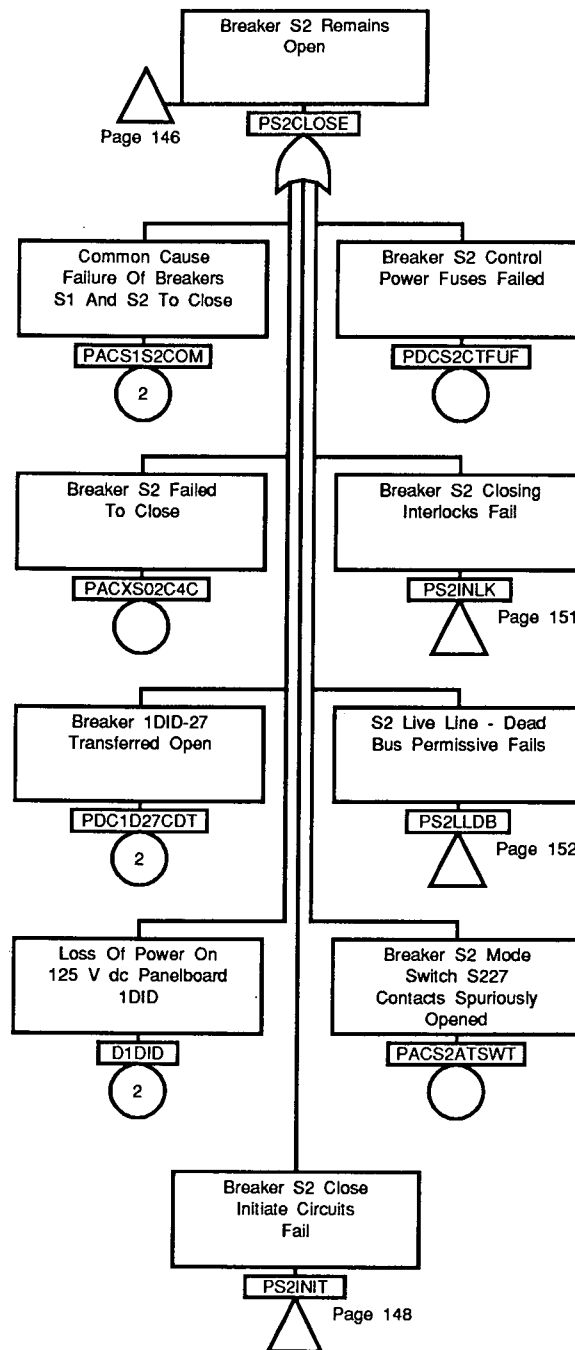
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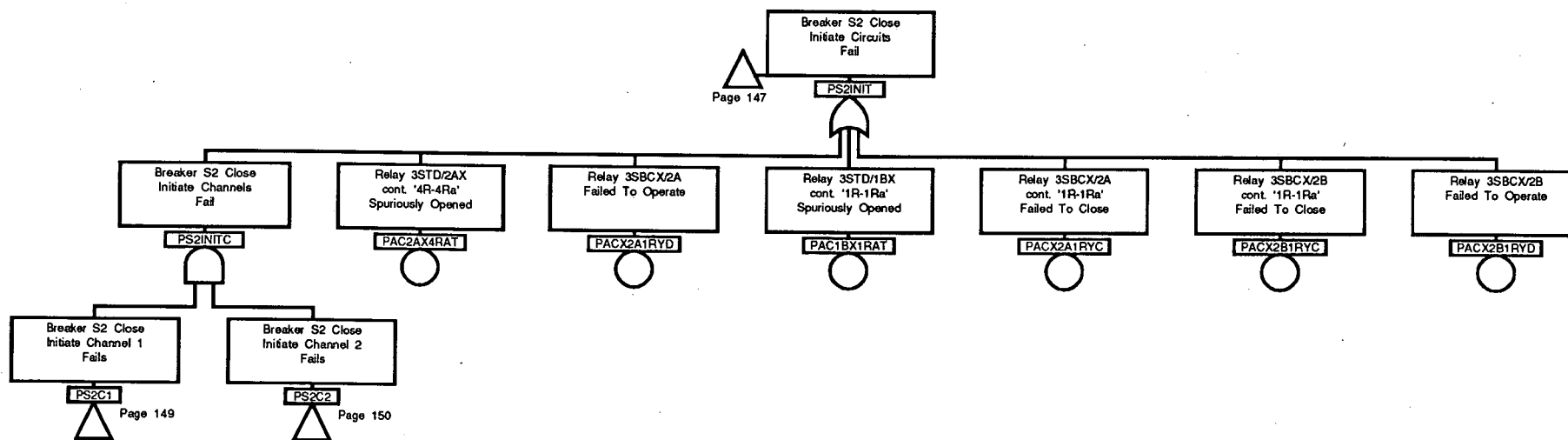


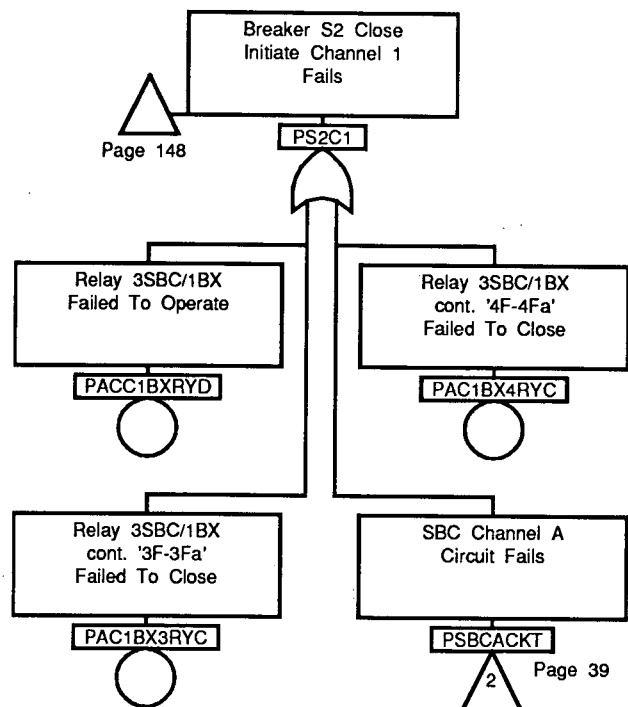


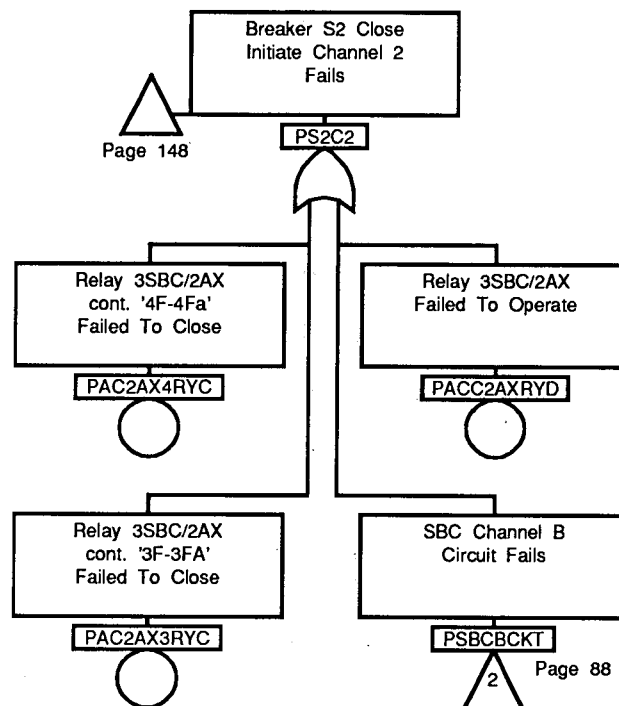






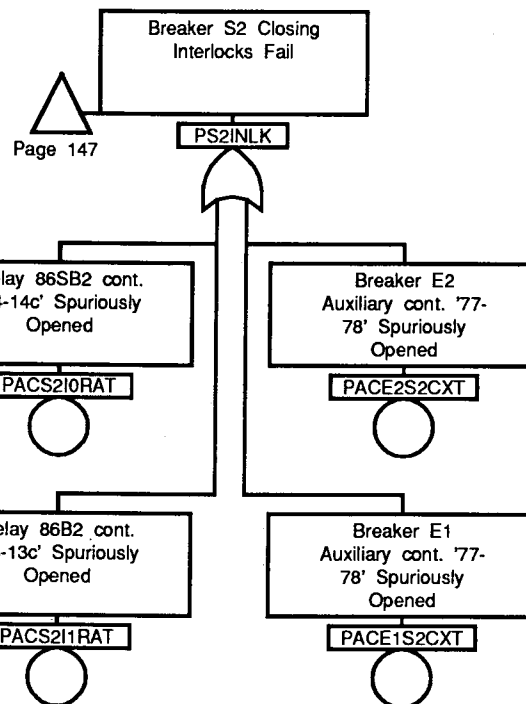


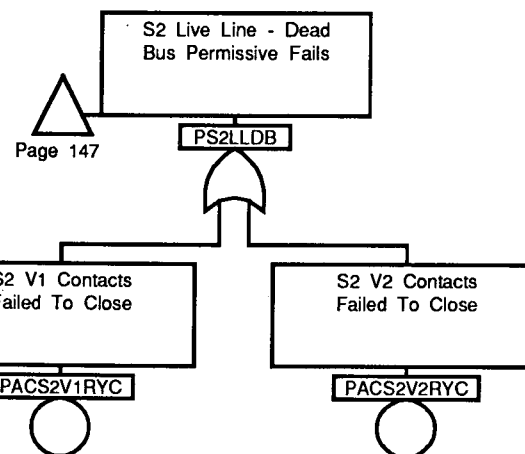


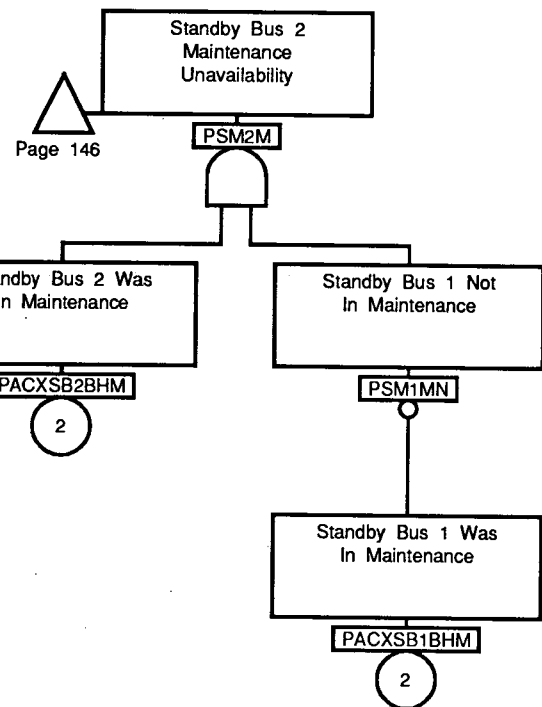


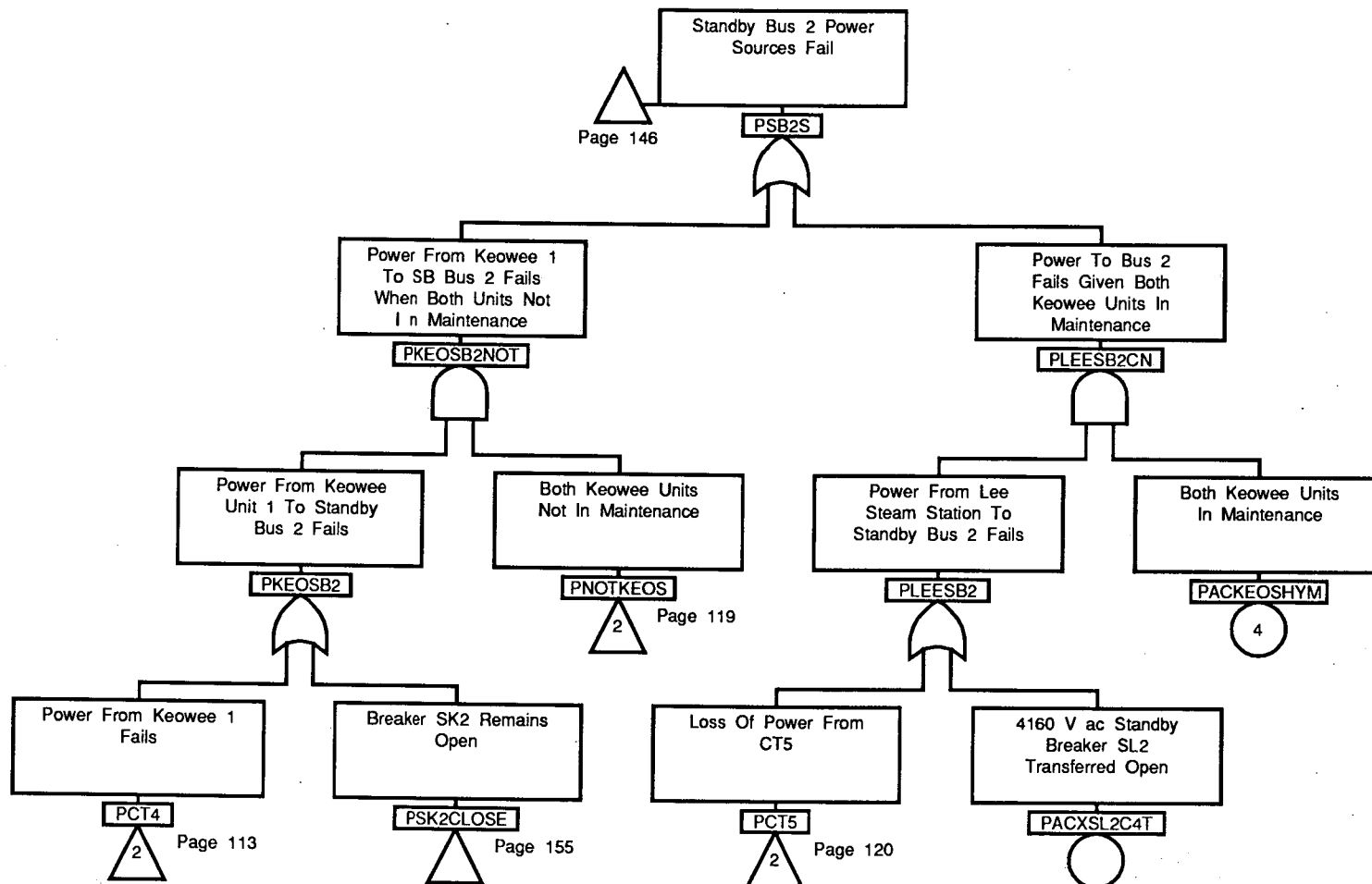
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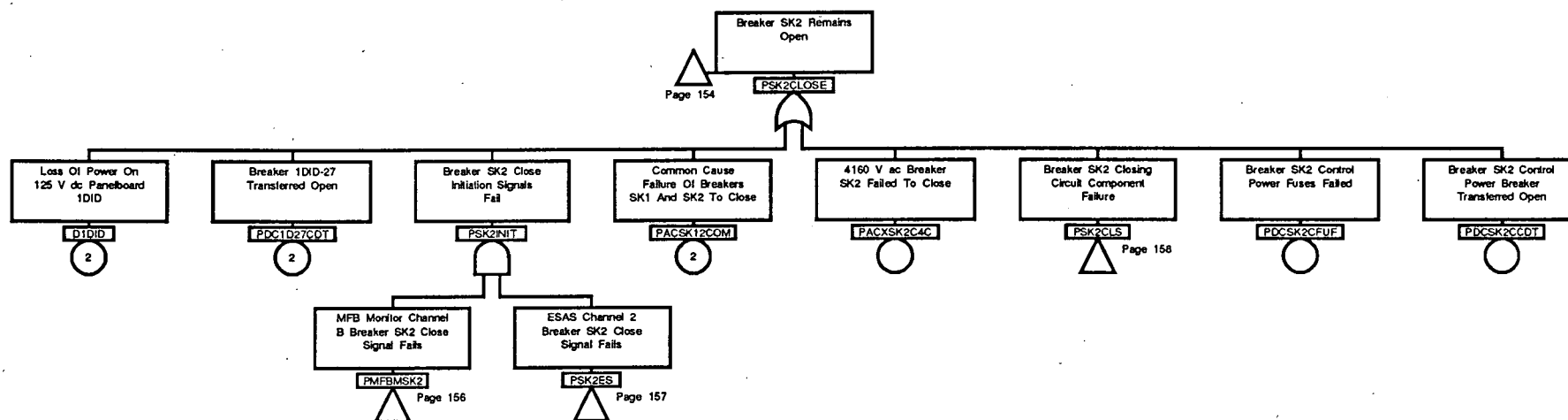
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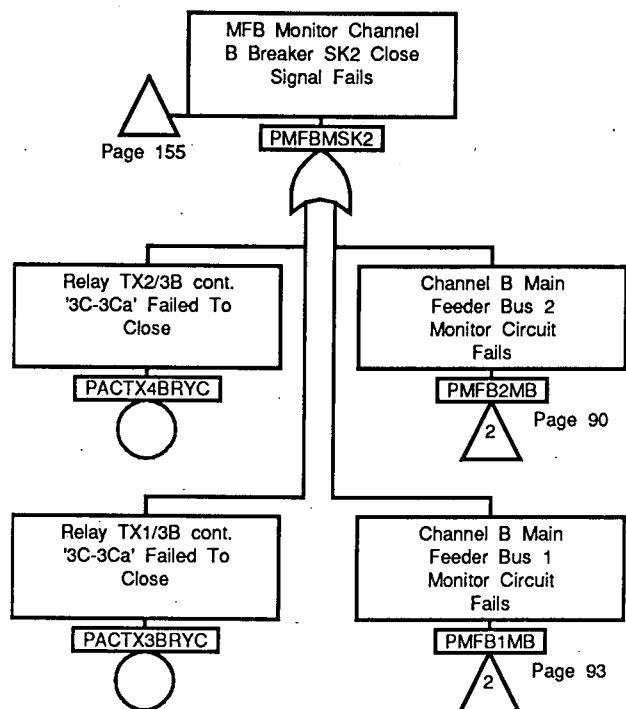


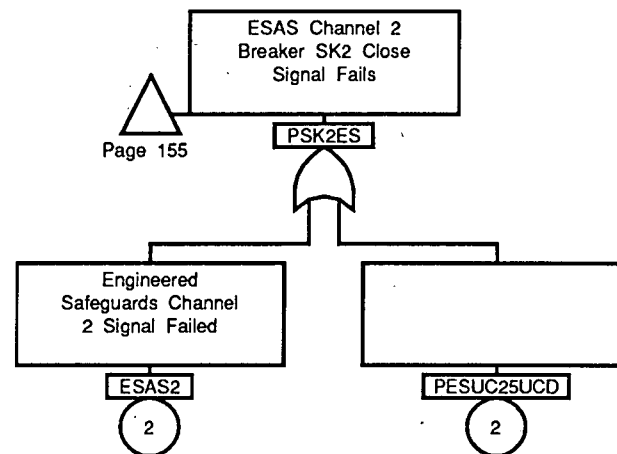


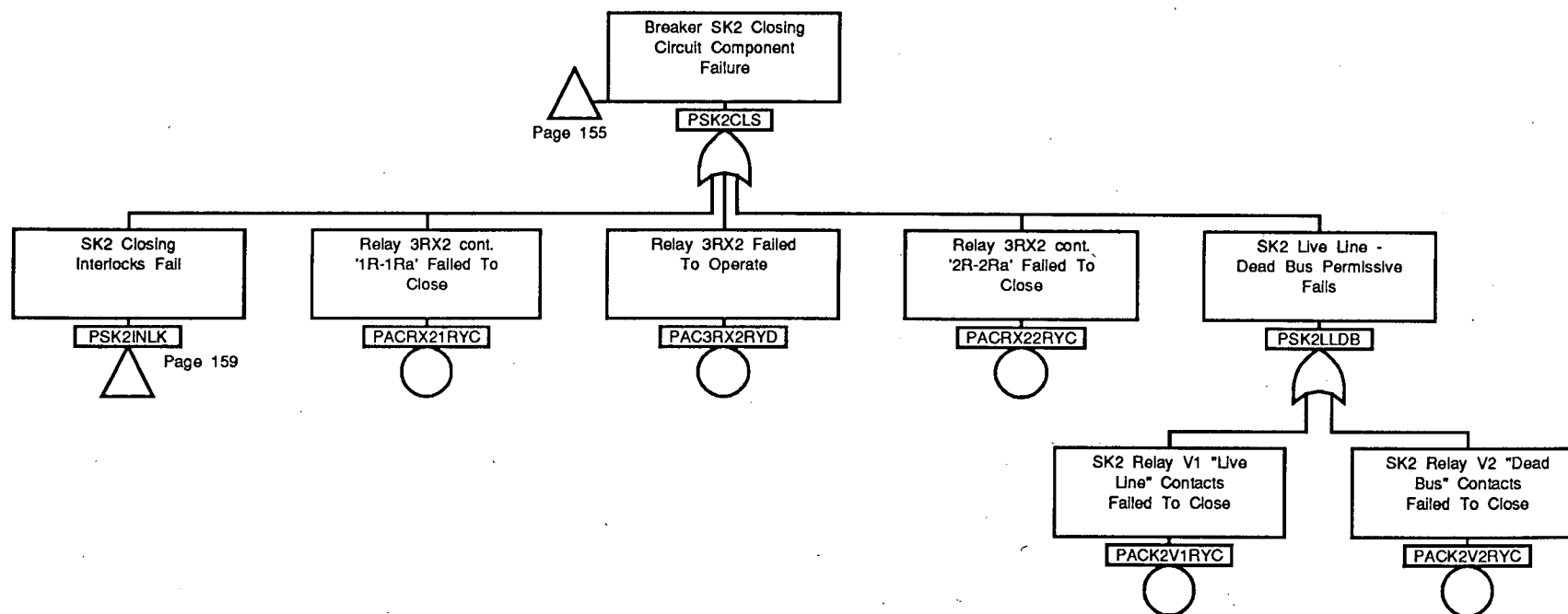


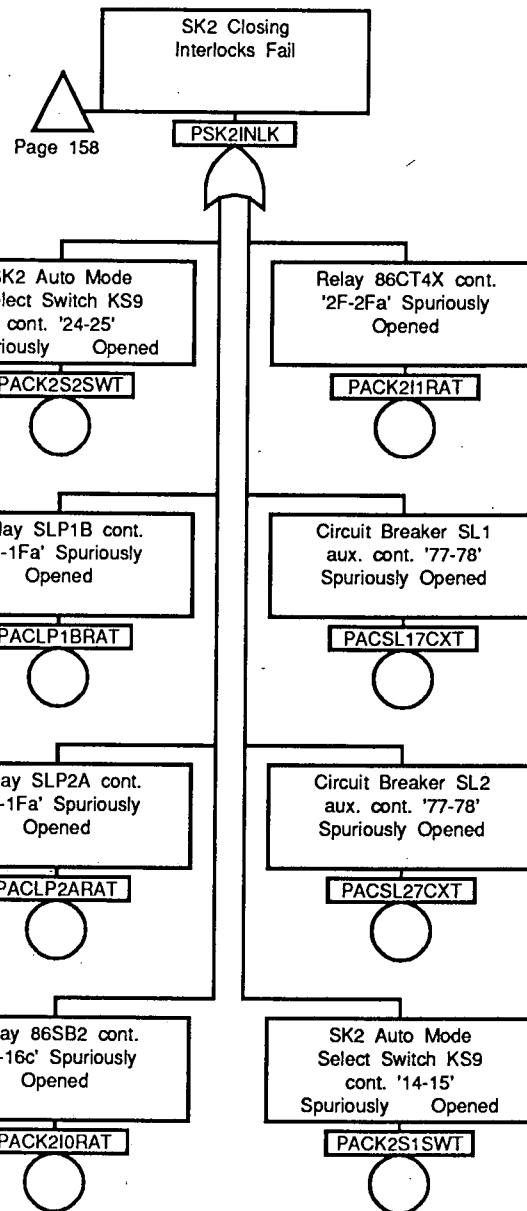


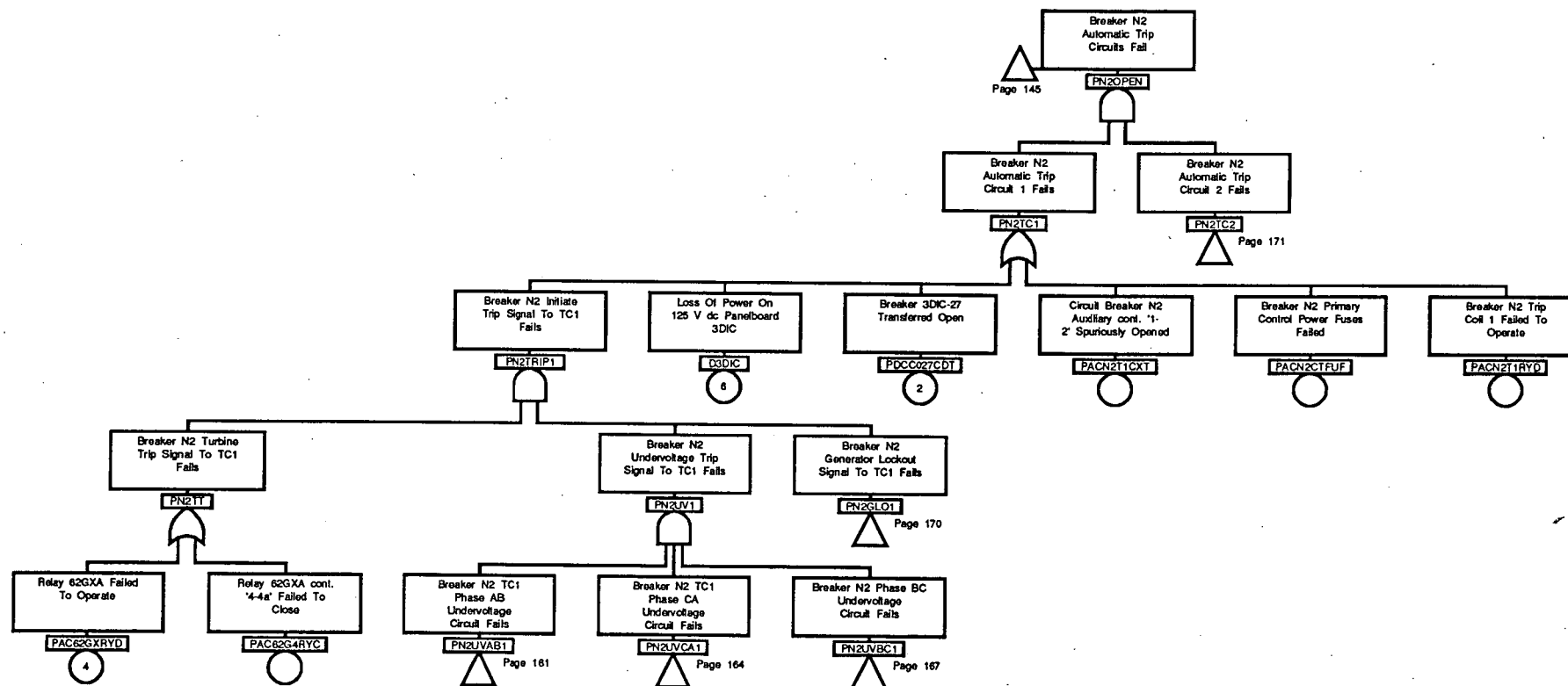


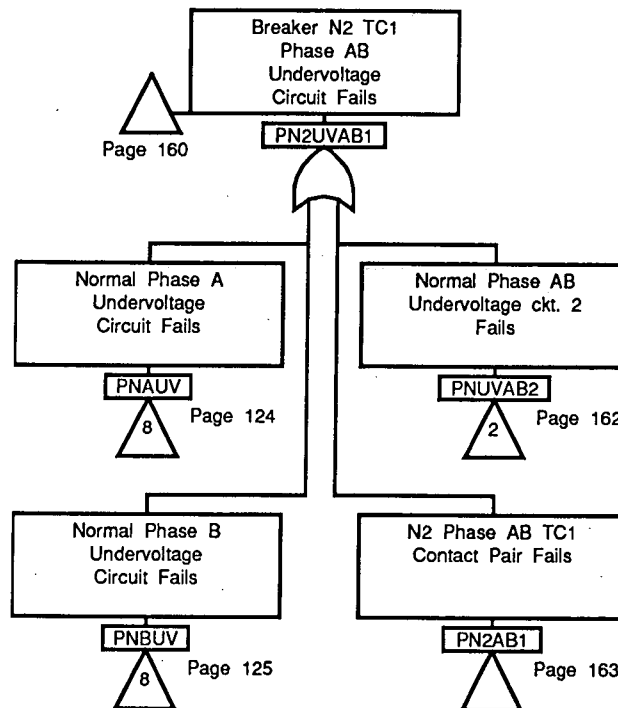


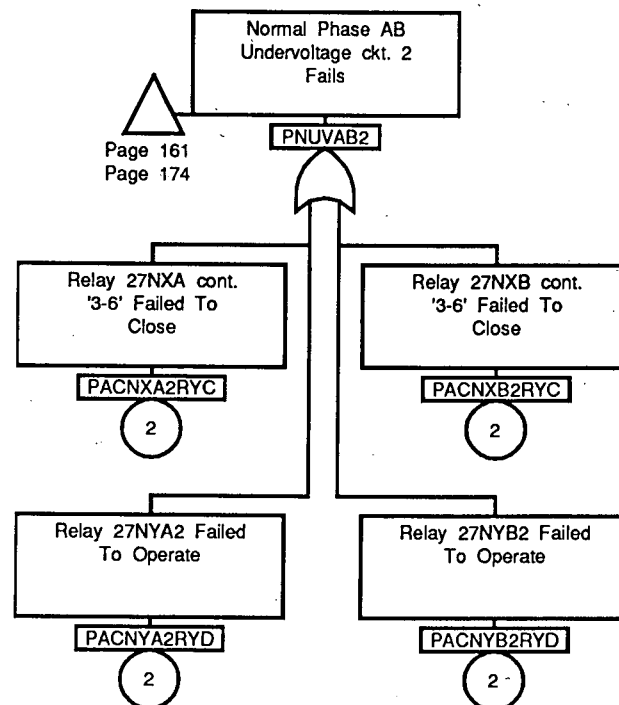


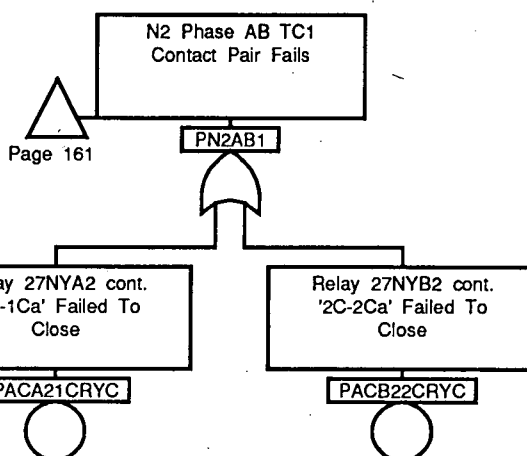


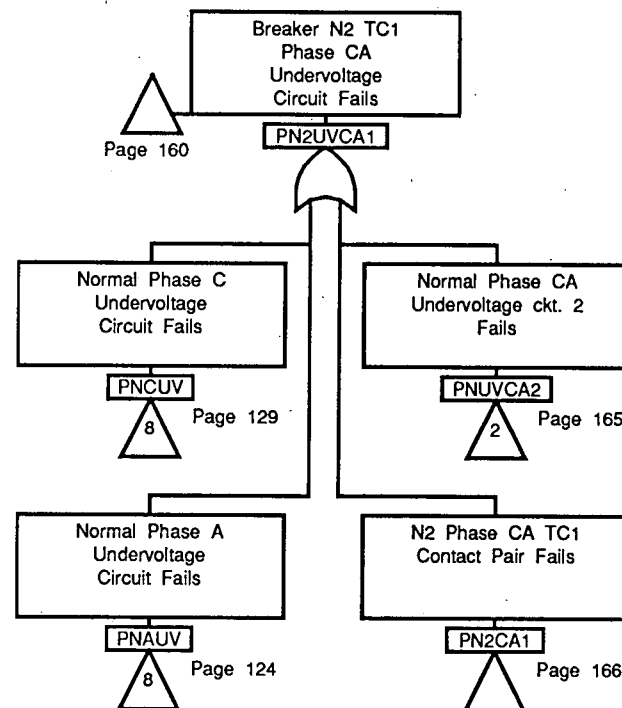


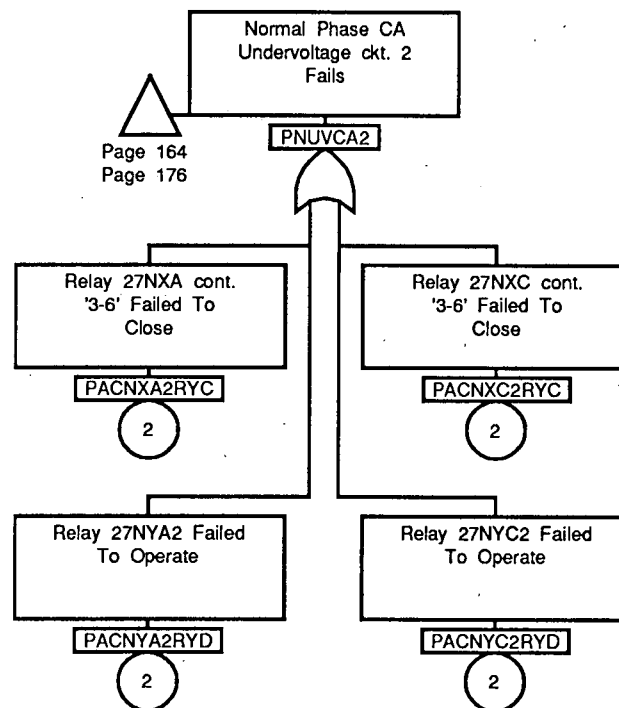


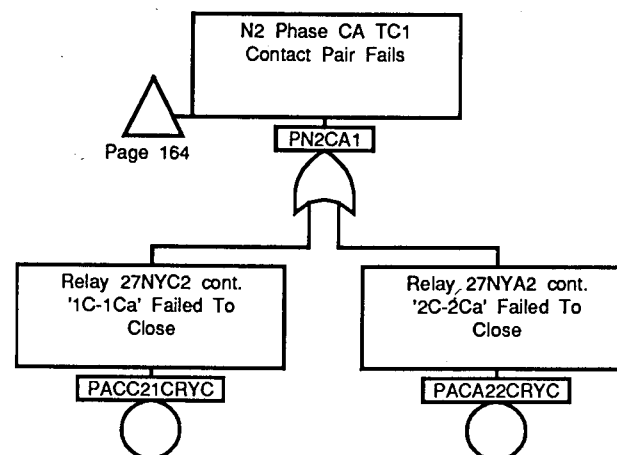


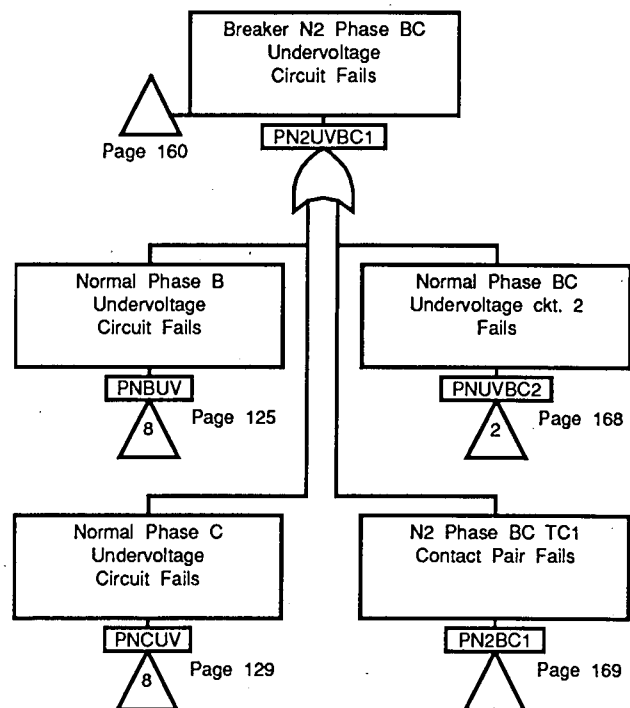


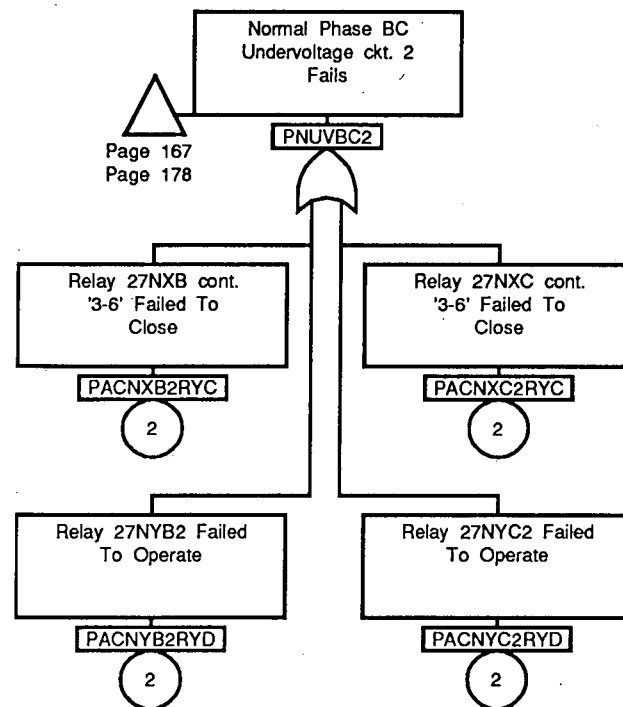




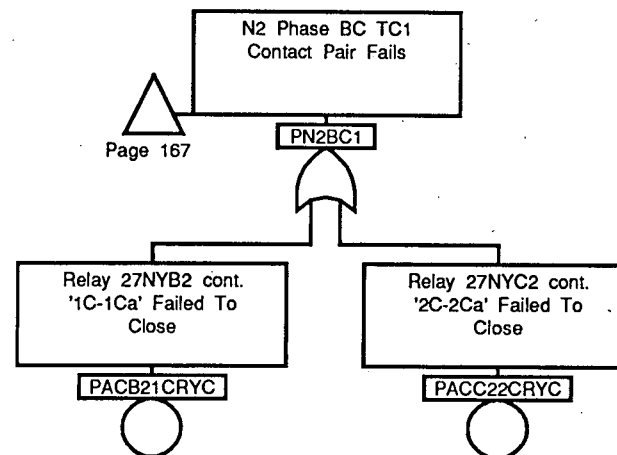


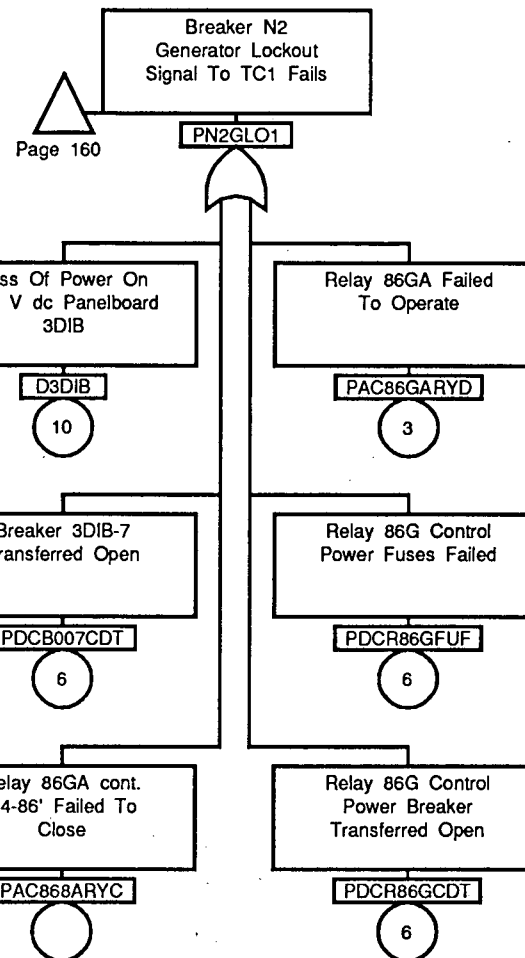




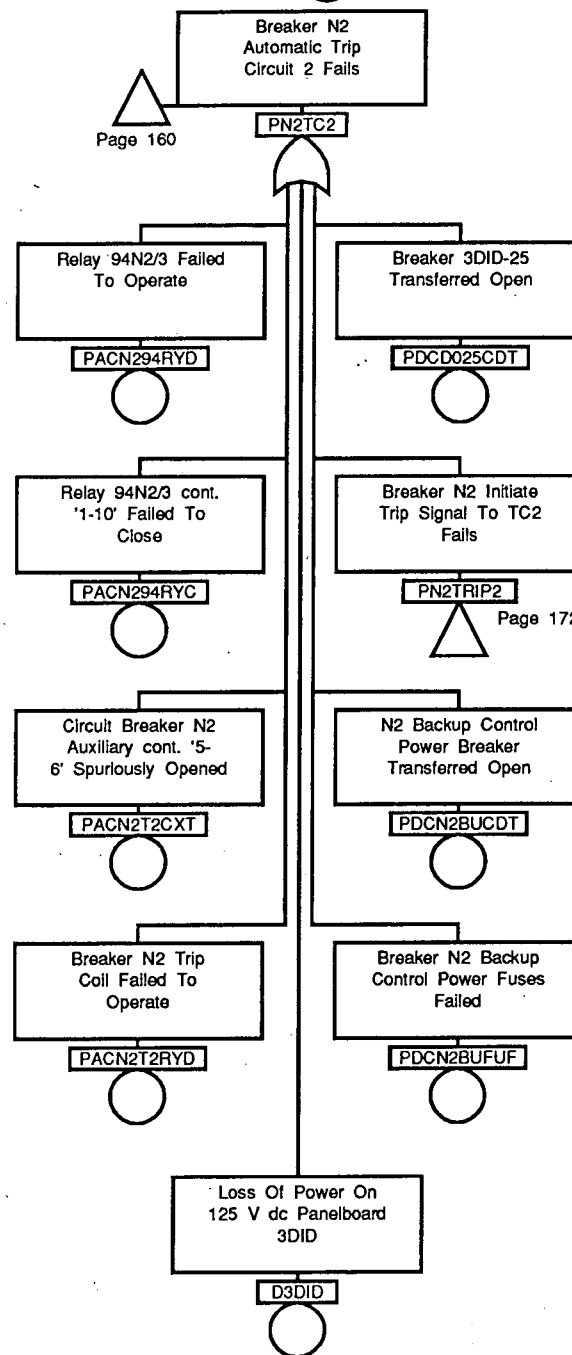


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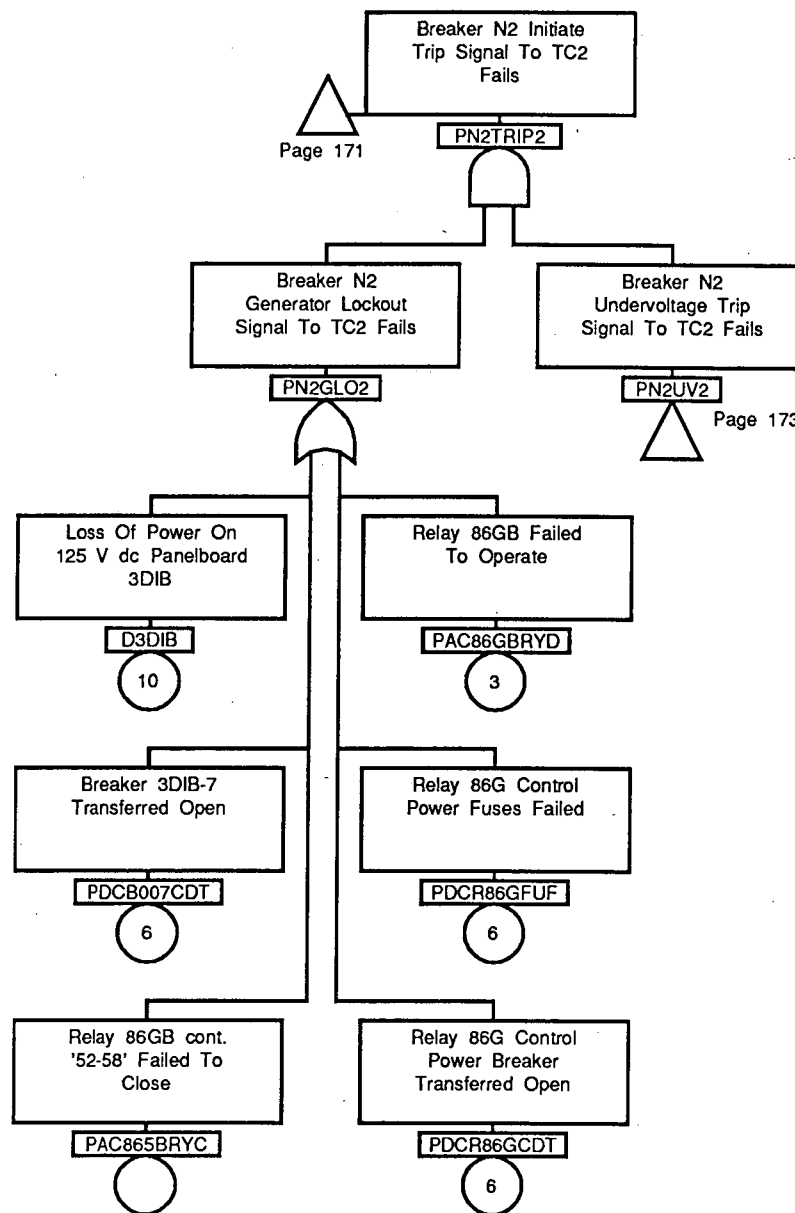




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