

CHAPTER 5 Q10GMS BOARD

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5.1 Guideline for Troubleshooting

Troubleshooting is not easy, because symptoms differ according to the faulty parts. A guide line for troubleshooting is easily provided by the following two means:

1. Check out procedure

Purpose: Guideline for troubleshooting for faults with indefinite symptoms.
Level: Replace corresponding units. (Repairable by persons who have a basic mechanical knowledge.)

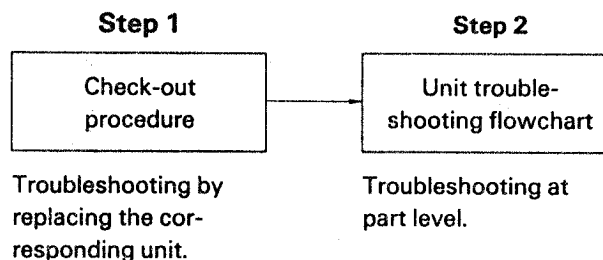
2. Unit troubleshooting flowchart

Purpose: Repair individual faulty unit at part level.
Level: Since troubleshooting is made at part level, it requires deep knowledge and high technical skill.

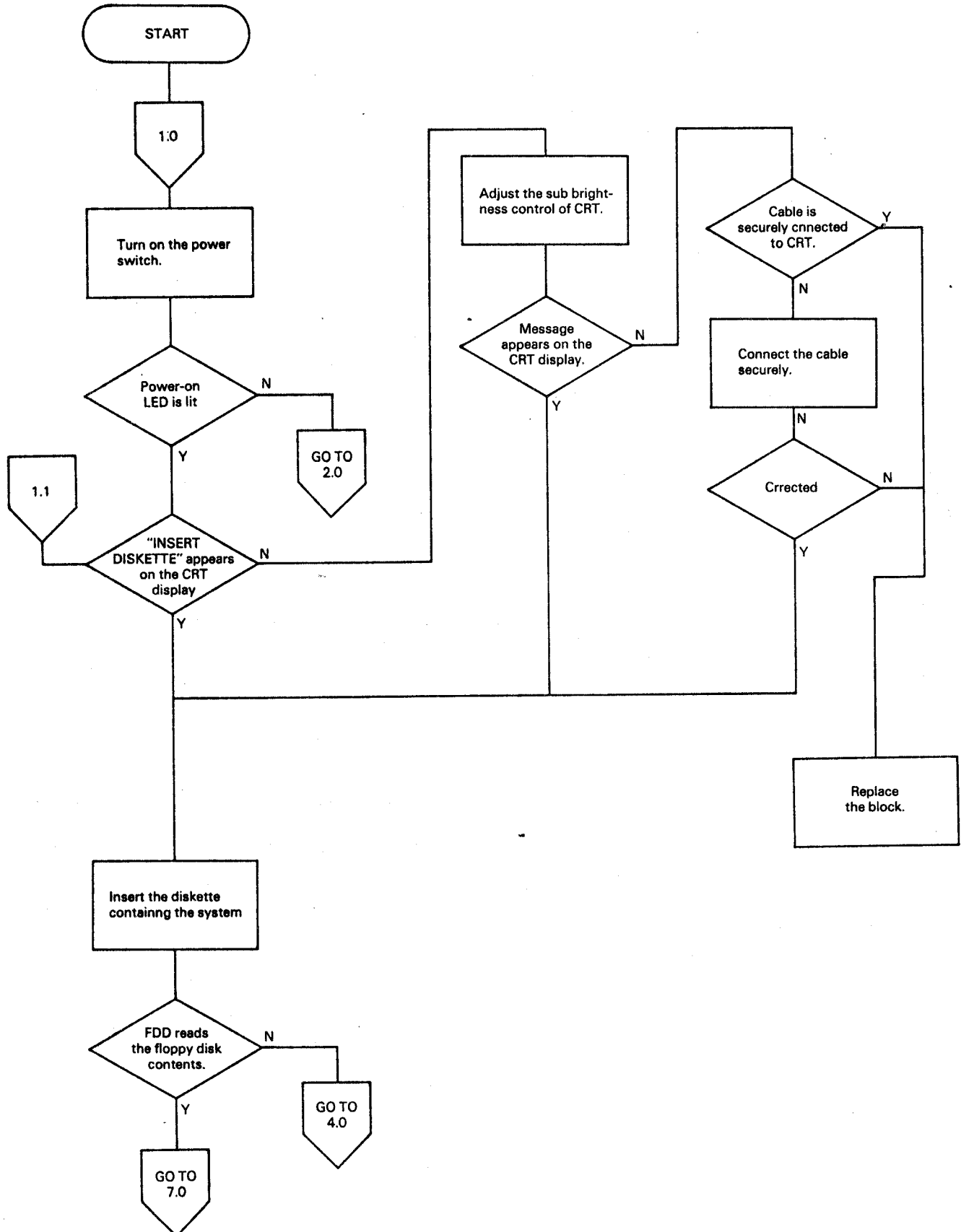
Troubleshooting Method

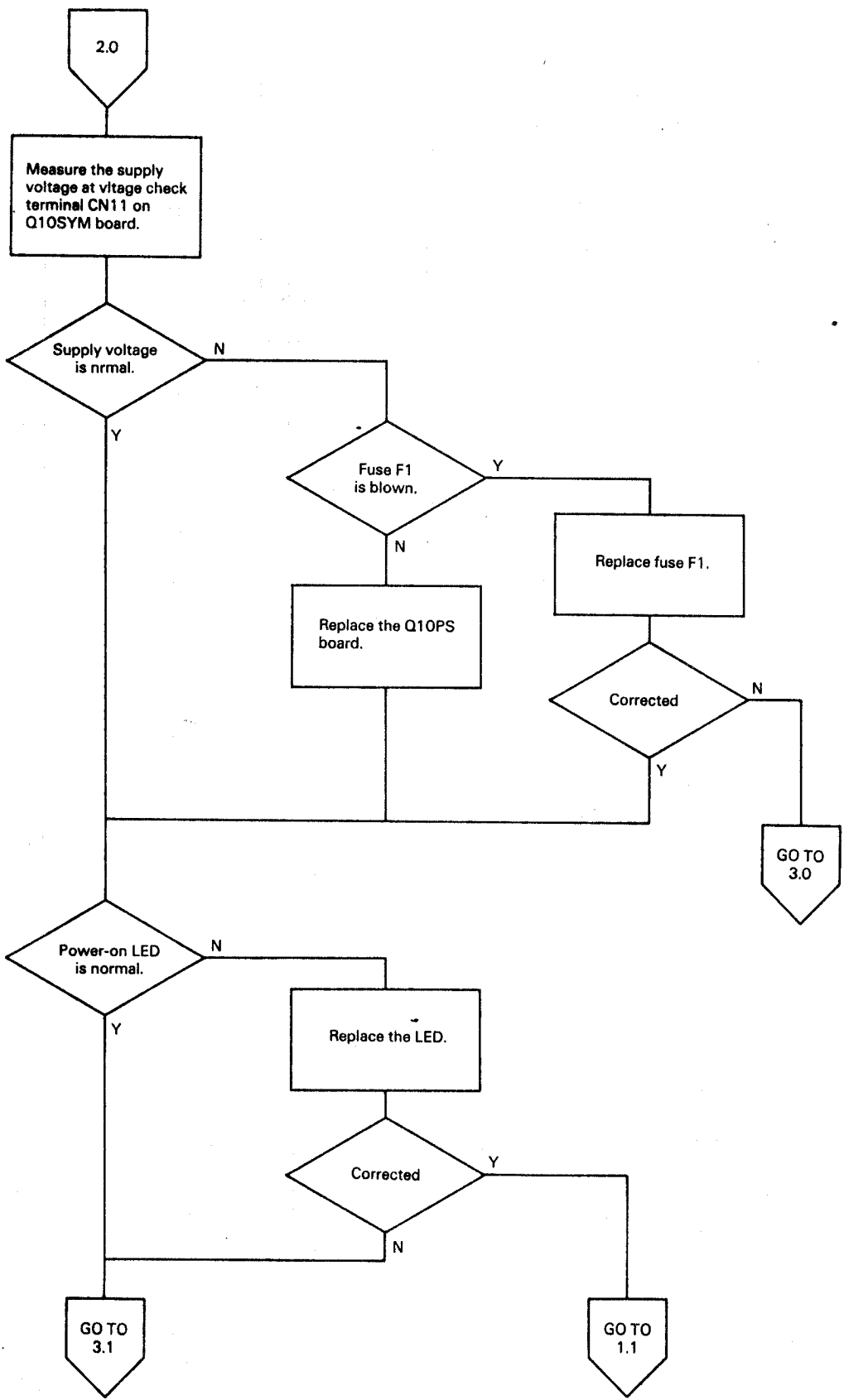
- As the first step, use the check out procedure and perform troubleshooting by replacing the corresponding units. In this case, be sure to check again that the replaced unit is not defective. (This is done to distinguish the fault from those caused by contact failure of connectors.)
- As the second step, replace the defective element in the corresponding unit according to the unit flowchart or table of faults.

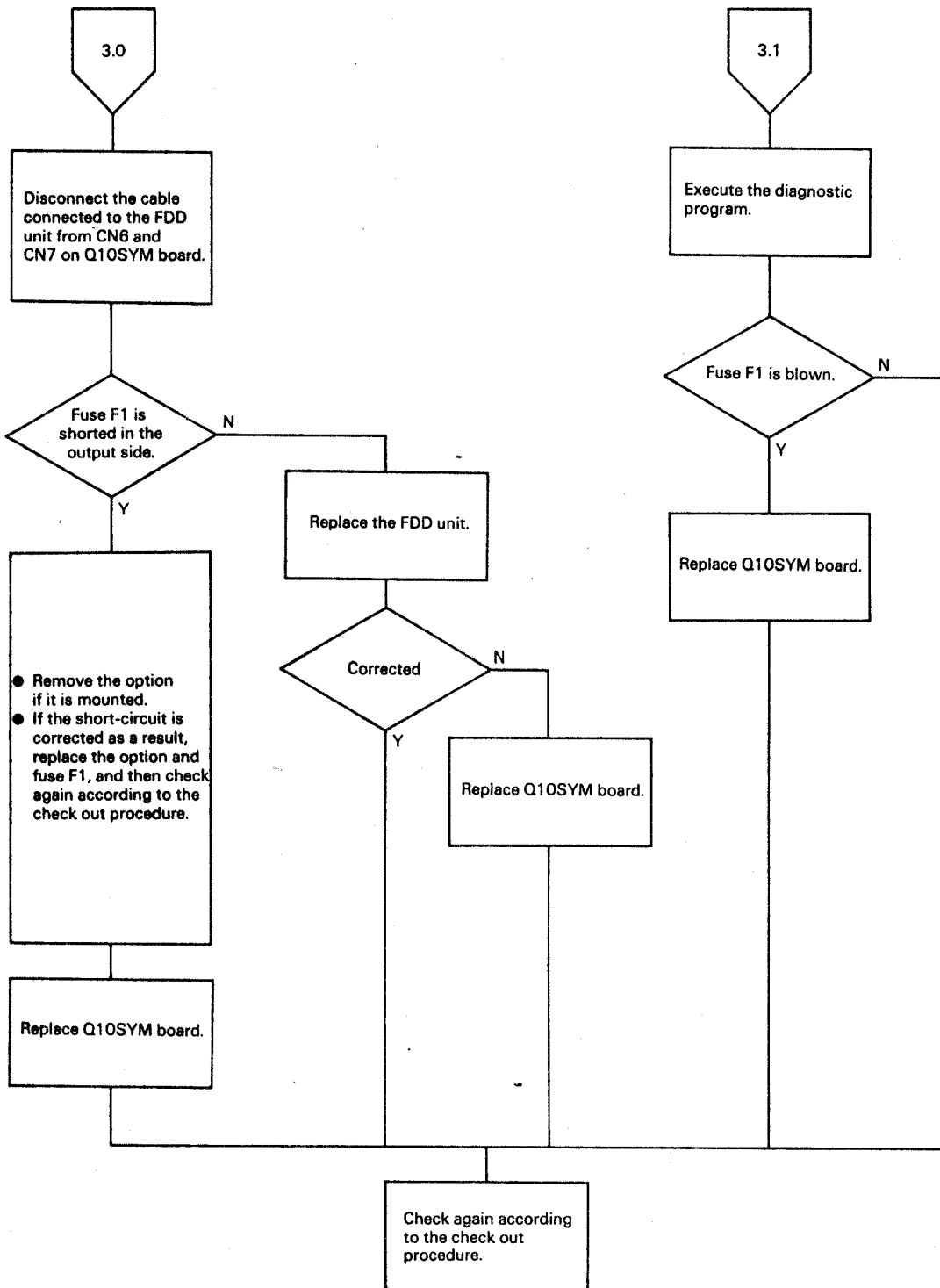
Notes 1: When a checking item appears in the flowchart, be sure to do it. If a part or unit is replaced without checking, the new part or unit may be damaged again.
2: When the troubleshooting procedure becomes indefinite halfway, be sure to return to the first entry and restart the procedure.

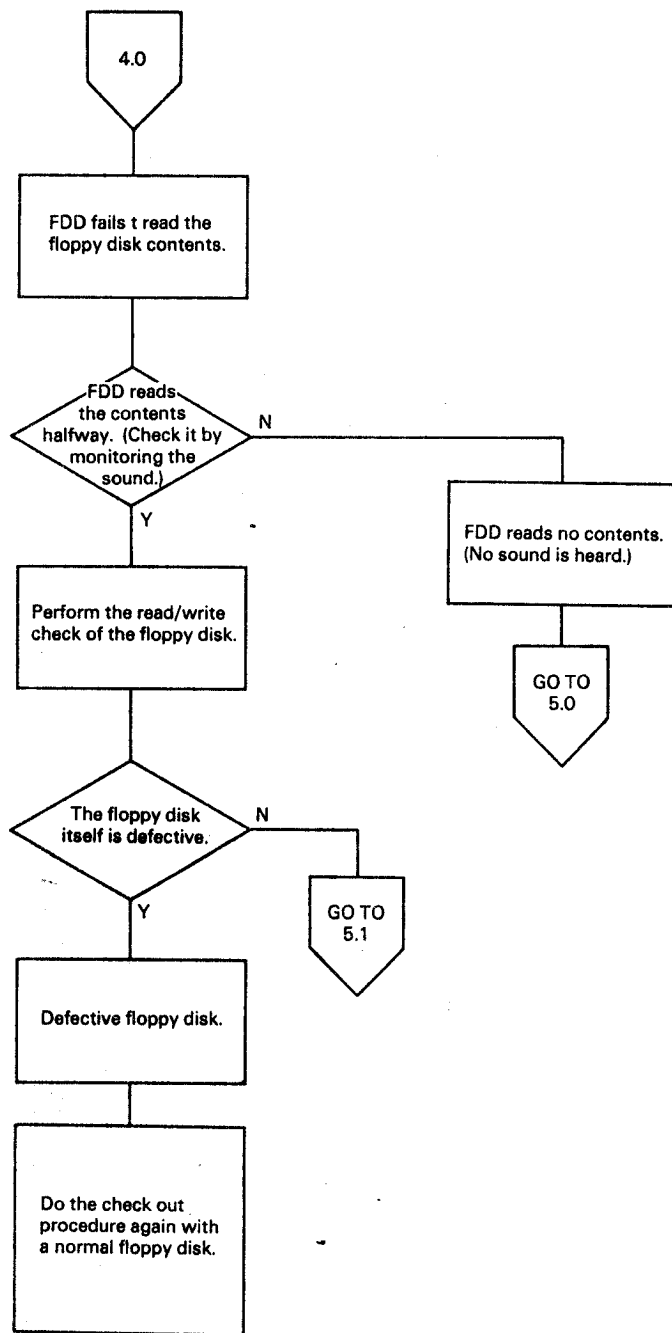


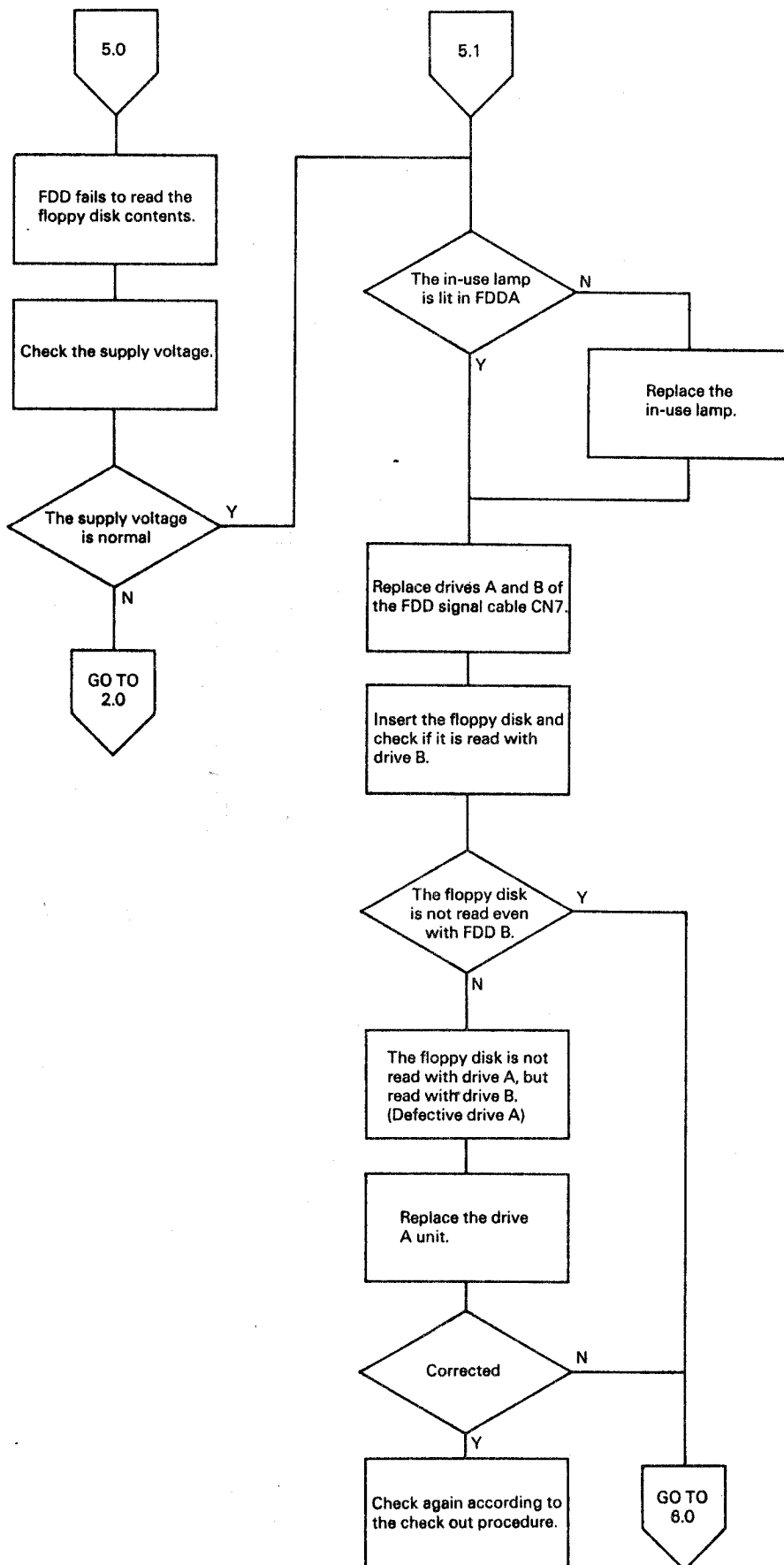
5.2 Check-out Procedure

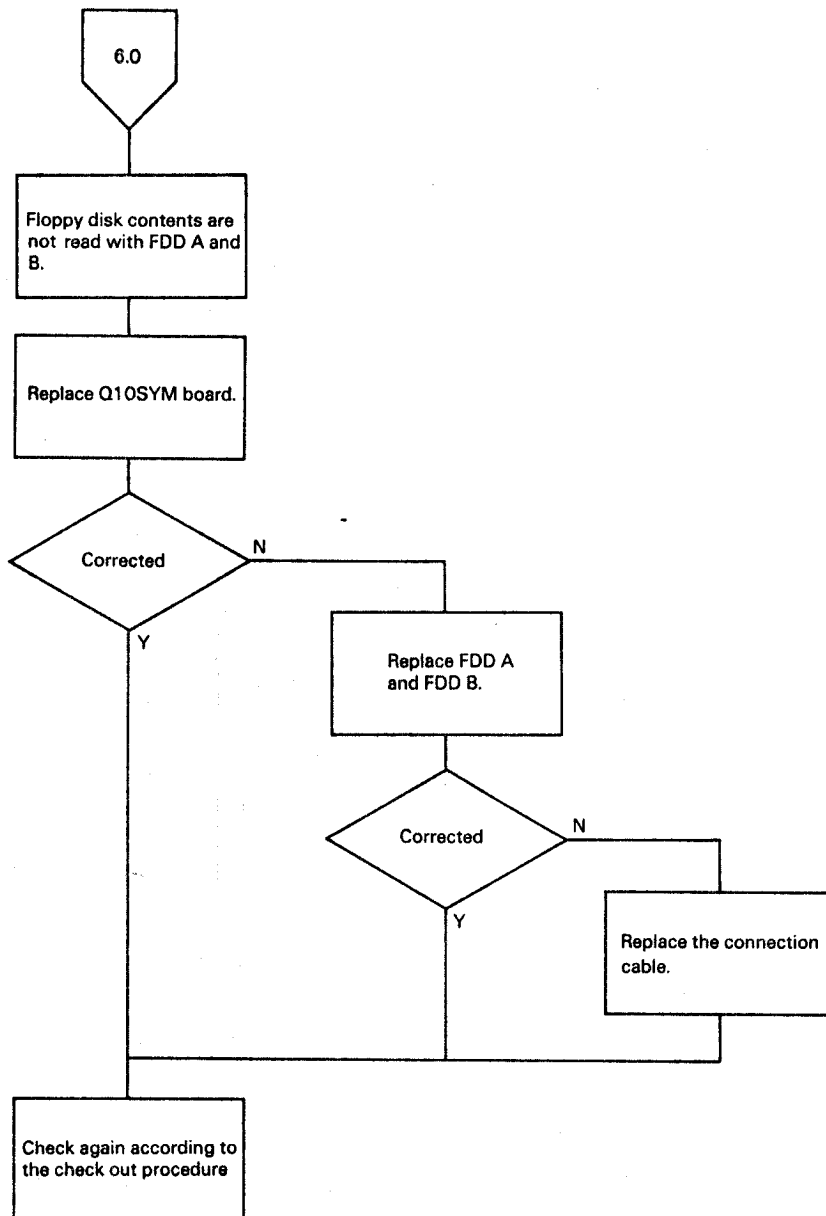


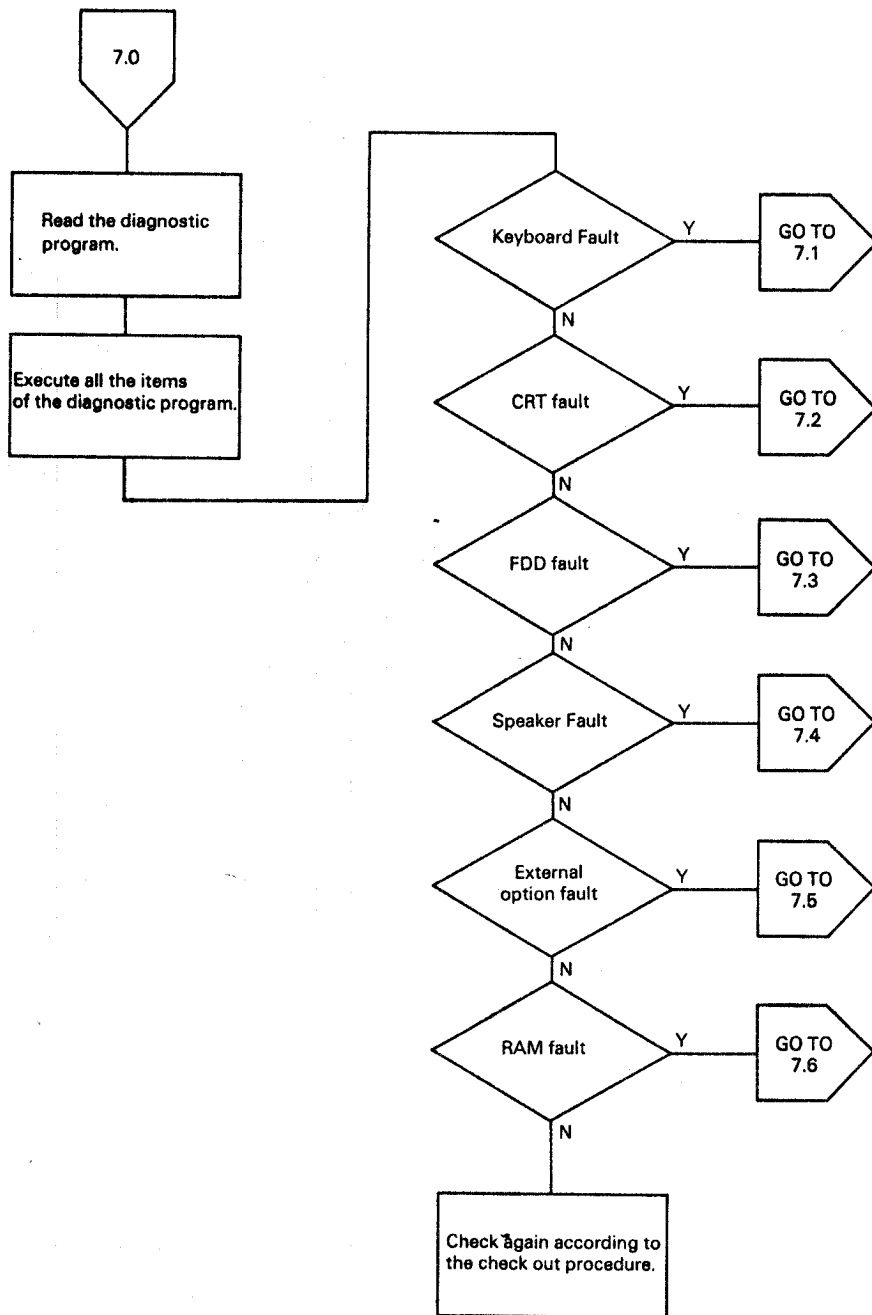


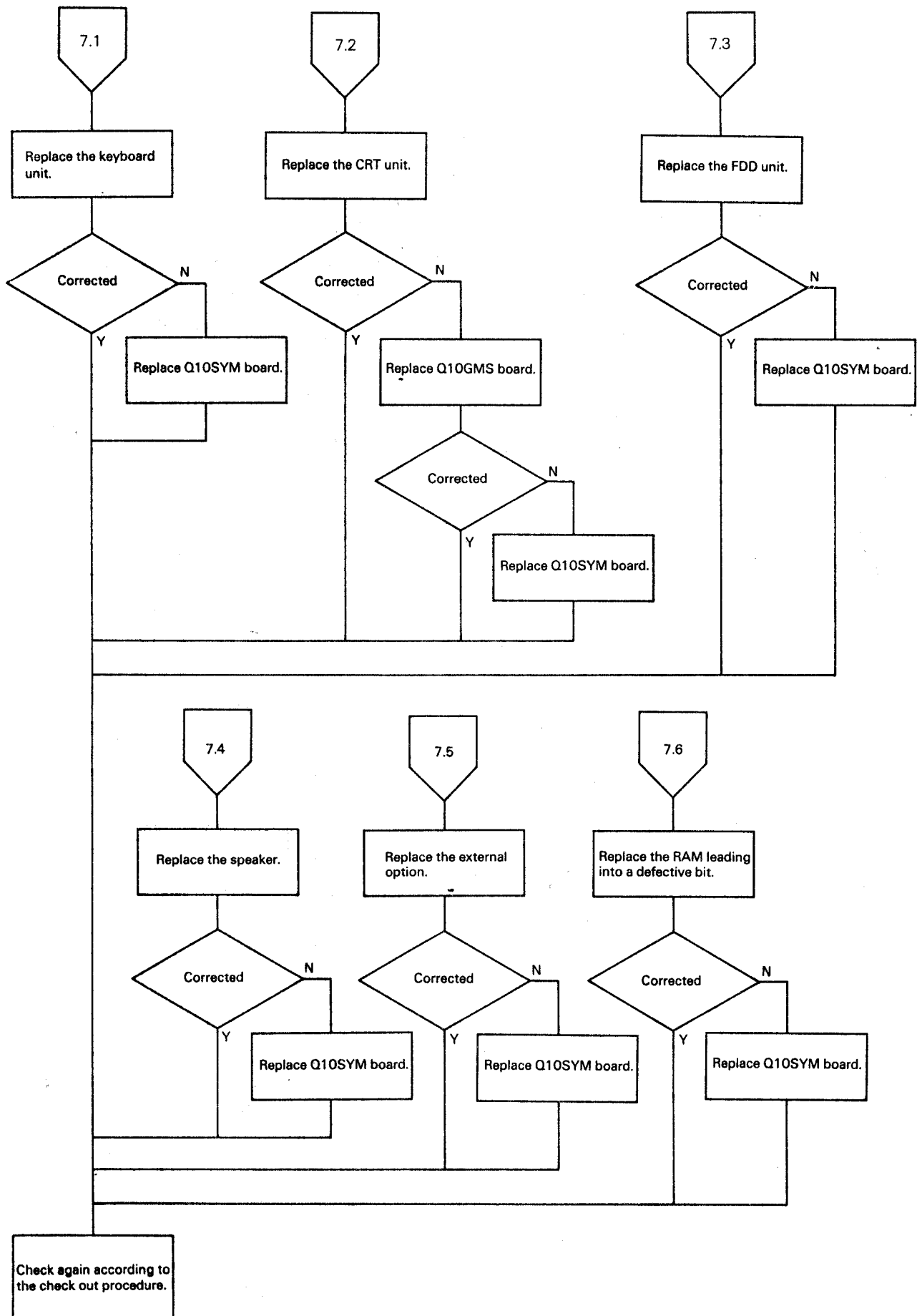






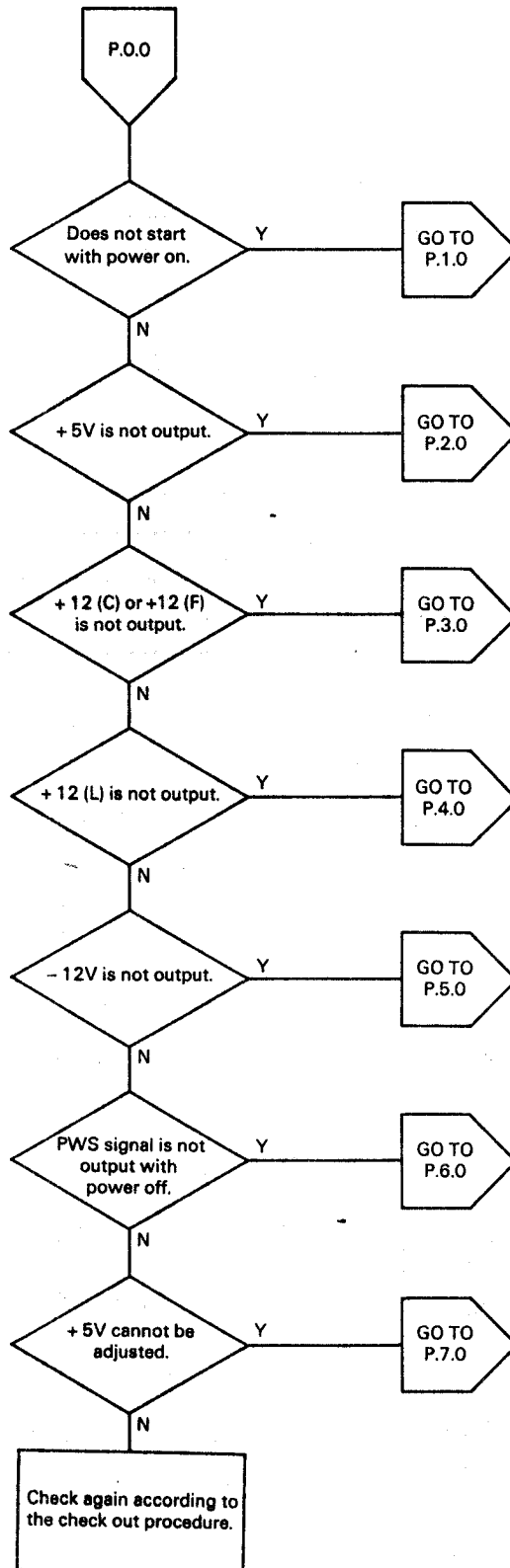


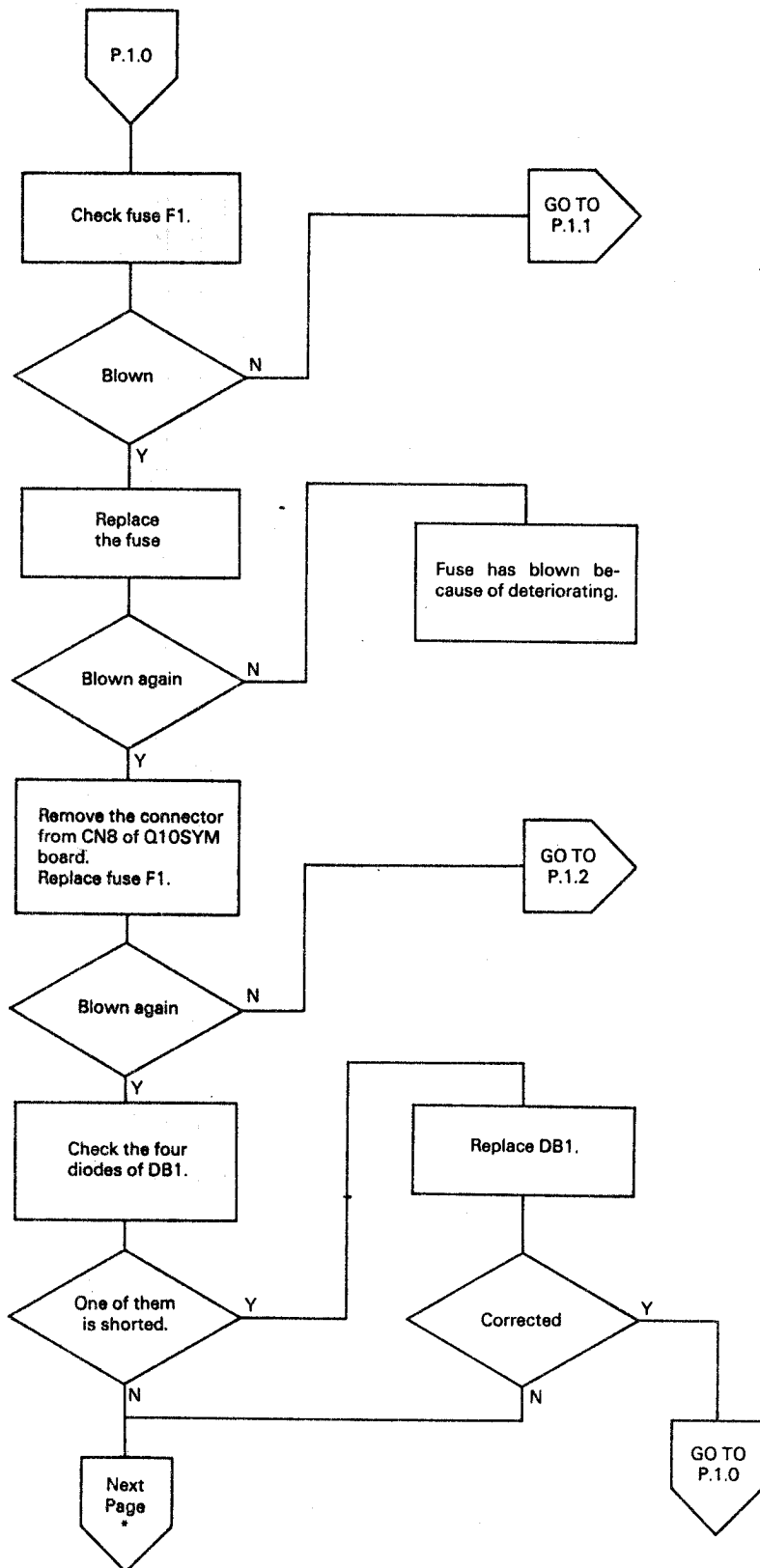


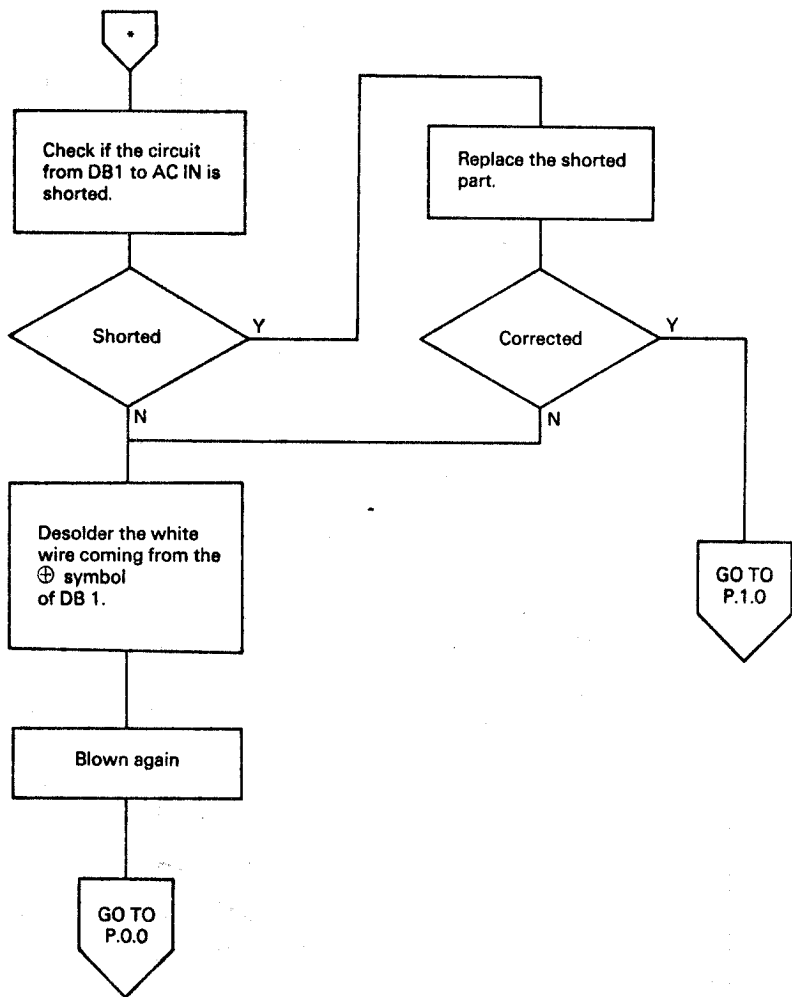


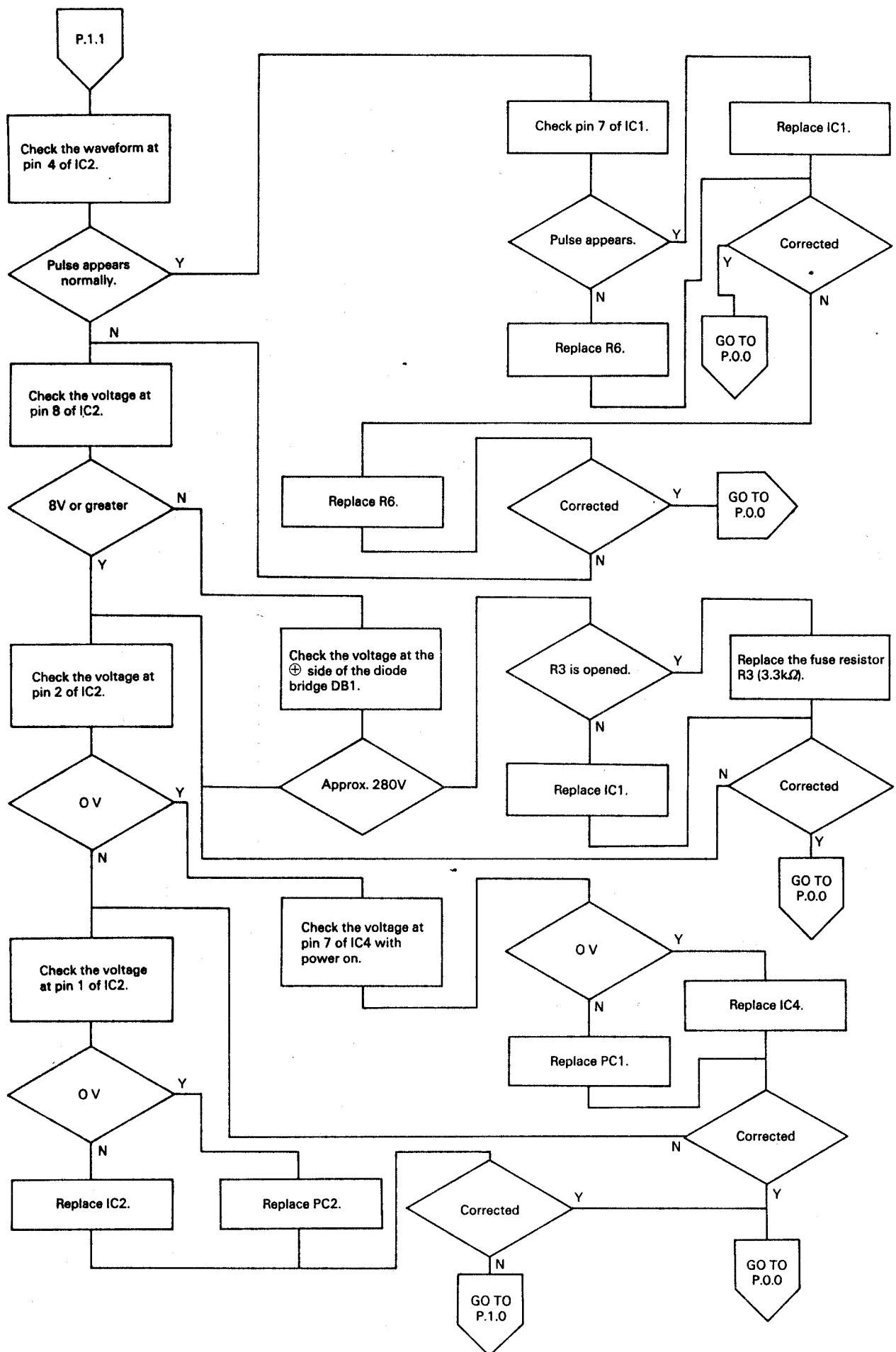
5.3 Unit Troubleshooting

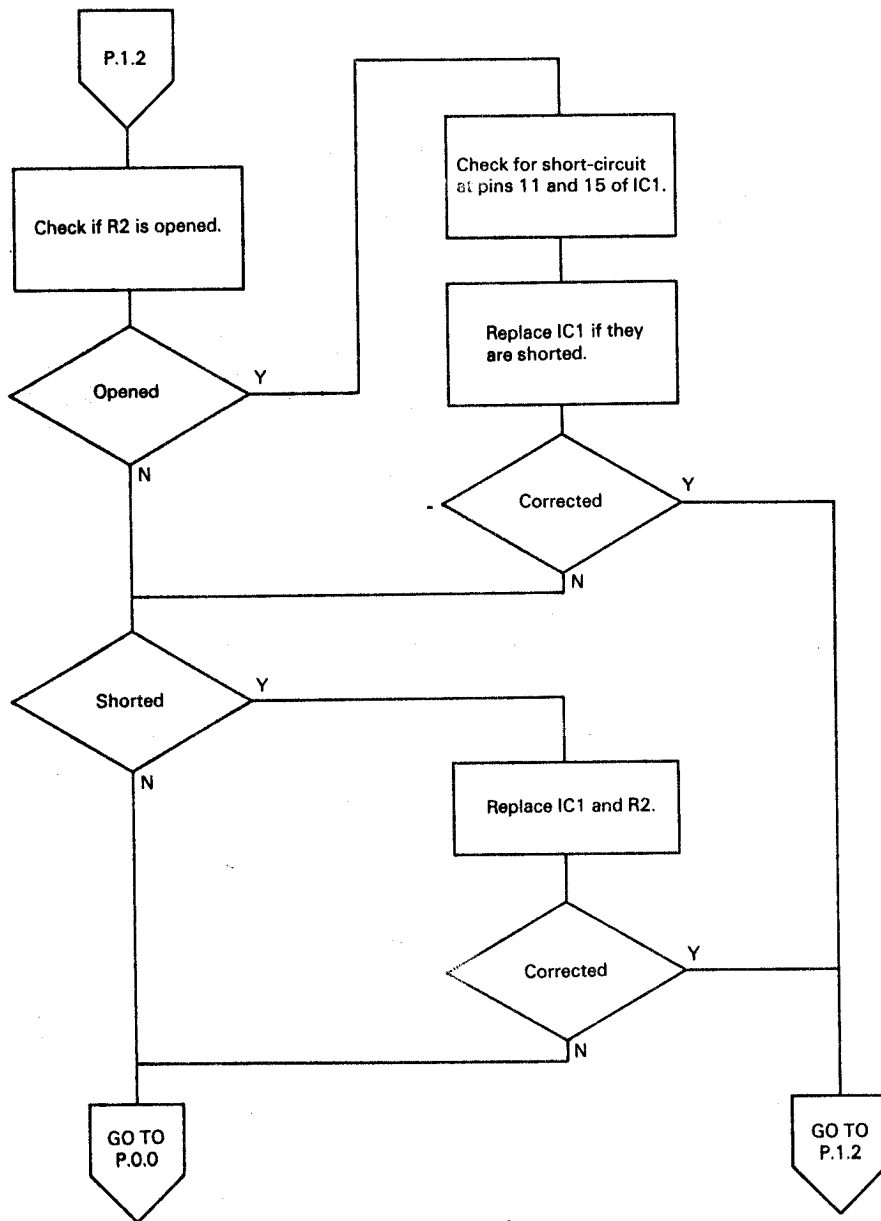
5.3.1 Q10PS board entry table

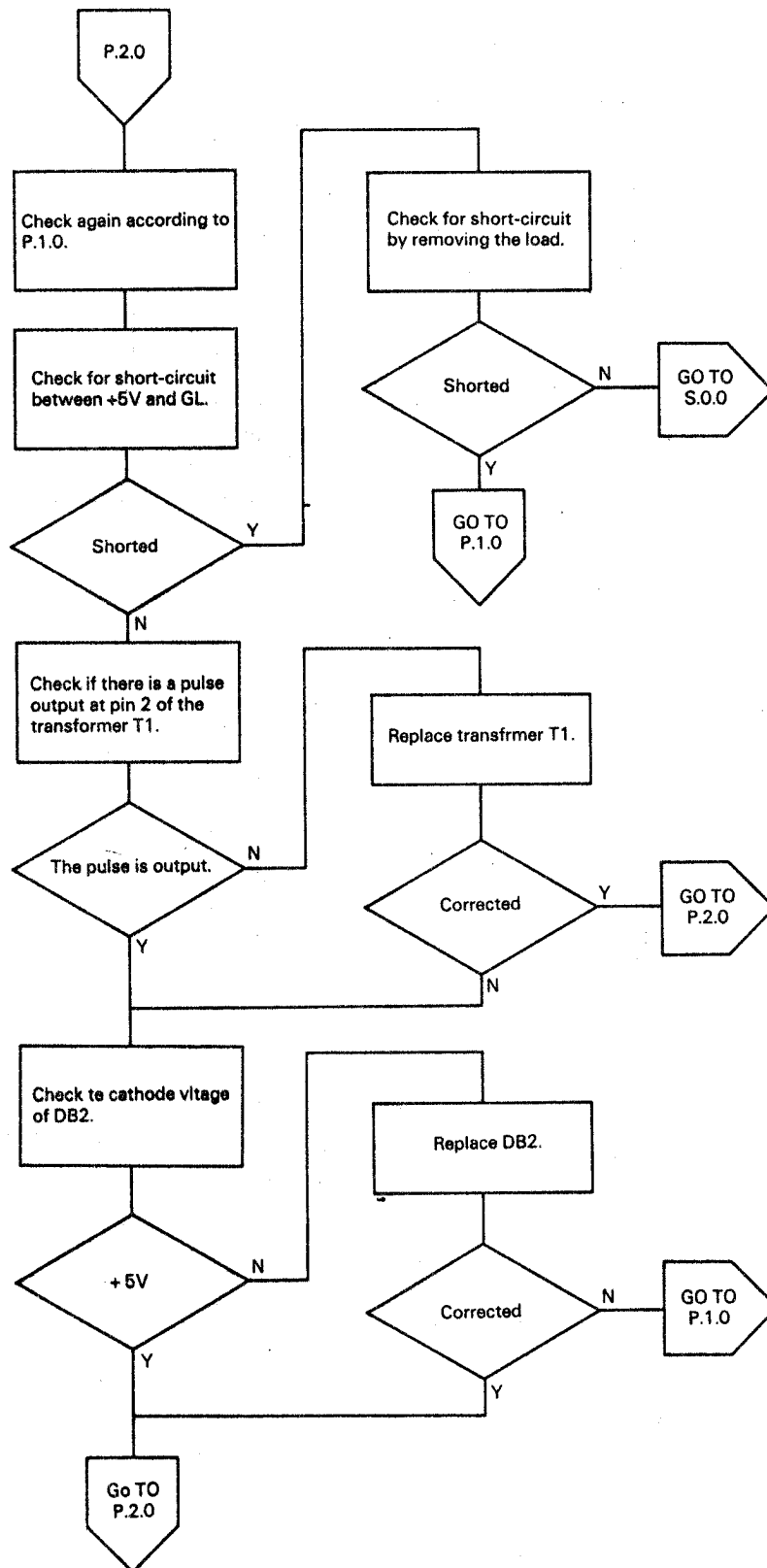


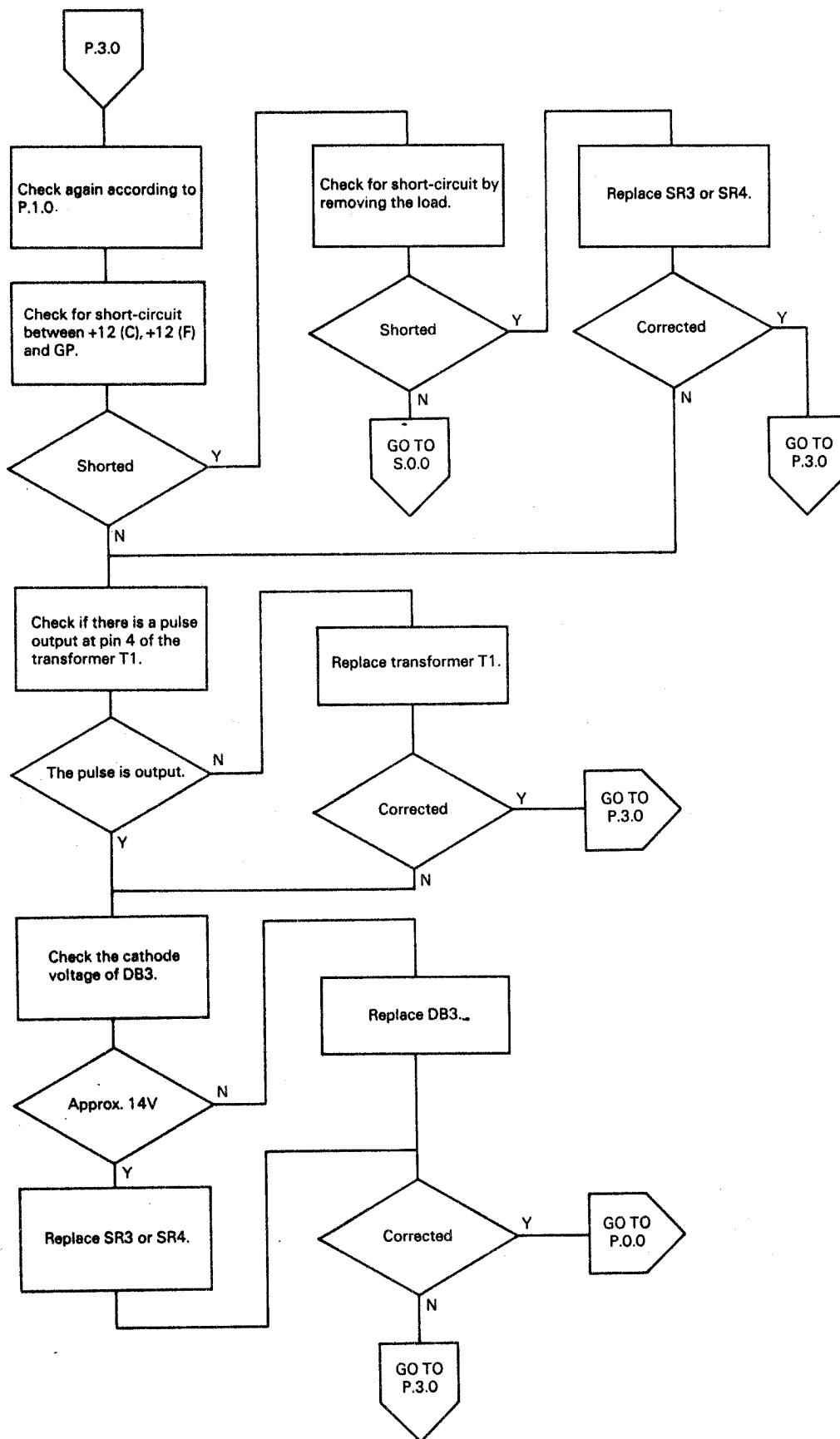


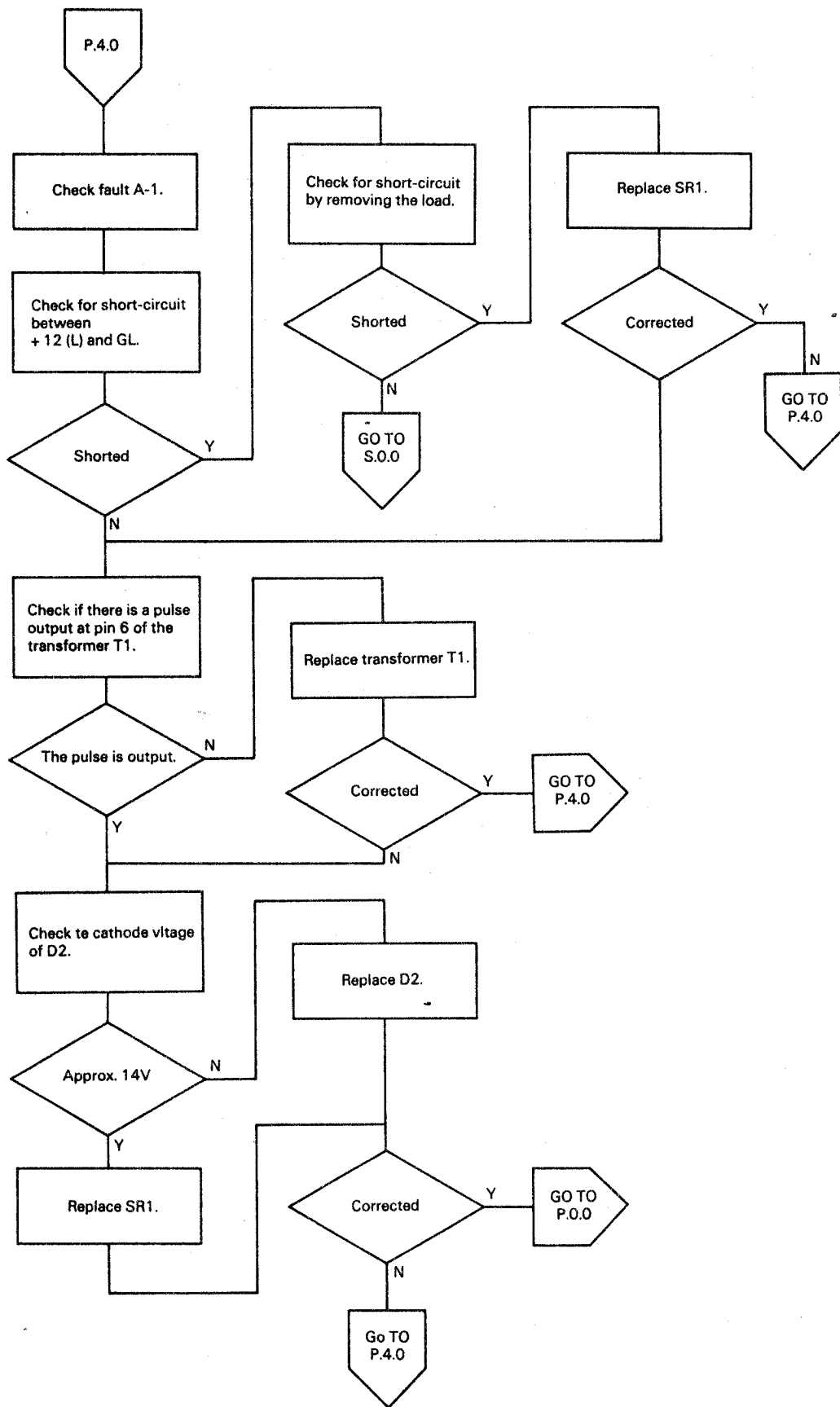


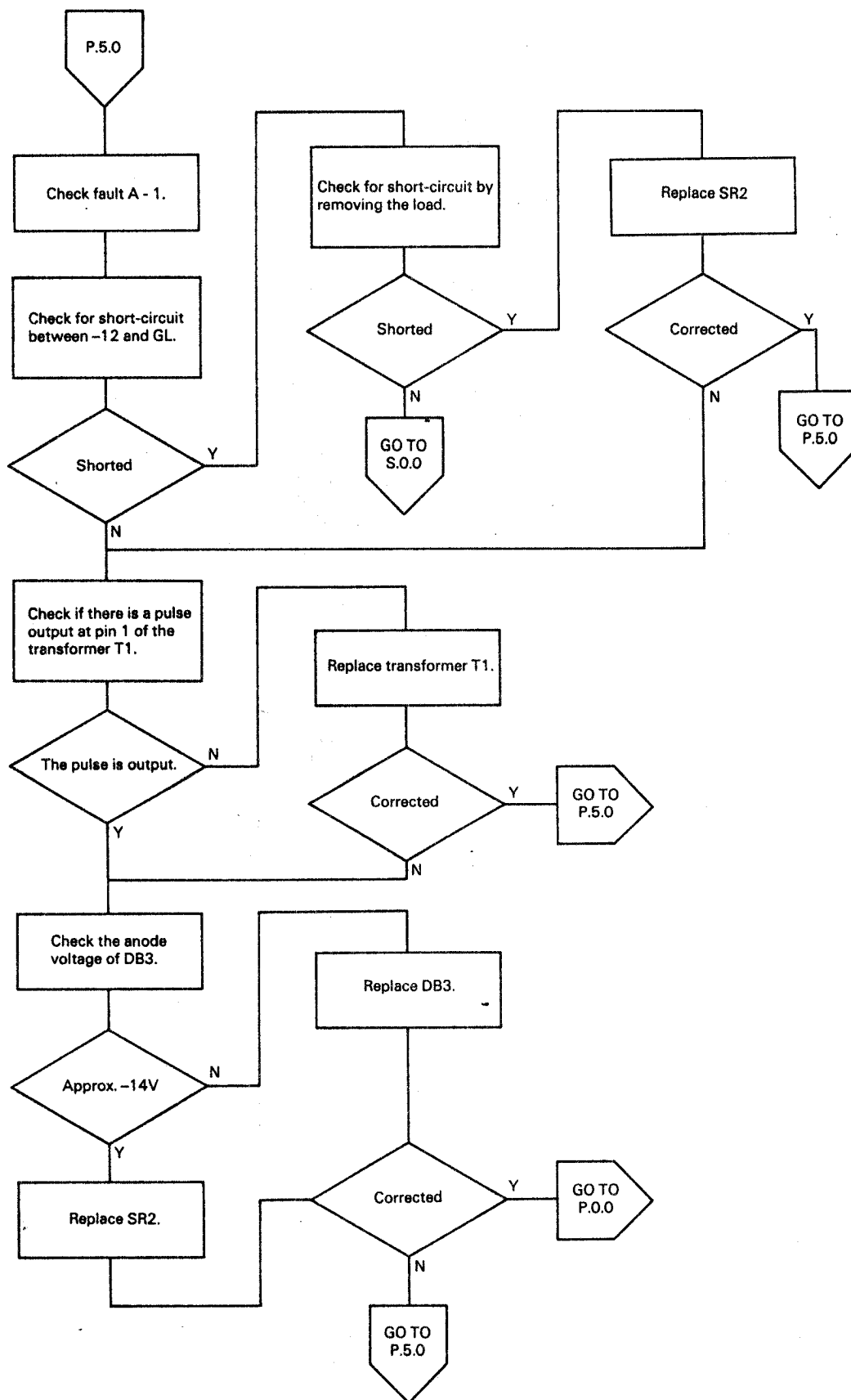


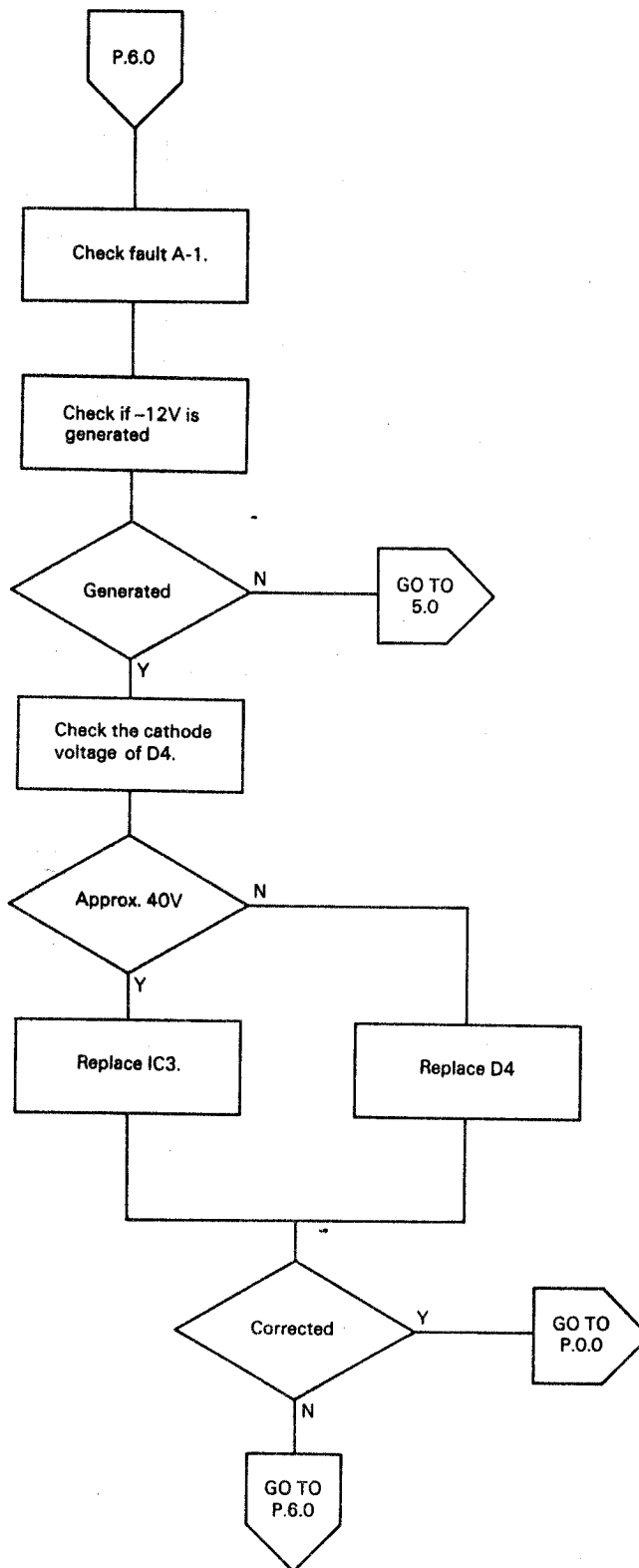


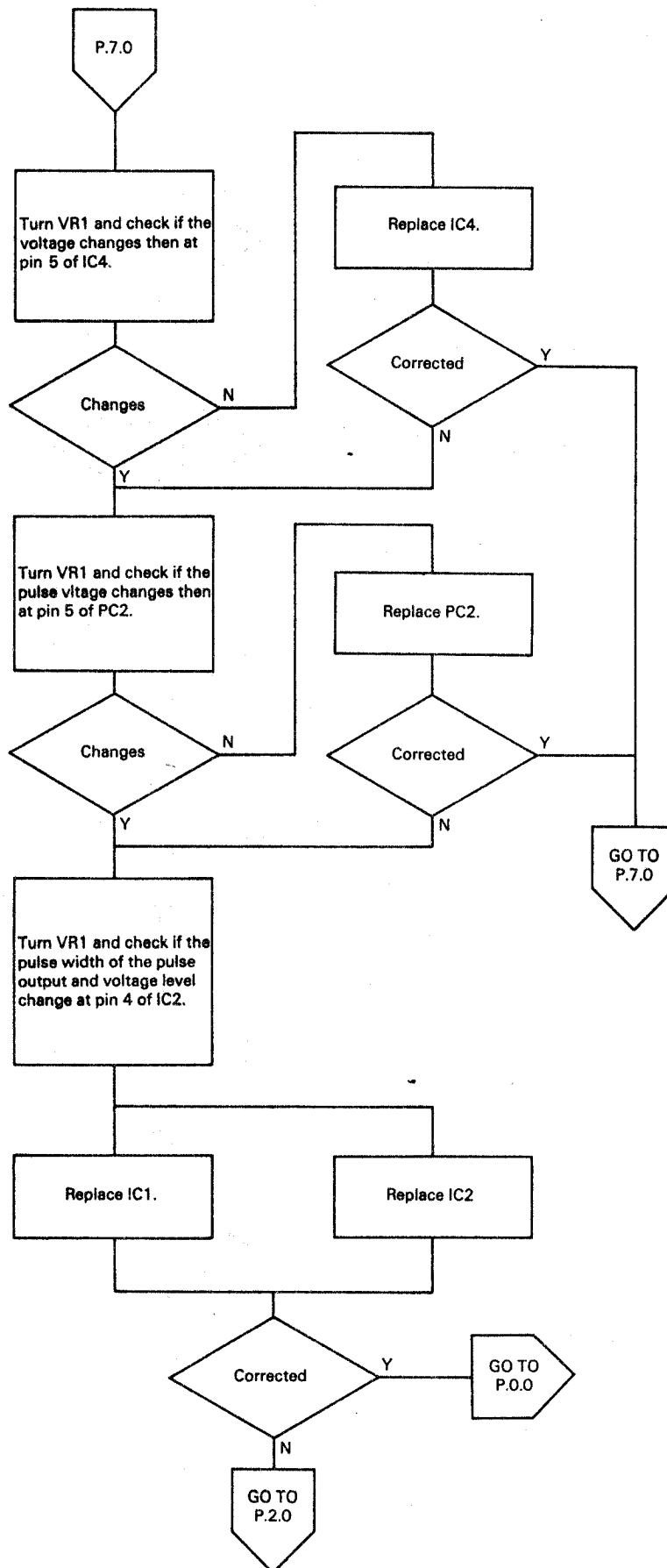




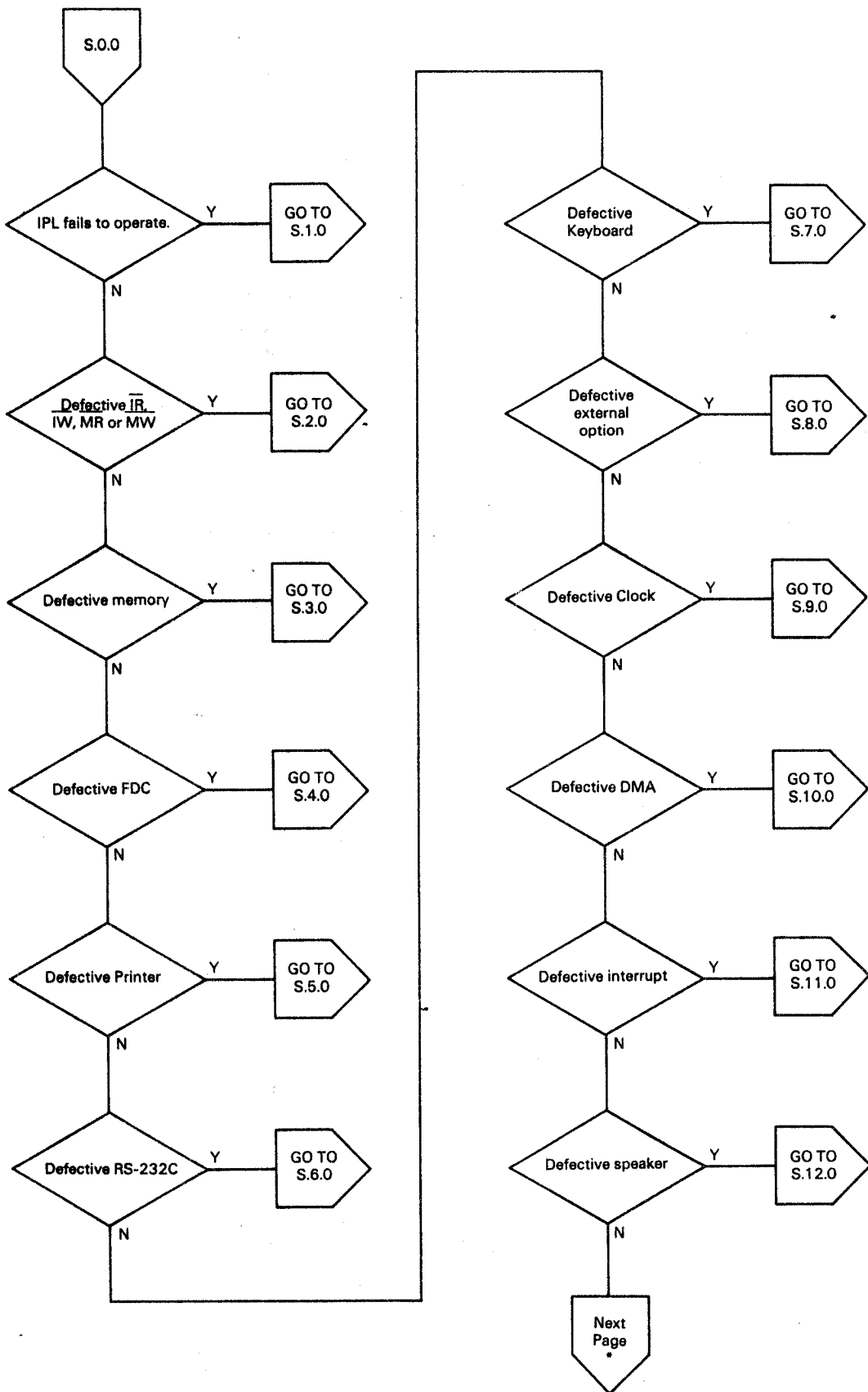


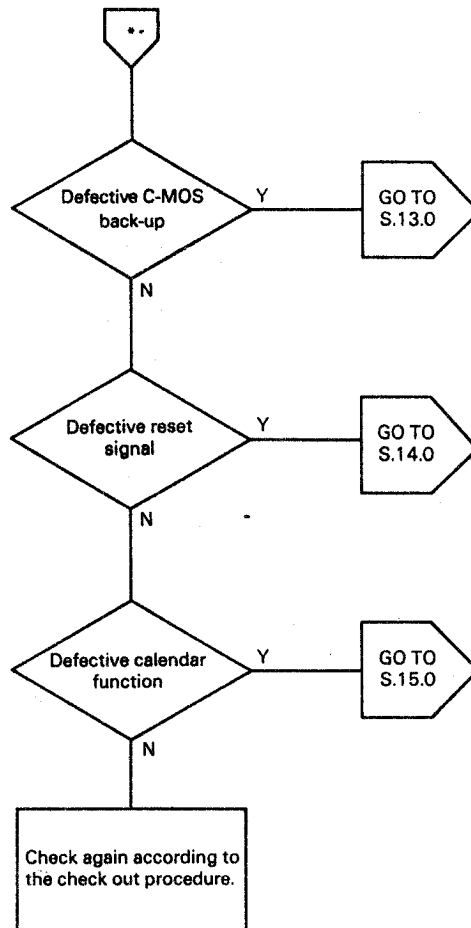




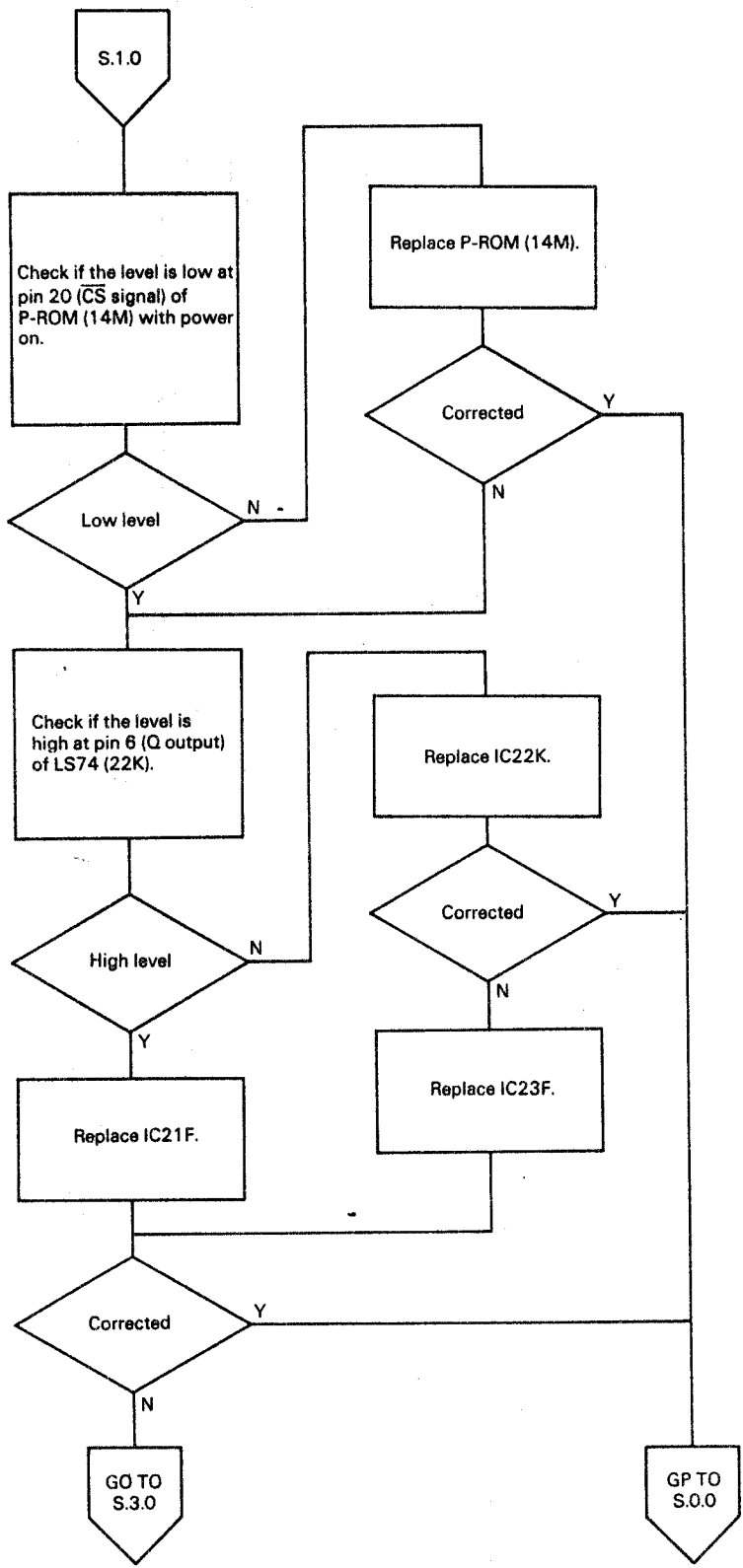


5.3.2 Q10SYM board entry table

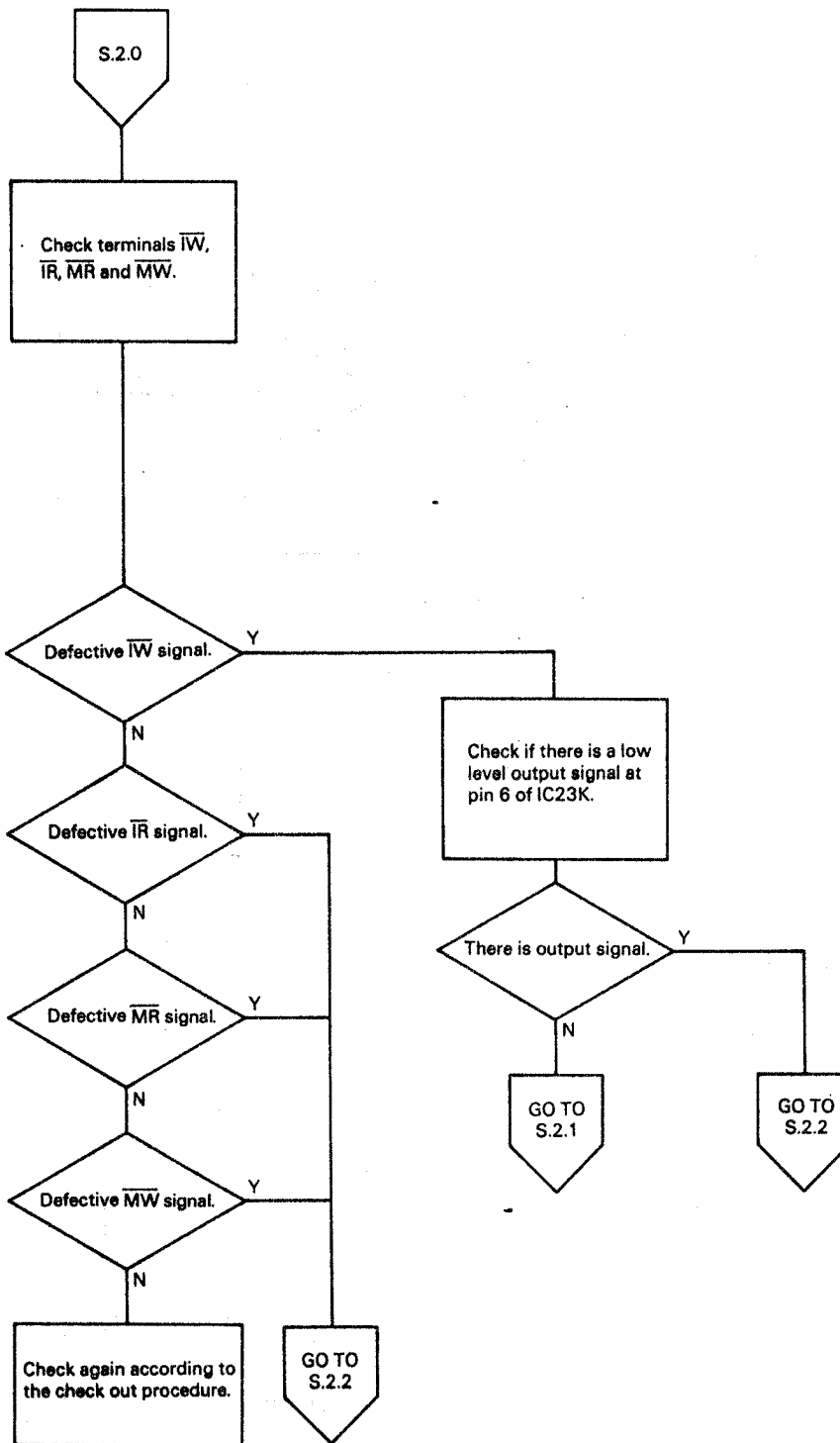




IPL fails to operate.



Defective \overline{IR} , \overline{IW} , \overline{MR} or \overline{MW}



Defective IOWR

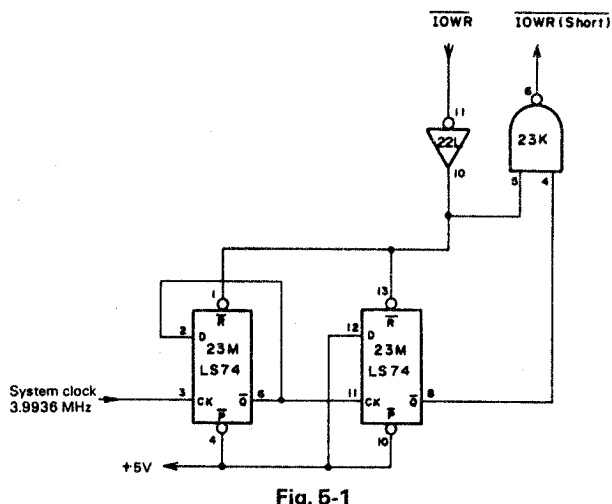
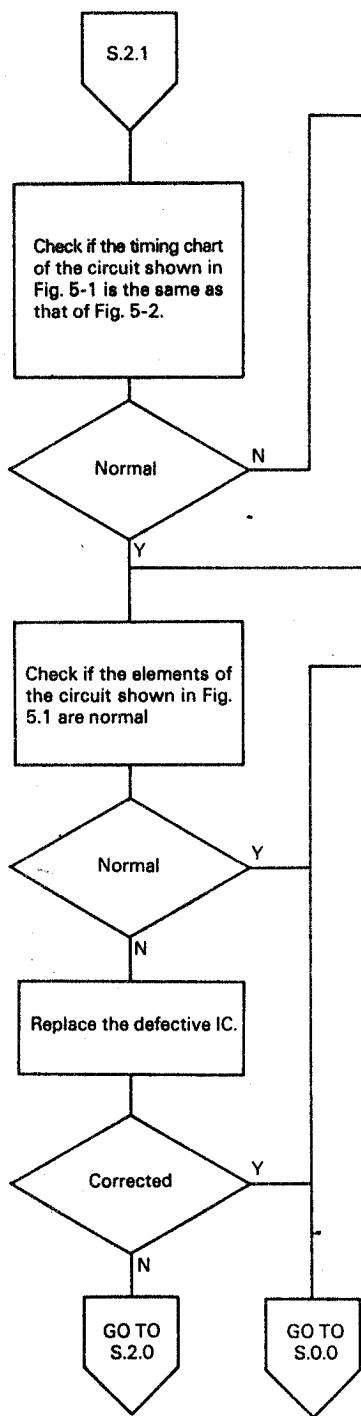


Fig. 5-1

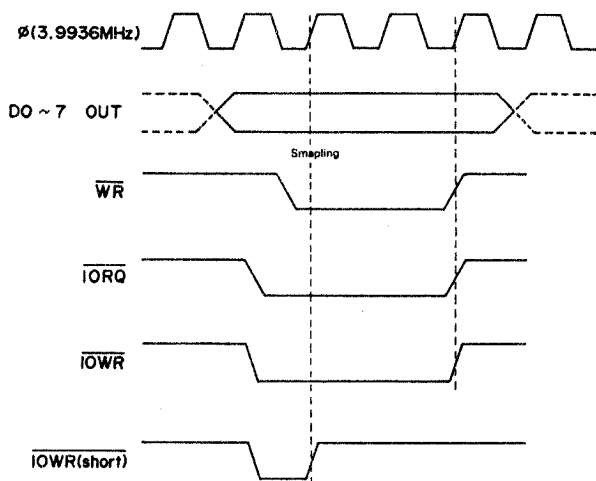
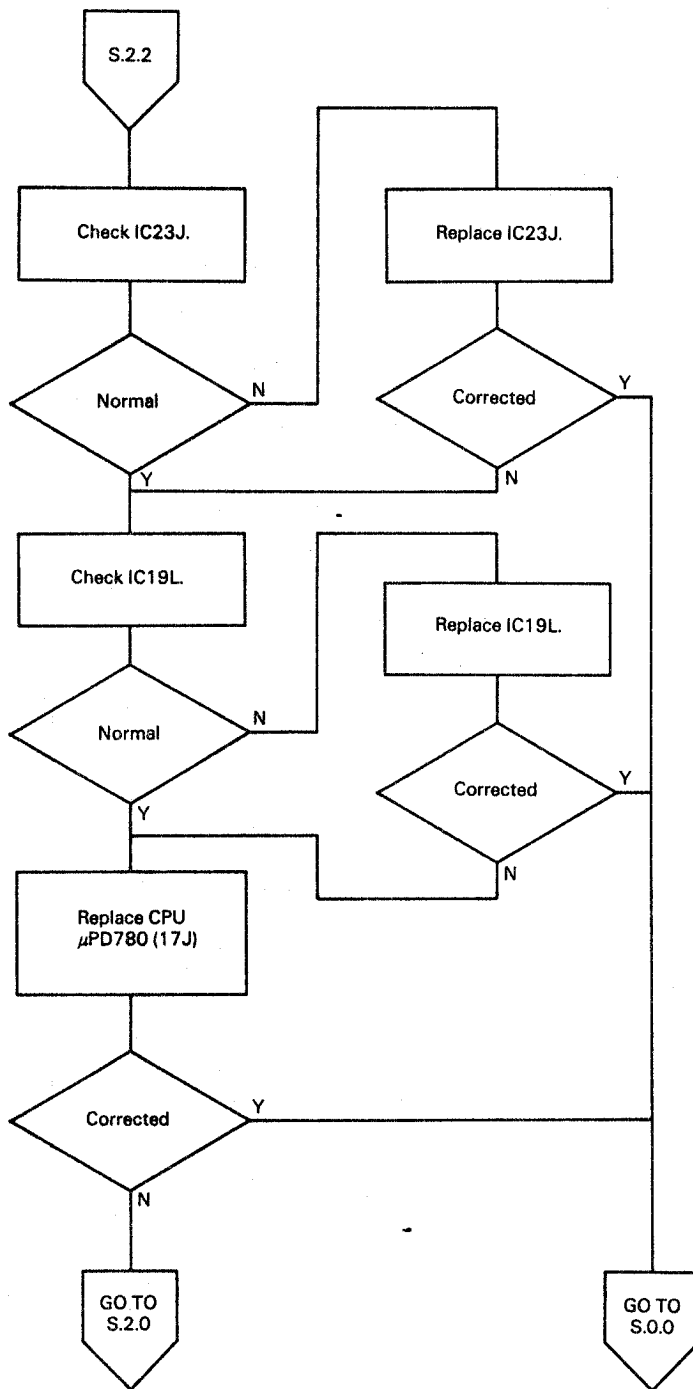


Fig. 5-2



Defective S241 (23J)

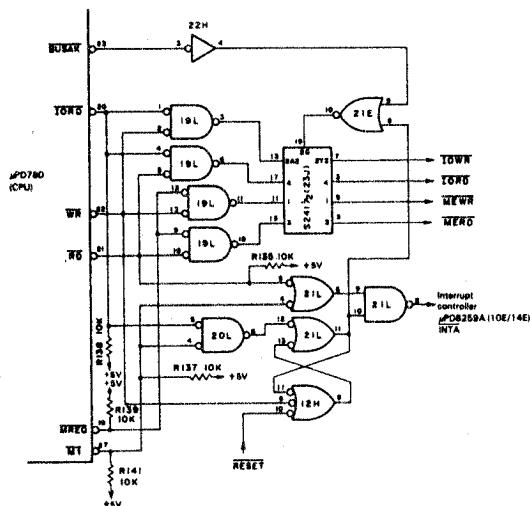
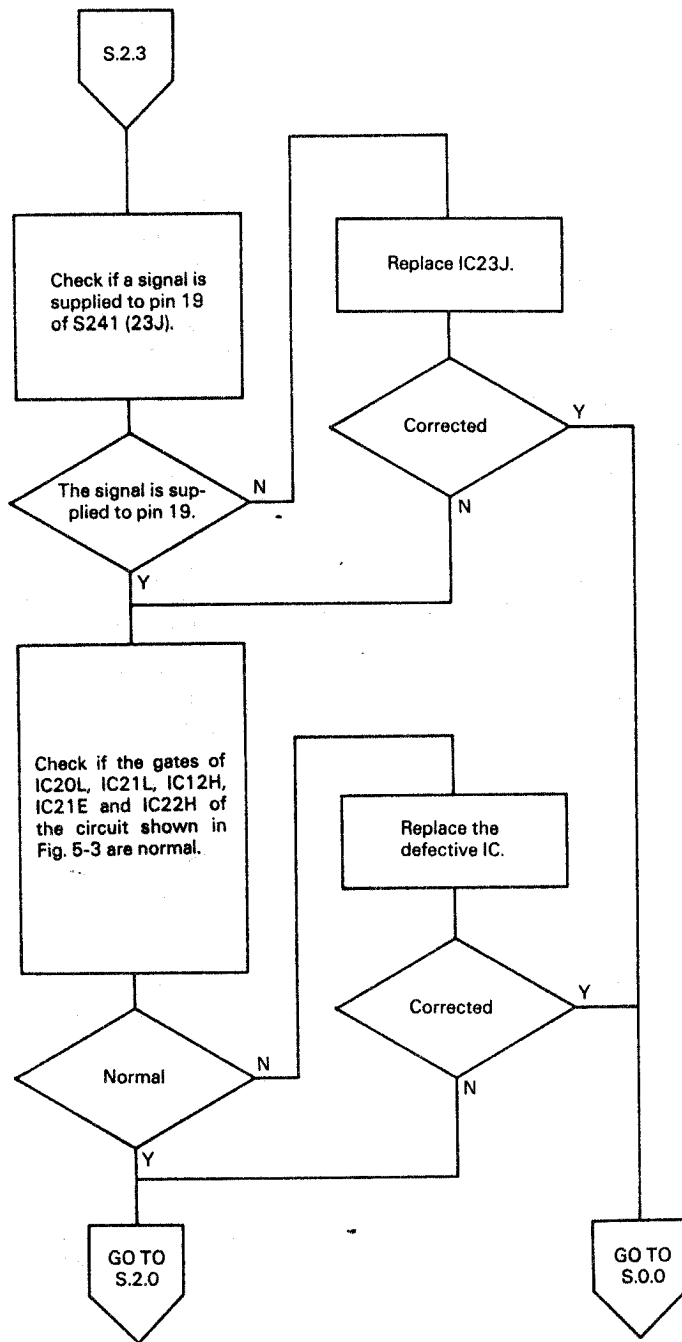
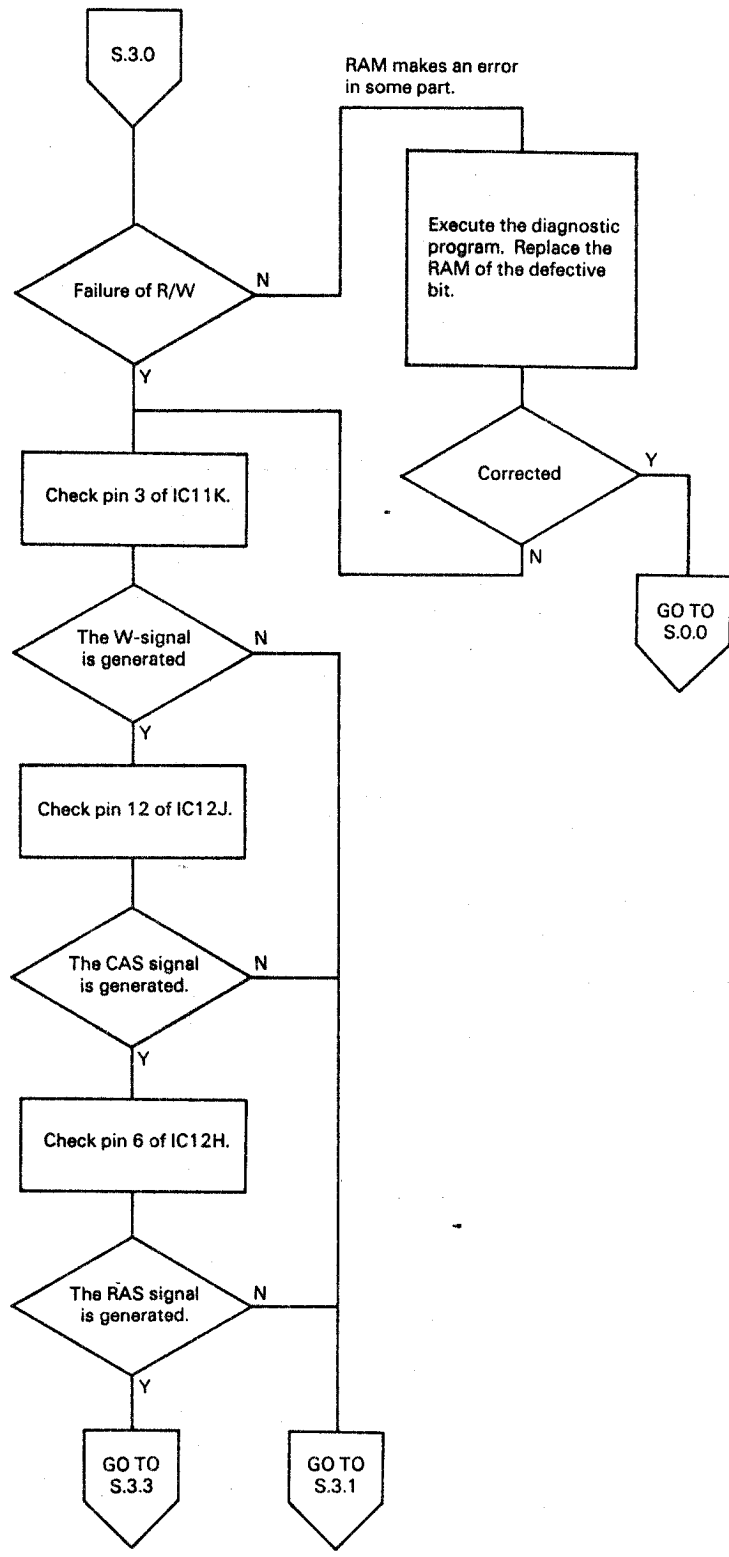


Fig. 5-3

Defective memory



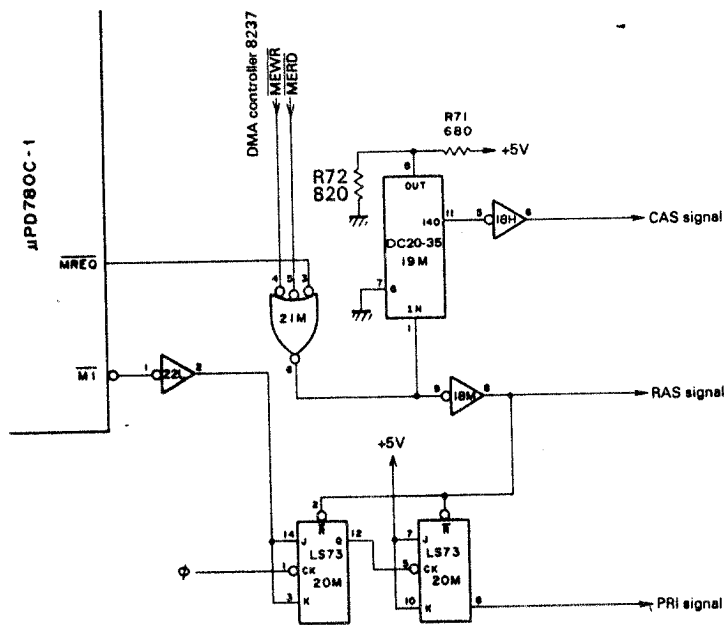
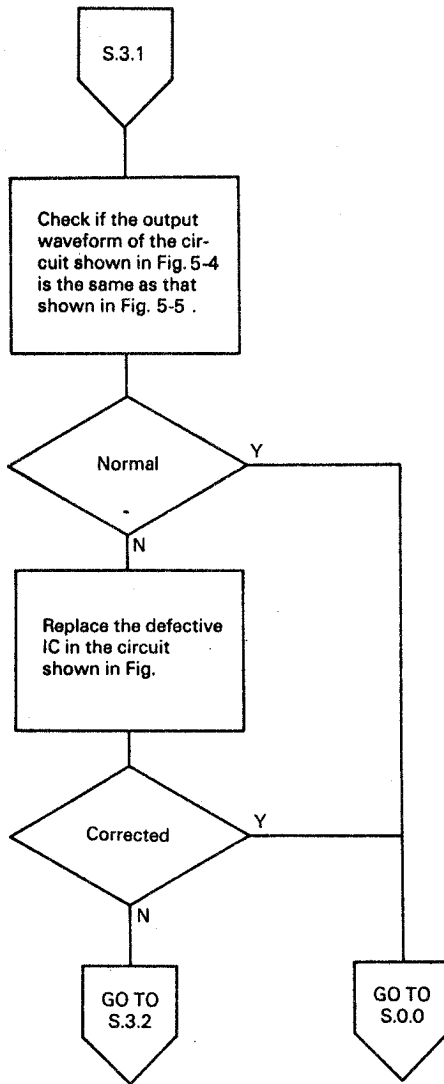
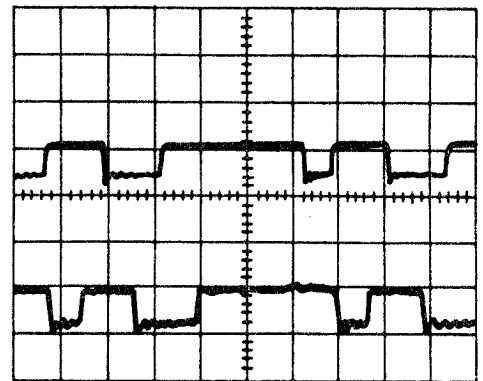


Fig. 5-4



Upper: RAS
Lower: CAS
(Sweep 0.2 μsec . 5 v/div.)

Fig. 5-5

RAS signal is not supplied.

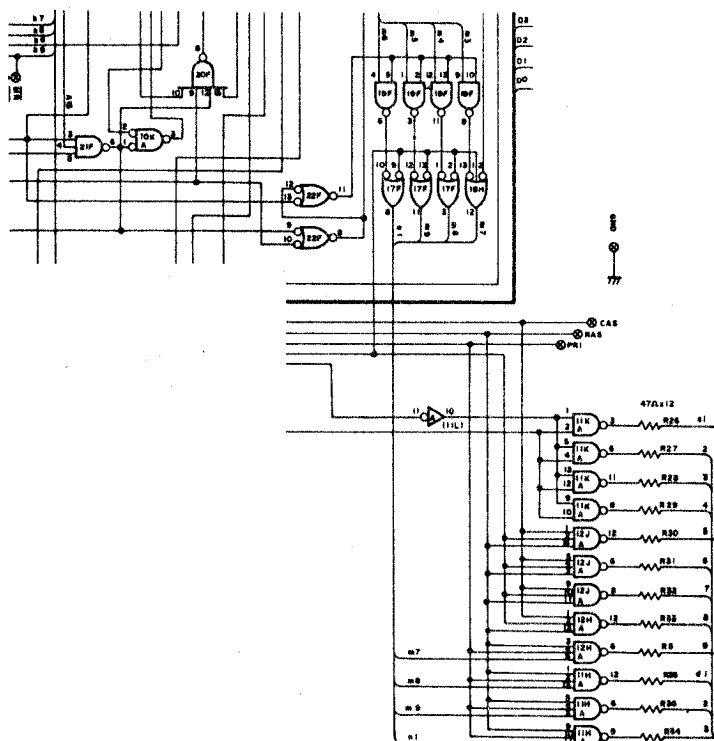
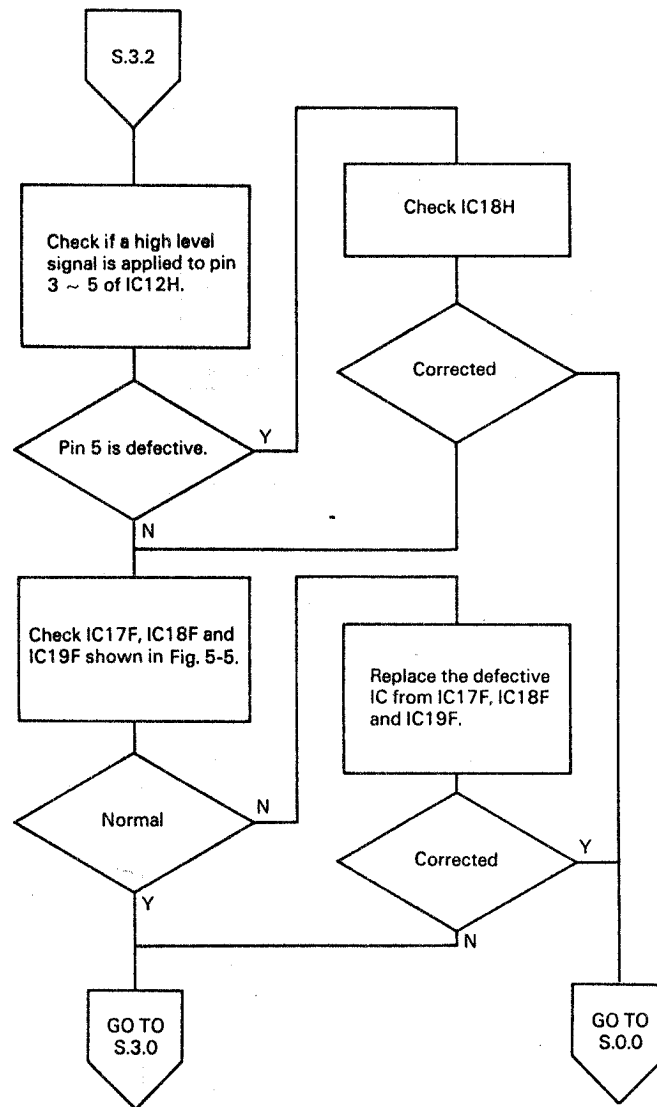


Fig. 5-5