2510 COMMUNICATIONS DISPLAY TERMINAL (CDT)

WITH CDDC801 OR CDDC803 MODULE

TROUBLESHOOTING

CONTENTS PAGE

1. GENERAL

1.01 This section provides a general troubleshooting procedure for a 2510 Communications Display Terminal equipped with either a CDDC801 or CDDC803 display controller module. Issue 1 of this section was a limited printing edition and did not receive general system-wide availability nor distribution. This reissue includes the latest troubleshooting information available at the time of this printing. This is the first standard printing available for general Bell System distribution. For similar information for the Series 2511 Communications Display Terminal, refer to Section 578-101-300.

1.02 The troubleshooting procedure provided in this section is divided into four basic categories: (1) a trouble call procedure, (2) a trouble analysis procedure, (3) options, and (4) a series of troubleshooting charts recommending corrective steps for restoring operation.

1.03 The trouble analysis procedure and troubleshooting charts are written to enable isolation of troubles to major components or circuit cards. The defective assembly can then be replaced by a known good assembly.

1.04 Do not begin random probing or substitutions of circuit cards until the operating trouble is isolated to a specific area in the terminal logic circuitry and a procedure or method is realized. The systematic approach presented in this section is intended to prevent the possibility of introducing additional troubles and to restore operation in a minimum amount of time.

1.05 After isolating a trouble to a specific circuit or component in the CDT, the troubleshooting procedure will recommend a swapping or substitution method where a known good part is used to replace the suspected circuit card assembly or electronic power supply. If the operating trouble is then eliminated, the replaced part (if it is a repairable component such as a power supply or circuit card assembly) should be returned to the nearest Teletype Corporation Product Service Center with a description of the suspected defect. Nonrepairable items such as deflection yoke windings and cathode ray tubes should be disposed of following normal Telephone Company scrap or reclamation procedures. Replacement parts can be ordered from Teletype Corporation Service Parts Division.

1.06 The troubleshooting guide in this section reflects a philosophy of replacing component assemblies or circuit card assemblies by a swapping method until a trouble is eliminated, or the difficulty is found to be more complex than this method can alleviate. This philosophy permits a "nonfamiliar" Telephone Company craftsman to troubleshoot and repair the majority of CDT troubles in a relatively short amount of time. Oscilloscope or volt-ohm metering equipment is not intended to be used by the nonfamiliar craftsman. Only spare units and circuit cards are required. For this reason, oscilloscope waveform illustrations are not provided in this section.

1.07 In the event that the swapping method does not correct the CDT trouble, the nonfamiliar craftsman should refer the set for repair by a Telephone Company craftsman or a Teletype Corporation product service repairman specifically trained for detailed CDT troubleshooting using an oscilloscope for waveform analysis and metering equipment for continuity tracing.

Prepared for American Telephone and Telegraph Company by Teletype Corporation

2. TROUBLE CALL PROCEDURE

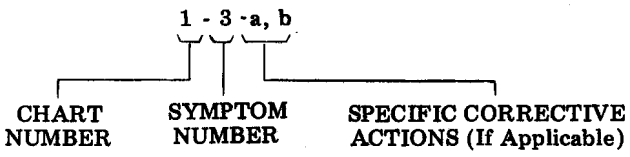
2.01 The procedure in Figure 1 illustrates the action that is normally taken when answering a trouble call.

3. TROUBLE ANALYSIS PROCEDURE

3.01 The trouble analysis procedure shown in Figure 2 should be followed when the cause of trouble in the CDT is not obvious.

3.02 The trouble analysis is broken down into nine specific areas (Figures 3 through 14). Each area has a series of steps that should be followed in order to arrive at the cause of the trouble. The area in which the trouble occurs is the only one that has to be checked.

3.03 Throughout the trouble analysis there are several references to the trouble-shooting charts in Part 4. The chart and specific symptom can be located as follows:



3.04 Follow the trouble analysis procedure for the 2510 CDT as shown in Figure 2.

CAUTION 1: DO NOT UNDER ANY CIRCUMSTANCES INSERT, REMOVE, CONNECT, OR DISCONNECT ANY ELECTRONIC COMPONENT OF THE CDT WITH THE AC POWER APPLIED.

CAUTION 2: ALWAYS WEAR SAFETY GLASSES WHEN WORKING WITH OR AROUND THE CATHODE RAY TUBE.

4. TROUBLESHOOTING CHARTS

4.01 The troubleshooting charts are provided to enhance the trouble analysis procedure in Part 3. They include symptoms that may occur along with those stated in the trouble analysis.

4.02 The following charts refer to the CDDC801 and CDDC803 modules:

Chart 1 — Power
Chart 2 — Digital Control for CRT Drive Circuits
Chart 3 — Display Errors
Chart 4 — Cursor and Cursor Movement
Chart 5 — Character Entry and Position
Chart 6 — Character and Line Delete Errors
Chart 7 — Character and Line Insert Errors
Chart 8 — Horizontal Tabulation Errors
Chart 9 — Receive Using CDDC801 Module
Chart 10 — Transmit Using CDDC801 Module
Chart 11 — Receive Using CDDC803 Module
Chart 12 — Transmit Using CDDC803 Module

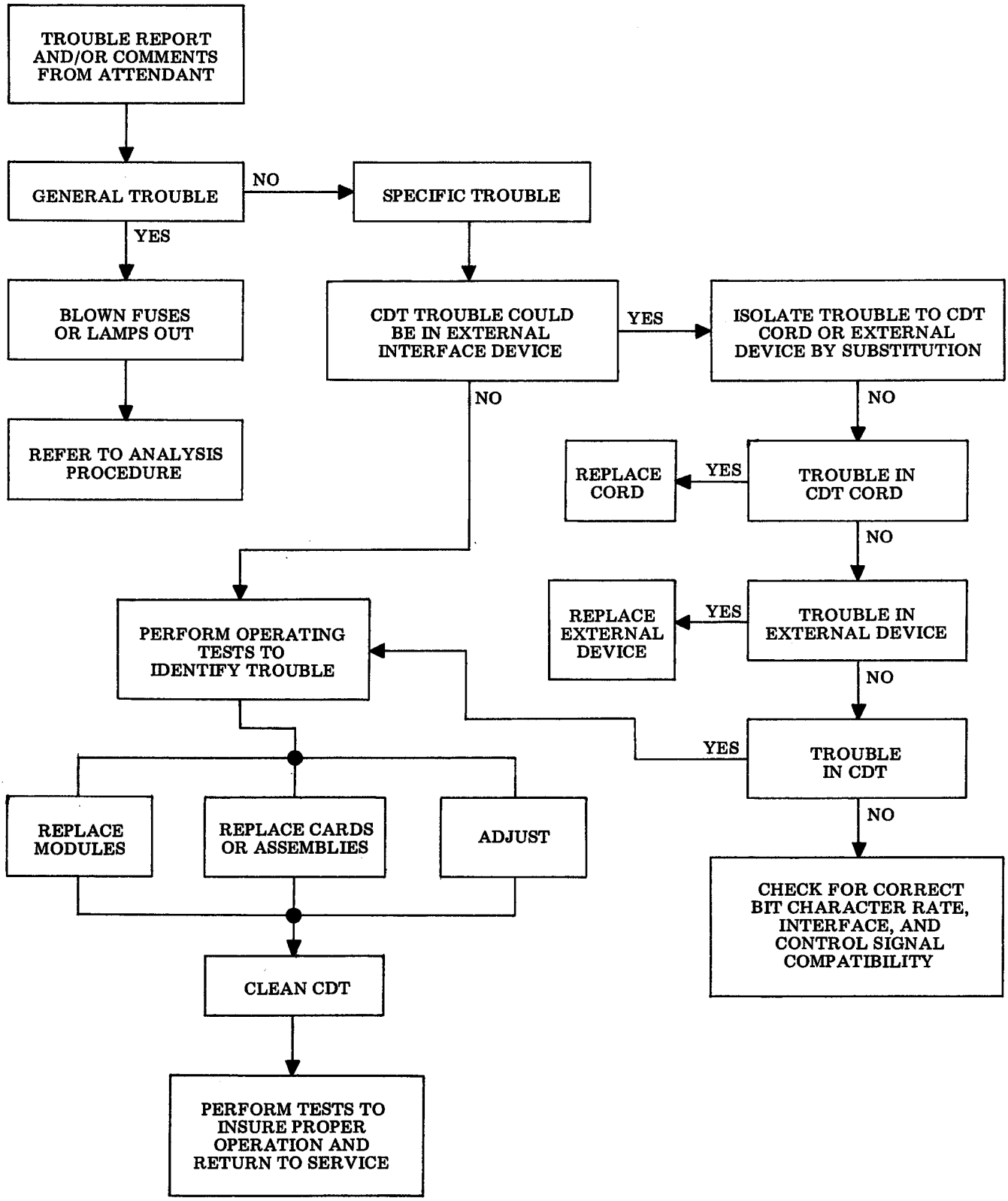


Figure 1 - Trouble Call Procedure

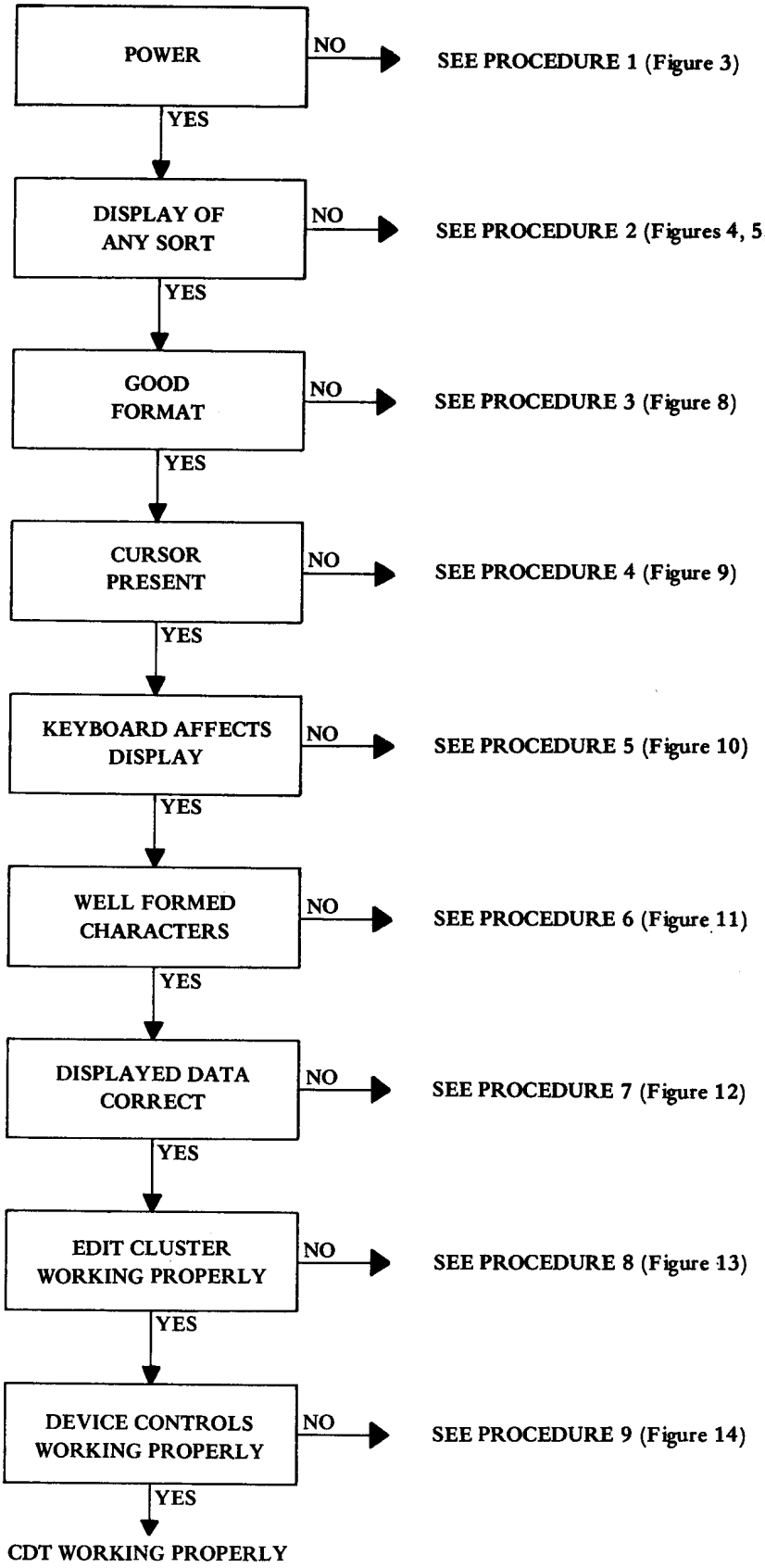


Figure 2 - Basic Trouble Analysis

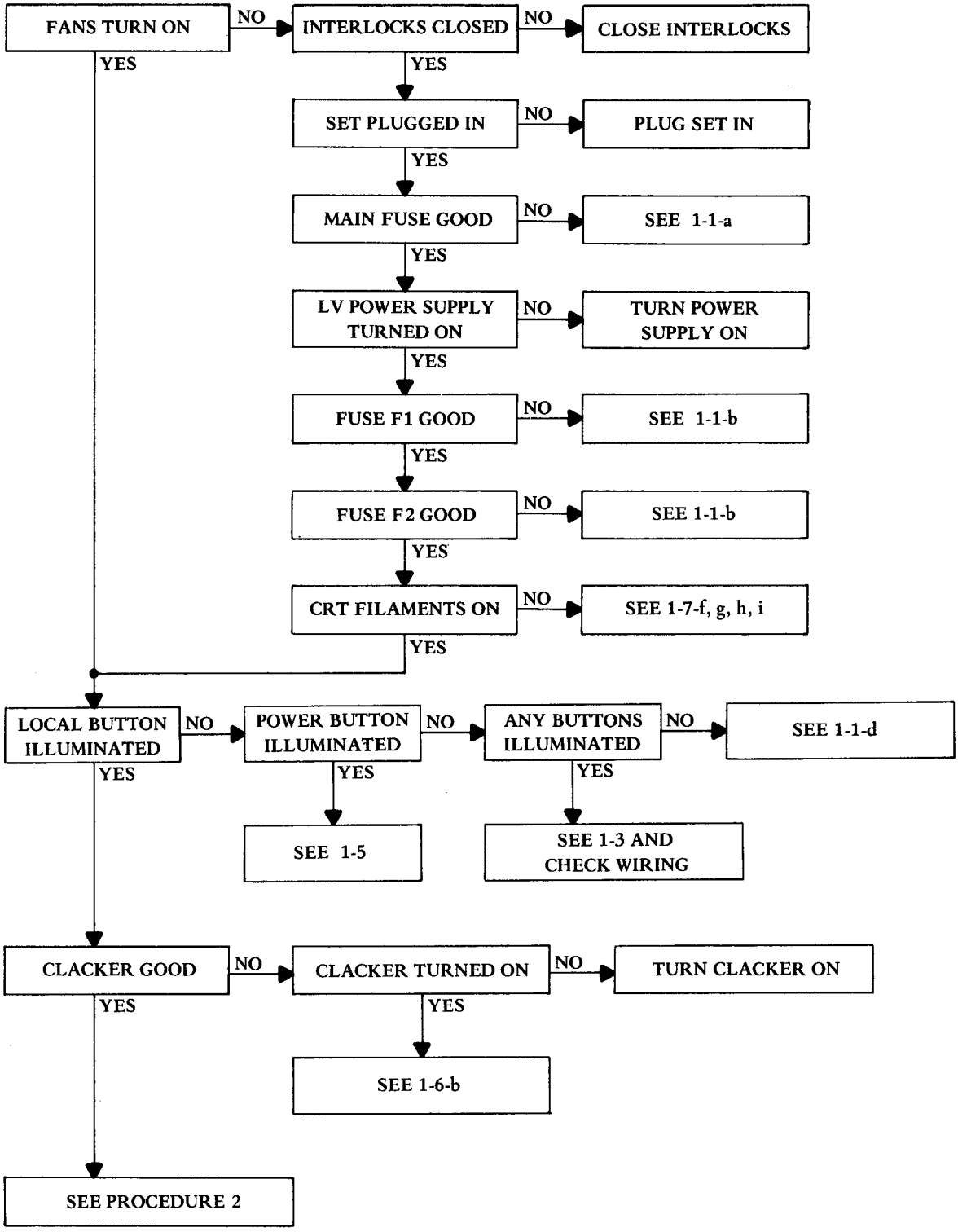


Figure 3 - Procedure 1

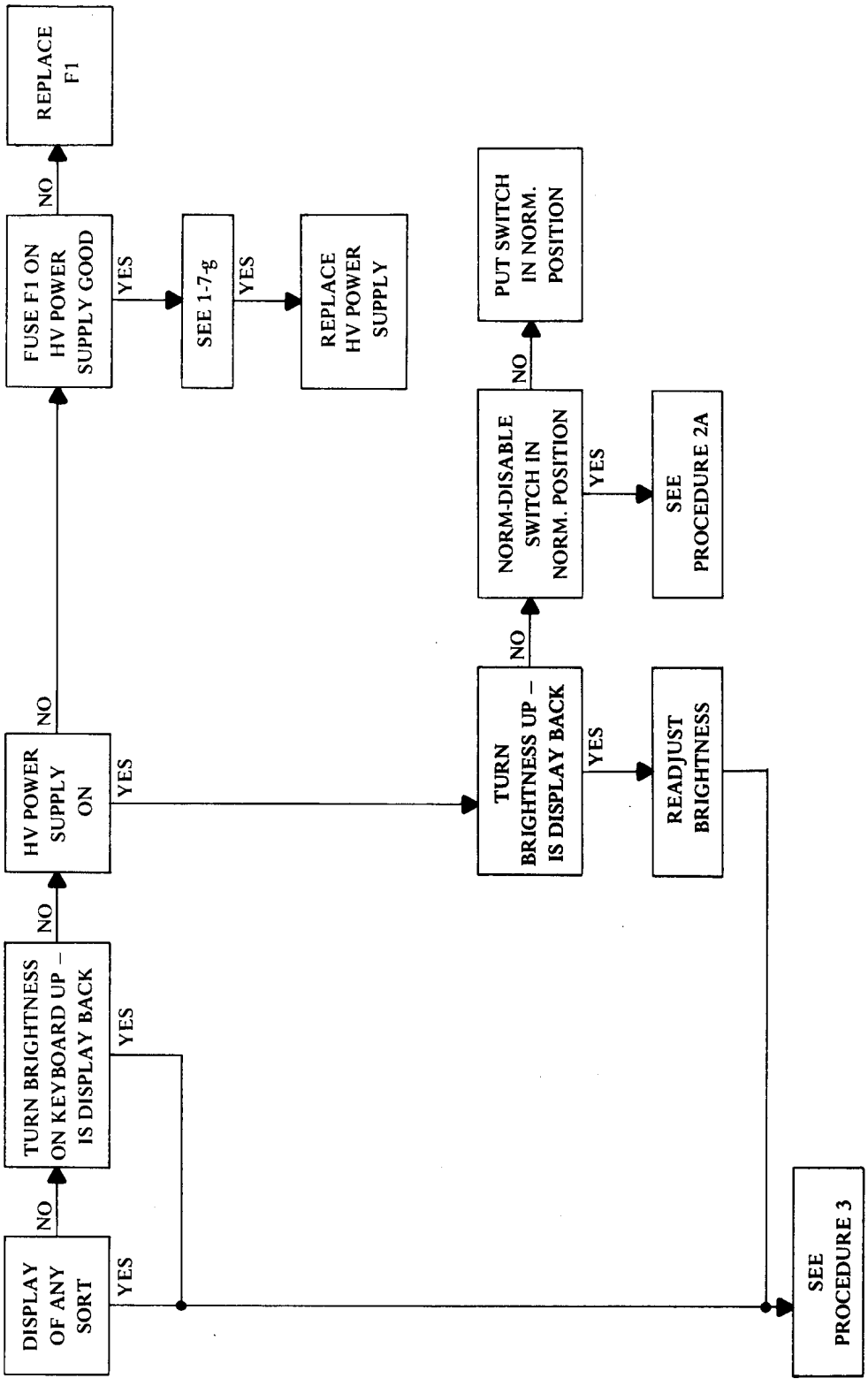
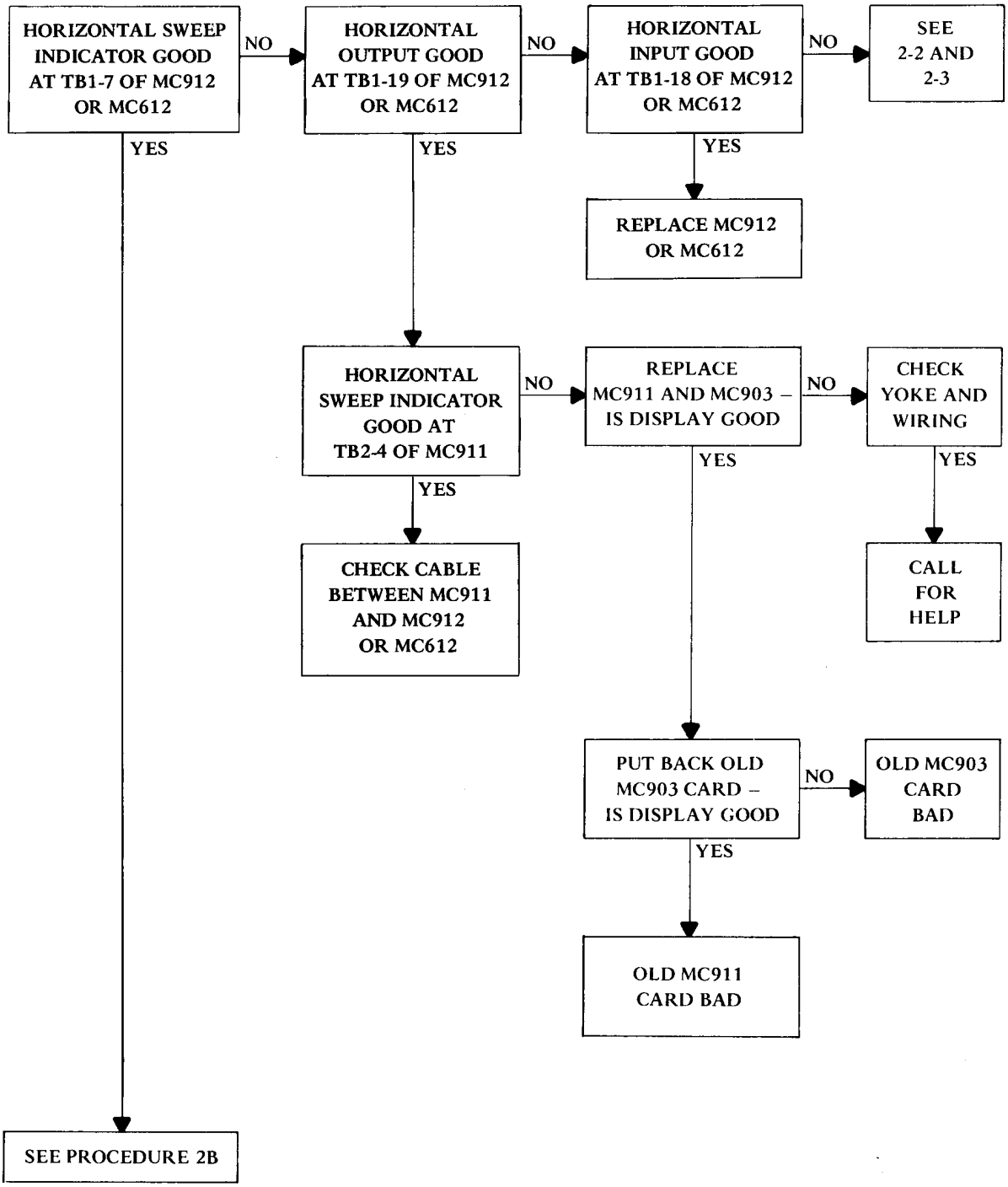


Figure 4 - Procedure 2



Note: Later factory built CDT sets are equipped with an MC612 function generator in place of the MC912 function generator.

Figure 5 - Procedure 2A

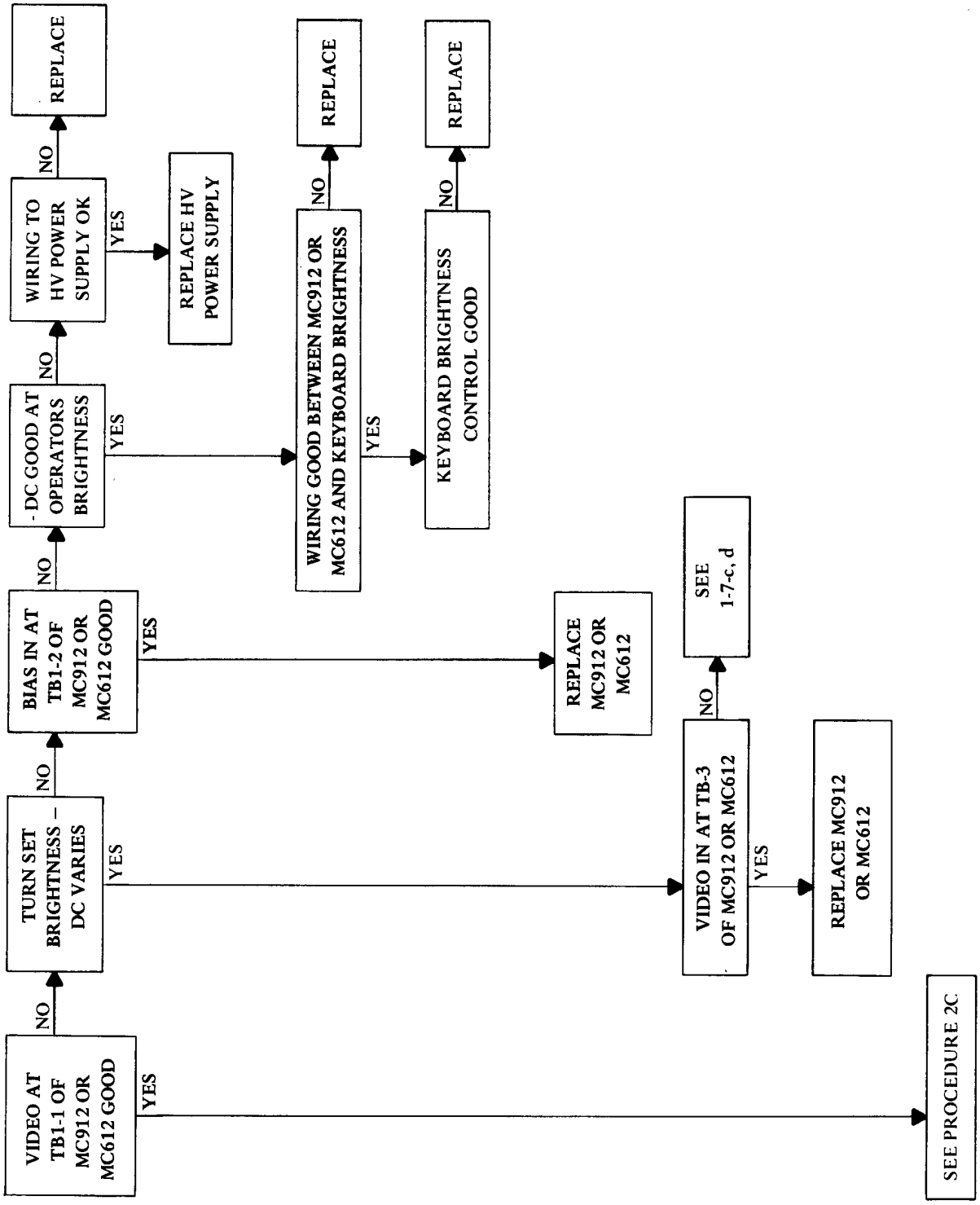


Figure 6 - Procedure 2B

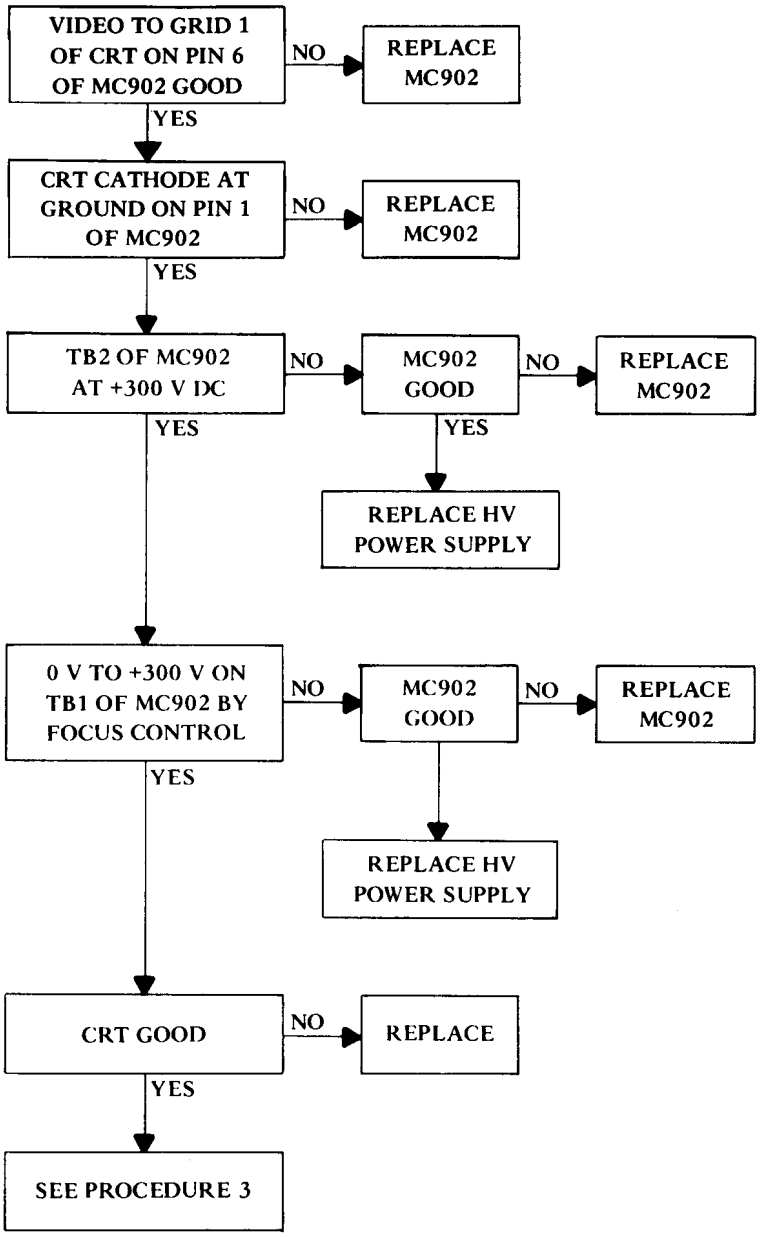


Figure 7 - Procedure 2C

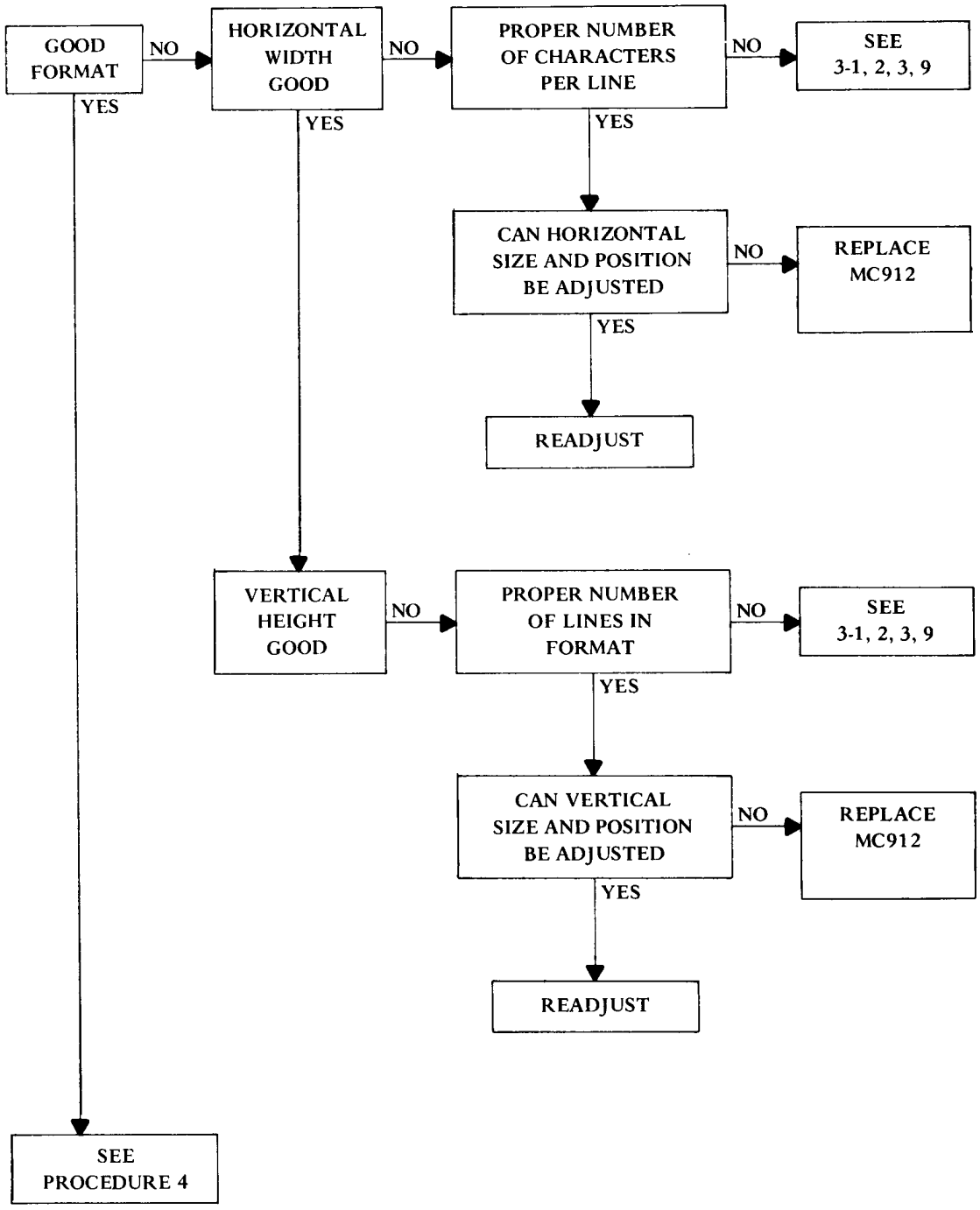


Figure 8 - Procedure 3

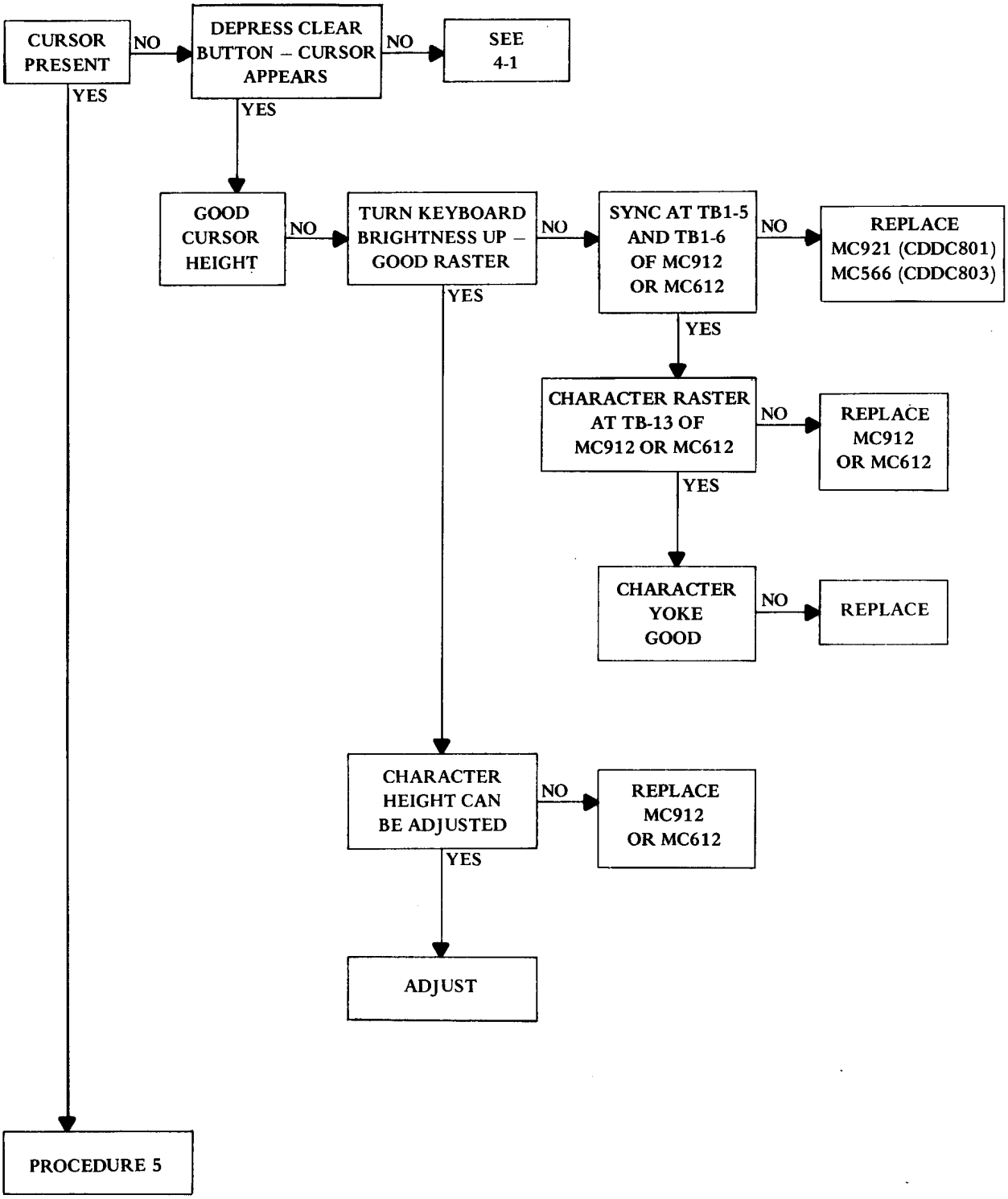


Figure 9 - Procedure 4

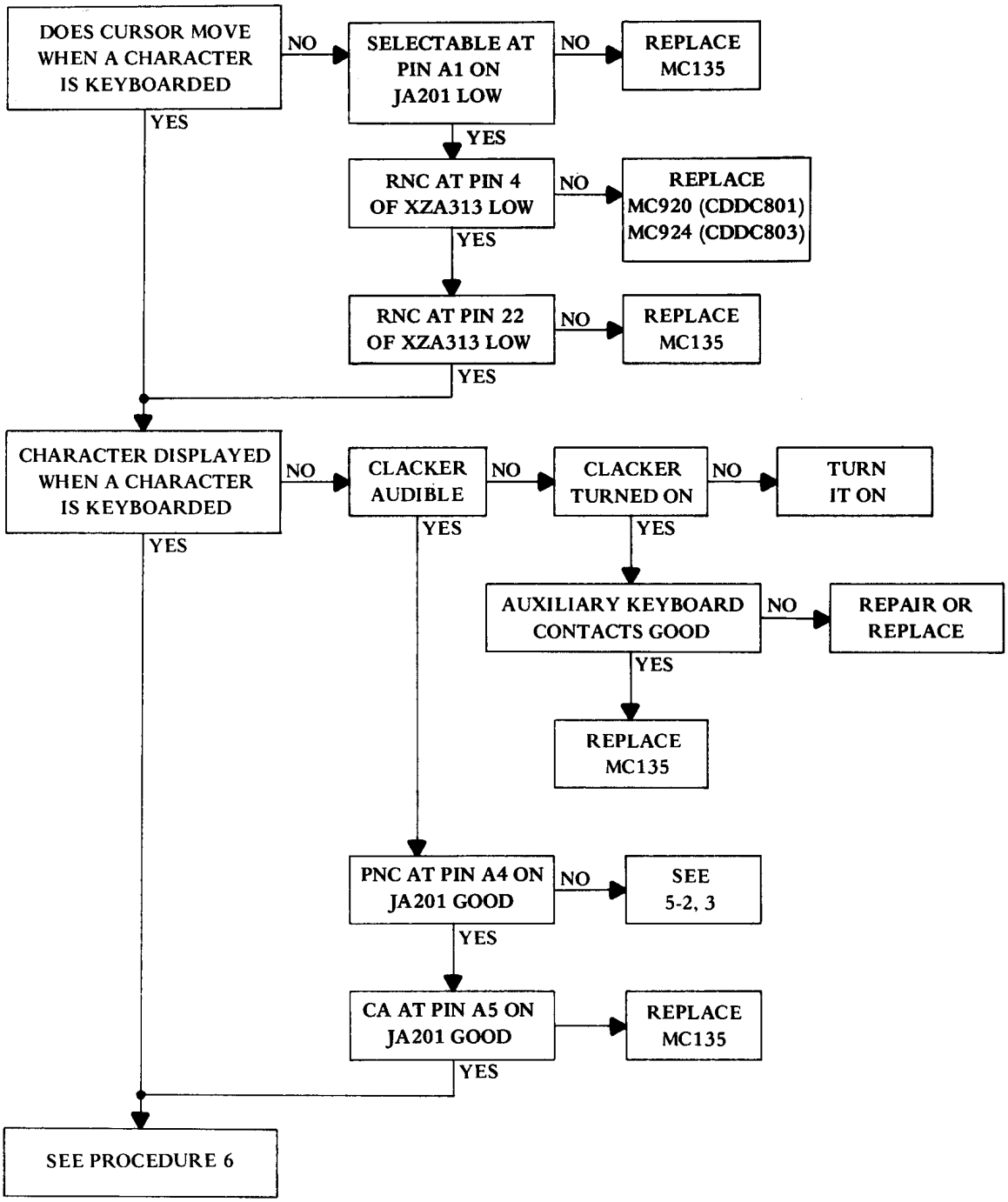


Figure 10 - Procedure 5

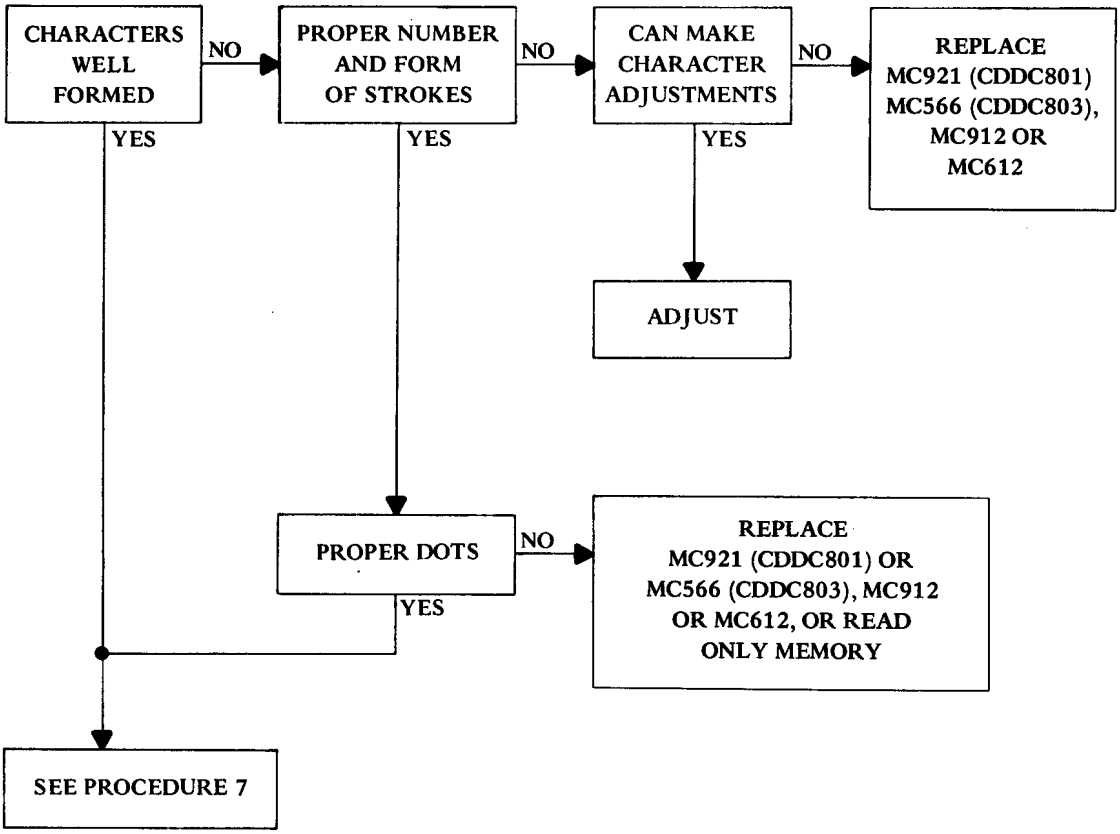
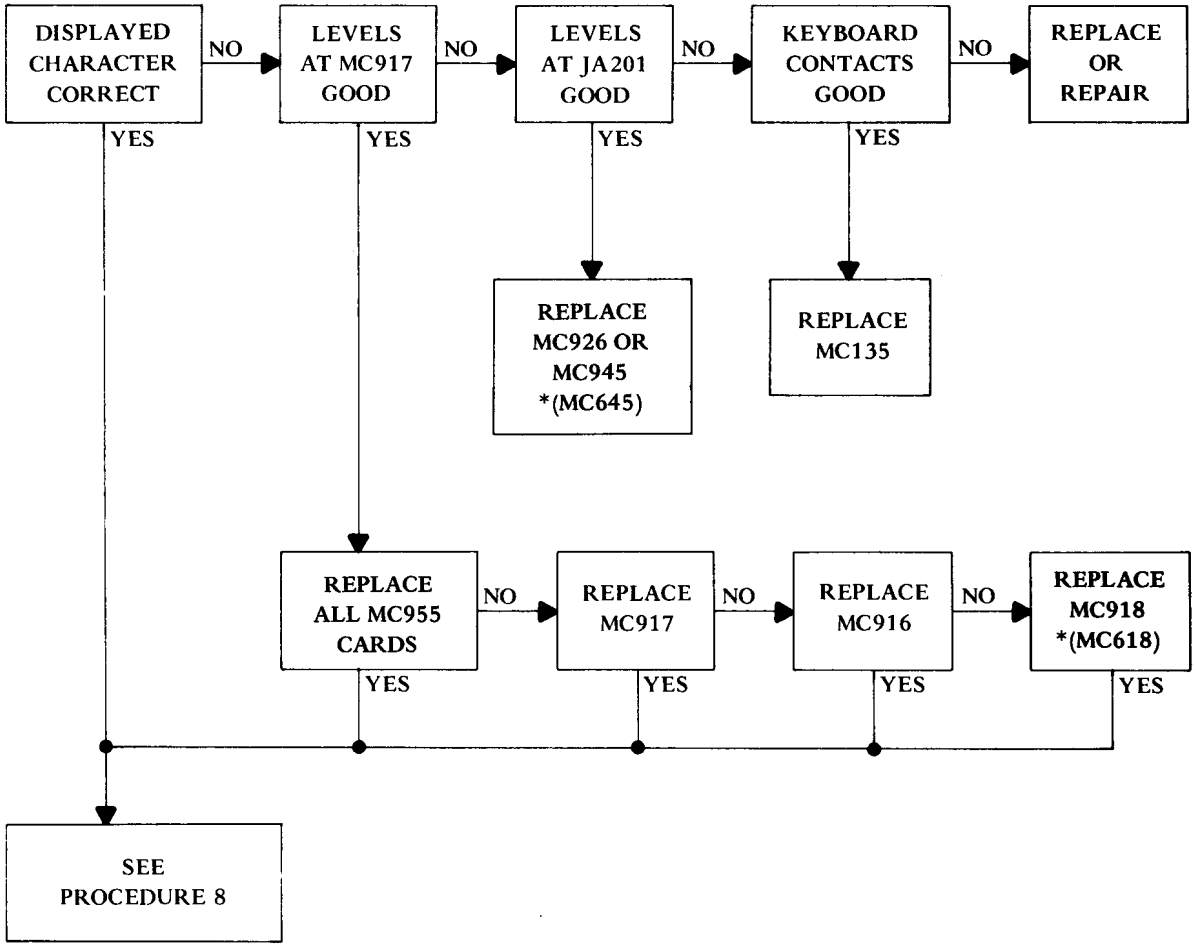


Figure 11 - Procedure 6



*Substitute circuit card; replaces original.
Refer to Section 578-100-200.

Figure 12 - Procedure 7

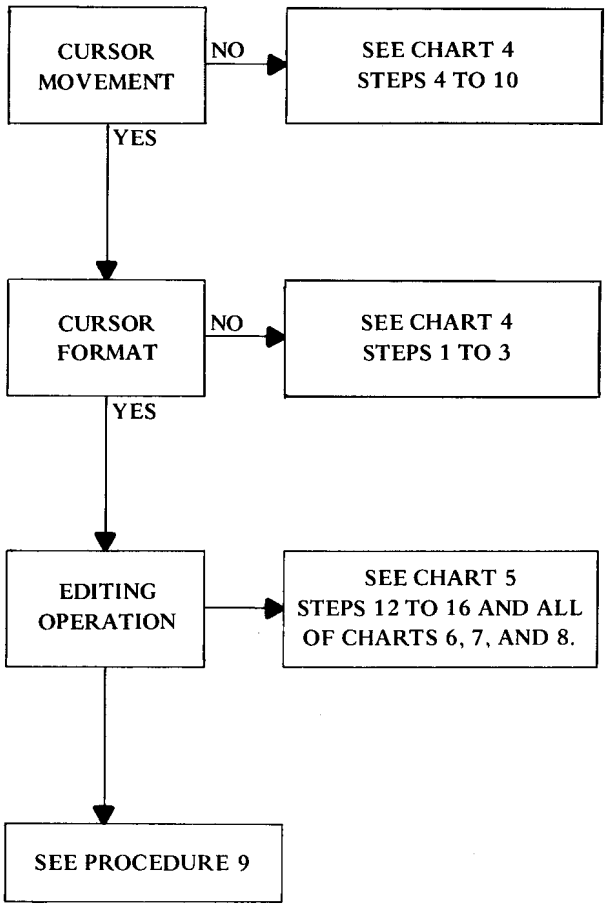


Figure 13 - Procedure 8

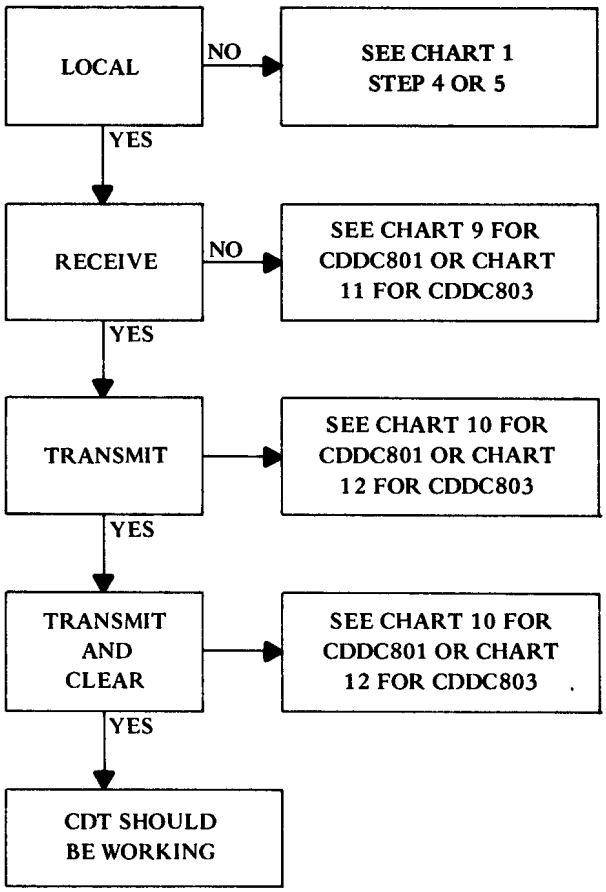


Figure 14 - Procedure 9

CHART 1

POWER

NO.	SYMPTOM	CORRECTIVE ACTION
1	When the POWER button is depressed, nothing happens.	a. Check customer ac receptacle for power. b. Replace main fuse if indicator is illuminated. c. Replace fuses F1 and F2 on the TP335879 LV Power Supply if defective. d. Replace cabinet interlock switches if defective. e. Check for +12 v dc at TA-7 of LV Power Supply. If not present, replace the supply.
2	Cabinet fans operate but device controls fail to illuminate.	a. Replace fuse F3 on the LV Power Supply if defective. b. Check for +5 v dc at pins 35 and 36 of MC909 R. F. Oscillator at XZA101. c. Check the MC905 +6 v regulator and MC907-10 v regulator cards. If good, replace the LV Power Supply.
3	POWER button fails to illuminate.	See corrective action for step 2. If symptom remains, replace lamp under POWER button.
4	LOCAL button fails to illuminate when depressed, set remains in TRANSMIT.	a. See corrective action for step 2. b. Replace fuses F4 and F5 on the LV Power Supply if defective. c. If fuses continue to blow, check the MC903 Deflection Pre-Amplifier and MC911 Deflection Amplifier circuit cards.
5	LOCAL button fails to illuminate when POWER button is illuminated or when LOCAL button is depressed.	Replace the lamp under the LOCAL button. Check other device controls in Procedure 9 of Trouble Analysis.
6	Clacker fails to operate.	a. Check that the clacker switch is in the ON position. b. Check fuses F4 and F5 on the LV Power Supply and replace if defective.

CHART 1

POWER (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
7	POWER button illuminated but no display.	a. Check for -60 v at TB1-2 on MC912 Function Generator card. b. Check for -150 v at TB1-2 on MC912 with operators brightness control fully counter-clockwise. c. Check for video information at TB1-3 on MC912 or MC612. If not present, check cards listed at end of j. d. If present, check sweep indicator input at TB1-7 of MC912. If a sawtooth waveform is present, see troubles 2 and 3 in Chart 2. e. Check that lead of SG3, closest to hole 1 (yellow wire) on MC902 Arc Suppression card, is at ground. If not, replace MC902. f. Check for 300 v at TB2 of MC902. If not present, replace MC902 or the TP335860 HV Power Supply. g. Check for +12 v dc at TB3 of MC902. If present, replace the HV Power Supply. h. Check for 6.3 v ac on TM-6 and TM-7 of the LV Power Supply. If not present, replace the LV Power Supply. i. With power off, check for continuity between pin 1 and pin 12 of the CRT. If not present, replace the CRT. j. Replace the circuit cards in order until the display appears: MC921 (MC566) Video Generator at XZA102 MC918 Stroke Counter at XZA103 MC909 R. F. Oscillator at XZA101 MC951 Miscellaneous Circuits at XZA117 MC927 Memory Format at XZA115 MC906 Memory Address Register at XZA116 MC925 Edit No. 2 at XZA311

CHART 2

DIGITAL CONTROL FOR CRT DRIVE CIRCUITS

NO.	SYMPTOM	CORRECTIVE ACTION
1	All inputs to the MC912 or MC612 function generator card at DC levels.	Replace the MC909 R. F. Oscillator at XZA101. If condition is not corrected, replace the MC921 (MC566) Video Generator card at XZA102.
2	Sync input to TB-5 and TB-6 on the MC912 or MC612 function generator is present, all other inputs at DC levels (bright bar across top or bottom of CRT).	Replace the circuit cards in order until the symptom is corrected: MC921 (MC566) Video Generator at XZA102 MC951 Miscellaneous Circuits at XZA117 MC918 Stroke Counter at XZA103 MC906 Memory Address Register at XZA116
3	Sync (TB-5) and horizontal retrace (TB-18) inputs to the MC912 or MC612 function generator present, line count inputs, TB-20 through TB-25, at DC levels.	Replace the circuit cards in order until the symptom is corrected: MC906 Memory Address Register at XZA116 MC951 Miscellaneous Circuits at XZA117 MC927 Format Memory at XZA115
4	No video input present at TB-3 of MC912 or MC612 function generator.	Replace the circuit cards in order until the symptom is corrected: MC921 (MC566) Video Generator at XZA102 MC918 Stroke Counter at XZA103 Read-Only Memory If the condition is not corrected, check the wiring from the Read-Only Memory frame into the Display Controller module.
5	No sync input to MC912 or MC612 function generator.	Replace the MC921 (MC566) Video Generator card at XZA102.

CHART 3

DISPLAY ERRORS

NO.	SYMPTOM	CORRECTIVE ACTION
1	Incorrect number of character positions per line.	Replace the circuit cards in order until the symptom is corrected: MC927 Memory Format at XZA115 MC906 Memory Address Register at XZA116

CHART 3

DISPLAY ERRORS (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
2	Incorrect number of lines per display.	See corrective action for step 1.
3	Display rolling.	Replace the circuit cards in order until the condition is corrected: MC927 Memory Format at XZA115 MC921 (MC566) Video Generator at XZA102 MC909 R. F. Oscillator at XZA101
4	Partial display.	See corrective action for step 1.
5	Display overlapped.	See corrective action for step 1.
6	No ASCII (American National Standard Code for Information Interchange) characters displayed.	Replace the MC921 (MC566) Video Generator at XZA102. If the condition is not corrected, replace the Read-Only Memory and check wiring from the Memory Frame to the Display Controller module.
7	One, two, or a group of characters missing.	Replace the Read-Only Memory.
8	Improper character formation (incorrect amount of dots).	Replace MC918 (MC618) Stroke Counter at XZA103. See corrective action for step 6.
9	Insufficient spacing between characters.	Replace the MC918 (MC618) Stroke Counter at XZA103.
10	Random dots displayed.	See corrective action for step 6.

CHART 4

CURSOR AND CURSOR MOVEMENT

NO.	SYMPTOM	CORRECTIVE ACTION
1	No cursor.	Replace the circuit cards in order until the symptom is corrected: MC921 (MC566) Video Generator at XZA102 MC922 Cursor Register at XZA112 and XZA113 MC928 Cursor Format at XZA114

CHART 4

CURSOR AND CURSOR MOVEMENT (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
2	More than one cursor per line.	Replace the circuit cards in order until the symptom is corrected: MC922 Cursor Register at XZA113 MC928 Cursor Format at XZA114
3	Cursors on more than one line.	Replace the circuit cards in order until the symptom is corrected: MC922 Cursor Register at XZA112 MC928 Cursor Format at XZA114
4	Cursor up and/or down inoperative.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC951 Miscellaneous Circuits at XZA117 MC922 Cursor Register at XZA112
5	Cursor right and/or left inoperative.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC951 Miscellaneous Circuits at XZA117 MC922 Cursor Register at XZA113
6	Cursor repeat movement inoperative.	Replace the MC923 Edit No. 1 at XZA312.
7	Erratic cursor movements.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC951 Miscellaneous Circuits at XZA117 MC922 Cursor Register at XZA112 and XZA113 MC928 Cursor Format at XZA114
8	No cursor return.	Replace MC923 Edit No. 1 at XZA312.
9	No single step cursor movements.	Replace the MC925 Edit No. 2 at XZA311.
10	No cursor home.	See corrective action for step 8.

CHART 5

CHARACTER ENTRY AND POSITION

NO.	SYMPTOM	CORRECTIVE ACTION
1	Character shifting through display.	Replace the circuit cards in order until the symptom is corrected: MC927 Memory Format at XZA115 MC916 Access Register at XZA110
2	No entry from keyboard.	Replace the circuit cards in order until the symptom is corrected: MC926 Receive/Read and Decode at XZA308 MC945 (MC645) 2-Character Buffer at XZA304 MC917 Refresh/Write and Decode at XZA104 MC918 Stroke Counter at XZA103 MC919 Transmit/Write and Decode at XZA301 MC135 Keyboard Interface located behind the keyboard
3	Random characters displayed when power is applied.	Replace the MC920 (MC564) Terminal Interface Control at XZA313.
4	Wrong characters displayed when entering from the keyboard.	Replace the circuit cards in order until the symptom is corrected: MC926 Receive/Read and Decode at XZA308 MC945 (MC645) 2-Character Buffer at XZA304 MC917 Refresh/Write and Decode at XZA104 MC918 Stroke Counter at XZA103 MC931 Refresh Shift Register at XZA105, XZA106, XZA107, and XZA109 MC135 Keyboard Interface located behind the keyboard Read-Only Memory If the condition is not corrected, check the wiring from the Memory Frame to the Display Controller module.

CHART 5

CHARACTER ENTRY AND POSITION (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
5	Multiple characters appear with a single depression of a keytop.	Replace the circuit cards in order until the symptom is corrected: MC945 (MC645) 2 Character Buffer at XZA304 MC919 Transmit/Write and Decode at XZA301 MC135 Keyboard Interface located behind the keyboard
6	Character changing in refresh.	Replace the circuit cards in order until the symptom is corrected: MC931 Refresh Shift Register at XZA105, XZA106, XZA107, or XZA109 depending upon the level affected MC916 Access Register at XZA110
7	Cursor does not step to left when depressing the BACK SPACE key.	Replace the circuit cards in order until the symptom is corrected: MC951 Miscellaneous Circuits at XZA117 MC919 Transmit/Write and Decode at XZA301
8	Depressing the NEW LINE key does position the cursor to the first character position of the next line.	Replace the circuit cards in order until the symptom is corrected: MC928 Cursor Format at XZA114 MC917 Refresh/Write and Decode at XZA104
9	With VIEW CONTRLS (Controls) button not illuminated, control characters are displayed.	Replace the circuit cards in order until the symptom is corrected: MC925 Edit No. 2 at XZA311 MC921 (MC566) Video Generator at XZA102
10	With VIEW CONTRLS button illuminated, control characters are not displayed.	See the corrective action for step 9.
11	ESCAPE and 3 sequence does not activate italics (applicable only on very early CDTs having a MC912 function generator and early design deflection yoke).	Replace the circuit cards in order until the symptom is corrected: MC917 Refresh/Write and Decode at XZA104 MC916 Access Register at XZA110 MC951 Miscellaneous Circuits at XZA117

CHART 5

CHARACTER ENTRY AND POSITION (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
12	When CLEAR button is depressed, characters remain on display.	Replace circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC917 Refresh/Write and Decode at XZA104 MC918 Stroke Counter at XZA103 MC925 Edit No. 2 at XZA311
13	When the CLEAR button is depressed, all characters change to something other than nulls.	Replace the circuit cards in order until the symptom is corrected: MC917 Refresh/Write and Decode at XZA104 MC931 Refresh Shift Register at either XZA105, XZA106, XZA107, or XZA109 depending upon the level affected
14	LINE ERASE function does not operate.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC918 Stroke Counter at XZA103 MC925 Edit No. 2 at XZA311
15	Depressing the LINE ERASE button performs a CLEAR function.	Replace the MC923 Edit No. 1 at XZA312.
16	Entire edit cluster is inoperative.	Replace the MC925 Edit No. 2 at XZA311.
17	Underline is not displayed when the appropriate key is depressed.	Replace the circuit cards in order until the symptom is corrected: MC917 Refresh/Write and Decode at XZA104 MC931 Refresh Shift Register at XZA109 MC952 Tab View at XZA309 MC921 (MC566) Video Generator at XZA102

CHART 6

CHARACTER AND LINE DELETE ERRORS

NO.	SYMPTOM	CORRECTIVE ACTION
1	CHAR (Character) DELETE function is inoperative.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC916 Access Register at XZA110 MC918 Stroke Counter at XZA103 MC925 Edit No. 2 at XZA311
2	No single step CHAR DELETE.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC916 Access Register at XZA110
3	CHAR DELETE function will not repeat.	Replace the MC923 Edit No. 1 at XZA312.
4	The CHAR DELETE function operates from one tab field into another.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC925 Edit No. 2 at XZA311 MC935 (MC565) Horizontal Tab at XZA108
5	LINE DELETE function is inoperative.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC916 Access Register at XZA110 MC918 Stroke Counter at XZA103
6	LINE DELETE function does not reset after one line.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC925 Edit No. 2 at XZA311
7	LINE DELETE function operates in first 6 lines of USO (Universal Service Order) format, first 4 lines of the 46 line format, or first line of the 39 line format.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC928 Cursor Format at XZA114

CHART 7

CHARACTER AND LINE INSERT ERRORS

NO.	SYMPTOM	CORRECTIVE ACTION
1	CHAR (Character) INSERT function is inoperative.	Replace the circuit cards in order until the symptom is corrected: MC925 Edit No. 2 at XZA311 MC923 Edit No. 1 at XZA312 MC916 Access Register at XZA110 MC918 Stroke Counter at XZA103
2	No single step CHAR INSERT.	Replace the circuit cards in order until the symptom is corrected: MC923 Edit No. 1 at XZA312 MC925 Edit No. 2 at XZA311
3	CHAR INSERT function will not repeat.	Replace the circuit cards in order until the symptom is corrected: MC925 Edit No. 2 at XZA311 MC923 Edit No. 1 at XZA312
4	CHAR INSERT operates from one tab field into another.	Replace the circuit cards in order until the symptom is corrected: MC925 Edit No. 2 at XZA311 MC935 (MC565) Horizontal Tab at XZA108
5	CHAR INSERT operative, even though the last character in the line or tab field is other than a null or space.	Replace the circuit cards in order until the symptom is corrected: MC917 Refresh/Write and Decode at XZA104 MC925 Edit No. 2 at XZA311
6	LINE INSERT function is inoperative.	Replace the circuit cards in order until the symptom is corrected: MC925 Edit No. 2 at XZA311 MC916 Access Register at XZA110 MC918 Stroke Counter at XZA103
7	LINE INSERT function does not reset after one line.	Replace the circuit cards in order until the symptom is corrected: MC925 Edit No. 2 at XZA311 MC928 Cursor Format at XZA114

CHART 7

CHARACTER AND LINE INSERT ERRORS (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
8	LINE INSERT operates in the first six lines of the USO format, first 4 lines of 46 line format, and first line of 39 line format.	Replace circuit cards in order until the symptom is corrected: MC928 Cursor Format at XZA114 MC925 Edit No. 2 at XZA311
9	LINE INSERT operative even though the last line of the display contains characters other than nulls or spaces.	See corrective action for step 5.

CHART 8

HORIZONTAL TABULATION ERRORS

NO.	SYMPTOM	CORRECTIVE ACTION
1	TAB is inoperative.	Replace the MC935 (MC565) Horizontal Tabulation card at XZA108.
2	TAB VIEW is inoperative.	Replace circuit cards in order until symptom is corrected: MC935 (MC565) Horizontal Tabulation at XZA108 MC952 Tab View at XZA309
3	TAB CLEAR is inoperative.	See corrective action for step 1.
4	Generating a TAB from the keyboard does not advance cursor to a tab mark or the end of a line.	Replace circuit cards in order until symptom is corrected: MC917 Refresh/Write and Decode at XZA104 MC935 (MC565) Horizontal Tabulation at XZA108
5	Generating a TAB from the keyboard causes the cursor to advance to the end of a line and bypass a Tab Mark.	Replace the circuit cards in order until the symptom is corrected: MC935 (MC565) Horizontal Tabulation at XZA108 MC922 Cursor Register at XZA113 MC901 Cursor Format at XZA114
6	Generating a TAB from the keyboard causes the cursor to stop at random before or after a Tab Mark.	See corrective action for step 5.

CHART 8

HORIZONTAL TABULATION ERRORS (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
7	Generating a TAB from the keyboard and using the Write On Space option, spaces are not written to the Tab Mark.	Replace the circuit cards in order until the symptom is corrected: MC935 (MC565) Horizontal Tabulation at XZA108 MC917 Refresh/Write and Decode at XZA104
8	Using the Write Space on Tab option, when a Tab is received, spaces are written into the entire memory.	See corrective action for step 7.

CHART 9

RECEIVE USING CDDC801 MODULE

NO.	SYMPTOM	CORRECTIVE ACTION
1	When power is applied, the CDT is not in Local.	Replace the MC920 (MC564) Terminal Interface Control card at XZA313.
2	The REC (Receive) button does not illuminate when it is depressed.	See corrective action for step 1.
3	When the REC button is depressed it becomes illuminated, but when released CDT goes into Local.	See corrective action for step 1.
4	REC button is illuminated but display does not go blank.	Replace the circuit cards in order until the symptom is corrected: MC920 (MC564) Terminal Interface Control at XZA313 MC918 Stroke Counter at XZA103 MC969 PTI Interface at XZA316
5	REC button is illuminated, display goes blank, but no data is received.	Replace the circuit cards in order until the symptom is corrected: MC920 Terminal Interface Control at XZA313 MC918 Stroke Counter at XZA103 MC916 Access Register at XZA110 MC919 Transmit/Write and Decode at XZA301 MC926 Receive/Read and Decode at XZA308 MC969 PTI Interface at XZA316

CHART 9

RECEIVE USING CDDC801 MODULE (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
5 (contd)		If the symptom is still not corrected, check the transmitting device connected to JA303.
6	Receive activated but data garbled.	Replace the circuit cards in order until the symptom is corrected: MC945 2-Character Buffer at XZA304 MC919 Transmit/Write and Decode at XZA301 MC916 Access Register at XZA110 MC969 PTI Interface at XZA316 If the symptom is still not corrected, check the transmitting device connected to JA303.
7	Character reject inoperative.	Replace the circuit cards in order until the symptom is corrected: MC926 Receive/Read and Decode at XZA308 MC920 Terminal Interface Control at XZA313
8	CDT does not go into Local upon receiving proper End-of-Transmission character.	See corrective action for step 7.
9	CDT goes into Local on a character other than End-of-Transmission.	Replace the MC926 Receive/Read and Decode Card at XZA308.

CHART 10

TRANSMIT USING CDDC801 MODULE

NO.	SYMPTOM	CORRECTIVE ACTION
1	The TRANS (Transmit) button does not illuminate when it is depressed.	Replace the MC920 Terminal Interface Control card at XZA313.
2	When the TRANS button is depressed it becomes illuminated, but when released the CDT goes into Local.	See corrective action for step 1.

CHART 10

TRANSMIT USING CDDC801 MODULE (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
3	TRANS button illuminated, display goes blank, but no data is transmitted.	Replace the circuit cards in order until the symptom is corrected: MC920 Terminal Interface Control at XZA313 MC916 Access Register at XZA110 MC919 Transmit/Write and Decode at XZA301 MC976 PTI Driver at XZA315 If the symptom is still not corrected, check the receiving device connected to JA301.
4	Transmitted data is garbled.	Replace the circuit cards in order until the symptom is corrected: MC945 (MC645) 2-Character Buffer at XZA304 MC920 Terminal Interface Control at XZA313 MC926 Receive/Read and Decode at XZA308 MC919 Transmit/Write and Decode at XZA301 MC976 PTI Driver at XZA315 If the symptom is still not corrected, check the receiving device connected to JA301.
5	CDT does not go into Local after transmitting the proper End-of-Transmission character.	Replace the circuit cards in order until the symptom is corrected: MC919 Transmit/Write and Decode at XZA301 MC920 Terminal Interface Control at XZA313
6	CDT goes into Local after transmitting a character other than End-of-Transmission.	Replace the MC919 Transmit/Write and Decode card at XZA301.
7	When returning to Local after transmitting, displayed information is garbled.	Replace the circuit cards in order until the symptom is corrected: MC918 Stroke Counter at XZA103 MC916 Access Register at XZA110 MC931 Refresh Shift Register at either XZA105, XZA106, XZA107, or XZA109

CHART 10

TRANSMIT USING CDDC801 MODULE (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
8	With the Home on Transmit option used, HOME is inoperative.	Replace the MC920 Terminal Interface Control card at XZA313.
9	When the TRANS AND CLEAR (Transmit and Clear) button is depressed with the TRANS button, the TRANS AND CLEAR button does not illuminate.	See corrective action for step 8.
10	After the proper End-of-Transmission character has been sent, the clear after transmit function is inoperative.	Replace the circuit cards in order until the symptom is corrected: MC920 Terminal Interface Control at XZA313 MC951 Miscellaneous Circuits at XZA117

CHART 11

RECEIVE USING CDDC803 MODULE

NO.	SYMPTOM	CORRECTIVE ACTION
1	When power is applied, the CDT is not in Local.	Replace the MC564 Terminal Interface Control card at XZA313.
2	The REC (Receive) button does not illuminate when it is depressed.	Replace the circuit cards in order until the symptom is corrected: MC564 Terminal Interface Control at XZA313 MC966 External Mode Control at XZA314 MC924 Mode Sequence Control at XZA305
3	When the REC button is depressed it becomes illuminated, but when released the CDT goes into Local.	See corrective action in step 2.
4	REC button is illuminated, but the display does not go blank.	Replace the circuit cards in order until the symptom is corrected: MC564 Terminal Interface Control at XZA313 MC918 Stroke Counter at XZA103 MC969 PTI Terminator at XZA316 MC966 External Mode Control at XZA314 MC924 Mode Sequence Control at XZA305

CHART 11

RECEIVE USING CDDC803 MODULE (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
5	REC button is illuminated, display goes blank, but no data is received.	Replace the circuit cards in order until the symptom is corrected: MC966 External Mode Control at XZA314 MC924 Mode Sequence Control at XZA305 MC564 Terminal Interface Control at XZA313 MC918 Stroke Counter at XZA103 MC916 Access Register at XZA110 MC919 Transmit/Write and Decode at XZA301 MC926 Receive/Read and Decode at XZA308 MC969 PTI Terminator at XZA316 If the symptom is still not corrected, check the transmitting device connected to JA303.
6	Receive activated but data is garbled.	Replace the circuit cards in order until the symptom is corrected: MC645 2-Character Buffer at XZA304 MC919 Transmit/Write and Decode at XZA301 MC916 Access Register at XZA110 MC969 PTI Terminator at XZA316 If the symptom is still not corrected, check the transmitting device connected to JA303.
7	Character reject does not operate.	Replace the circuit cards in order until the symptom is corrected: MC926 Receive/Read and Decode at XZA308 MC564 Terminal Interface Control at XZA313
8	CDT does not go into Local upon receiving proper End-of-Transmission character.	Replace the circuit cards in order until the symptom is corrected: MC926 Receive/Read and Decode at XZA308 MC564 Terminal Interface Control at XZA313 MC966 External Mode Control at XZA314

CHART 11

RECEIVE USING CDDC803 MODULE (Continued)

NO.	SYMTPOM	CORRECTIVE ACTION
9	CDT goes into Local on a character other than End-of-Transmission.	Replace the circuit cards in order until the symptom is corrected: MC924 Mode Sequence Control at XZA305 MC926 Receive/Read and Decode at XZA308
10	CDT does not respond to On-Line Edit Escape sequences.	Replace the circuit cards in order until the symptom is corrected: MC567 On-Line Decoder at XZA303 MC568 On-Line Edit at XZA310

CHART 12

TRANSMIT USING CDDC803 MODULE

NO.	SYMPTOM	CORRECTIVE ACTION
1	The TRANS (Transmit) button does not illuminate when it is depressed.	Replace the circuit cards in order until the symptom is corrected: MC564 Terminal Interface Control at XZA313 MC924 Mode Sequence Control at XZA305
2	When the TRANS button is depressed it becomes illuminated, but when released the CDT goes into Local.	Replace the MC564 Terminal Interface Control card at XZA313.
3	TRANS button illuminated, display goes blank, but no data is transmitted.	Replace the circuit cards in order until the symptom is corrected: MC564 Terminal Interface Control at XZA313 MC916 Access Register at XZA110 MC919 Transmit/Write and Decode at XZA301 MC976 PTI Driver at XZA315 If the symptom is still not corrected, check the receiving device connected to JA301.

CHART 12

TRANSMIT USING CDDC803 MODULE (Continued)

NO.	SYMPTOM	CORRECTIVE ACTION
4	Transmitted data is garbled.	Replace the circuit cards in order until the symptom is corrected: MC645 2-Character Buffer at XZA304 MC564 Terminal Interface Control at XZA313 MC926 Receive/Read and Decode at XZA308 MC919 Transmit/Write and Decode at XZA301 MC976 PTI Driver at XZA315 If the symptom is still not corrected, check the receiving device connected to JA301.
5	CDT does not go into Receive after transmitting the proper End-of-Transmission character.	Replace the circuit cards in order until the symptom is corrected: MC919 Transmit/Write and Decode at XZA301 MC564 Terminal Interface Control at XZA313
6	CDT goes into the Receive after transmitting a character other than End-of-Transmission.	Replace the MC919 Transmit/Write and Decode card at XZA301.
7	With the Home on Transmit option used, HOME is inoperative.	Replace the MC564 Terminal Interface Control card at XZA313.
8	Error rerun inoperative.	Replace the circuit cards in order until the symptom is corrected: MC564 Terminal Interface Control at XZA313 MC924 Mode Sequence Control at XZA305 MC966 External Mode Control at XZA314