FOREWORD

Notice

The information in this guide is subject to change without notice.

COMPAQ COMPUTER CORPORATION SHALL NOT BE LIABLE FOR TECHNICAL OR EDITORIAL ERRORS OR OMISSIONS CONTAINED HEREIN; NOR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE FURNISHING, PERFORMANCE, OR USE OF THIS MATERIAL.

MAINTENANCE AND SERVICE GUIDE
COMPAQ SLT 386s/20 PERSONAL COMPUTER,
COMPAQ SLT/286 PERSONAL COMPUTER
First Edition (June 1990)
Text PN 118385-001

Preface

THE MAINTENANCE AND SERVICE GUIDE COMPAQ SLT 386s/20 PERSONAL COMPUTER, COMPAQ SLT/286 PERSONAL COMPUTER is a troubleshooting guide. It can be used as a reference when servicing the COMPAQ SLT 386s/20, Model 60 and Model 120, or the COMPAQ SLT/286, Model 20 and Model 40. Compaq Computer Corporation reserves the right to make changes to the computers without notice. The diagrams and procedures in this document apply to these computers. Diagnostic tests are designed to test only these products.

Interpreting Symbols

WARNING: TEXT SET OFF IN THIS MANNER INDICATES THAT FAILURE TO FOLLOW DIRECTIONS IN THE WARNING COULD RESULT IN BODILY HARM OR LOSS OF LIFE.

CAUTION: TEXT SET OFF IN THIS MANNER INDICATES THAT FAILURE TO FOLLOW DIRECTIONS COULD RESULT IN DAMAGE TO EQUIPMENT OR LOSS OF DATA.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.

NOTE: Text set off in this manner presents commentary sidelights, or interesting points of information.

Locating Additional Information

The following documentation is available for the COMPAQ SLT 386s/20 and COMPAQ SLT/286 Personal Computers:

- OPERATIONS GUIDE
- TECHNICAL REFERENCE GUIDE
- MAINTENANCE AND SERVICE GUIDE - OPTIONS AND PERIPHERALS
- MAINTENANCE AND SERVICE GUIDE - SUPPORT SOFTWARE
- MS-DOS REFERENCE GUIDE
- MS OS/2 COMMAND REFERENCE AND USER'S GUIDE
- BASIC REFERENCE GUIDE
- COMPAQ SERVICE QUICK REFERENCE GUIDE
- COMPAQ Service Advisories and Bulletins
- HOW TO DO BUSINESS WITH COMPAQ CUSTOMER SERVICE

Technician Notes

CAUTION: ONLY AUTHORIZED TECHNICIANS TRAINED BY COMPAQ SHOULD ATTEMPT TO REPAIR THIS EQUIPMENT. ALL TROUBLESHOOTING AND REPAIR PROCEDURES ARE DETAILED TO ALLOW ONLY SUBASSEMBLY/MODULE LEVEL REPAIR. BECAUSE OF THE COMPLEXITY OF THE INDIVIDUAL BOARDS AND SUBASSEMBLIES, NO ONE SHOULD ATTEMPT TO MAKE REPAIRS AT THE COMPONENT LEVEL OR TO MAKE MODIFICATIONS TO ANY PRINTED WIRING BOARD. IMPROPER REPAIRS CAN CREATE A SAFETY HAZARD. ANY INDICATIONS OF COMPONENT REPLACEMENT OR PRINTED WIRING BOARD MODIFICATIONS MAY VOID ANY WARRANTY OR EXCHANGE ALLOWANCES.

Chapter 1 - Specifications

INTRODUCTION

This chapter provides physical, environmental, and performance specifications for the following COMPAQ SLT 386s/20 Personal Computer and the COMPAQ SLT/286 Personal Computer subsystems:

- System Unit
- Laptop Enhanced Keyboard
- VGA Backlit Display
- 3 1/2 Inch 1.44 Megabyte Diskette Drive
- Fixed Disk Drives
- Internal Power Supply
- AC Adapter
- Battery Pack

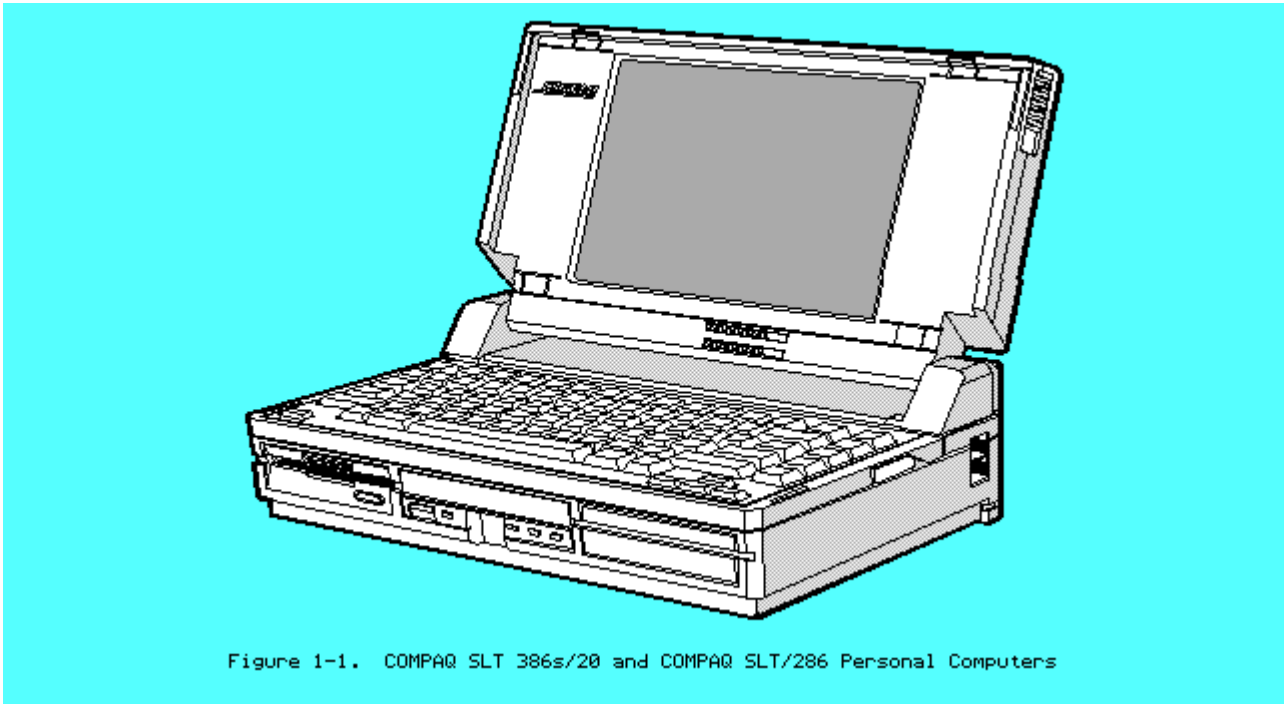


Figure 1-1. COMPAQ SLT 386s/20 and COMPAQ SLT/286 Personal Computers

Chapter 1.1 SYSTEM UNIT

Dimensions:		
Height	4.15 in.	10.54 cm
Depth	8.50 in.	29.59 cm
Width	13.50 in.	34.29 cm
Weight:		
COMPAQ SLT 386s/20 Personal Computer:		

Model 120	14.0 lb	6.30 kg
Model 60	14.0 lb	6.30 kg
COMPAQ SLT/286 Personal Computer:		
Model 40	14.0 lb	6.30 kg
Model 60	14.0 lb	6.30 kg
Standalone (Battery) Power Requirements:		
Nominal Operating Voltage	12 VDC	12 VDC
Average Power	8.0W	8.0W
Peak Power	11.0W	11.0W
Environmental Requirements:		
Temperature Range:		
Operating	50oF to 95oF	10oC to 35oC
Nonoperating	-4oF to 140oF	-20oC to 60oC
Relative Humidity (noncondensing):		
Operating	10% to 90%	10% to 90%
Nonoperating	5% to 95%	5% to 95%
Shock and Vibrations:		
Shock	40 g, 11 ms, half sine (nonoperating)	
Vibration	3 g, 5 - 500 Hz 1/2 octave/minute sweep 2 hour duration (nonoperating) 1 g, 5 - 500 Hz (operating)	
Maximum Unpressurized Altitude:		
Operating	10,000 ft	3048 m
Nonoperating	40,000 ft	12192 m

Chapter 1.2 LAPTOP ENHANCED KEYBOARD

Dimensions:		
Height	0.65 in.	1.65 cm
Depth	6.45 in.	16.38 cm
Width	13.50 in.	34.29 cm
Weight	1.38 lb	0.63 kg
Number of Keys	82 or 83	82 or 83
Cable:		
Compressed	6.50 in.	16.51 cm
Extended	24.00 in.	60.96 cm
Interface	6 pin mini DIN connector	6 pin mini DIN connector
Power:		
Volts	5 VDC	5 VDC
Current	50 mA maximum 20 mA nominal	50 mA maximum 20 mA nominal

Chapter 1.3 VGA BACKLIT DISPLAY

Dimensions (image area):		
Height	5.86 in.	14.88 cm
Depth	0.90 in.	2.30 cm
Width	7.81 in.	19.84 cm
Diagonal Size	10.00 in.	25.40 cm
Mounting	Internal	Internal
Display	Compensated Supertwist LCD	Compensated Supertwist LCD
Cable:		
Diameter	0.28 in.	0.71 cm

Chapter 1.4 DISKETTE DRIVE

	1.44 MEGABYTE
Diskette Size	3 1/2 inch
LED Indicators:	
Read/Write (high density)	Green
Read/Write (low density)	Orange
Capacity Per Diskette (high/low)	1.44 MB/720 Kbytes
Drives Supported	Two
Drive Height	Third
Drive Rotation (rpm)	300
Transfer Rate (bps) (high/low)	500K/250K
Bytes Per Sector	512
Sectors Per Track (high/low)	18/9
Tracks Per Side (high/low)	80/80
Access Times:	
Track to Track (ms)	3
Average (ms)	79
Settling Time (ms)	15
Latency Average (ms)	100
Cylinders (high/low)	80/80

Read/Write Heads	2

Chapter 1.5 FIXED DISK DRIVES

COMPAQ SLT 386s/20 Personal Computer

	120 MEGABYTE	60 MEGABYTE
Standard Configurations	Model 120	Model 60
LED Indicators	Orange	Orange
Formatted Capacity Per Drive	121.56 MB	60.7 MB
Drives Supported	One	One
Drive Height	Third	Third
Drive Size	3 1/2 inch	3 1/2 inch
Drive Type	50	55
Transfer Rate (Mb/s)	12	12
Sector Interleave	1:1	1:1
Bytes Per Sector	512	512
Sectors Per Track:		
Physical	40	39
Logical	39	39

	120 MEGABYTE	60 MEGABYTE
Number of Surfaces:		
Physical	2	2
Logical	4	4
Tracks per Surface	1053	636
Access Times (including settling):		
Track to Track (ms)	<5	<5
Average (ms)	<19	<19
Maximum (ms)	<35	<35
Physical Cylinders	1522	1522
Physical Read/Write Heads	4	2
Logical Cylinders	760	760
Logical Read/Write Heads	8	4

COMPAQ SLT/286 Personal Computer

	40 MEGABYTE	20 MEGABYTE
Standard Configurations	Model 40	Model 20
LED Indicators	Orange	Orange
Formatted Capacity Per Drive	42.9 MB	21.4 MB
Drives Supported	One	One
Drive Height	1 inch	1 inch
Drive Size	3 1/2 inch	3 1/2 inch
Drive Type	22	2
Transfer Rate (Mb/s)	12	10
Sector Interleave	1:1	3:1
Bytes Per Sector	512	512
Sectors Per Track:		
Physical	40	33
Logical	17	40

	40 MEGABYTE	20 MEGABYTE
Number of Surfaces:		
Physical	2	2
Logical	4	4
Tracks per Surface	1053	636
Access Times (including settling):		
Track to Track (ms)	8	8
Average (ms)	29	29
Maximum (ms)	50	50
Physical Cylinders	1053	636
Physical Read/Write Heads	2	2
Logical Cylinders	524	615
Logical Read/Write Heads	4	4

Chapter 1.6 INTERNAL POWER SUPPLY

Input Requirements:

Input Voltage	10 - 18.2 VDC
Input Fuse	5A (Not user accessible)

Power Output:	
Steady State	18W
Peak	23W

Cooling	Convection

VDC Output:

Nominal Voltage	Current Minimum	Nominal Continuous Current Maximum	Maximum Peak Current	Regulation Tolerance
+ 5.00	0A	2A	3A	ñ 3%
+ 12.00	0A	0.6A	1A	ñ 8%
- 13.00	0A	60 mA	60 mA	ñ 15%
- 26.00	0A	60 mA	60 mA	ñ 15%

Chapter 1.7 AC ADAPTER

Dimensions:		
Height	2.40 in.	6.10 cm
Depth	8.60 in.	21.84 cm
Width	3.40 in.	8.64 cm
Weight	1.66 lb	0.75 kg
Power Supply:		
Operating Voltage	110 VAC/220 - 240 VAC	
Steady State Power	20W	
Peak Power	33W	
Operating Current	1.0A	
Frequency	50/60 Hz	

Chapter 1.8 BATTERY PACK

Dimensions:		
Height	1.20 in.	3.05 cm
Depth	5.40 in.	13.72 cm
Width	4.60 in.	11.68 cm
Weight	1.97 lb	0.89 kg
Power Supply:		
Nominal Open Circuit Voltage	12.0 VDC	
Capacity	2.4A	
Power	29W	

Chapter 2 - Power On Self Test (POST)

INTRODUCTION

This chapter lists the subassemblies checked by the Power On Self Test (POST) and briefly describes the types of error codes that can occur. The chapter also includes problem isolation procedures and a flowchart for quick reference.

Chapter 2.1 POST

POST is a series of diagnostic tests that runs automatically on the COMPAQ SLT 386s/20 and COMPAQ SLT/286 Personal Computers when the computers are turned on.

POST checks the following subassemblies to ensure that the computer system is functioning properly:

- System Board
- System Memory
- Memory Boards
- Keyboard
- Controller Circuitry
- VGA Backlit Display (Monitor)
- Fixed Disk Drives
- Diskette Drives

POST also detects the type of mass storage devices installed in the computer.

If POST finds an error in the computer, an error condition is indicated by an audible and/or visual message. See Chapter 3, "Error Messages and Codes," for an explanation of the error codes and a recommended course of action.

Chapter 2.2 PRELIMINARY STEPS

If you encounter an error condition, complete the following steps before starting the problem isolation procedures:

1. Turn off power to the computer. Do not remove the battery pack.

2. Disconnect any external devices (leave the AC Adapter attached). Do not disconnect the printer if you want to test the printer or use it to log error messages.

3. Install all appropriate loopback plugs and terminating plugs for complete testing.

4. Clear the power on password, if it is preset by the user.

   NOTE: The COMPAQ SLT 386s/20 has a power on password feature. You will know that the power on password is set when a key icon (o--m) appears

on the screen when POST completes. If this occurs, you must enter the password to continue.

If you do not have access to the password, you must disable the power on password feature by resetting the password switch on the system board (see section 2.3, "Clearing Power On Password").

5. Position the brightness and contrast controls approximately in the center of their range.

6. Insert the DIAGNOSTICS diskette into drive A.

7. Turn on the computer.

8. Follow the procedures of the Problem Isolation Flowchart in section 2.4.

Refer to Chapter 3, "Error Messages and Codes," for detailed information on problem isolation.

Chapter 2.3 CLEARING POWER ON PASSWORD

To clear the power on password feature on the COMPAQ SLT 386s/20, disable the power on password by resetting the system board switch. To do so, complete the following steps:

1. Disconnect the AC power.

2. Disassemble the computer to reach the system board (refer to Chapter 5).

3. Locate switch SW1 on the system board (Figure 2-1).

4. Change switch SW1-2 to the ON position (disable).

5. Reassemble the computer (refer to Chapter 5); then reconnect the AC power.

6. Turn on the computer and allow it to complete POST. If the key icon (o--m) does not appear when POST completes, the power on password has been cleared.

To reset or enable the power on password switch, follow these steps:

1. Turn off the computer and disconnect the AC power.

2. Disassemble the computer to reach the system board (refer to Chapter 5).

3. Reset switch SW1-2 to the OFF position (enable).

4. Reassemble the computer.

5. Reconnect the AC power and turn on the computer.

IMPORTANT: If the power on password switch is not reset to its original position, it will be impossible to reestablish the password.

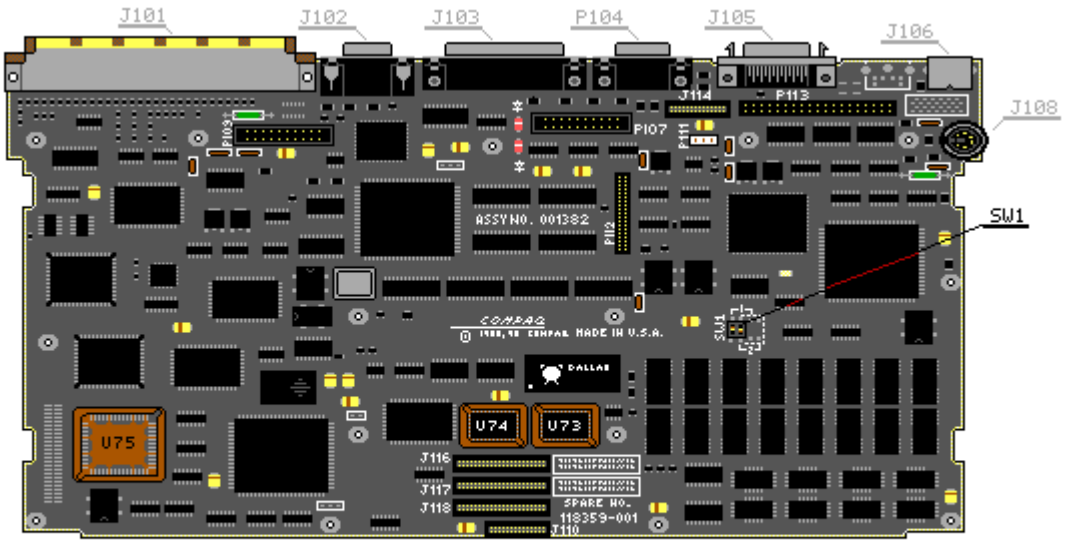
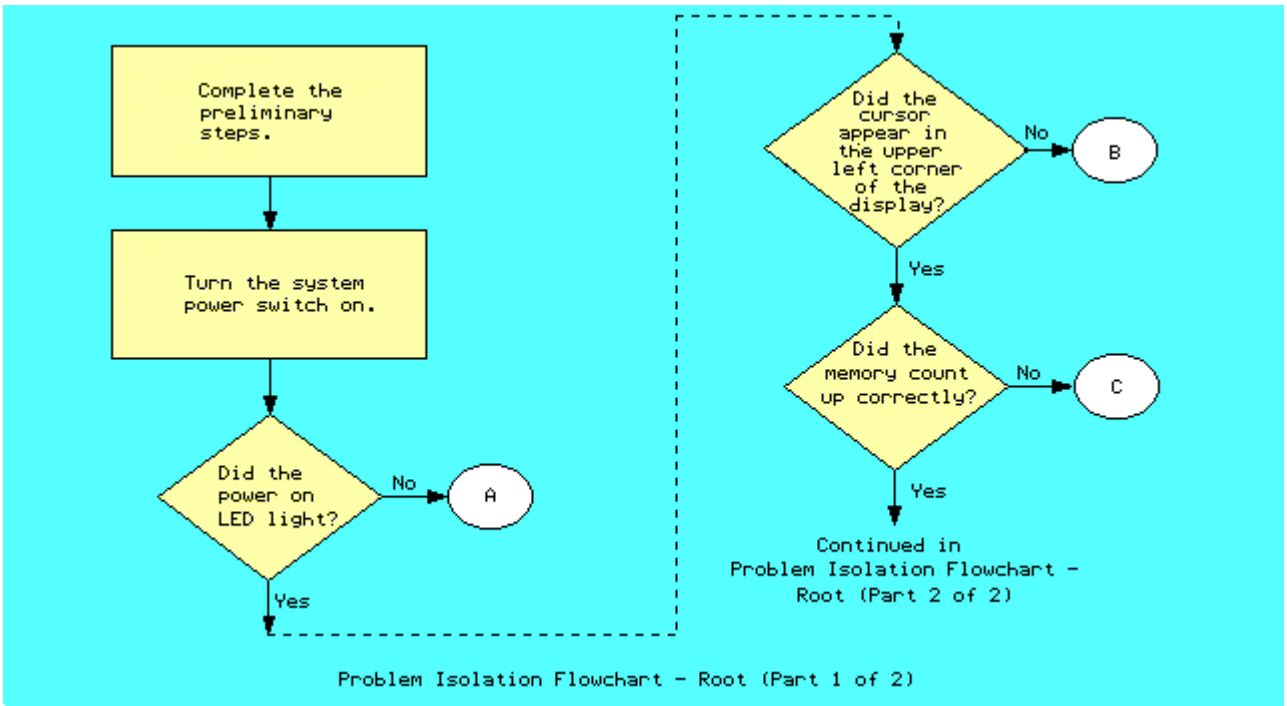


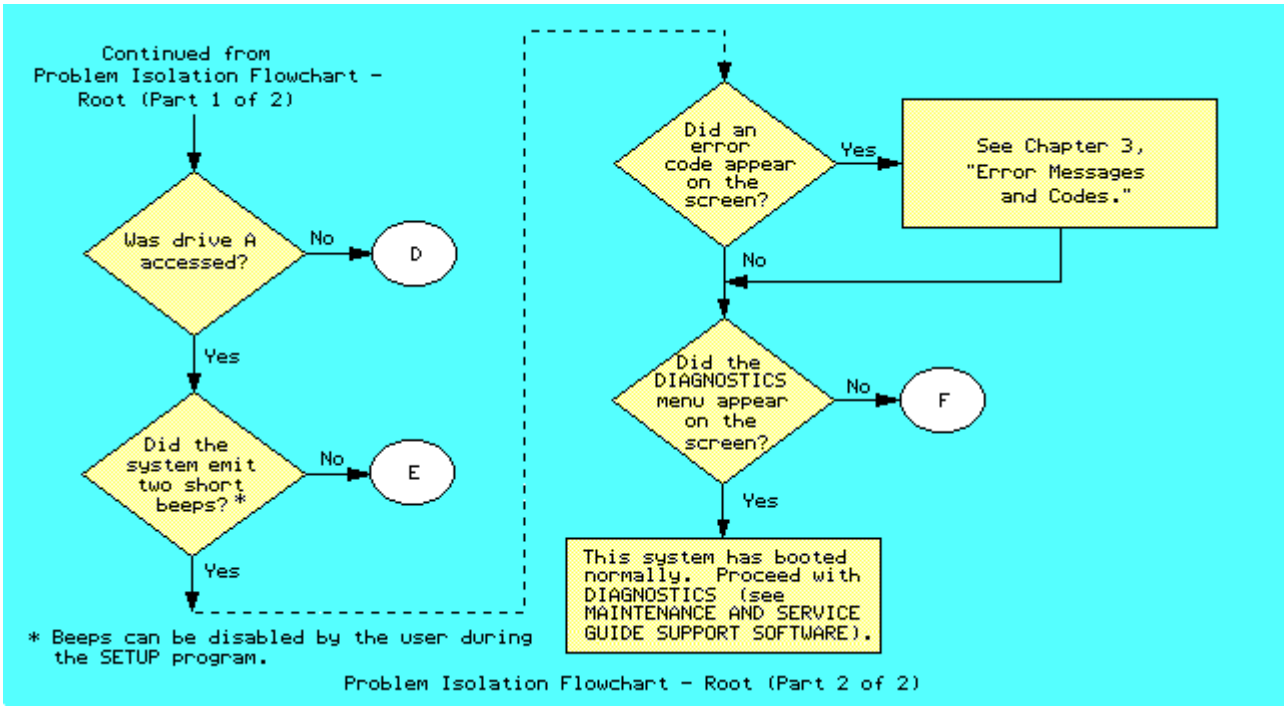
Figure 2-1. Power on Password Switch on the COMPAQ SLT 386s/20 (Assy No. 001382)

Chapter 2.4 PROBLEM ISOLATION FLOWCHART

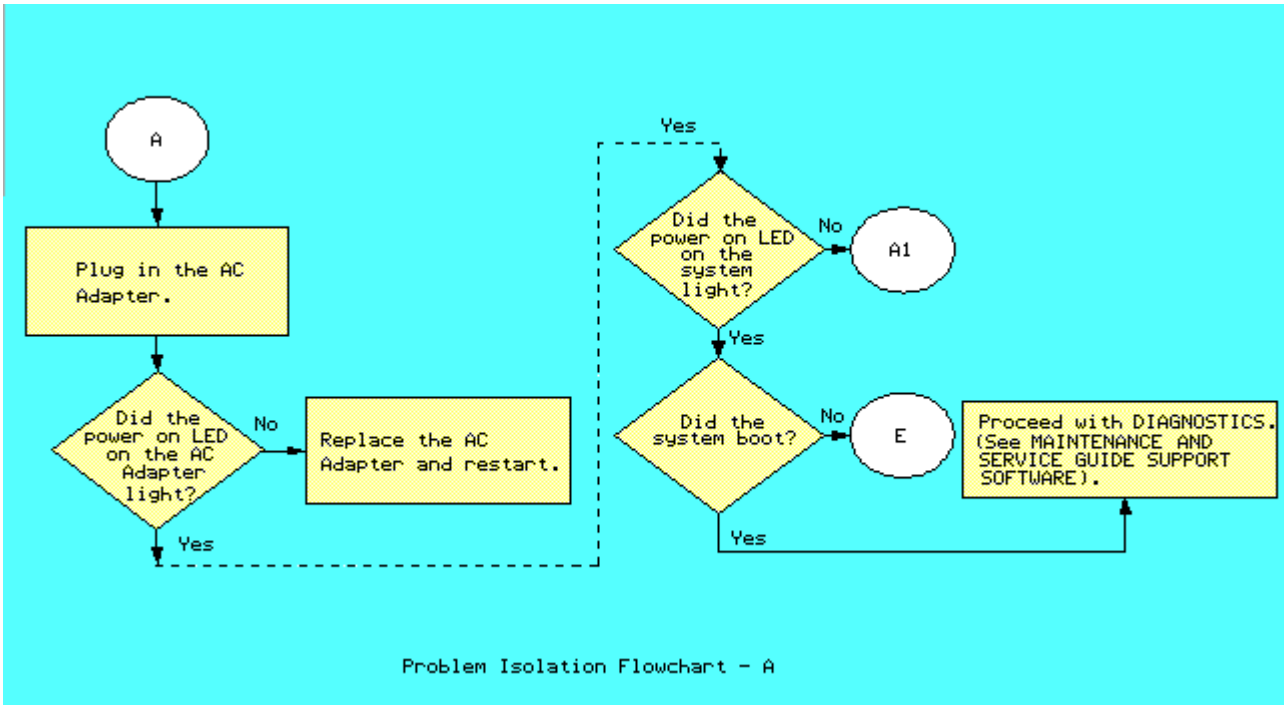
The problem isolation flowchart provides a quick reference for identifying and correcting problems that may occur during POST. The flowchart gives troubleshooting procedures for identifying malfunctions. It also directs you to the DIAGNOSTICS chapter in the MAINTENANCE AND SERVICE GUIDE SUPPORT SOFTWARE and to Chapter 3, "Error Messages and Codes," for more detailed troubleshooting information.



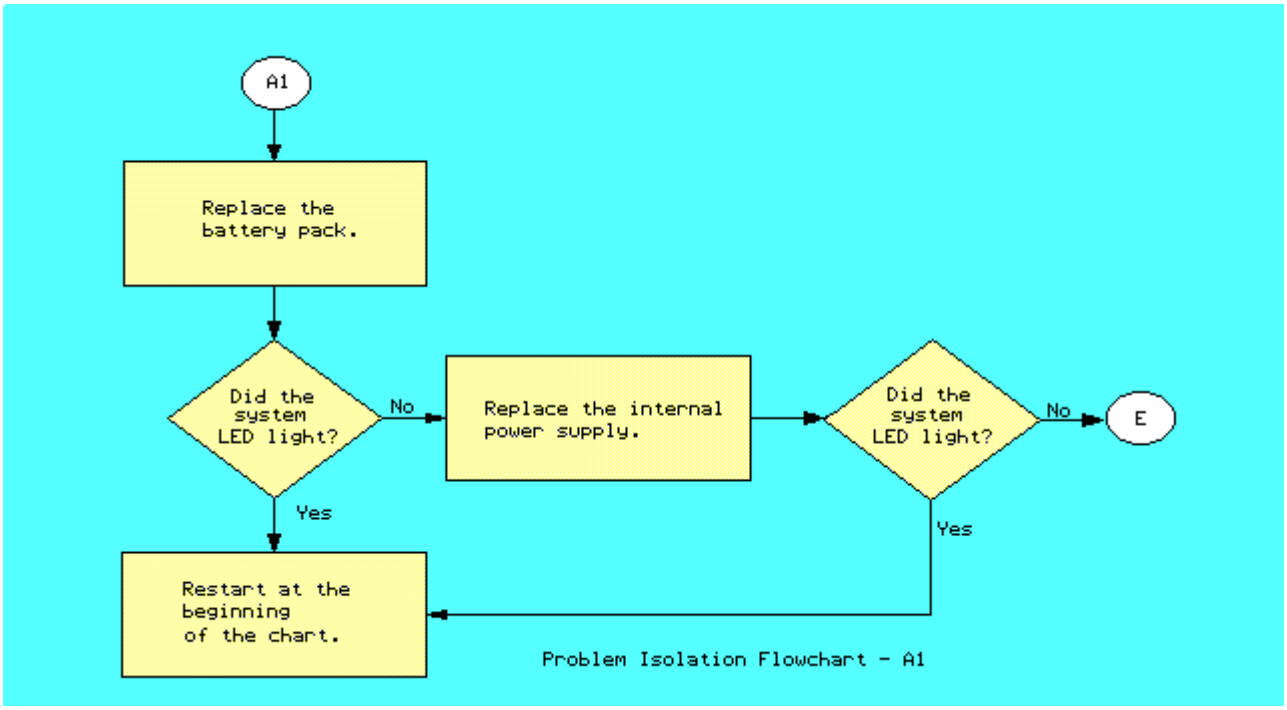
Problem Isolation Flowchart - Root (Part 1 of 2)



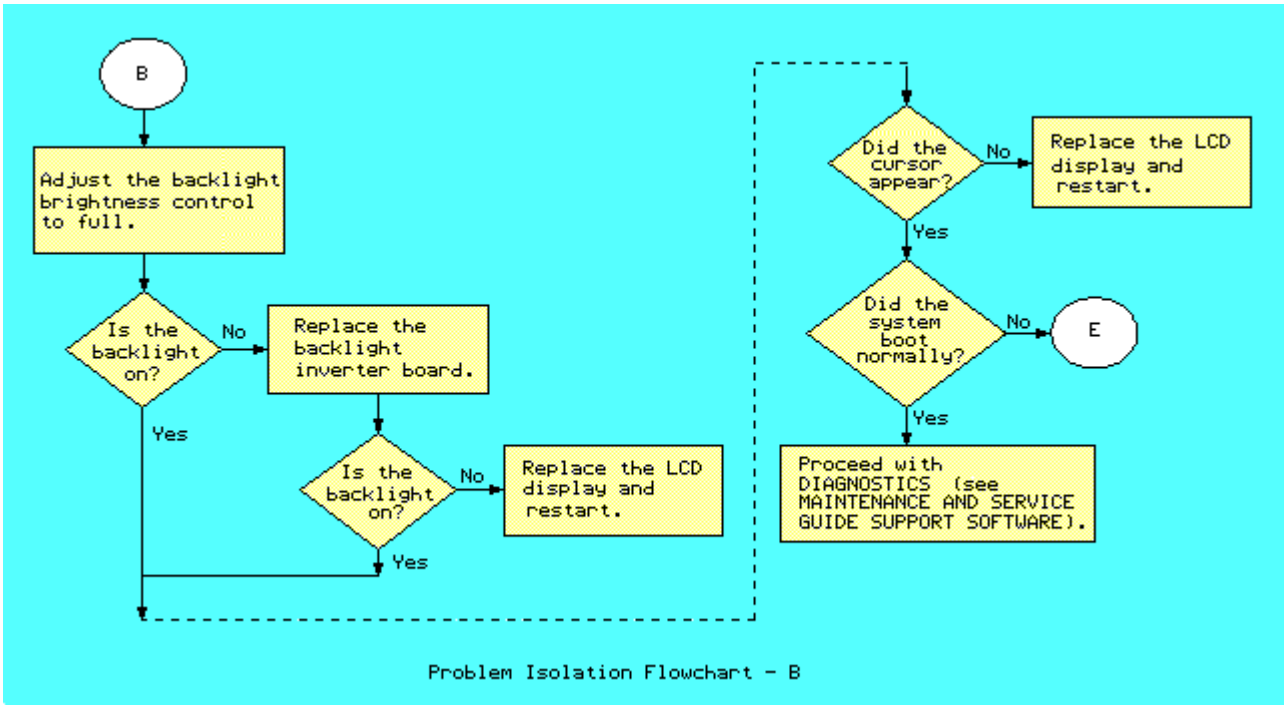
Problem Isolation Flowchart - Root (Part 2 of 2)



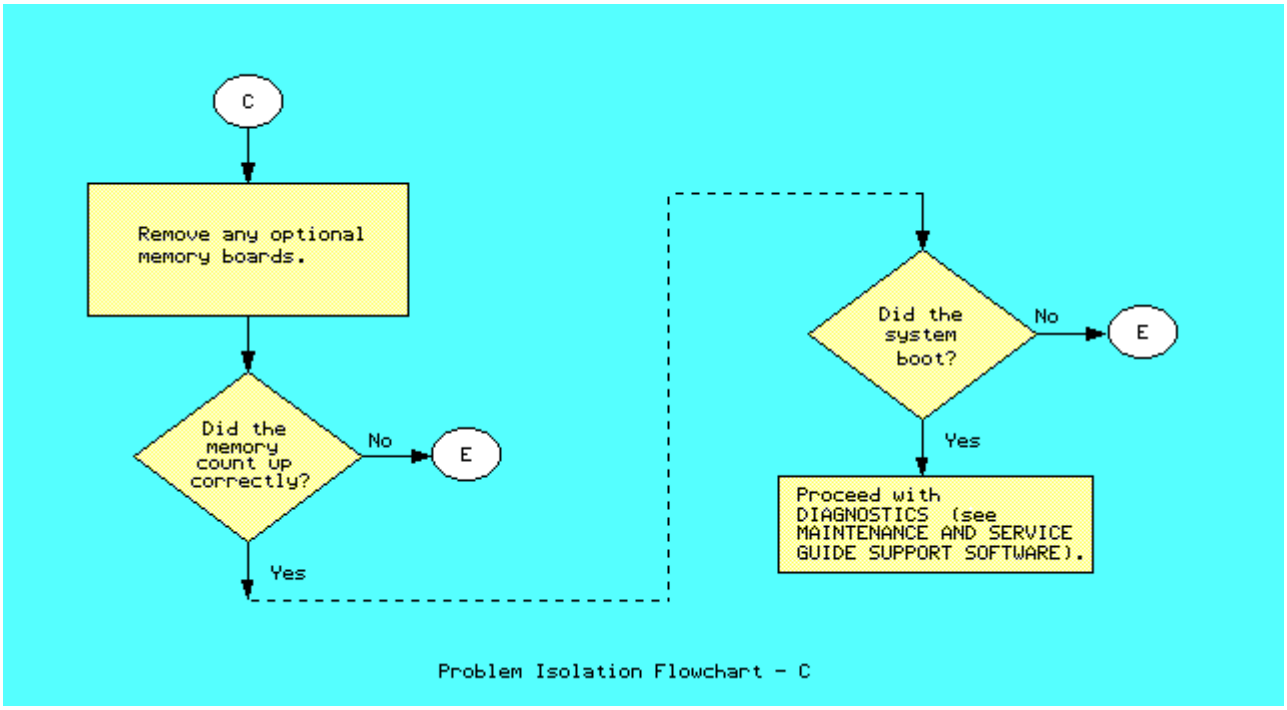
Problem Isolation Flowchart - A



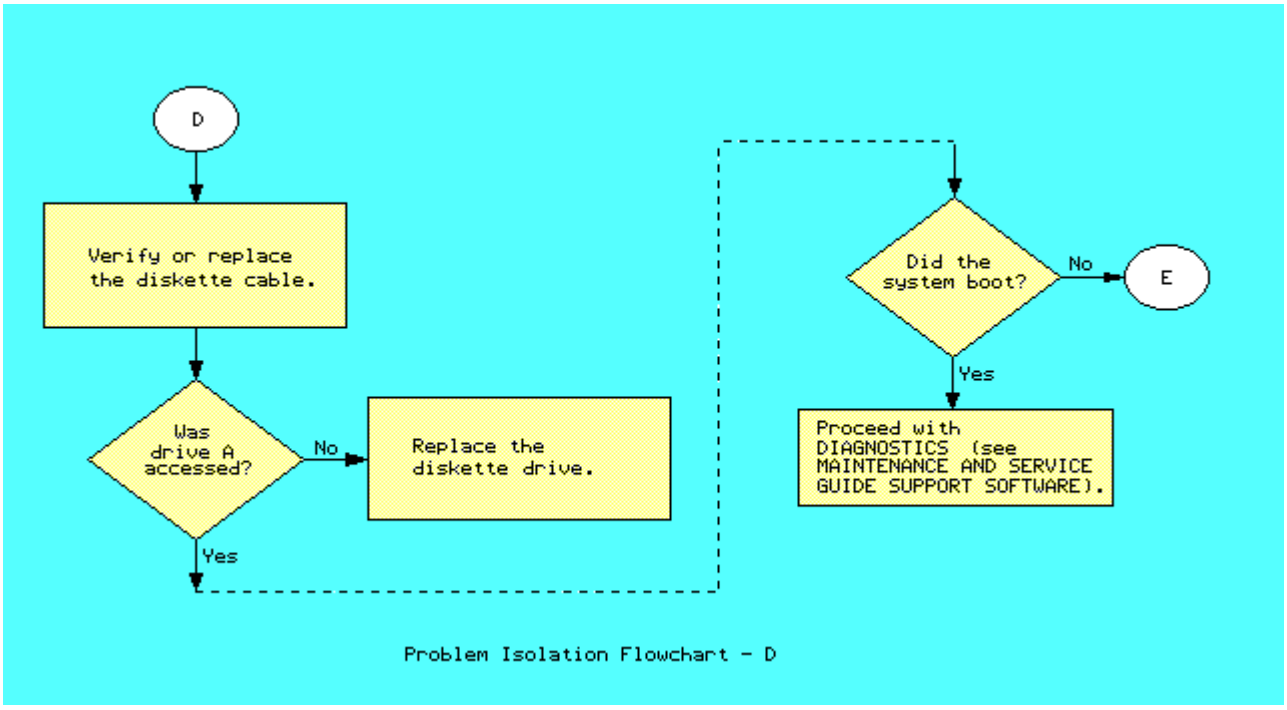
Problem Isolation Flowchart - A1



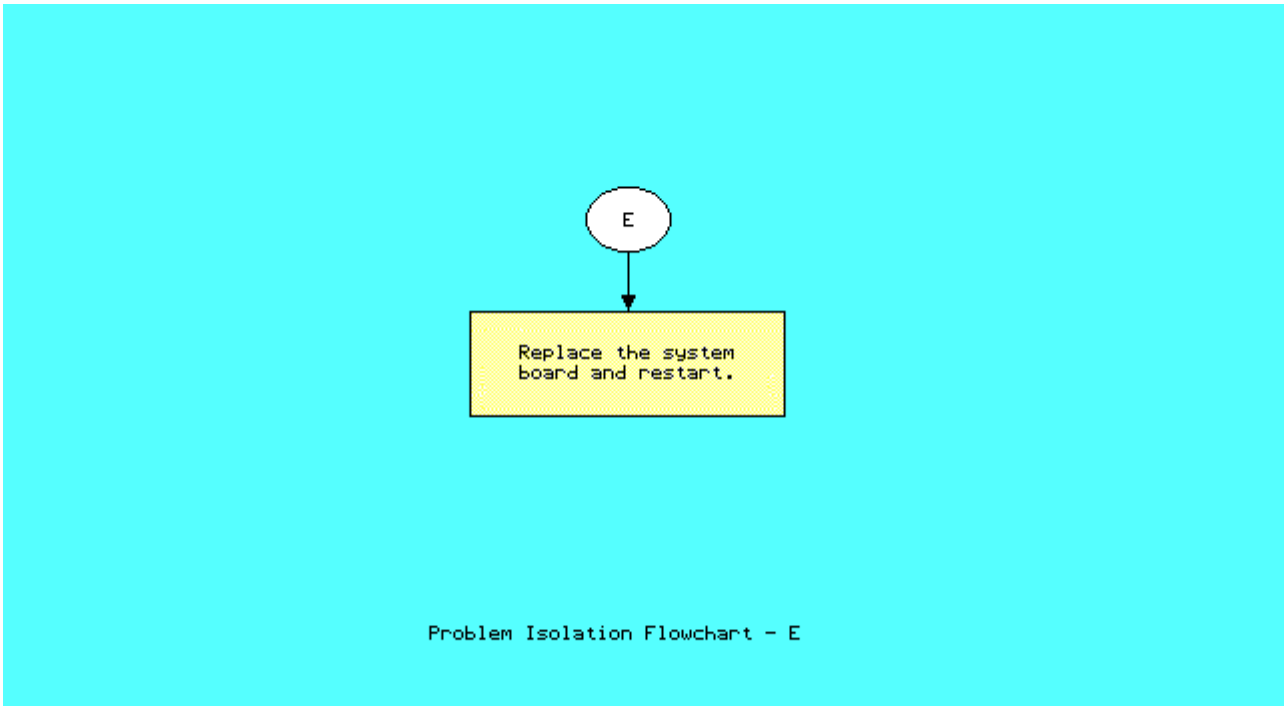
Problem Isolation Flowchart - B



Problem Isolation Flowchart - C



Problem Isolation Flowchart - D



Problem Isolation Flowchart - E

Chapter 3 - Error Messages and Codes

INTRODUCTION

This chapter contains Power On Self Test (POST) messages, DIAGNOSTIC error codes, and memory error codes.

The messages and codes appear in tables that list the message or error code, a description of the error or its probable cause, and the action recommended to resolve the error condition.

Chapter 3.1 POWER ON SELF TEST MESSAGES

An error message results if a problem is encountered during POST, which runs automatically when the system is turned on.

Table 3-1 lists the messages for POST, the audible (beep) messages, probable causes, and recommended actions.

Table 3-1. Power On Self Test Messages

Message	Beeps	Probable Cause	Recommended Action
101 - ROM Error	1 Long, 1 Short	System ROM	1. Inspect the ROM placement. 2. Verify the correct ROM. 3. Replace the ROM.
101 - I/O ROM Error	1 Long, 1 Short	System ROM	1. Inspect the ROM placement. 2. Verify the correct ROM. 3. Replace the ROM.
102 - System Board or System Memory Failure	None	System board	Replace the system board.
162 - System Options Error	2 Short	Configuration error	Run SETUP.
162 - System Options Not Set	2 Short	Configuration incorrect	Run SETUP.
163 - Time & Date Not Set	2 Short	Invalid time or date in configuration memory	Run SETUP.
Message	Beeps	Probable Cause	Recommended Action
164 - Memory	2 Short	Configuration	Run SETUP.

Size Error		memory incorrect	
167 - RTC Lost Power	2 Short	Real time clock	Replace system board.
XX000Y ZZ * 201 - Memory Error	None	RAM failure	1. Replace the memory board (See Figure 3-1.) 2. Replace the system board.
XX000Y ZZ * 203 - Memory Address Error	None	RAM failure	Replace the system board.
205 - Memory Error	None	Cache Memory error	Run DIAGNOSTICS.
301 - Keyboard Error	None	Keyboard	Replace the keyboard.
301 - Keyboard Error or Test Fixture Installed	None	Keyboard	Replace the keyboard.

* See Section 3.3, Memory Error Codes

Message	Beep	Probable Cause	Recommended Action
303 - Keyboard Controller Error	None	System board keyboard controller	Replace the system board.
304 - Keyboard or System Unit Error	None	Keyboard	1. Replace the keyboard. 2. Replace the system board.
401 - Printer Error (COMPAQ SLT/286 only)	None	Printer controller	Replace the system board.
601 - Diskette Controller Error	None	Diskette Controller circuitry	1. Check and/or replace cables. 2. Run DIAGNOSTICS. 3. Replace the system board.
605 - Diskette Drive Error	2 Short	Mismatch in drive type	Run SETUP.
610 - External Storage Device Failure Hit F1 when ready	None	External Storage Module attached but turned off	Turn on External Storage Module or disconnect from computer.
702 - Coprocessor	None	Coprocessor	1. Run SETUP.

Detection Error		problem; added or removed the coprocessor	2. Check the coprocessor installation. 3. Replace the coprocessor.
1125 - Internal Serial Port Failure	2 Short	Defective internal serial port	Replace the system board.
1150 - Comm Port Configuration Error	2 Short	Added or removed modem, or second serial interface board	Run SETUP.
1780 - Disk 0 Failure	None	Fixed disk drive/format error	1. Run DIAGNOSTICS. 2. Replace the drive.
1781 - Disk 1 Failure	None	Fixed disk drive/format error	1. Run DIAGNOSTICS. 2. Replace the drive.
Message	Beeps	Probable Cause	Recommended Action
1782 - Disk Controller Failure	None	Fixed disk drive controller error	1. Run DIAGNOSTICS. 2. Replace the drive.
1790 - Disk 0 Error	None	Fixed disk drive error	1. Run DIAGNOSTICS. 2. Replace the drive.
XX000Y ZZ Parity Check 2	None	Parity RAM failure	Run DIAGNOSTICS.
Audible *	1 Short	Power on successful	None.
Audible *	2 Short	Power on successful	None.
(RESUME = "F1" KEY)	None	As indicated to continue	Press F1 key.

* Beeps can be disabled by the user during the SETUP program.

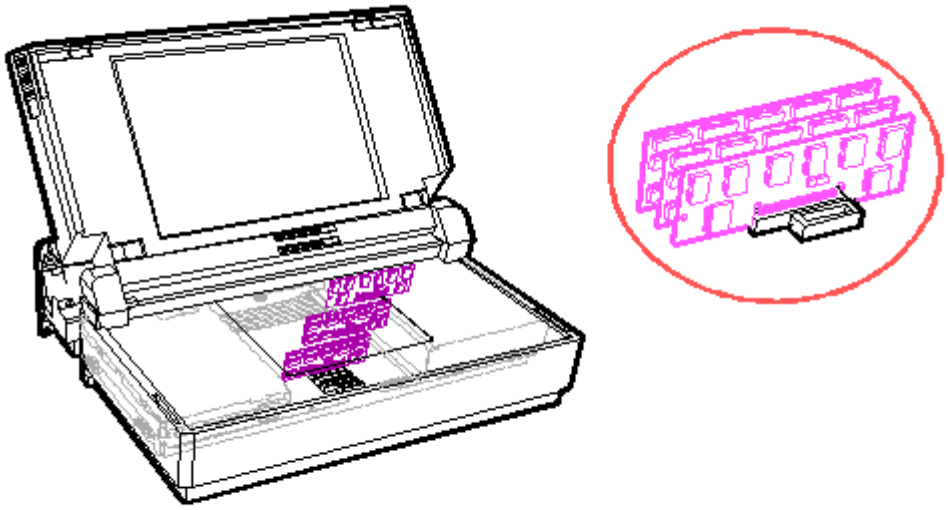


Figure 3-1. Memory Board Location

Chapter 3.2 DIAGNOSTIC ERROR CODES

DIAGNOSTIC error codes occur if the system recognizes a problem while running the COMPAQ DIAGNOSTICS program (refer to the MAINTENANCE AND SERVICE GUIDE SUPPORT SOFTWARE for additional information on running the DIAGNOSTICS software). These error codes help identify possible defective subassemblies. Tables 3-2 through 3-11 list possible error codes, a description of the error condition, and the action required to resolve the error condition.

In each case, the Recommended Action column lists steps necessary to correct the problem. After completing each step, run the DIAGNOSTICS program to verify whether the error condition has been corrected. If the error code reappears, perform the next step, then run the DIAGNOSTICS program again. Follow this procedure until the DIAGNOSTICS program no longer detects an error condition.

The error codes appear in an AYY-XX or AAYY-XX format.

A or AA = number that represents faulty assembly
YY = test or action that failed
XX = a specific problem

Example: Error code 610 - 21 shows that the diskette drive failed to get change line status.

For assistance in the removal and replacement of a particular subassembly, see Chapter 5, "Removal and Replacement Procedures."

Table 3-2. Processor Test Error Codes

Error

Code	Description	Recommended Action
101 - 01	CPU test failed	Replace the system board and retest for error code 101 - 01.
102 - 01	Coprocessor initial status word incorrect	The following steps apply to error codes 102 - xx:
102 - 02	Coprocessor initial control word incorrect	1. Run SETUP. 2. Replace the coprocessor and retest. 3. Replace the system board and retest.
102 - 03	Coprocessor tag word not all ones	
102 - 04	Coprocessor tag word not all zeros	
102 - 05	Coprocessor exchange command failed	
102 - 06	Coprocessor masked exception incorrectly handled	
102 - 07	Coprocessor unmasked exception incorrectly handled	

Error Code	Description	Recommended Action
102 - 08	Coprocessor wrong mask bit set in status register	The following steps apply to error codes 102 - xx:
102 - 09	Coprocessor unable to store real number	1. Run SETUP. 2. Replace the coprocessor and retest. 3. Replace the system board and retest.
102 - 10	Coprocessor real number calculation test failed	
102 - 11	Coprocessor speed test failed	
102 - 12	Coprocessor pattern test failed	
102 - 15	Coprocessor is inoperative or socket is unoccupied	

Error Code	Description	Recommended Action
103 - 01	DMA page registers test failed	Replace the system board and retest for error codes 103 - xx through 114 - xx.
103 - 02	DMA byte controller test failed	
103 - 03	DMA word controller test failed	
104 - 01	Interrupt controller master	

test failed

104 - 02 Interrupt controller slave test failed

104 - 03 Interrupt controller software RTC is inoperative

105 - 01 Port 61 bit 6 not at zero

105 - 02 Port 61 bit 5 not at zero

105 - 03 Port 61 bit 3 not at zero

Error Code	Description	Recommended Action
105 - 04	Port 61 bit 1 not at zero	Replace the system board and retest for error codes 103 - xx through 114 - xx.
105 - 05	Port 61 bit 0 not at zero	

105 - 06 Port 61 bit 5 not at one

105 - 07 Port 61 bit 3 not at one

105 - 08 Port 61 bit 1 not at one

105 - 09 Port 61 bit 0 not at one

105 - 10 Port 61 I/O test failed

105 - 11 Port 61 bit 7 not at zero

105 - 12 Port 61 bit 2 not at zero

106 - 01 Keyboard controller self test failed

107 - 01 CMOS RAM test failed

108 - 02 CMOS interrupt test failed

Error Code	Description	Recommended Action
108 - 03	CMOS interrupt test, CMOS not properly initialized	Replace the system board and retest for error codes 103 - xx through 114 - xx.
109 - 01	CMOS clock load data test failed	
109 - 02	CMOS clock rollover test failed	

109 - 03 CMOS clock test, CMOS not properly initialized

110 - 01 Programmable timer load data test failed

110 - 02 Programmable timer dynamic test failed

111 - 01 Refresh detect test failed

112 - 01 Speed test slow mode out of range

112 - 02 Speed test mixed mode out of range

Error Code	Description	Recommended Action
112 - 03	Speed test fast mode out of range	Replace the system board and retest for error codes 103 - xx through 114 - xx.
112 - 04	Speed test unable to enter slow mode	
112 - 05	Speed test unable to enter mixed mode	
112 - 06	Speed test unable to enter fast mode	
112 - 07	Speed test system error	
112 - 08	Speed test unable to enter auto mode	
112 - 09	Speed test unable to enter high mode	
112 - 10	Speed test high mode out of range	
112 - 11	Speed test auto mode out of range	
113 - 01	Protected mode test failed	
114 - 01	Speaker test failed	

Table 3-3. Memory Test Error Codes

Error

Code	Description	Recommended Action
201 - 01	Memory machine ID test failed	The following steps apply to error codes 201 - xx through 202 - xx: 1. Replace the system ROM and retest. 2. Replace the system memory board and retest.
202 - 01	Memory system ROM checksum failed	
202 - 02	Failed RAM/ROM map test	
202 - 03	Failed RAM/ROM protect test	
203 - 01	Memory write/read test	The following steps apply to error codes 203 - xx through 211 - xx: 1. Replace the memory board and retest. 2. Replace the system board and retest.
203 - 02	Error during saving program memory in write/read test	
203 - 03	Error during restore of program	
204 - 01	Memory address test failed	
204 - 02	Error during saving program memory in address test	
204 - 03	Error during restore of program memory in address test	
204 - 04	A20 address test failed	
204 - 05	Page hit address test failed	
205 - 01	Walking I/O test failed	
205 - 02	Error during saving program memory in walking I/O test	
205 - 03	Error during restore of program memory in walking I/O test	
210 - xx	Increment Pattern Test	
211 - xx	Random Pattern Test	

Table 3-4. Keyboard Test Error Codes

Error Code	Description	Recommended Action
301 - 01	Keyboard short test, 8042 self test failed	The following steps apply to error codes 301 - xx through 304 - xx: 1. Check the keyboard connection. If disconnected, turn off the computer and connect the
301 - 02	Keyboard short test, interface test failed	
301 - 03	Keyboard short test,	

Error Code	Description	Recommended Action
	echo test failed	keyboard.
		2. Replace the keyboard and retest.
301 - 04	Keyboard short test	3. Replace the system board and retest.
302 - 01	Keyboard long test failed.	
303 - 01	Keyboard LED test, 8042 self test failed	
303 - 02	Keyboard LED test, reset test failed	
303 - 03	Keyboard LED test, reset test failed	
303 - 04	Keyboard LED test, LED command test failed	The following steps apply to error codes 301 - xx through 304 - xx:
303 - 05	Keyboard LED test, LED command test failed	1. Check the keyboard connection. If disconnected, turn off the computer and connect the keyboard.
303 - 06	Keyboard LED test, LED command test failed	2. Replace the keyboard and retest.
303 - 07	Keyboard LED test, LED command test failed	3. Replace the system board and retest.
303 - 08	Keyboard LED test, command byte restore test failed	
303 - 09	Keyboard LED test, LEDs failed to light	
304 - 01	Keyboard typematic test failed	
304 - 02	Unable to enter mode 3	
304 - 03	Incorrect scan code from keyboard	
304 - 04	No make code observed	
304 - 05	Unable to disable typematic feature	
304 - 06	Unable to return to normal mode	

Table 3-5. Parallel Printer Test Error Codes

Error Code	Description	Recommended Action
401 - 01	Printer failed or not connected	The following steps apply to error codes 401 - xx through 498 - xx: 1. If a printer is connected, be sure it is turned ON and in the ONLINE mode. 2. Replace the printer and/or the printer cable and retest. 3. Replace the system board and retest.
402 - 01	Printer data register failed	
402 - 02	Printer control register failed	
402 - 03	Printer data and control register failed	
402 - 04	Printer loopback failed	
402 - 05	Printer loopback and data failed	
402 - 06	Printer loopback and control register failed	
402 - 07	Printer loopback, data, and control register failed	
402 - 08	Printer interrupt test failed	
402 - 09	Printer interrupt and data register failed	

Error Code	Description	Recommended Action
402 - 10	Printer interrupt and control register failed	The following steps apply to error codes 401 - xx through 498 - xx: 1. If a printer is connected, be sure it is turned ON and in the ONLINE mode. 2. Replace the printer and/or the printer cable and retest. 3. Replace the system board and retest.
402 - 11	Printer interrupt, data, and control register failed	
402 - 12	Printer interrupt and loopback failed	
402 - 13	Printer interrupt, loopback, and data register failed	
402 - 14	Printer interrupt, loopback, and control register failed	
402 - 15	Printer interrupt, loopback, data, and control register failed	
402 - 16	Printer unexpected interrupt received	

403 - 01 Printer pattern test failed

498 - 00 Printer failed or not connected

Table 3-6. Diskette Drive Test Error Codes

Error Code	Description	Recommended Action
600 - xx	Diskette ID drive types test failed	The following steps apply to error codes 600 - xx through 610 - xx: 1. Replace the diskette and retest. 2. Check and/or replace the power and signal cables and retest. 3. Replace the diskette drive and retest. 4. Replace the system board and retest.
601 - xx	Diskette format failed	
602 - xx	Diskette read test failed	
603 - xx	Diskette write, read, compare test failed	
604 - xx	Diskette random seek test failed	
605 - xx	Diskette ID media failed	
606 - xx	Diskette speed test failed	
607 - xx	Diskette wrap test failed	
608 - xx	Diskette write protect test failed	
609 - xx	Diskette reset controller test failed	

Error Code	Description	Recommended Action
610 - xx	Diskette change line test failed	The following steps apply to error codes 600 - xx through 610 - xx: 1. Replace the diskette and retest. 2. Check and/or replace the power and signal cables and retest. 3. Replace the diskette drive and retest. 4. Replace the system board and retest.
610 - 01	Exceeded maximum soft error limit	
610 - 02	Exceeded maximum hard error limit	
610 - 03	Previously exceeded maximum soft error limit	
610 - 04	Previously exceeded maximum hard error limit	
610 - 05	Failed to reset controller	

Error Code	Description	Recommended Action
610 - 06	Fatal error while reading	
610 - 07	Fatal error while writing	
610 - 08	Failed compare of write/read buffers	
610 - 09	Failed to format a track	
610 - 10	Failed sector wrap test	The following steps apply to error codes 600 - xx through 610 - xx: 1. Replace the diskette and retest. 2. Check and/or replace the power and signal cables and retest. 3. Replace the diskette drive and retest. 4. Replace the system board and retest.
610 - 20	Failed to get drive type	
610 - 21	Failed to get change line status	
610 - 22	Failed to clear change line status	
610 - 23	Failed to set drive type in ID media	
610 - 24	Failed to read diskette media	
610 - 25	Failed to verify diskette media	
610 - 26	Failed to read media in speed test	
610 - 27	Failed speed limits	
610 - 28	Failed write protect test	
697 - 00	Diskette type error	The following steps apply to error codes 697 - xx through 698 - xx: 1. Replace the diskette and retest. 2. Check and/or replace the diskette signal and power cable and retest. 3. Replace the diskette drive and retest. 4. Replace the system board and retest.
698 - 00	Diskette drive speed not within limits	
699 - 00	Diskette drive/media ID error, rerun SETUP	1. Replace the media. 2. Run SETUP.

Table 3-7. Serial Test Error Codes

Error Code	Description	Recommended Action
1101 - 01	Serial Port Test: UART DLAB bit failure	The following steps apply to error codes 1101 - xx through 1109 - xx:
1101 - 02	Serial Port Test; line input or UART fault	1. Replace the serial interface board and retest.
1101 - 03	Serial Port Test; address line fault	2. Replace the system board and retest.
1101 - 04	Serial Port Test; data line fault	
1101 - 05	Serial Port Test; UART control signal failure	
1101 - 06	Serial Port Test; UART THRE bit failure	
1101 - 07	Serial Port Test; UART DATA READY bit failure	
1101 - 08	Serial Port Test; UART TX/RX buffer failure	
1101 - 09	Serial Port Test; INTERRUPT circuit failure	

Error Code	Description	Recommended Action
1101 - 10	Serial Port Test; COM1 set to invalid interrupt	The following steps apply to error codes 1101 - xx through 1109 - xx:
1101 - 11	Serial Port Test; COM2 set to invalid interrupt	1. Replace the serial interface board and retest.
1101 - 12	Serial Port Test; DRIVER/ RECEIVER control signal failure	2. Replace the system board and retest.
1101 - 13	Serial Port Test; UART control signal interrupt failure	
1101 - 14	Serial Port Test; DRIVER/ RECEIVER data failure	
1109 - 01	Clock register initialization failure	
1109 - 02	Clock register rollover failure	
1109 - 03	Clock reset failure	

1109 - 04 Input line or clock failure

1109 - 05 Address line fault

1109 - 06 Data line fault

Table 3-8. Modem Communications Test Error Codes

Error Code	Description	Recommended Action
1201 - xx	Modem Internal Loopback Test	The following steps apply to error codes 1201 - xx through 1210 - xx:
1201 - 01	UART DLAB bit failure	1. Refer to the modem documentation for SETUP procedures.
1201 - 02	Line input or UART failure	2. Check the modem line.
1201 - 03	Address line fault	3. Replace the modem and retest.
1201 - 04	Data line fault	
1201 - 05	UART control signal failure	
1201 - 06	UART THRE bit failure	
1201 - 07	UART DATA READY bit failure	
1201 - 08	UART TX/RX buffer failure	
1201 - 09	INTERRUPT circuit failure	
1201 - 10	COM1 set to invalid interrupt	
1201 - 11	COM2 set to invalid interrupt	
1201 - 12	DRIVER/RECEIVER control signal failure	

Error Code	Description	Recommended Action
1201 - 13	UART control signal interrupt failure	The following steps apply to error codes 1201 - xx through 1210 - xx:
1201 - 14	DRIVER/RECEIVER data failure	1. Refer to the modem documentation for SETUP procedures.
1201 - 15	Modem detection failure	2. Check the modem line.
1201 - 16	Modem ROM; checksum failure	3. Replace the modem and retest.
1201 - 17	Tone detection failure	
1202 - xx	Modem Internal Test	

1202 - 01 Modem timed out waiting for SYNC (local loopback mode)

1202 - 02 Modem timed out waiting for response (local loopback mode)

1202 - 03 Modem exceeded data block retry limit (local loopback mode)

1202 - 11 Modem timed out waiting for SYNC (analog loopback originate mode)

1202 - 12 Modem timed out waiting for modem response (analog loopback originate mode)

Error Code	Description	Recommended Action
1202 - 13	Modem exceeded data block retry limit (analog loopback originate mode)	The following steps apply to error codes 1201 - xx through 1210 - xx: 1. Refer to the modem documentation for SETUP procedures. 2. Check the modem line. 3. Replace the modem and retest.
1202 - 21	Modem timed out waiting for SYNC (analog loopback answer mode)	
1202 - 22	Modem timed out waiting for modem response (analog loopback answer mode)	
1202 - 23	Modem exceeded data block retry limit (analog loopback answer mode)	

1203 - xx Modem External Termination Test

1203 - 01 Modem external TIP/RING failure

1203 - 02 Modem external DATA TIP/RING failure

1203 - 03 Modem line termination failure

1204 - xx Modem Auto Originate Test

1205 - xx Modem Auto Answer Test

1206 - xx Dial Multifrequency Tone Test

Error Code	Description	Recommended Action
1210 - xx	Modem Direct Connect Test	The following steps apply to error codes 1201 - xx through 1210 - xx:

1210 - 01	Modem timed out waiting for SYNC	1. Refer to the modem documentation for SETUP procedures.
1210 - 02	Modem timed out waiting for response	2. Check the modem line.
1210 - 03	Modem exceeded data block retry limit	3. Replace the modem and retest.
1210 - 04	RCV exceeded carrier lost limit	
1210 - 05	XMIT exceeded carrier lost limit	
1210 - 06	Timeout waiting for dial tone	
1210 - 07	Dial number string too long	
1210 - 08	Modem timed out waiting for remote response	
1210 - 09	Modem exceeded maximum redial limit	
1210 - 10	Line quality prevented remote connection	
1210 - 11	Modem timed out waiting for remote connection	
1210 - 17	Tone detection failure	

Table 3-9. Fixed Disk Drive Test Error Codes

Error Code	Description	Recommended Action
1700 - xx	Fixed disk ID drive types test failed	The following steps apply to error codes 1700 - xx through 1799 - xx:
1701 - xx	Fixed disk format test failed	1. Replace the fixed disk drive signal and power cables and retest.
1702 - xx	Fixed disk read test failed	2. Replace the fixed disk drive and retest.
1703 - xx	Fixed disk write/read/ compare test failed	3. Replace the system board and retest.
1704 - xx	Fixed disk random seek test failed	
1705 - xx	Fixed disk controller test failed	

Error Code	Description	Recommended Action
1706 - xx	Fixed disk drive ready test failed	
1707 - xx	Fixed disk drive recalibrate test failed	
1708 - xx	Fixed disk format bad track test failed	
1709 - xx	Fixed disk reset controller test failed	The following steps apply to error codes 1700 - xx through 1799 - xx: 1. Replace the fixed disk drive signal and power cables and retest. 2. Replace the fixed disk drive and retest. 3. Replace the system board and retest.
1710 - xx	Fixed disk park head test failed	
1714 - xx	Fixed disk file write test failed	
1715 - xx	Fixed disk head select test failed	
1716 - xx	Fixed disk conditional format test failed	
1717 - xx	Fixed disk Error Correction Detection (ECC) test failed	
1719 - xx	Fixed disk drive power mode test	
1719 - 01	Exceeded maximum soft error limit	

Error Code	Description	Recommended Action
1719 - 02	Exceeded maximum hard error limit	The following steps apply to error codes 1700 - xx through 1799 - xx: 1. Replace the fixed disk drive signal and power cables and retest. 2. Replace the fixed disk drive and retest. 3. Replace the system board and retest.
1719 - 03	Previously exceeded maximum soft error limit	
1719 - 04	Previously exceeded maximum hard error limit	
1719 - 05	Failed to reset controller	
1719 - 06	Fatal error while reading	
1719 - 07	Fatal error while writing	
1719 - 08	Failed compare of write/read/compare	

1719 - 09 Failed to format a track

1719 - 10 Failed sector wrap test

1719 - 19 Controller failed to deallocate bad sector

Error Code	Description	Recommended Action
1719 - 40	Failed cylinder 0	The following steps apply to error codes 1700 - xx through 1799 - xx:
1719 - 41	Drive not ready	1. Replace the fixed disk drive signal and power cables and retest.
1719 - 42	Recalibrate failed	2. Replace the fixed disk drive and retest.
1719 - 43	Failed to format bad track	3. Replace the system board and retest.
1719 - 44	Failed fixed disk controller diagnostics	
1719 - 45	Failed to get drive parameters from ROM	
1719 - 46	Invalid drive parameters found in ROM	
1719 - 47	Failed to park heads	
1719 - 48	Failed to move disk table to RAM	
1719 - 49	Failed to read media in file write test	

Error Code	Description	Recommended Action
1719 - 50	Failed file I/O write test	The following steps apply to error codes 1700 - xx through 1799 - xx:
1719 - 51	Failed file I/O read test	1. Replace the fixed disk drive signal and power cables and retest.
1719 - 52	Failed file I/O compare test	2. Replace the fixed disk drive and retest.
1719 - 53	Failed drive/head register test	3. Replace the system board and retest.
1719 - 54	Failed digital input register test	
1719 - 55	Failed cylinder 1	
1719 - 56	Fixed disk drive controller	

Error Code	Description	Recommended Action
	RAM diagnostics failed	
1719 - 57	Fixed disk drive controller to drive test failed	
1719 - 58	Failed to write sector buffer	
1719 - 59	Failed to read sector buffer	
1719 - 60	Failed to compare sector buffer	
1719 - 61	Failed uncorrectable ECC error	The following steps apply to error codes 1700 - xx through 1799 - xx: 1. Replace the fixed disk drive signal and power cables and retest. 2. Replace the fixed disk drive and retest. 3. Replace the system board and retest.
1719 - 62	Failed correctable ECC error	
1719 - 63	Failed soft error rate	
1719 - 65	Exceeded maximum bad sector per track	
1719 - 66	Failed initial drive parameter	
1719 - 67	Failed to write long	
1719 - 68	Failed to read long	
1719 - 69	Failed to read drive size from controller	
1719 - 70	Failed translate mode	
1719 - 71	Failed nontranslated mode	
1719 - 72	Bad track limit exceeded	
1719 - 73	Previously exceeded bad track limit	
1719 - 74	Failed sleep mode	
1719 - 75	Failed idle mode	
1719 - 76	Failed standby mode	
1719 - 77	Failed to change mode	
1719 - 78	Exceeded spinup time limit	

Table 3-10. Tape Drive Test Error Codes

Error Code	Description	Recommended Action
1900 - xx	Tape ID failed	The following steps apply to error codes 1901 - xx through 1906 - xx: 1. Replace the tape cartridge and retest. 2. Check and/or replace the signal cable and retest. 3. Replace the tape drive and retest. 4. Replace the system board and retest.
1901 - xx	Tape servo write failed	
1902 - xx	Tape format failed	
1903 - xx	Tape drive sensor test failed	
1904 - xx	Tape BOT/EOT test failed	
1906 - xx	Tape write/read/compare test failed	
1906 - 01	Drive not installed	
1906 - 02	Cartridge not installed	
1906 - 03	Tape motion error	
1906 - 04	Drive busy error	
1906 - 05	Track seek error	

Error Code	Description	Recommended Action
1906 - 06	Tape write protected error	The following steps apply to error codes 1901 - xx through 1906 - xx: 1. Replace the tape cartridge and retest. 2. Check and/or replace the signal cable and retest. 3. Replace the tape drive and retest. 4. Replace the system board and retest.
1906 - 07	Tape already servo written	
1906 - 08	Unable to servo write	
1906 - 09	Unable to format	
1906 - 10	Format mode error	
1906 - 11	Drive recalibration error	
1906 - 12	Tape not servo written	
1906 - 13	Tape not formatted	
1906 - 14	Drive timeout error	
1906 - 15	Sensor error flag	
1906 - 16	Block locate (block ID) error	
1906 - 17	Soft error limit exceeded	
1906 - 18	Hard error limit exceeded	
1906 - 19	Write (probably ID) error	

1906 - 20	NEC fatal error	
1906 - 21	Received servo pulses second time but not first	

Error Code	Description	Recommended Action
1906 - 22	Never got to EOT after servo check	The following steps apply to error codes 1901 - xx through 1906 - xx: 1. Replace the tape cartridge and retest. 2. Check and/or replace the signal cable and retest. 3. Replace the tape drive and retest. 4. Replace the system board and retest.
1906 - 23	Change line not set	
1906 - 24	Write protect error	
1906 - 25	Unable to erase cartridge	
1906 - 26	Cannot identify drive	
1906 - 27	Drive not compatible with controller	
1906 - 28	Format gap error	
1906 - 30	Exception bit not set	
1906 - 31	Unexpected drive status	
1906 - 32	Device fault	
1906 - 33	Illegal command	
1906 - 34	No data detected	
1906 - 35	Power on reset occurred	
1906 - 91	Power lost during test	

Table 3-11. Video Test Error Codes

Error Code	Description	Recommended Action
2402 - 01	Video memory test failed	The following steps apply to error codes 2402 - xx through 2416 - xx: Replace the system board and retest.
2403 - 01	Video attribute test failed	
2404 - 01	Video character set test failed	
2405 - 01	Video 80 x 25 mode 9 x 14 character cell test failed	
2406 - 01	Video 80 x 25 mode 8 x 8 character cell test failed	

2407 - 01	Video 40 x 25 mode test failed	
2408 - 01	Video 320 x 200 mode color set 0 test failed	
2409 - 01	Video 320 x 200 mode color set 1 test failed	
2410 - 01	Video 640 x 200 mode test failed	
2411 - 01	Video screen memory page test failed	
2412 - 01	Video gray scale test failed	
2414 - 01	Video white screen test failed	
2416 - 01	Video noise pattern test failed	

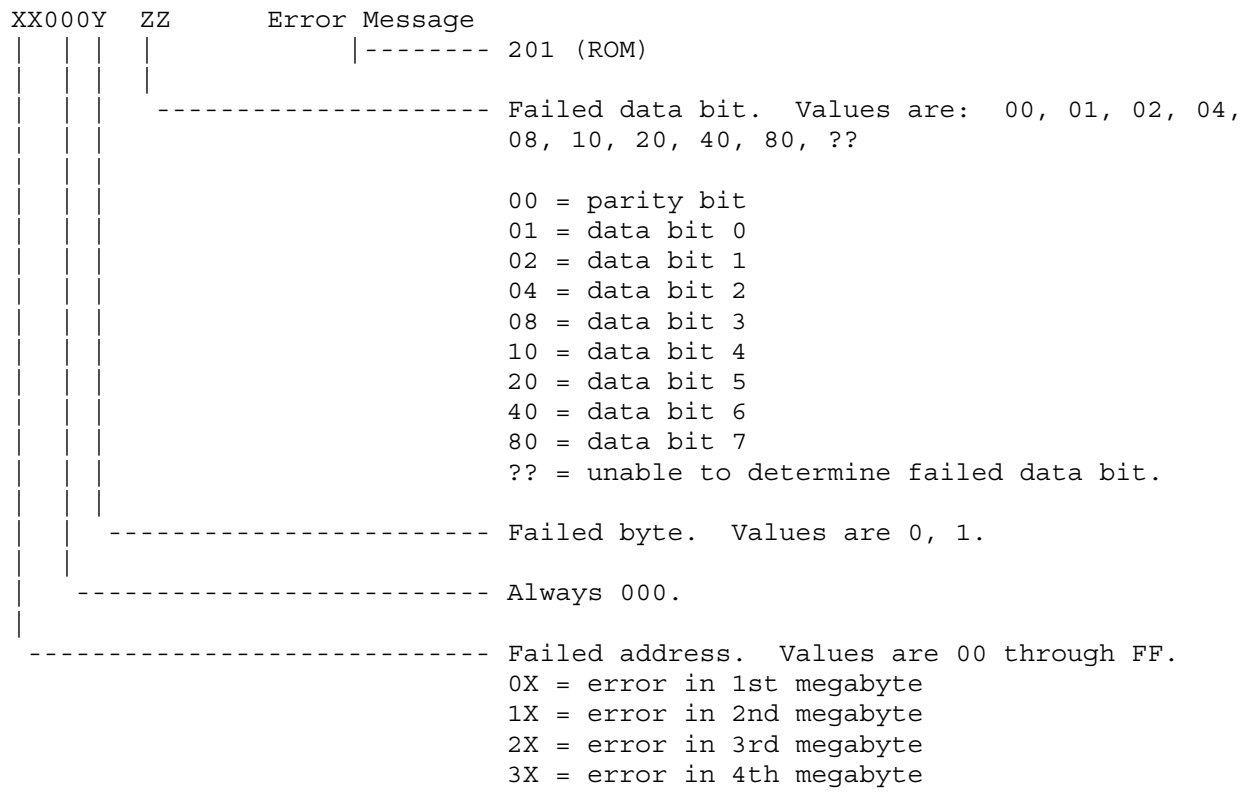
Error Code	Description	Recommended Action
2418 - 01	Video memory test failed	The following steps apply to error codes 2418 - xx through 2425 - xx:
2418 - 02	Video shadow RAM test failed	
		Replace the system board and retest.
2419 - 01	Video ROM checksum test failed	
2420 - 01	Video attribute test failed	
2421 - 01	Video 640 x 200 graphics mode test failed	
2422 - 01	Video 640 x 350 16 color set test failed	
2423 - 01	Video 640 x 350 64 color set test failed	
2424 - 01	Video monochrome text mode test failed	
2425 - 01	Video monochrome graphics mode test failed	
2431 - xx	Video 640 x 480 graphics mode test failed	Replace the system board and retest.
2432 - xx	Video 320 x 200 graphics mode test failed	

Chapter 3.3 MEMORY ERROR CODES

Memory error codes appear when the system detects a memory fault during the Power On Self Test (201 or 203 error codes) or as a result of a diagnostic test. The TEST programs attempt to isolate the memory fault to a specific location, then generate a memory error code.

The memory error code points to a specific memory address. The physical location of the memory address depends on the number and type of memory boards installed and the type of memory device used.

Memory error codes are displayed in an eight digit format (XX000Y ZZ). The XX and Y alphanumeric codes are like key identification points for defective memory isolation.



Chapter 4 - Illustrated Parts Catalog

INTRODUCTION

This chapter provides illustrated parts breakdown and identifies the spare parts for the standard features of both the COMPAQ SLT 386s/20 and COMPAQ SLT/286 Personal Computers.

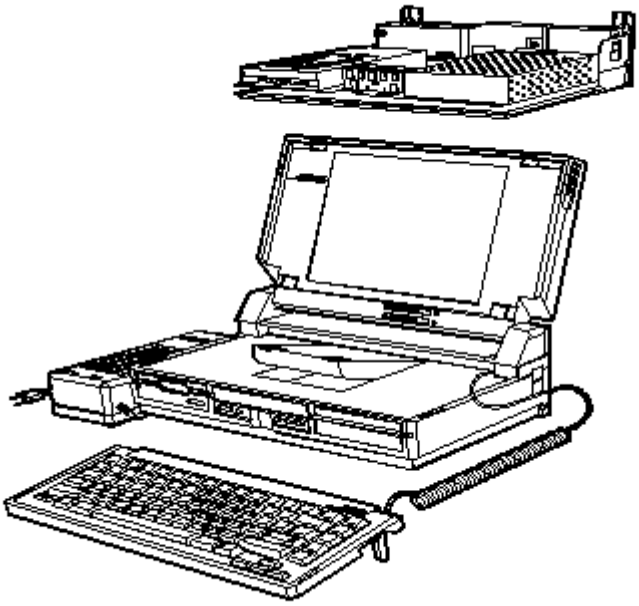


Figure 4-1. COMPAQ SLT 386s/20 and COMPAQ SLT/286 Personal Computers

Chapter 4.1 ILLUSTRATED PARTS BREAKDOWN

System Unit

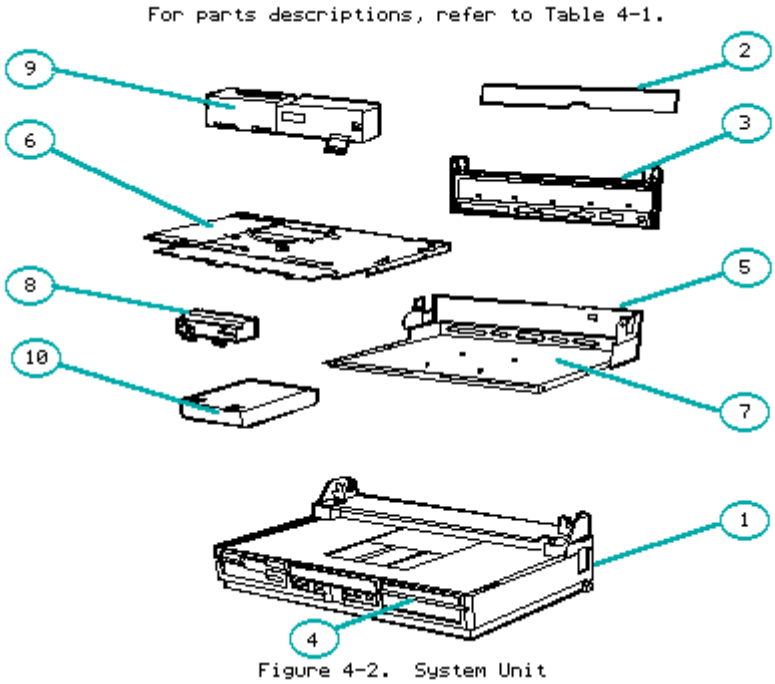


Figure 4-2. System Unit

Table 4-1. System Unit

Description	Part Number
System Unit Assembly	
1. Main Housing (plastics, including handle and fixed disk drive fascia insert)	108436-001
2. Rear Connector Cover	110622-001 (replaced by 110602-001)
3. Rear Bezel (SLT/286)	110527-001
4. Rear Bezel (SLT 386s/20)	118376-001
Metal Covers	118375-001
5. Metal Chassis (bottom)	
6. Drive Mounting Plate	
7. Processor Ground Pan Shield	
8. Memory Shield	
Memory Shield (COMPAQ SLT/286 only)	110140-001 (replaced by 110140-002)
9. Internal Power Supply	110361-001
10. Battery Pack	110351-001

VGA Backlit Display

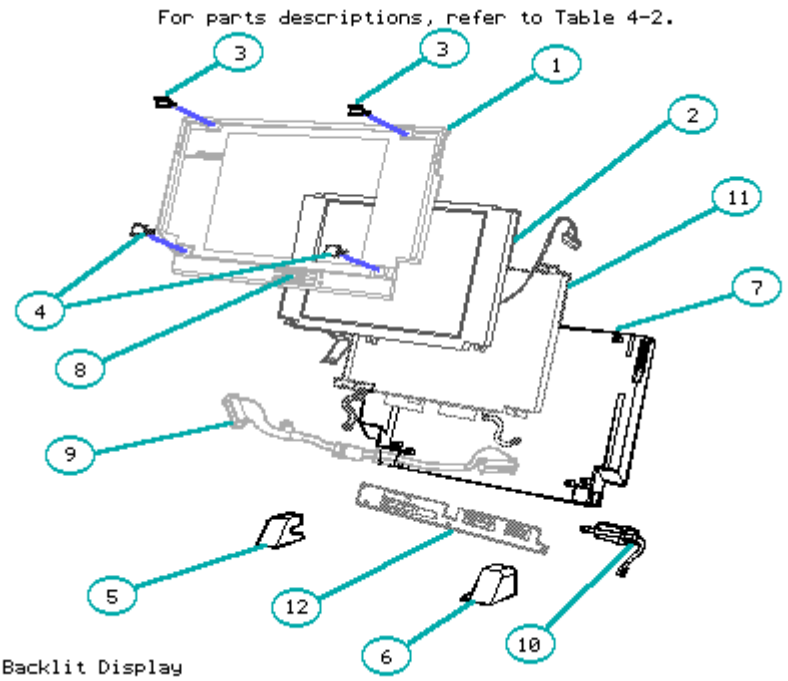


Figure 4-3. VGA Backlit Display

Table 4-2. VGA Backlit Display

Description	Part Number
1. Display Bezel	118372-001
Screw Covers, Flat *	
Screw Covers, Contoured *	
2. LCD Display Panel	110451-001
Display Plastic Parts	118370-001
3. Cosmetic Screw Covers, Contoured	
4. Cosmetic Screw Covers, Flat	
5. Left Hinge Cover	
6. Right Hinge Cover	
7. Display Enclosure (includes latches)	110508-001
8. Potentiometer Slide Knob	
9. Left Hinge (includes display signal cable)	110450-001
10. Right Hinge (includes display ground cable)	110449-001
11. Display Shield Assembly with Ground Cables (2)	130762-001
12. Backlight Inverter Board	110452-001

* Not shown in Figure 4-3.

Mass Storage Devices

For parts descriptions, refer to Table 4-3.

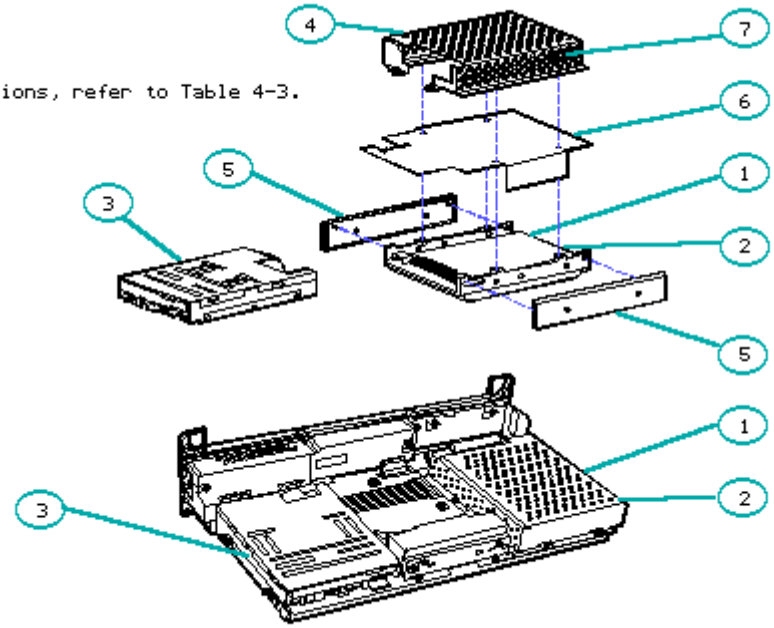


Figure 4-4. Mass Storage Devices

Table 4-3. Mass Storage Devices

Description	Part Number
1. COMPAQ SLT 386s/20	
120 Megabyte Fixed Disk Drive	118360-001
60 Megabyte Fixed Disk Drive	118355-001
2. COMPAQ SLT/286	
40 Megabyte Fixed Disk Drive	110358-001 (replaced by 142365-001)
100 Megabyte Fixed Disk Drive	142365-001
3. 3 1/2 Inch 1.44 Megabyte Diskette Drive	110356-001
Fixed Disk Drive Assembly	118367-001
4. Fixed Disk Drive Enclosure	
5. Fixed Disk Drive Shock Mounts	
6. Flexible Ground Shield	
7. Ground Clip	
8. Screws	

Cables

For parts descriptions, refer to Table 4-4.

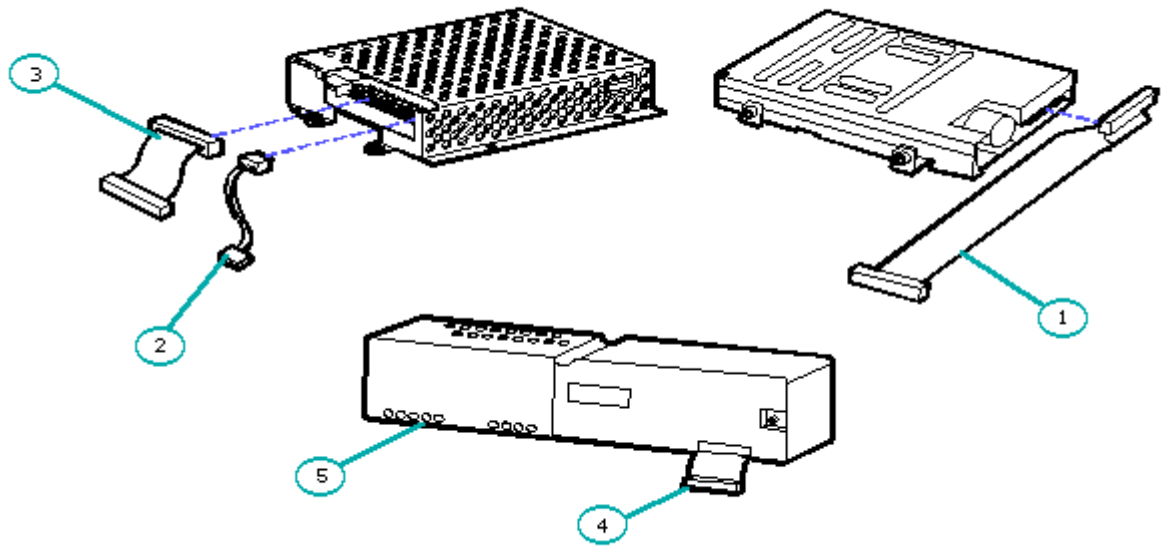


Figure 4-5. Cables

Table 4-4. Cables

Description	Part Number
Cable Kit	118368-001
1. Single Diskette Drive Signal/Power Cable	
2. Fixed Disk Drive Power Cable	
3. Fixed Disk Drive Signal Cable	
4. Power Supply Cable	
5. Power Supply Switch Cable	

System Boards

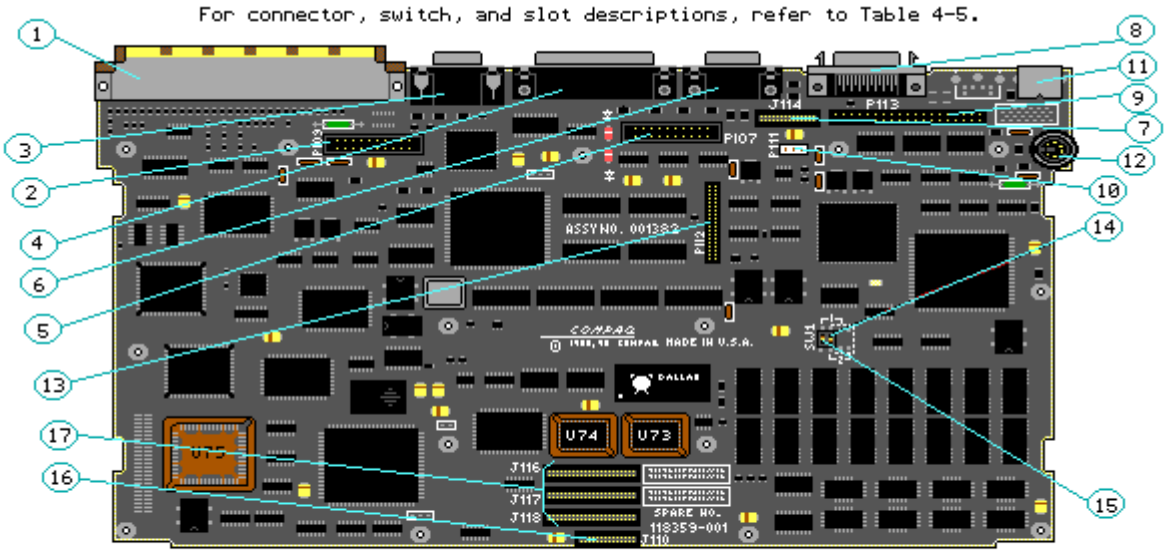


Figure 4-6. COMPAQ SLT 386s/20 System Board (Assy No. 001382)

Table 4-5. COMPAQ SLT 386s/20 System Board Connectors

1.	Desktop Expansion Base/CD-ROM Adapter Connector
2.	LCD Connector
3.	VGA Monitor Connector
4.	Parallel Connector
5.	System Power Connector
6.	Serial Connector
7.	Second Serial/Modem Connector
8.	External Storage Module Connector
9.	Fixed Disk Drive Connector
10.	Fixed Disk Drive Power Connector
11.	External Keyboard Connector
12.	Internal Keyboard Connector
13.	Diskette Drive Connector
14.	Password Switch
15.	Fail Safe Timer Switch
16.	LED Indicator Connector
17.	Memory Expansion Slots

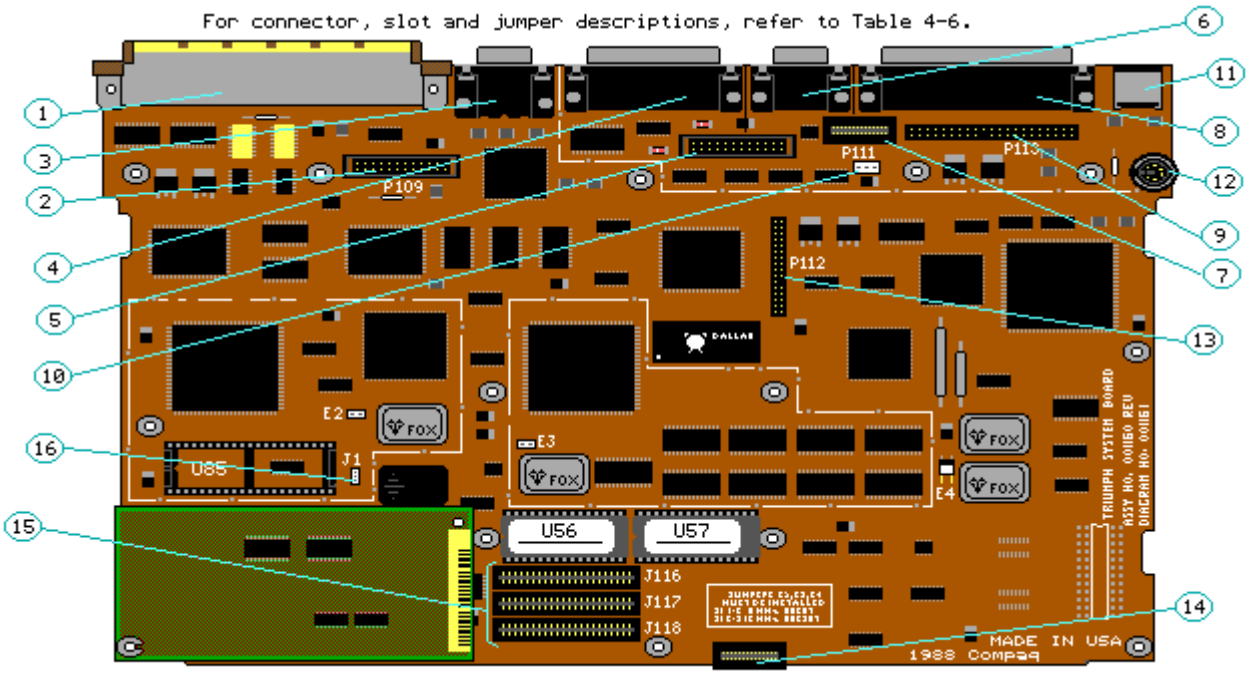


Figure 4-7. COMPAQ SLT/286 System Board (Assy No. 001160)

NOTE: The COMPAQ SLT/286 system board (Assy No. 001160) comes with a memory module (not shown in this illustration) mounted on the system board. When returning the COMPAQ SLT/286 system board (001160), the memory module must be attached.

Table 4-6. COMPAQ SLT/286 System Board Connectors

1.	Desktop Expansion Base Connector
2.	LCD Connector
3.	VGA Monitor Connector
4.	Parallel Connector
5.	System Power Connector
6.	Serial Connector
7.	Second Serial/Modem Connector
8.	External Storage Module Connector
9.	Fixed Disk Drive Connector
10.	Fixed Disk Drive Power Connector
11.	External Keyboard Connector
12.	Internal Keyboard Connector
13.	Diskette Drive Connector
14.	LED Indicator Connector
15.	Memory Expansion Slots
16.	Coprocessor Jumper

Standard Boards

For parts descriptions, refer to Table 4-7.

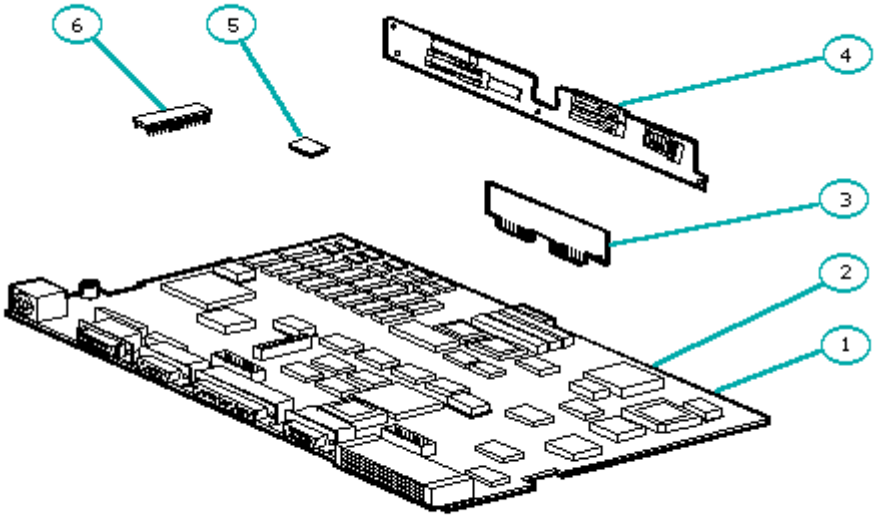


Figure 4-8. Standard Boards

Table 4-7. System and Standard Board Assemblies

Description	Part Number
1. COMPAQ SLT 386s/20	
System Board (including processor ground pan shield)	118359-001
2. COMPAQ SLT/286	
System Board	110355-001
Processor Ground Pan Shield	110445-001
3. LED Indicator Board	
COMPAQ SLT 386s/20	118353-001
COMPAQ SLT/286	110453-001
4. Backlight Inverter Board	110452-001
5. COMPAQ SLT 386s/20	
System ROMs	118402-001
6. COMPAQ SLT/286	
System ROM	110542-001

AC Adapter

For parts descriptions, refer to Table 4-8.

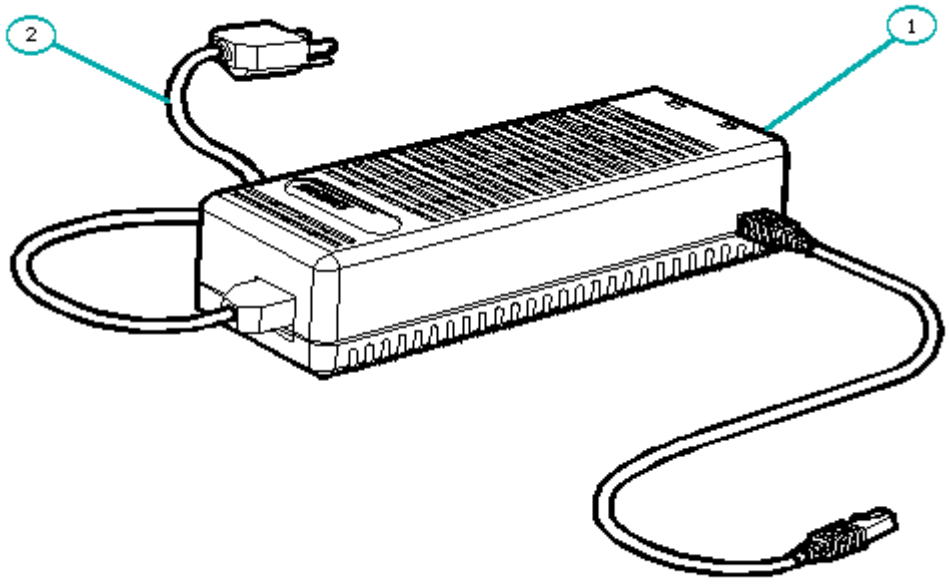


Figure 4-9. AC Adapter

Table 4-8. AC Adapter

Description	Part Number
1. AC Adapter	
COMPAQ SLT 386s/20	118460-001
COMPAQ SLT/286	110353-001
2. Power Cord	110543-001

Laptop Enhanced Keyboard

For parts descriptions, refer to Table 4-9.

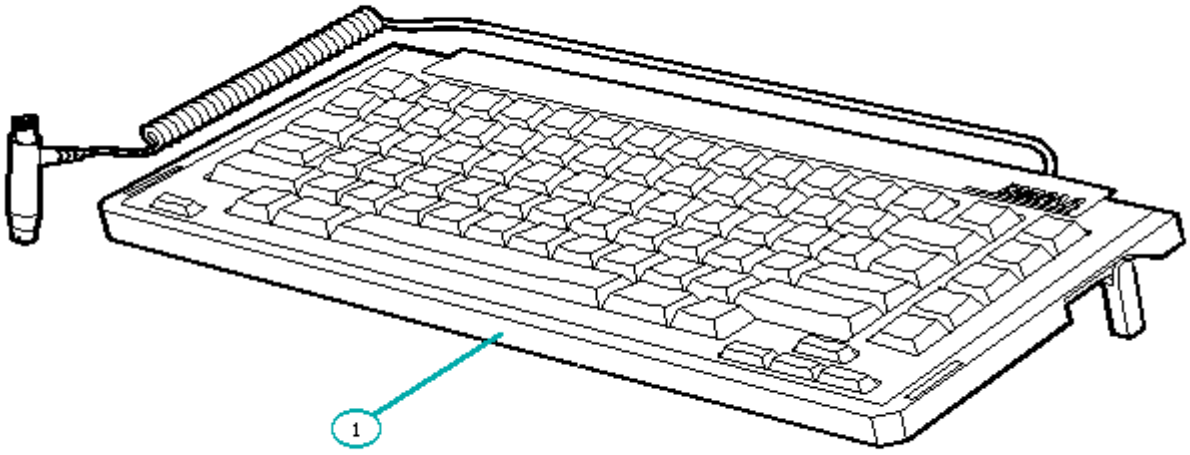


Figure 4-10. Laptop Enhanced Keyboard

Table 4-9. Laptop Enhanced Keyboards

Description	Part Number
COMPAQ SLT 386s/20 Laptop Enhanced Keyboards	
1. U.S. English Laptop Enhanced Keyboard	118448-001
2. UK English Laptop Enhanced Keyboard	118449-001 *
3. German Laptop Enhanced Keyboard	118450-001 *
4. French Laptop Enhanced Keyboard	118451-001 *
5. Italian Laptop Enhanced Keyboard	118452-001 *
6. Spanish Laptop Enhanced Keyboard	118453-001 *
7. Danish Laptop Enhanced Keyboard	118454-001 *
8. Norwegian Laptop Enhanced Keyboard	118456-001 *
9. Swedish/Finnish Laptop Enhanced Keyboard	118459-001 *
10. Swiss Laptop Enhanced Keyboard	118455-001 *
11. French Canadian Laptop Enhanced Keyboard	118458-001 *
12. Belgian Laptop Enhanced Keyboard	118457-001 *
13. Portuguese Laptop Enhanced Keyboard	118463-001 *
14. Turkish Laptop Enhanced Keyboard	118464-001 *
15. Greek Laptop Enhanced Keyboard	118465-001 *
16. Latin American Laptop Enhanced Keyboard	118466-001 *
17. Arabic Laptop Enhanced Keyboard	118467-001 *
COMPAQ SLT/286 Laptop Enhanced Keyboards	
18. U.S. English Laptop Enhanced Keyboard	110354-001
19. UK English Laptop Enhanced Keyboard	110517-001 *
20. German Laptop Enhanced Keyboard	110516-001 *
21. French Laptop Enhanced Keyboard	110515-001 *
22. Italian Laptop Enhanced Keyboard	110514-001 *
23. Spanish Laptop Enhanced Keyboard	110513-001 *
24. Danish Laptop Enhanced Keyboard	110512-001 *
25. Norwegian Laptop Enhanced Keyboard	110511-001 *
26. Swedish/Finnish Laptop Enhanced Keyboard	110510-001 *
27. Swiss Laptop Enhanced Keyboard	110509-001 *
28. French Canadian Laptop Enhanced Keyboard	110674-001 *

29. Belgian Laptop Enhanced Keyboard	110855-001 *
30. Portuguese Laptop Enhanced Keyboard	110859-001 *
31. Turkish Laptop Enhanced Keyboard	110858-001 *
32. Greek Laptop Enhanced Keyboard	110857-001 *
33. Latin American Laptop Enhanced Keyboard	110856-001 *
34. Arabic Laptop Enhanced Keyboard	110854-001 *

* Not shown in Figure 4-10.

Chapter 4.2 SPARE PART NUMBERS

The following table provides a list of all of the spare part descriptions and part numbers for features of the COMPAQ 386s/20 and COMPAQ SLT/286 Personal Computers. Refer to the MAINTENANCE AND SERVICE GUIDE OPTIONS AND PERIPHERALS for spare part numbers to optional features.

Table 4-10. Spare Parts List

Description	Part Number
System Unit Assembly	
1. Main Housing (plastics, including handle and fixed disk drive fascia insert)	108436-001
2. Rear Connector Cover	110622-001 (replaced by 110602-001)
3. Rear Bezel (SLT/286)	110527-001
4. Rear Bezel (SLT 386s/20)	118376-001
Metal Covers Metal Chassis (bottom) Drive Mounting Plate Memory Shield	118375-001
Memory Shield (COMPAQ SLT/286 only)	110140-001 (replaced by 110140-002)
Internal Power Supply	110361-001
Battery Pack	110351-001
VGA Backlit Display Display Bezel Screw Covers, Flat Screw Covers, Contoured Potentiometer Slide Knobs	118372-001
LCD Display Panel	110451-001
Display Plastic Parts Cosmetic Screw Covers, Contoured Cosmetic Screw Covers, Flat Left Hinge Cover	118370-001

Right Hinge Cover	
Display Enclosure (includes latches)	110508-001
Left Hinge (includes display signal cable)	110450-001
Right Hinge (includes display ground cable)	110449-001
Display Shield Assembly (including ground cables [2])	130762-001
Mass Storage Devices	
COMPAQ SLT 386s/20	
120 Megabyte Fixed Disk Drive	118360-001
60 Megabyte Fixed Disk Drive	118355-001
COMPAQ SLT/286	
40 Megabyte Fixed Disk Drive	110358-001 (replaced by 142365-001)
100 Megabyte Fixed Disk Drive	142365-001
3 1/2 Inch 1.44 Megabyte Diskette Drive	110356-001
Fixed Disk Drive Assembly	118367-001
Fixed Disk Drive Enclosure	
Fixed Disk Drive Shock Mounts	
Flexible Ground Shield	
Ground Clip	
Screws	
Cables	118368-001
Single Diskette Drive Signal/Power Cable	
Fixed Disk Drive Power Cable	
Fixed Disk Drive Signal Cable	
Power Supply Cable	
Power Supply Switch Cable	
Standard Board Assemblies	
COMPAQ SLT 386s/20 System Board (including processor ground pan shield)	118359-001
System ROMs	118402-001
COMPAQ SLT/286 System Board	110355-001
System ROM	110542-001
System Board Insulator	110445-001
LED Indicator Board	
COMPAQ SLT 386s/20	118353-001
COMPAQ SLT/286	110453-001
Backlight Inverter Board	110452-001
Memory Options	
COMPAQ SLT 386s/20	
1 Megabyte Memory Board	118357-001
2 Megabyte Memory Board	118356-001
4 Megabyte Memory Board	118358-001
COMPAQ SLT/286	
1 Megabyte Memory Board	110355-001
4 Megabyte Memory Board	110863-001

AC Adapter	
COMPAQ SLT 386s/20	118460-001
COMPAQ SLT/286	110353-001
Power Cord	110543-001
COMPAQ SLT 386s/20 Laptop Enhanced Keyboards	
U.S. English Laptop Enhanced Keyboard	118448-001
UK English Laptop Enhanced Keyboard	118449-001
German Laptop Enhanced Keyboard	118450-001
French Laptop Enhanced Keyboard	118451-001
Italian Laptop Enhanced Keyboard	118452-001
Spanish Laptop Enhanced Keyboard	118453-001
Danish Laptop Enhanced Keyboard	118454-001
Norwegian Laptop Enhanced Keyboard	118456-001
Swedish/Finnish Laptop Enhanced Keyboard	118459-001
Swiss Laptop Enhanced Keyboard	118455-001
French Canadian Laptop Enhanced Keyboard	118458-001
Belgian Laptop Enhanced Keyboard	118457-001
Portuguese Laptop Enhanced Keyboard	118463-001
Turkish Laptop Enhanced Keyboard	118464-001
Greek Laptop Enhanced Keyboard	118465-001
Latin American Laptop Enhanced Keyboard	118466-001
Arabic Laptop Enhanced Keyboard	118467-001
COMPAQ SLT/286 Laptop Enhanced Keyboards	
U.S. English Laptop Enhanced Keyboard	110354-001
UK English Laptop Enhanced Keyboard	110517-001
German Laptop Enhanced Keyboard	110516-001
French Laptop Enhanced Keyboard	110515-001
Italian Laptop Enhanced Keyboard	110514-001
Spanish Laptop Enhanced Keyboard	110513-001
Danish Laptop Enhanced Keyboard	110512-001
Norwegian Laptop Enhanced Keyboard	110511-001
Swedish/Finnish Laptop Enhanced Keyboard	110510-001
Swiss Laptop Enhanced Keyboard	110509-001
French Canadian Laptop Enhanced Keyboard	110674-001
Belgian Laptop Enhanced Keyboard	110855-001
Portuguese Laptop Enhanced Keyboard	110859-001
Turkish Laptop Enhanced Keyboard	110858-001
Greek Laptop Enhanced Keyboard	110857-001
Latin American Laptop Enhanced Keyboard	110856-001
Arabic Laptop Enhanced Keyboard	110854-001
Documentation	
Service Aids Kit	105264-001
Maintenance and Service Guide	
COMPAQ SLT 386s/20 Personal Computer and COMPAQ SLT/286 Personal Computer Options and Peripherals Support Software	110707-001 120557-001 120576-001
Operations Guide	
COMPAQ SLT 386s/20 Personal Computer	118354-001
COMPAQ SLT/286 Personal Computer	110170-001 (replaced by 110704-001)
Technical Reference Guide	
COMPAQ SLT 386s/20 Personal Computer	118412-001

COMPAQ SLT/286 Personal Computer	110181-001 (replaced by 110705-001)
COMPAQ SERVICE QUICK REFERENCE GUIDE	106854-001
Software	
COMPAQ DIAGNOSTICS	
5 1/4 Inch 1.2 Megabyte Diskette	130645-001
5 1/4 Inch 360 Megabyte Diskette	109333-001
3 1/2 Inch 1.44 Megabyte Diskette	109728-001
COMPAQ User Programs	
5 1/4 Inch 1.2 Megabyte Diskette	130644-001
5 1/4 Inch 360 Megabyte Diskette	108289-001
3 1/2 Inch 1.44 Megabyte Diskette	109725-001

Table 4-11. Miscellaneous Hardware

Description	Part Number
Screw Kit	110544-001
Torx Screws (6-32 x 3/8 inch), pan head (10)	
Torx Screws (6-32 x 1 1/2 inch), pan head (10)	
Torx Screws (4-40 x 1/4 inch), pan head (10)	
Torx Screws (4-40 x 3/8 inch), pan head (10)	
Torx Screws (6-32 x 1/4 inch), pan head (10)	
Torx Screws (4-40 x 11/16 inch), pan head (10)	
Torx Screws Taptite (4-40 x 1/4 inch) (10)	
Torx Screws Taptite (4-40 x 3/4 inch) (10)	
Torx Screws Plastite (6-19 x 1/2 inch), pan head (10)	
Torx Screws Plastite (6-19 x 1 inch), pan head (10)	
Torx Screws (2-56 x 1/4 inch), pan head (10)	
Torx Screw Truss Head half depth drive (10)	

Chapter 5 - Removal and Replacement Procedures

INTRODUCTION

This chapter provides module level removal and replacement procedures for the COMPAQ SLT 386s/20 and COMPAQ SLT/286 Personal Computers.

After completing all removal and replacement procedures, run the DIAGNOSTICS program to verify that all components operate properly. Refer to the MAINTENANCE AND SERVICE GUIDE SUPPORT SOFTWARE for information on installing new or updated utilities when adding or removing options.

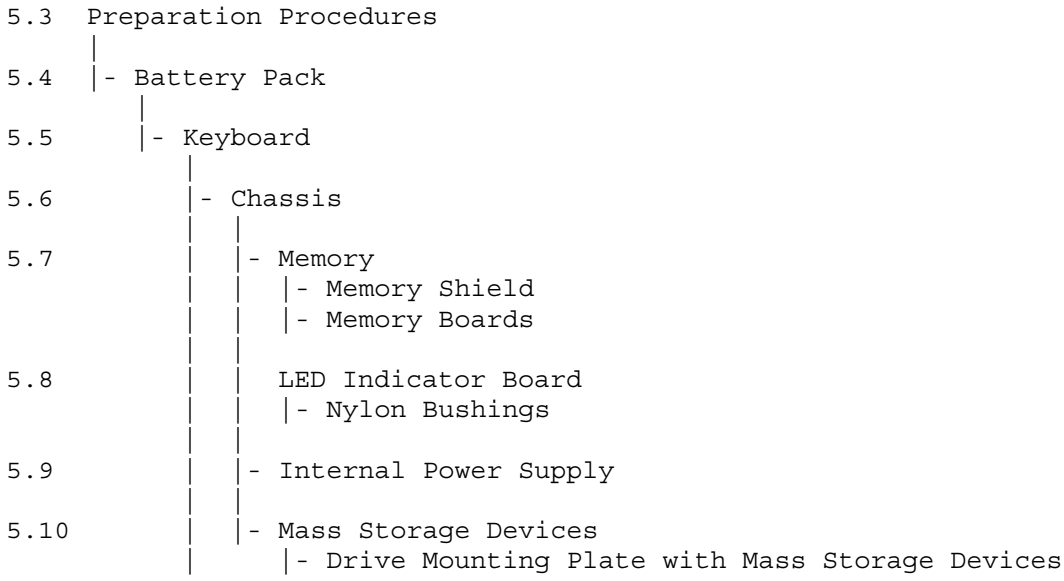
Chapter 5.1 TOOL AND SOFTWARE REQUIREMENTS

To service the COMPAQ SLT 386s/20 or COMPAQ SLT/286 Personal Computer, you need the following:

- Torx T-8 screwdriver
- Torx T-10 screwdriver
- Torx T-15 screwdriver
- 3/16 inch nutdriver
- Modem terminating plug
- 25 pin parallel interface loopback plug
- 9 pin serial interface loopback plug
- DIAGNOSTICS software
- PLCC Extractor

Chapter 5.2 DISASSEMBLY/ASSEMBLY SEQUENCE CHART

Use the following chart as a reference along with the procedures in this chapter for removing and reinstalling the subassemblies of the COMPAQ SLT 386s/20 and COMPAQ SLT/286 Personal Computers.



```
            |      |- Fixed Disk Drive
            |      |   |- Drive Enclosure
            |      |   |- Memory Shield
            |      |   |- Shock Mounts
            |      |- Diskette Drive
            |      |- Drive Mounting Plate
            |      |
5.11        |      |- System Board
            |
5.12        |- Rear Connector Cover
            |
5.13        |- Rear Bezel
            |
5.14        |- VGA Backlit Display
            |- LCD Panel
            |- Display Shield Assembly
            |- Display Backlight Inverter Board
            |- VGA Backlit Display Enclosure
            |- Hinges
```

Chapter 5.3 PREPARATION PROCEDURES

Before beginning the removal and replacement procedures, complete the following steps:

1. Turn off the computer.
2. Disconnect all external devices (printer, monitor, and so on) from the computer.
3. Disconnect the AC Adapter from its power source, then from the computer.

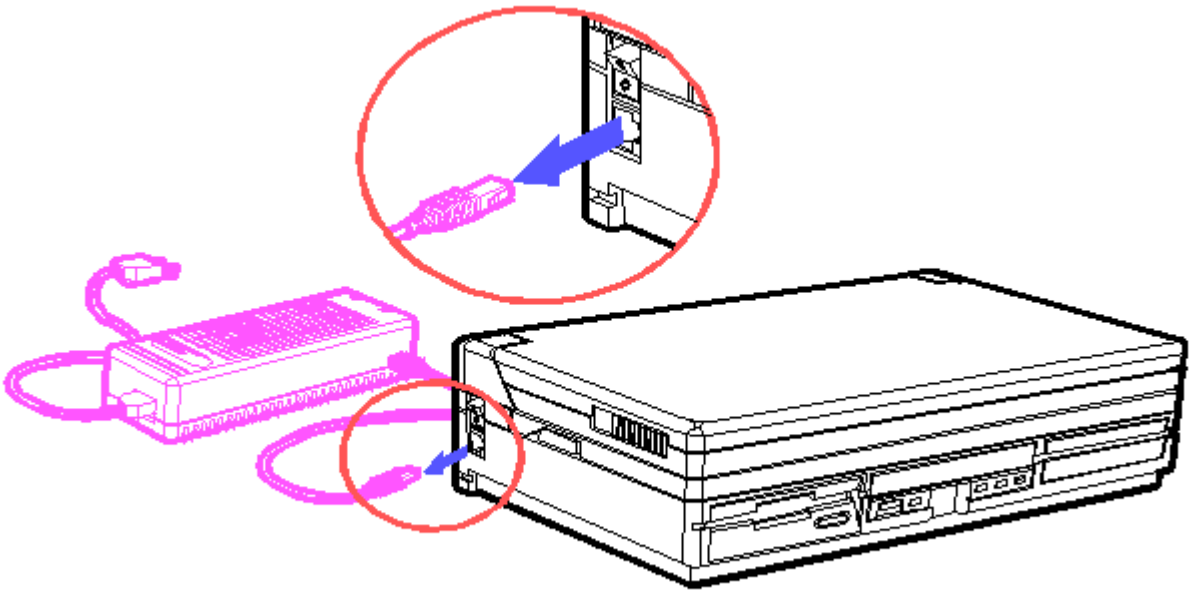


Figure 5-1. Disconnecting the AC Power

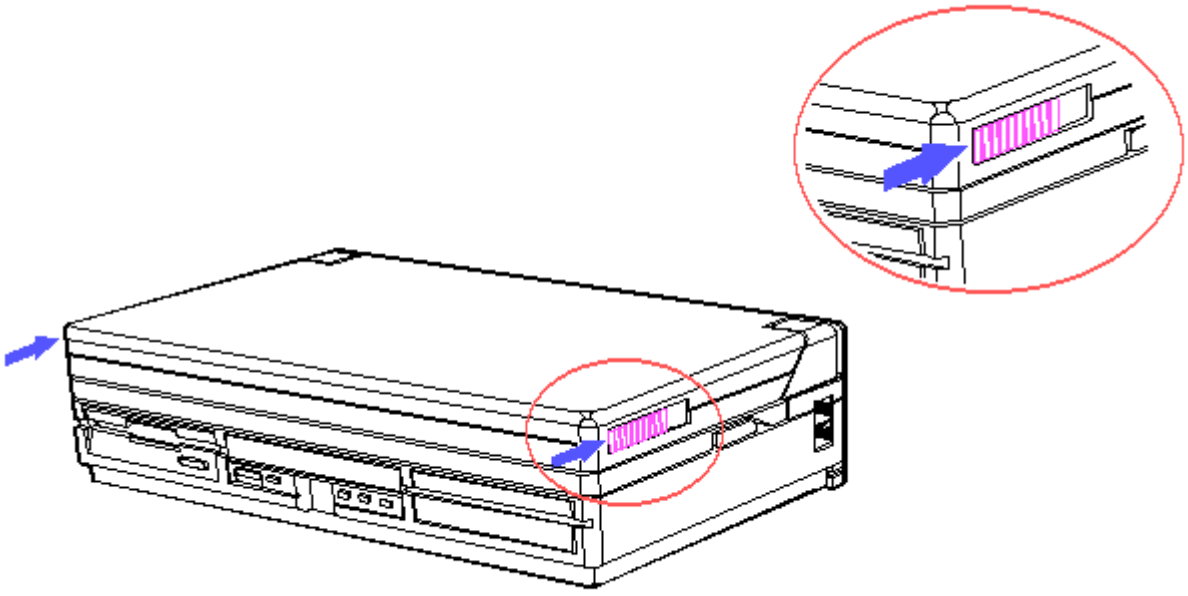


Figure 5-2. Opening the Computer

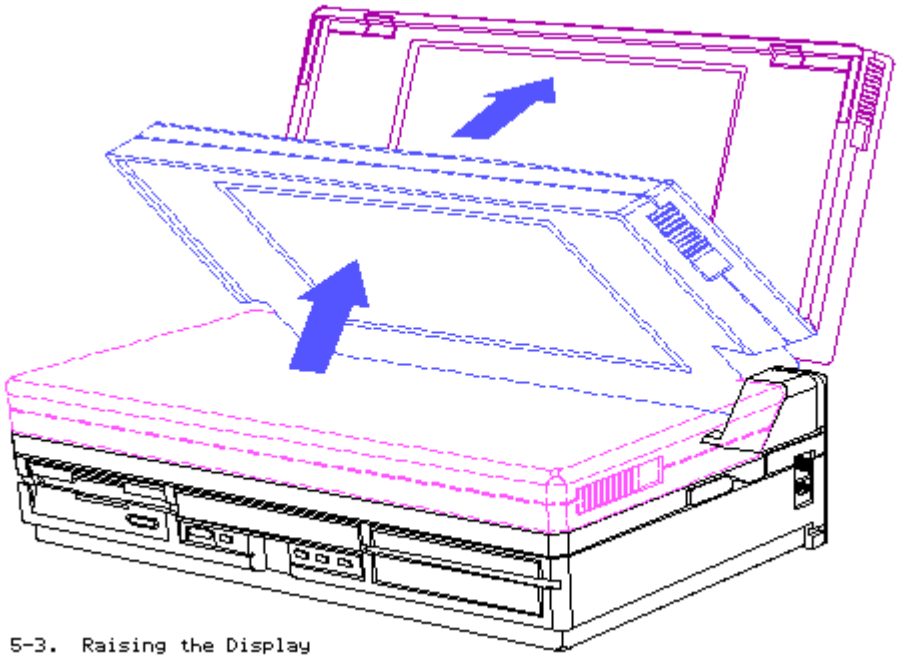


Figure 5-3. Raising the Display

CAUTION: STATIC ELECTRICITY CAN DAMAGE THE CMOS COMPONENTS. BE SURE THAT YOU ARE PROPERLY GROUNDED BEFORE PERFORMING ANY OF THE FOLLOWING PROCEDURES.

CAUTION: SCREWS IN THIS SYSTEM ARE NOT INTERCHANGEABLE. AS YOU REMOVE SCREWS, PLACE THEM WITH THE COMPONENT YOU REMOVED. DAMAGE MAY OCCUR IF YOU INSERT THESE SCREWS IN THE WRONG PLACE.

Chapter 5.4 BATTERY PACK

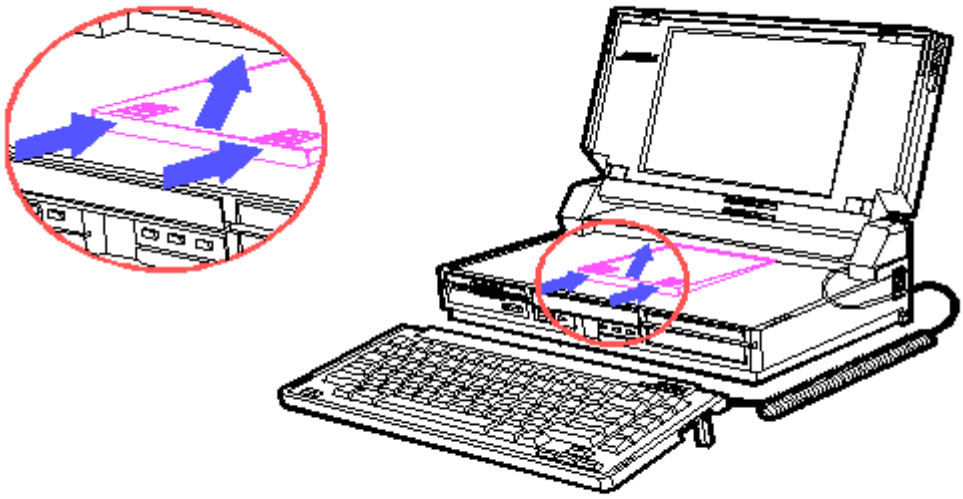


Figure 5-4. Releasing the Battery Pack

To replace the battery pack, place the new battery pack into the enclosure and press down. Slide the latches into place.

WARNING: DISPOSAL OF A BATTERY SHOULD BE DONE WITHIN COMPLIANCE OF LOCAL REGULATIONS OR RETURNED TO COMPAQ COMPUTER CORPORATION BY WAY OF ESTABLISHED PARTS RETURN METHODS.

Chapter 5.5 KEYBOARD

Remove the hinge covers by rolling back the top of the hinge cover, then lift it up.

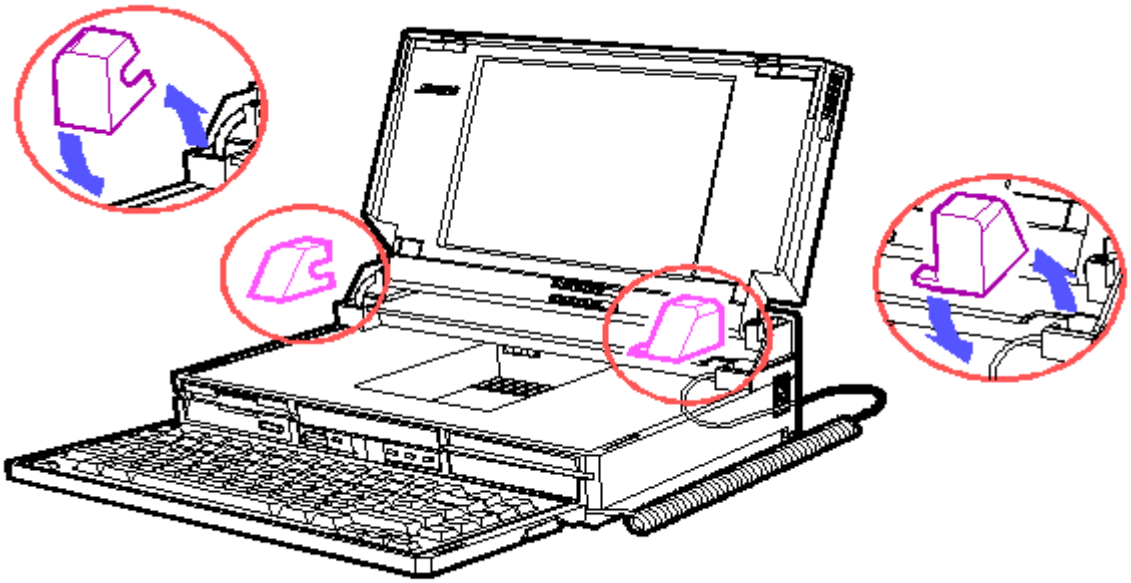


Figure 5-5. Removing the Hinge Covers

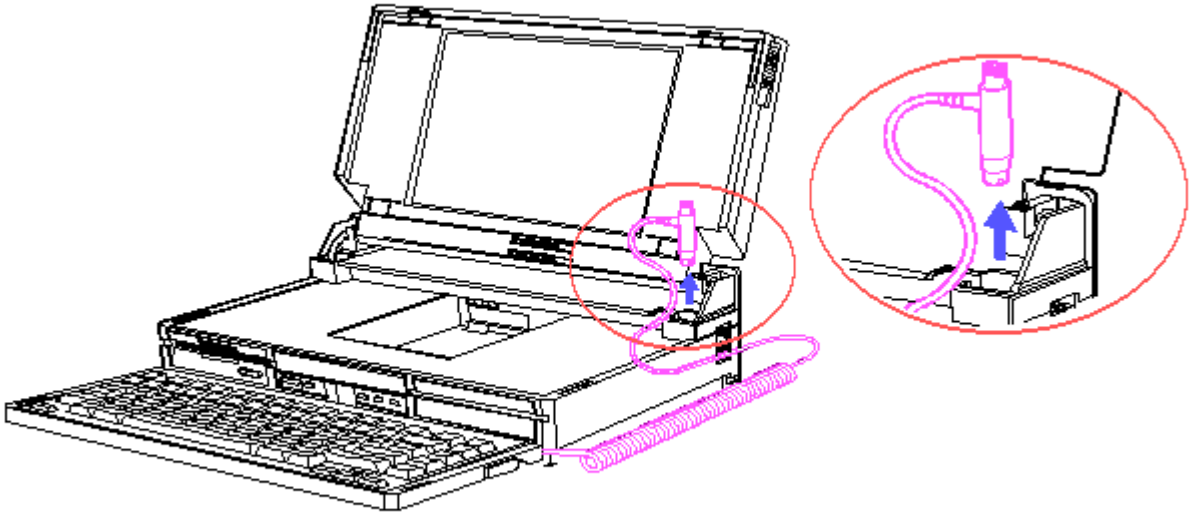


Figure 5-6. Disconnecting the Keyboard Cable

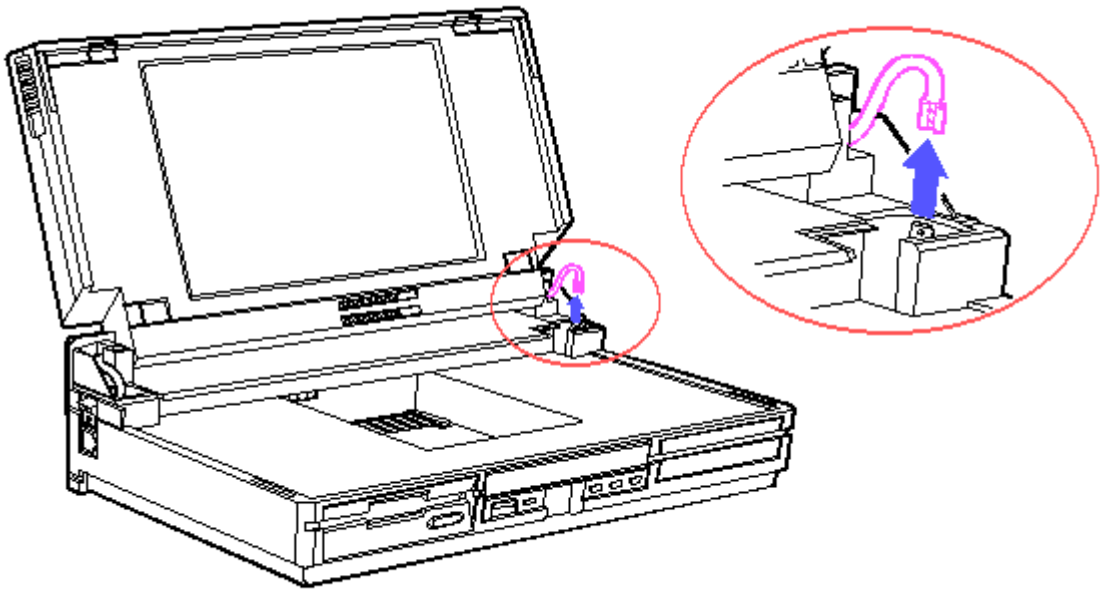


Figure 5-7. Disconnecting the Grounding Cable

To replace the keyboard, reverse the steps in the previous illustrations.

Chapter 5.6 CHASSIS

1. Remove the hinge covers and keyboard, section 5.5.

2. Remove the battery pack, section 5.4.

3. Lower the display.

4. Use the Torx T-15 screwdriver to remove the rear panel screws. The rear panel will contain two long screws in the middle and four short screws in the corners.

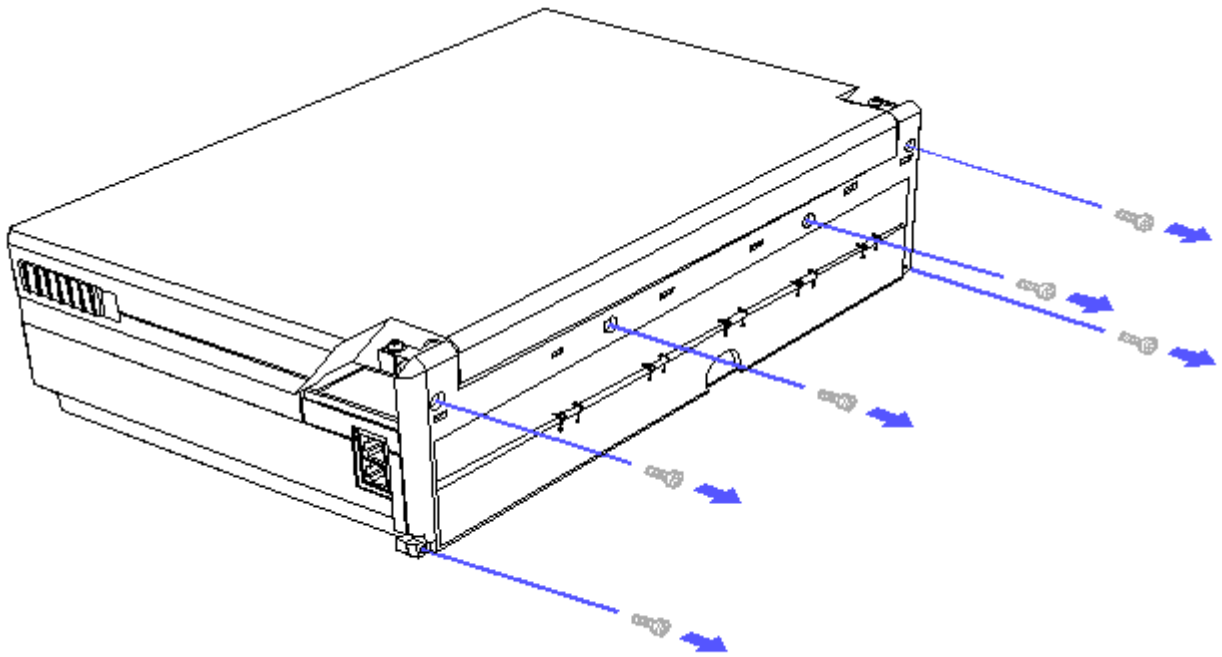


Figure 5-8. Removing the Screws from the Rear Panel

NOTE: To slide the chassis completely out of the computer, you need to loosen the display data ground cable screw, using a Torx T-10 screwdriver, and remove the pull tab on the display data cable from the system board (refer to Figure 5-45 and Figure 5-46).

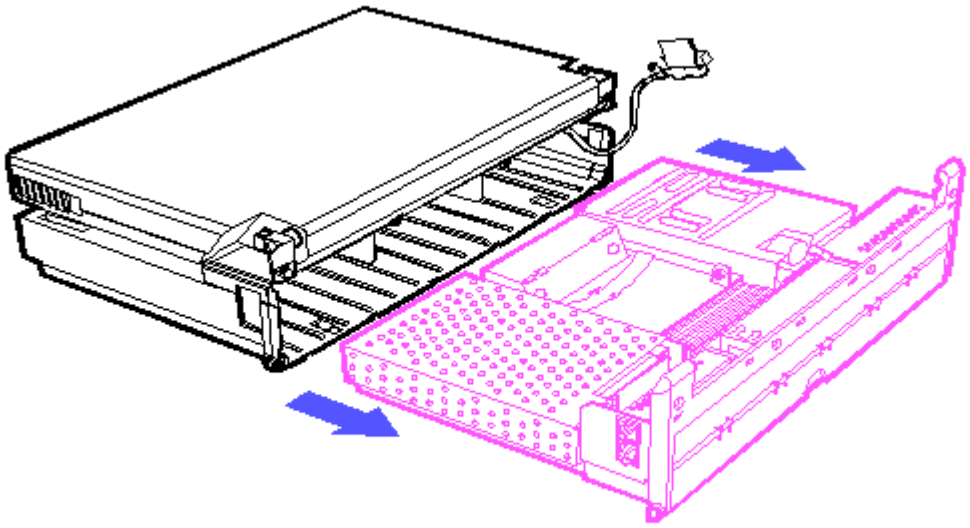


Figure 5-9. Removing the Chassis

To replace the chassis, reverse the steps in the previous illustrations.

Chapter 5.7 MEMORY

NOTE: Memory boards are not interchangeable between the COMPAQ SLT 386s/20

and COMPAQ SLT/286 Personal Computers.

1. Remove the keyboard, section 5.5.
2. Remove the battery pack, section 5.4.
3. Remove the chassis, section 5.6.

Removing the Memory Shield

Use a Torx T-10 screwdriver to remove the screws that secure the memory shield to the drive mounting plate.

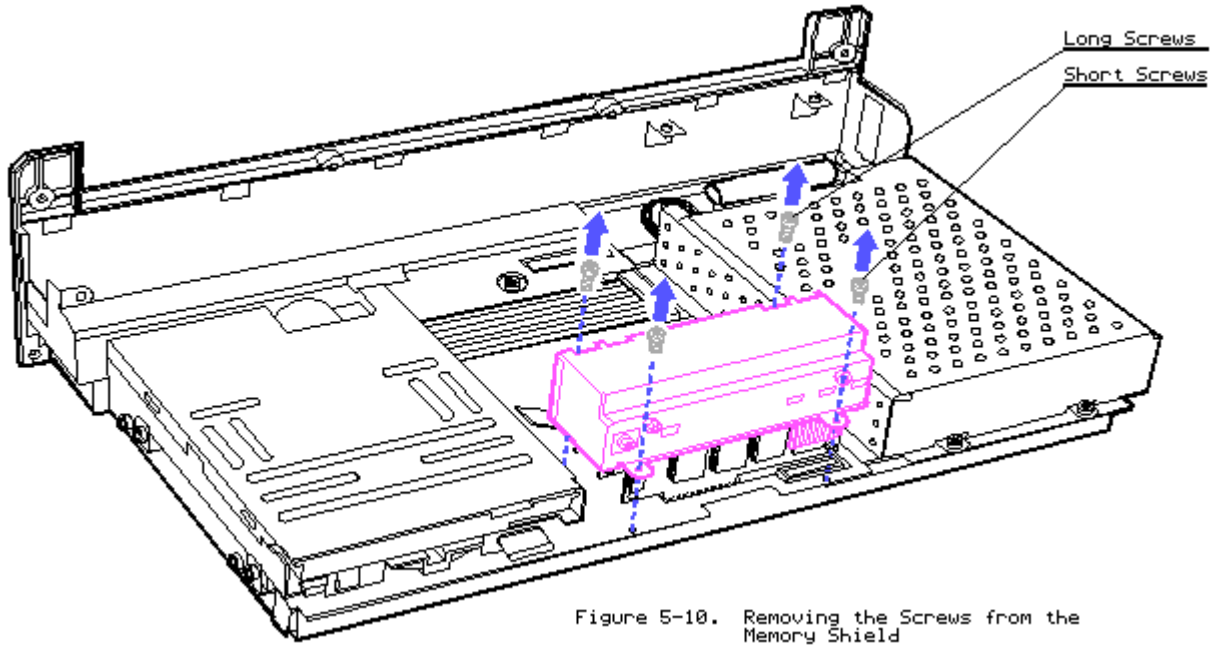


Figure 5-10. Removing the Screws from the Memory Shield

To replace the memory shield, reverse the step in the previous illustration.

Removing Optional Memory Boards

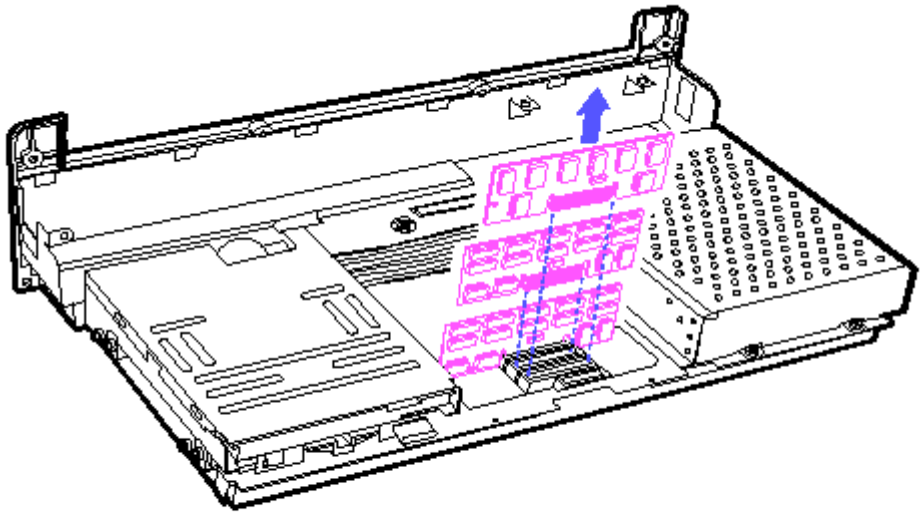


Figure 5-11. Removing the Memory Boards

To replace a memory board, reverse the step in the previous illustration.

Memory Expansion

COMPAQ SLT 386s/20 Personal Computer

Memory expansion alternatives for the COMPAQ SLT 386s/20 are shown in Table 5-1. Memory boards can be added in combinations of 1, 2, and 4 megabytes.

NOTE: The following table does not represent all possible configurations. Memory boards can be installed in any combination and in any available slot.

Table 5-1. Memory Expansion Alternatives - COMPAQ SLT 386s/20 Personal Computer

System Memory	Memory Board(s) Added to Slot 1, 2, or 3			Total Memory
2 MB	1 MB			3 MB
2 MB	2 MB			4 MB
2 MB	1 MB	2 MB		5 MB
2 MB	4 MB			6 MB
2 MB	1 MB	4 MB		7 MB
2 MB	2 MB	4 MB		8 MB
2 MB	1 MB	2 MB	4 MB	9 MB
2 MB	4 MB	4 MB		10 MB
2 MB	1 MB	4 MB	4 MB	11 MB
2 MB	2 MB	4 MB	4 MB	12 MB
2 MB	4 MB	4 MB	4 MB	14 MB

COMPAQ SLT/286 Personal Computer

Memory expansion for the COMPAQ SLT/286 is shown in Table 5-2. Memory boards

can be added in combinations of 1 and 4 megabytes.

NOTE: The following table does not represent all possible configurations. Memory boards can be installed in any combination and in any available slot.

Table 5-2. Memory Expansion Alternatives - COMPAQ SLT/286 Personal Computer

System Memory	Memory Board(s) Added to Slot 1, 2, or 3			Total Memory
640 KB	1 MB			1.6 MB
640 KB	1 MB	1 MB		2.6 MB
640 KB	1 MB	1 MB	1 MB	3.6 MB
640 KB	4 MB			4.6 MB
640 KB	1 MB	4 MB		5.6 MB
640 KB	1 MB	1 MB	4 MB	6.6 MB
640 KB	4 MB	4 MB		8.6 MB
640 KB	1 MB	4 MB	4 MB	9.6 MB
640 KB	4 MB	4 MB	4 MB	12.6 MB

Chapter 5.8 LED INDICATOR BOARD

1. Remove the chassis, section 5.6.
2. Remove the memory shield, section 5.7.

CAUTION: THE LED INDICATOR BOARD WILL FALL OUT OF THE ALUMINUM MEMORY SHIELD ONCE THE SCREWS ARE REMOVED.

Removing the LED Indicator Board from the COMPAQ SLT 386s/20

Use a Torx T-10 to remove the two black, low profile screws that secure the LED indicator board to the memory shield.

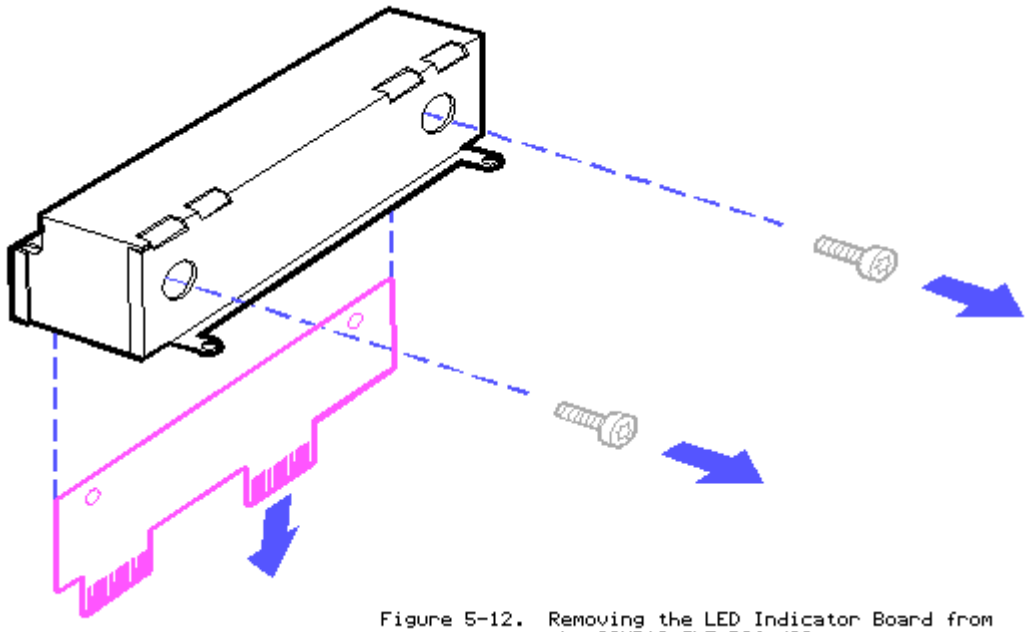


Figure 5-12. Removing the LED Indicator Board from the COMPAQ SLT 386s/20

CAUTION: SCREWS FROM THE MEMORY SHIELD ARE NOT INTERCHANGEABLE. THE COMPAQ SLT 386s/20 MEMORY BOARD CAN BE DAMAGED IF THE WRONG SCREWS ARE USED.

Removing the LED Indicator Board from the COMPAQ SLT/286

Use a Torx T-10 screwdriver to remove the screws that secure the LED indicator board to the memory shield.

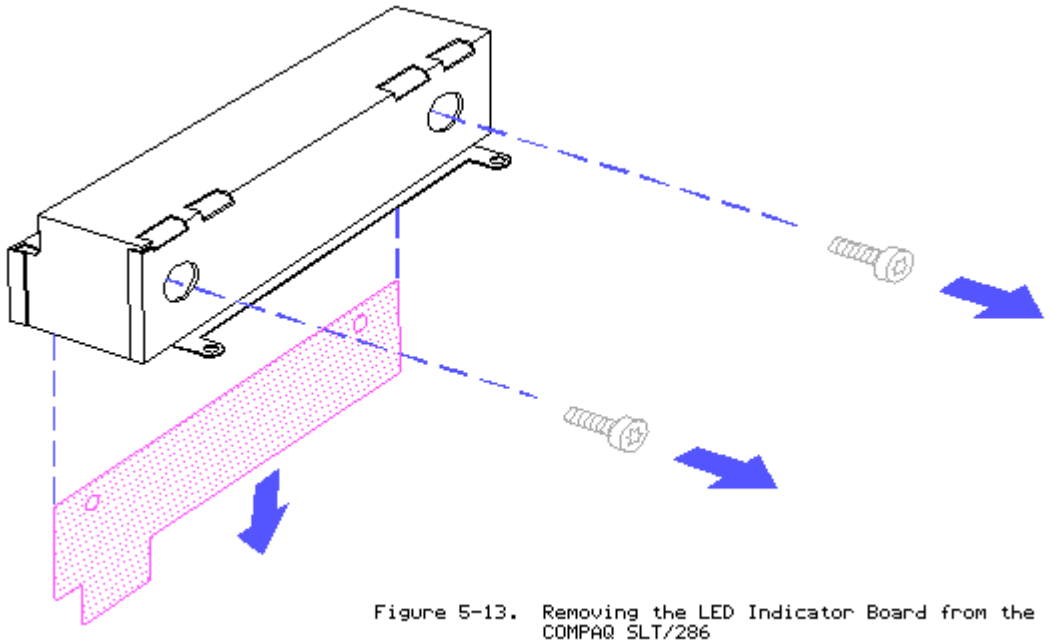


Figure 5-13. Removing the LED Indicator Board from the COMPAQ SLT/286

Removing the Nylon Bushings

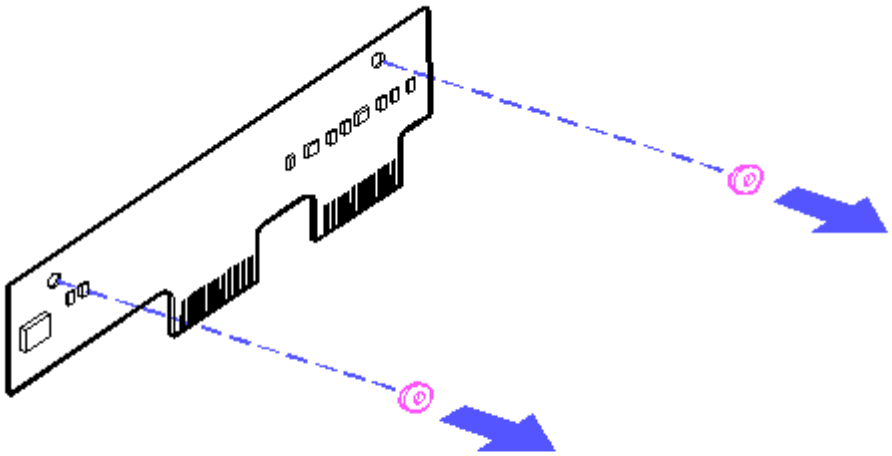


Figure 5-14. Removing the Nylon Bushings

To replace the LED indicator board and nylon bushings, reverse the steps in the previous illustrations. When replacing the LED indicator board, be sure the nylon bushings are placed between the board and aluminum memory shield.

CAUTION: IF THE NYLON BUSHINGS ARE NOT REPLACED PROPERLY, THE LED INDICATOR BOARD WILL SHORT OUT.

Chapter 5.9 INTERNAL POWER SUPPLY

1. Remove the keyboard, section 5.5.

2. Remove the battery pack, section 5.4.

3. Remove the chassis, section 5.6.

4. Remove the modem or serial interface board, if installed.

5. Use a Torx T-10 screwdriver to remove the power supply screws.

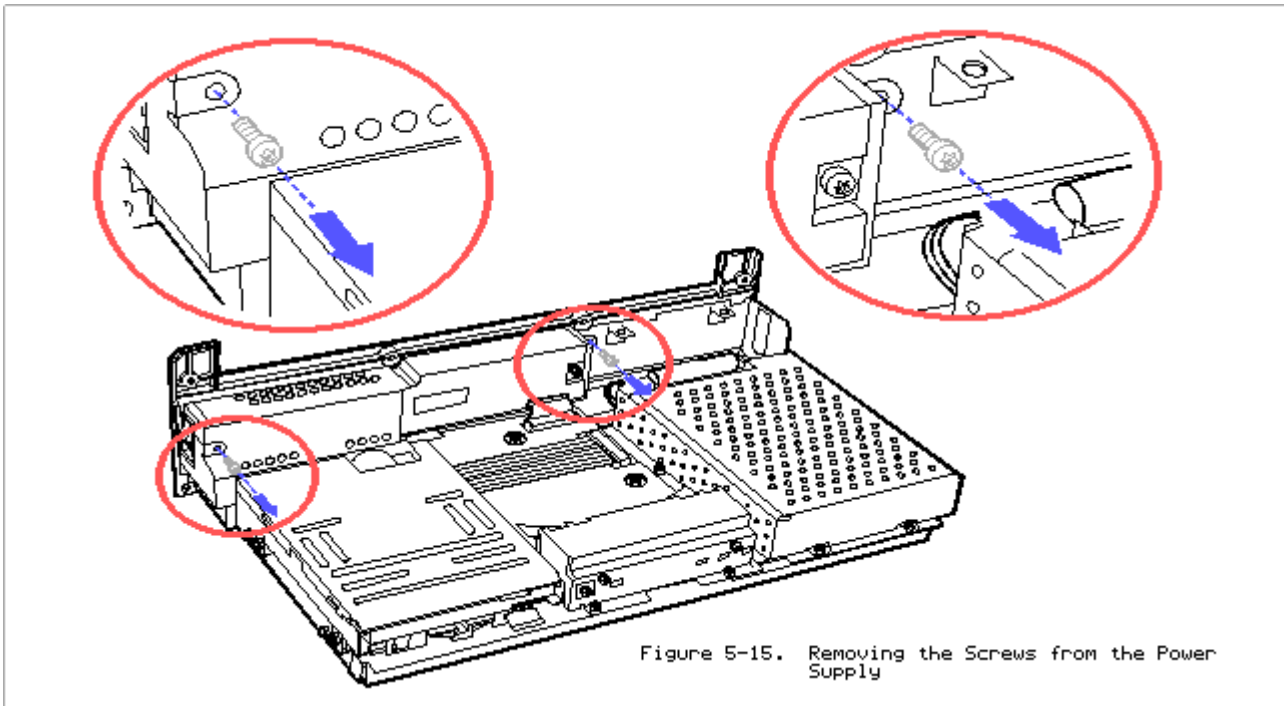


Figure 5-15. Removing the Screws from the Power Supply

6. Pull up on the right side of the power supply assembly until the power cable disconnects from the system board.

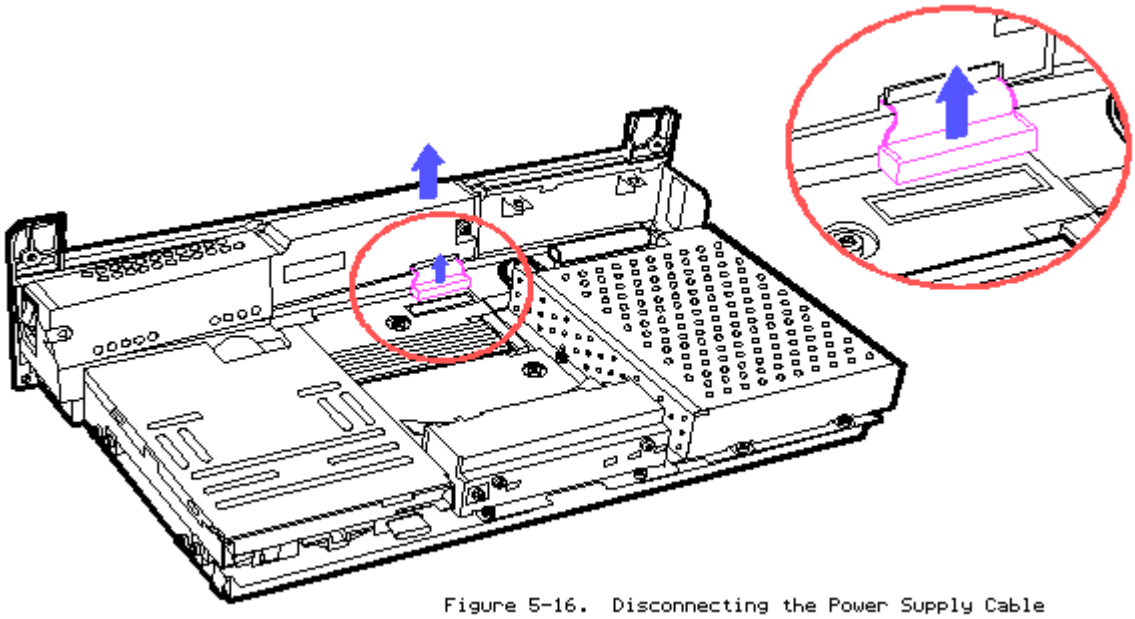


Figure 5-16. Disconnecting the Power Supply Cable

To replace the power supply, reverse the step in the previous illustration.

Chapter 5.10 MASS STORAGE DEVICES

Removing the Drive Mounting Plate with the Mass Storage Devices

The drive mounting plate can be removed without removing the mass storage devices.

To remove the mounting plate with the mass storage devices in place, do the following:

1. Remove the keyboard, section 5.5.

2. Remove the battery pack, section 5.4.

3. Remove the chassis, section 5.6.

4. Disconnect the power and signal cables from the diskette drive and fixed disk drive.

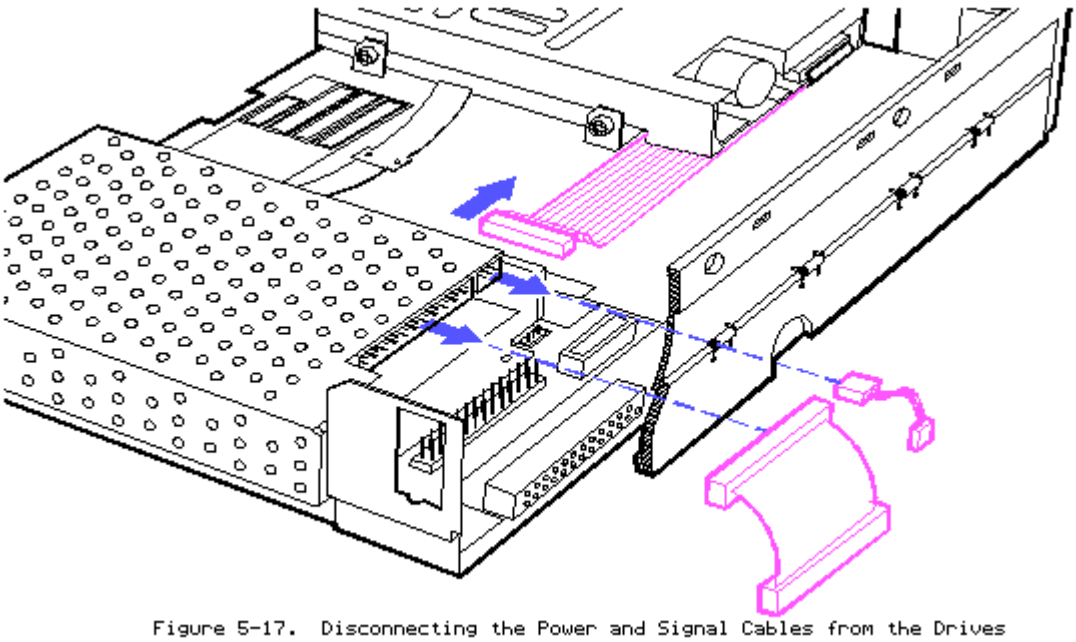


Figure 5-17. Disconnecting the Power and Signal Cables from the Drives

5. Use a Torx T-10 screwdriver to remove the screws.

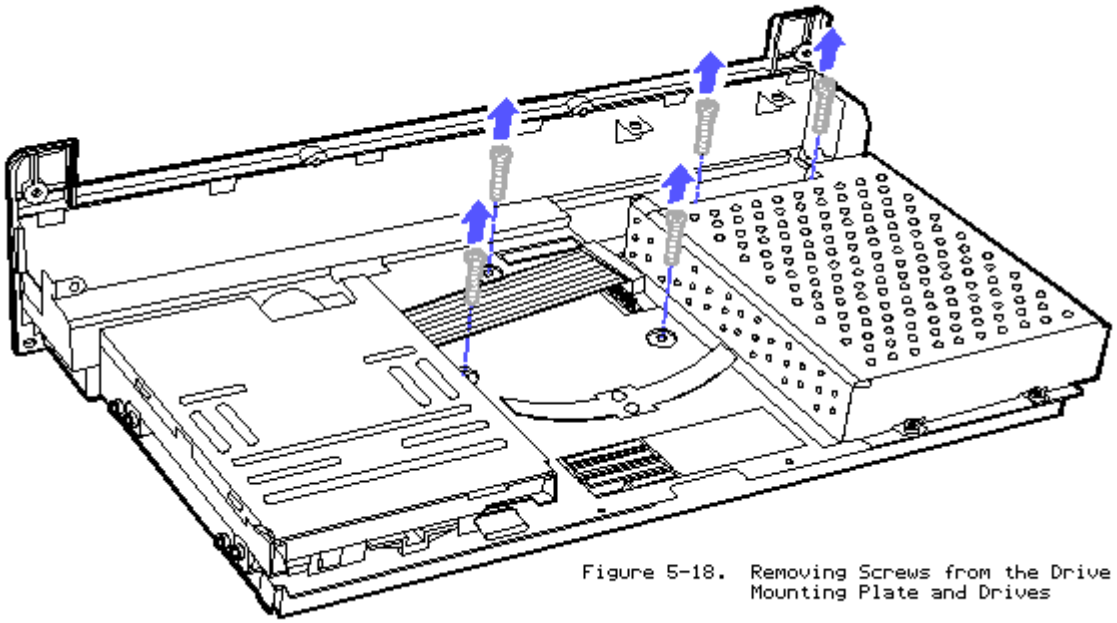


Figure 5-18. Removing Screws from the Drive Mounting Plate and Drives

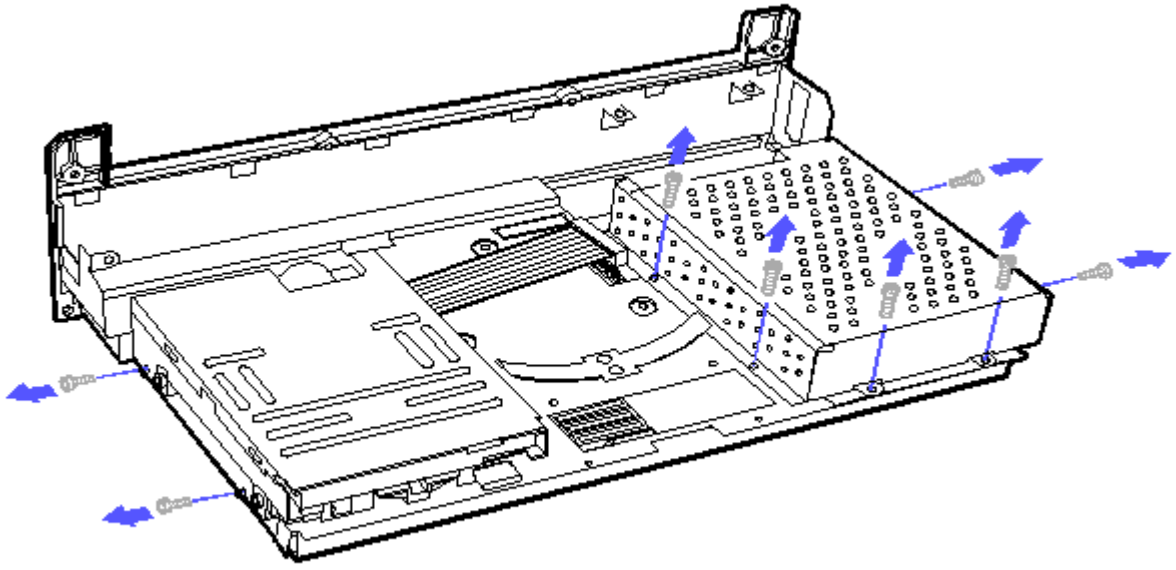


Figure 5-19. Removing Screws from the Drives

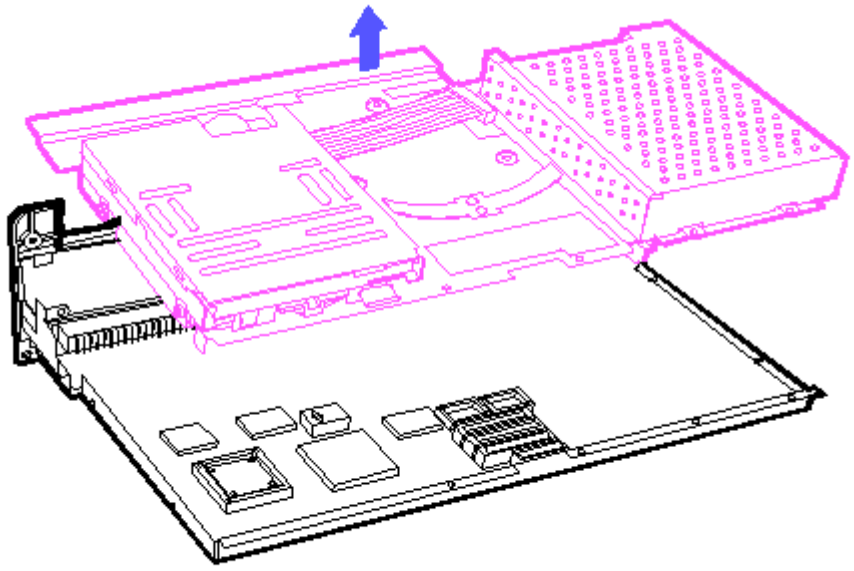


Figure 5-20. Removing the Drive Mounting Plate with Mass Storage Devices

To replace the Drive Mounting Plate with the mass storage devices, reverse the steps in the previous illustrations.

IMPORTANT: When replacing the drive mounting plate, install the short screws to the outside of the drives to prevent damage to the system board.

Removing the Fixed Disk Drive Assembly

NOTE: The fixed disk drive on the COMPAQ SLT 386s/20 contains a flexible ground shield that covers the drive. The ground shield is shown in the following illustrations of the fixed disk drive assembly.

1. Use a Torx T-15 screwdriver to remove the screw securing the flexible ground shield, if applicable.

2. Lift the flexible ground shield flap that covers the power and signal cable connectors. Be careful not to damage the ground shield.

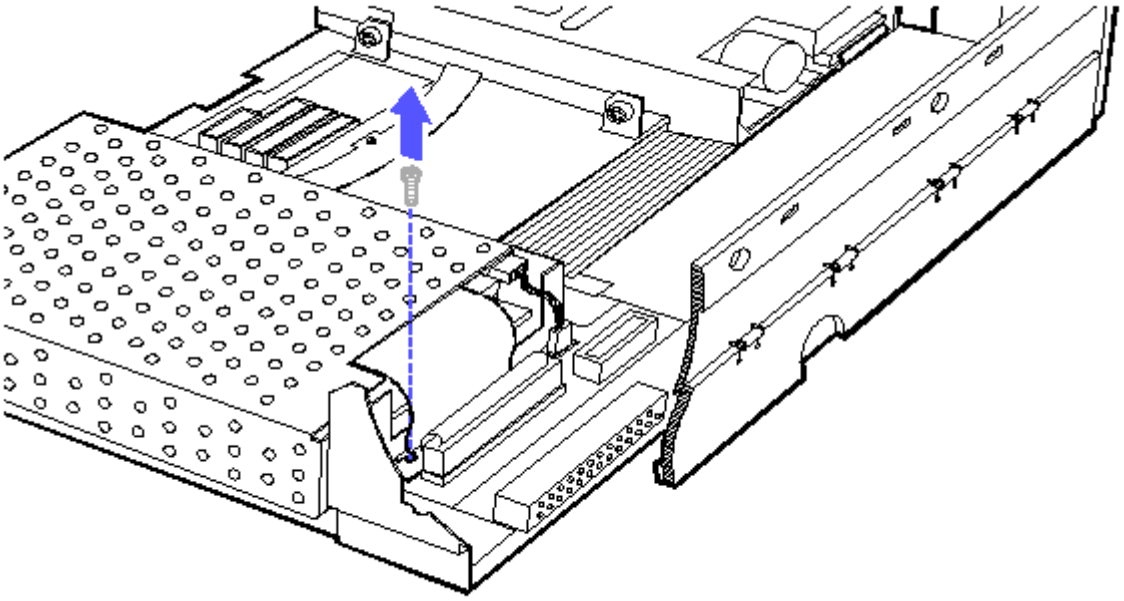


Figure 5-21. Removing the Screw from the Flexible Ground Shield

NOTE: If the drive cables are being replaced, first disconnect the power and signal cables from the drive; then from the system board.

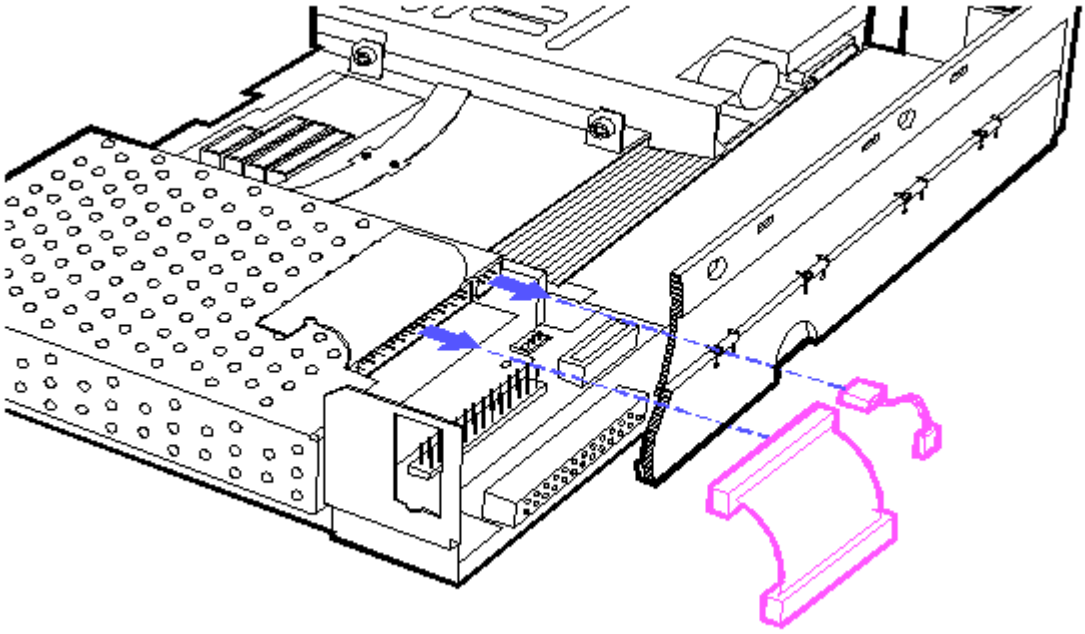


Figure 5-22. Disconnecting the Power and Signal Cables

3. Use a Torx T-10 screwdriver to remove the screws from the fixed disk drive enclosure.

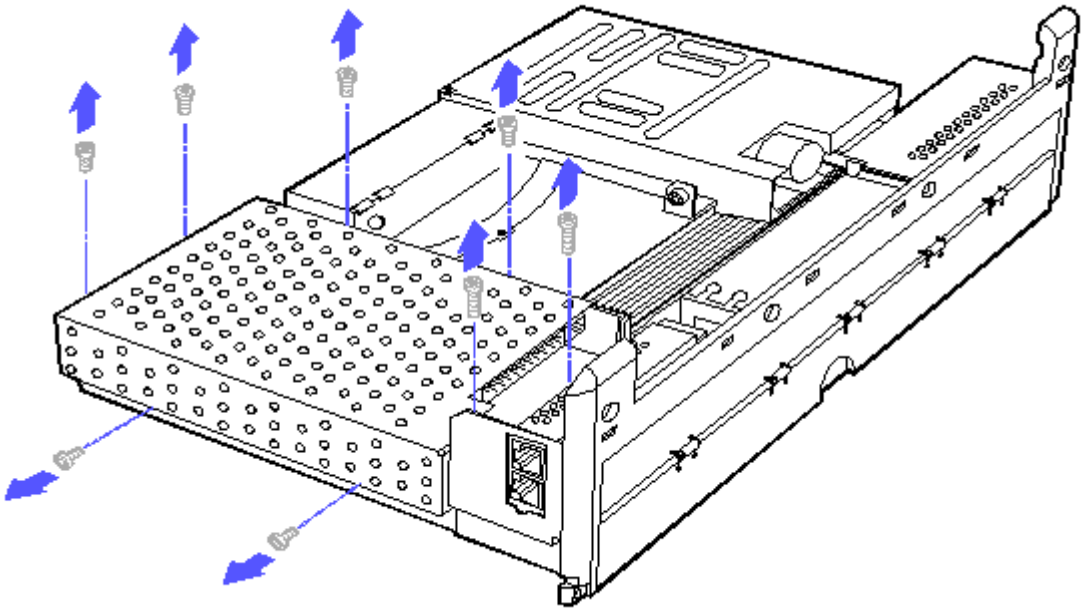


Figure 5-23. Removing the Screws from the Fixed Disk Drive Enclosure

Removing the Fixed Disk Drive Enclosure and Shock Mounts

1. Rotate the drive enclosure to remove it from the fixed disk drive.

CAUTION: ON THE COMPAQ SLT 386s/20, BE CAREFUL NOT TO THE DAMAGE THE FLEXIBLE GROUND SHIELD WHEN REMOVING THE DRIVE ENCLOSURE.

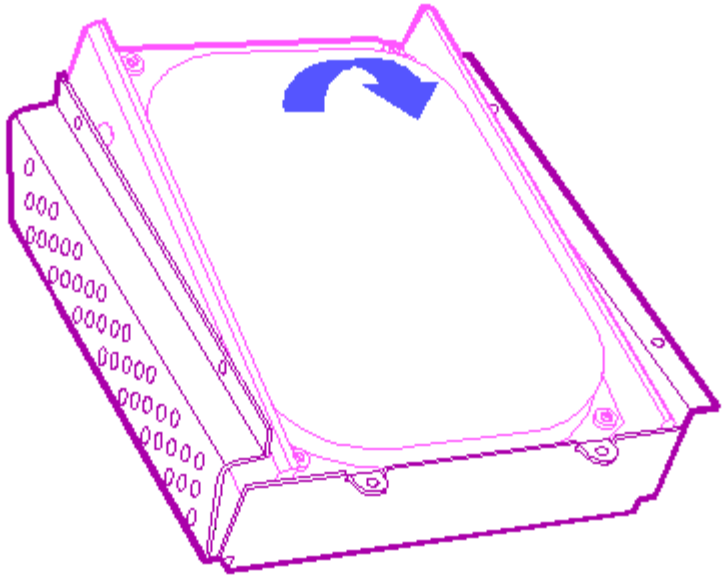


Figure 5-24. Removing the Fixed Disk Drive from the Drive Enclosure

2. If applicable, lift the side flaps of the flexible ground shield before removing the shock mounts.

3. Remove the shock mounts by grasping the center of the rails and pulling the shock mounts straight out.

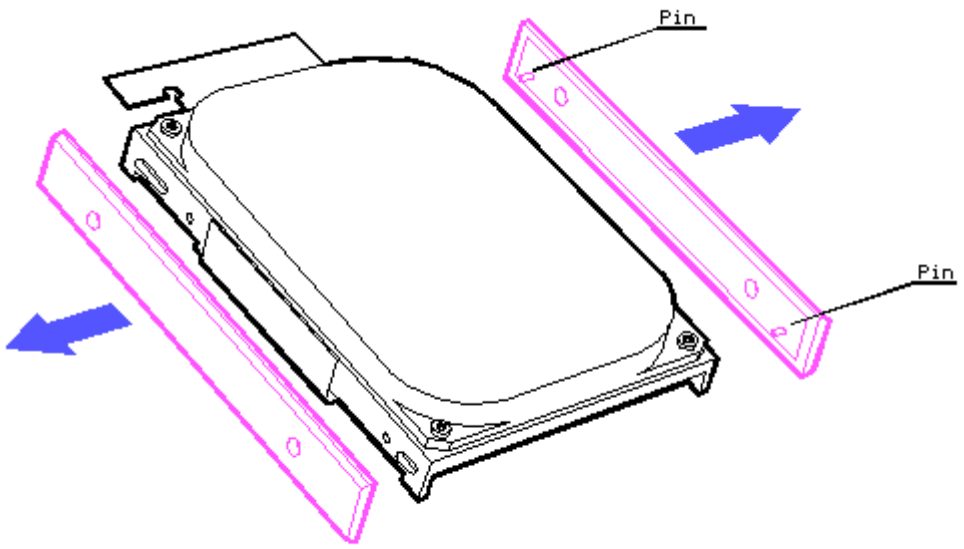


Figure 5-25. Removing the Shock Mounts

To replace the shock mounts, fixed disk drive enclosure, and fixed disk drive, reverse the steps in the previous illustrations.

CAUTION: SHOCK MOUNTS MAY BEND WHEN REMOVED. BE SURE THE PINS ARE STRAIGHTENED BEFORE REPLACING THE SHOCK MOUNTS ON THE DRIVE.

IMPORTANT: When replacing the fixed disk drive, install the short screws to the outside of the drive to prevent damage to the system board.

Removing the Flexible Ground Shield (COMPAQ SLT 386s/20 Only)

1. Remove the fixed disk drive assembly.

2. Remove the fixed disk drive enclosure and shock mounts.

3. Use a Torx T-15 screwdriver to remove the four screws securing the flexible ground shield to the drive.

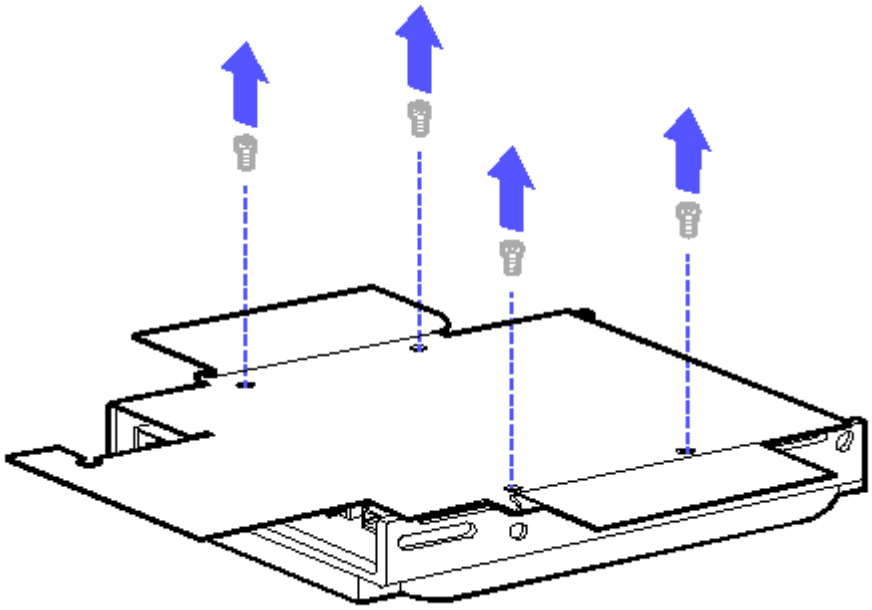


Figure 5-26. Removing the Screws from the Flexible Ground Shield

To replace the flexible ground shield, follow these steps:

IMPORTANT: To prevent damage to the fixed disk drive, be sure the flexible ground shield is replaced properly.

1. Replace the flexible ground shield, white side down, on the component side of the fixed disk drive. Be sure the long flap is facing the connector.

2. Extend the slide flaps of the flexible ground shield.

3. Replace the shock mounts to the fixed disk drive, then fold the flexible ground shield side flaps over the outside of the shock mounts.

IMPORTANT: To ensure proper grounding, be sure the flexible ground shield side flaps are folded over the outside of the shock mounts.

Removing a Diskette Drive

NOTE: If the drive cable is being replaced, remove the diskette drive, then disconnect the drive cable from the system unit.

Use the Torx T-15 screwdriver to remove the four screws from the diskette drive.

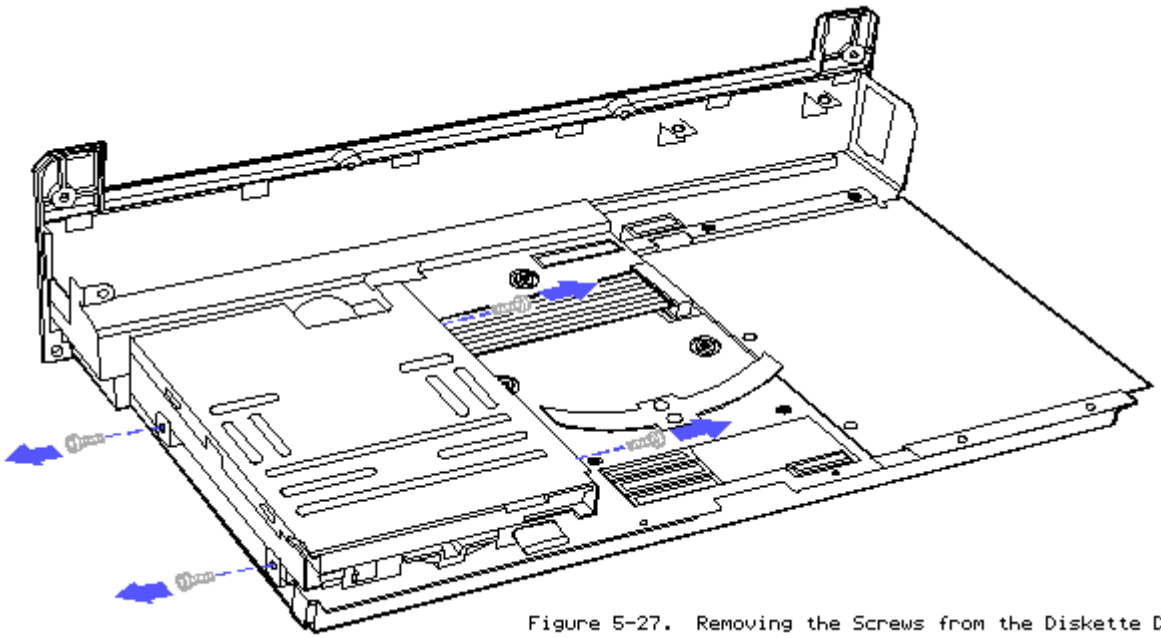


Figure 5-27. Removing the Screws from the Diskette Drive

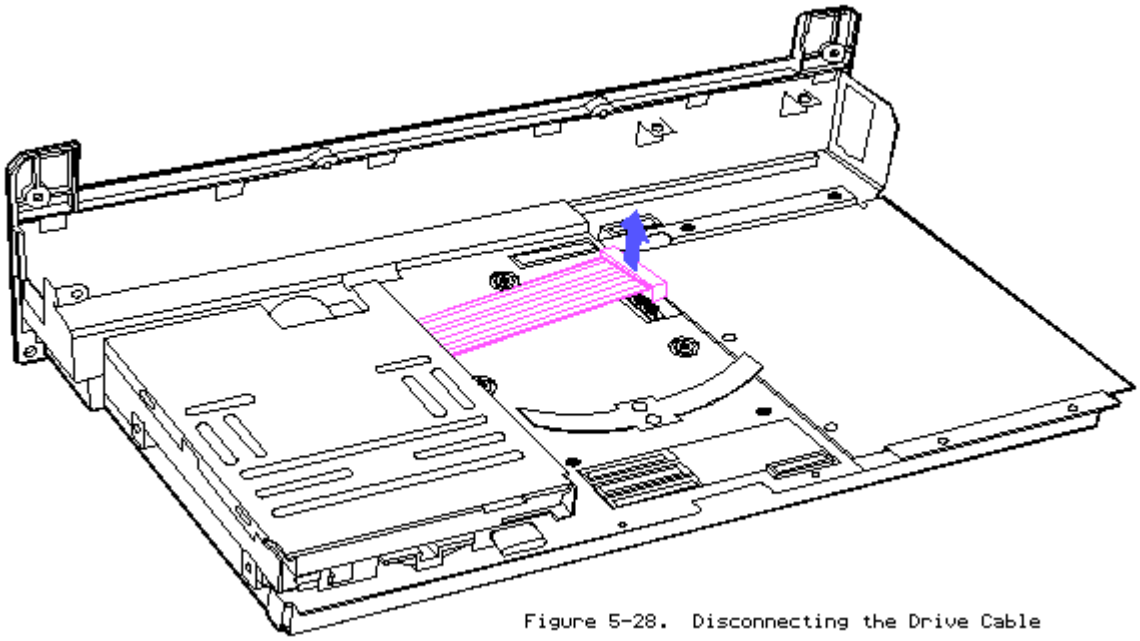


Figure 5-28. Disconnecting the Drive Cable

To replace the diskette drive, reverse the steps in the previous illustrations.

Removing the Drive Mounting Plate

Disconnect any mass storage device power and signal cables from the system board.

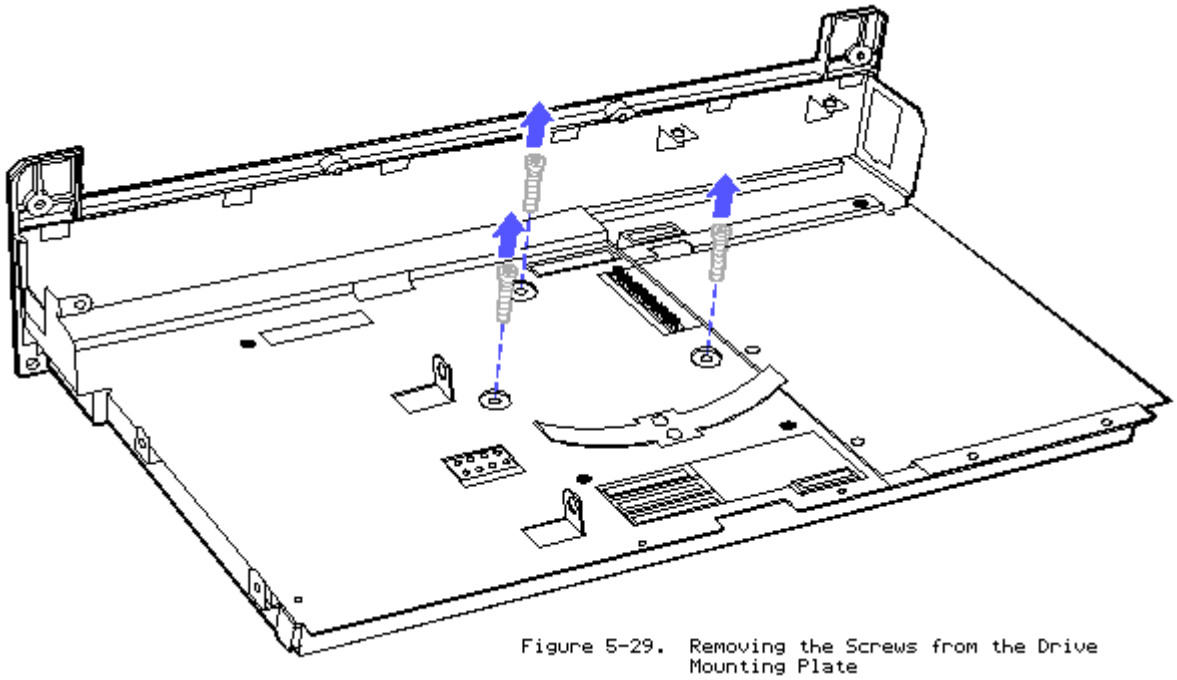


Figure 5-29. Removing the Screws from the Drive Mounting Plate

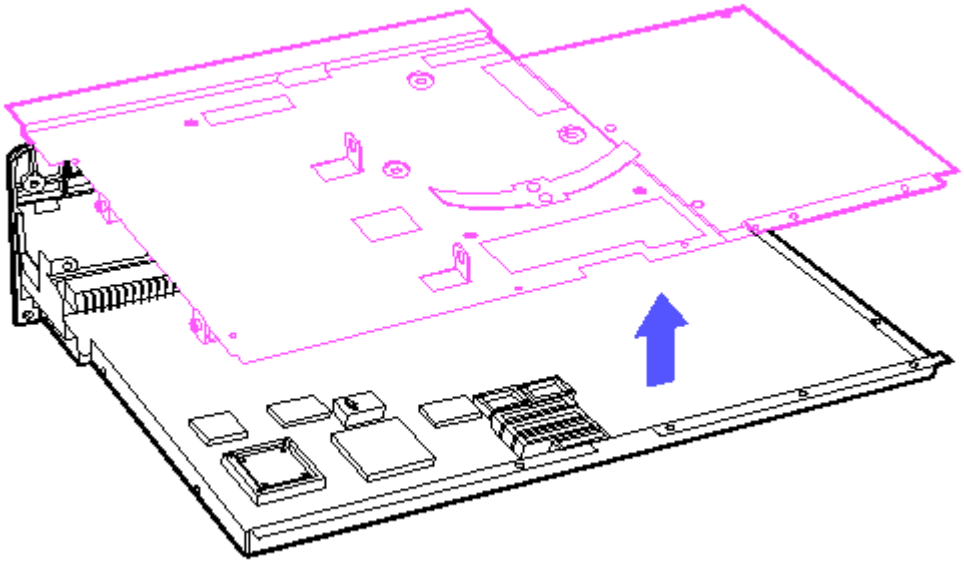


Figure 5-30. Removing the Drive Mounting Plate from the System Board

To replace the drive mounting plate, reverse the steps in the previous illustrations.

Chapter 5.11 SYSTEM BOARD

1. Remove the keyboard, section 5.5.

2. Remove the battery pack, section 5.4.

3. Remove the chassis, section 5.6.

4. Remove the memory shield and, if applicable, the memory boards, section 5.7.

5. Remove the internal power supply, section 5.9.

6. Remove the mass storage devices, section 5.10.

7. Use a 3/16 inch nutdriver to remove the hex screws from the rear panel interface connectors.

8. On the COMPAQ SLT 386s/20, use a Torx T-8 screwdriver to remove the two screws from the External Storage Module interface.

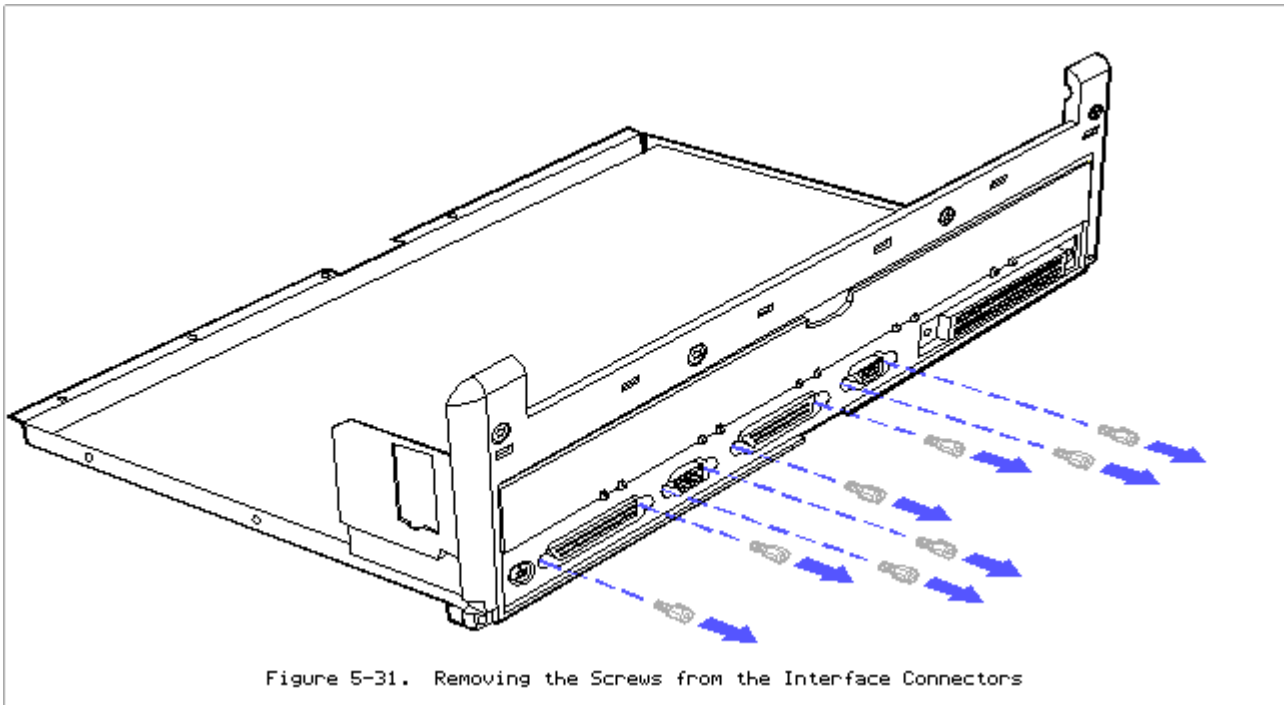


Figure 5-31. Removing the Screws from the Interface Connectors

9. Use a Torx T-10 screwdriver to remove the 3/8 inch screws from the expansion base (J101) connector.

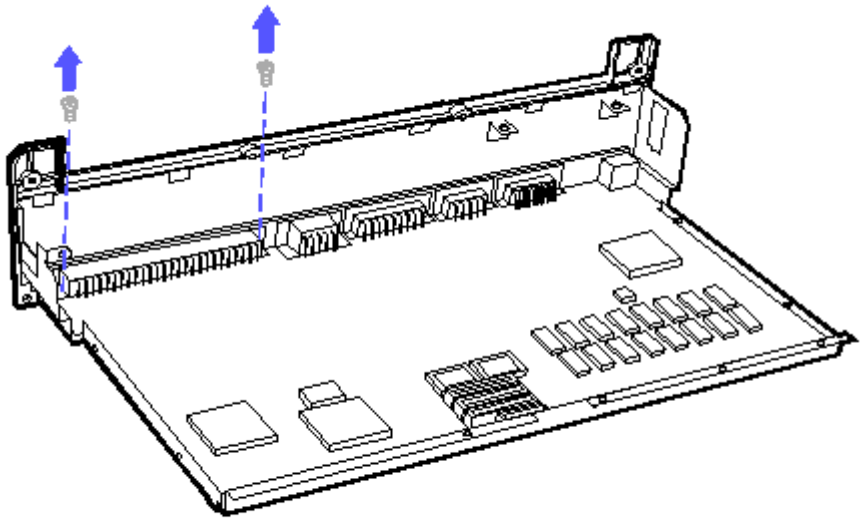


Figure 5-32. Removing Screws from the Expansion Base (J101) Connector

10. Use a Torx T-10 screwdriver to remove the remaining screws from the system board.

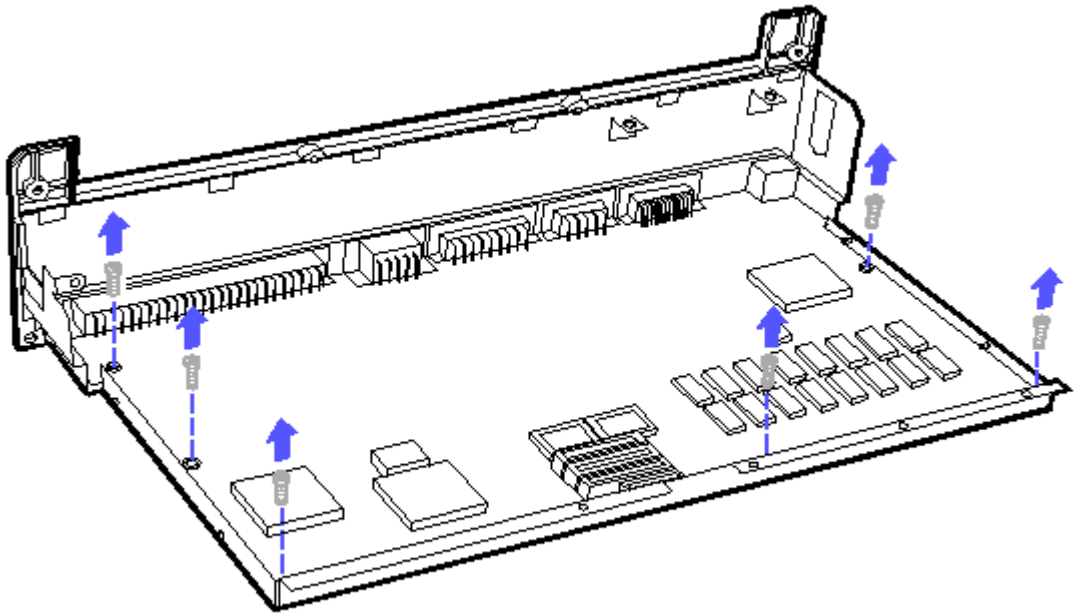


Figure 5-33. Removing Screws from the System Board

To replace the system board, reverse the steps in the previous illustrations.

IMPORTANT: Be sure the J101 connector screws are installed first before you replace the other connector screws. This assures the connectors are aligned properly.

WARNING: THE SYSTEM BOARD CONTAINS A LITHIUM BATTERY INTEGRAL TO THE CLOCK

CHIP THAT IS SOLDERED TO THE SYSTEM BOARD. THE LITHIUM BATTERY MAY EXPLODE IF MISHANDLED. DO NOT ABUSE, DISASSEMBLE, OR DISPOSE OF IN FIRE. RETURN THE SYSTEM BOARD TO COMPAQ COMPUTER CORPORATION FOR PROPER REPLACEMENT OR DISPOSAL OR YOU MAY DISPOSE OF THE BATTERY WITHIN COMPLIANCE OR LOCAL REGULATIONS.

NOTE: UPS will not airship (UPS blue label) lithium batteries.

Chapter 5.12 REAR CONNECTOR COVER

1. Open the rear panel connector cover door.

2. Gently disconnect the plastic door from the hinges as illustrated below.

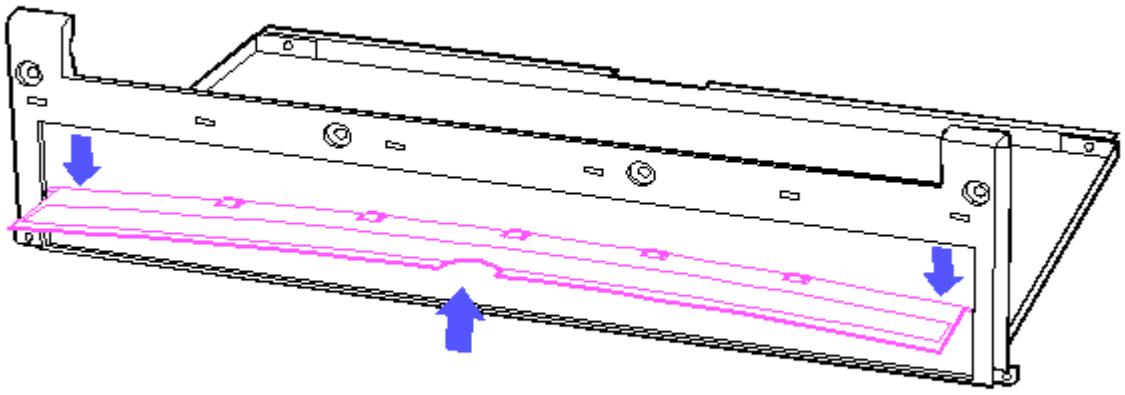


Figure 5-34. Releasing the Cover from the Hinges

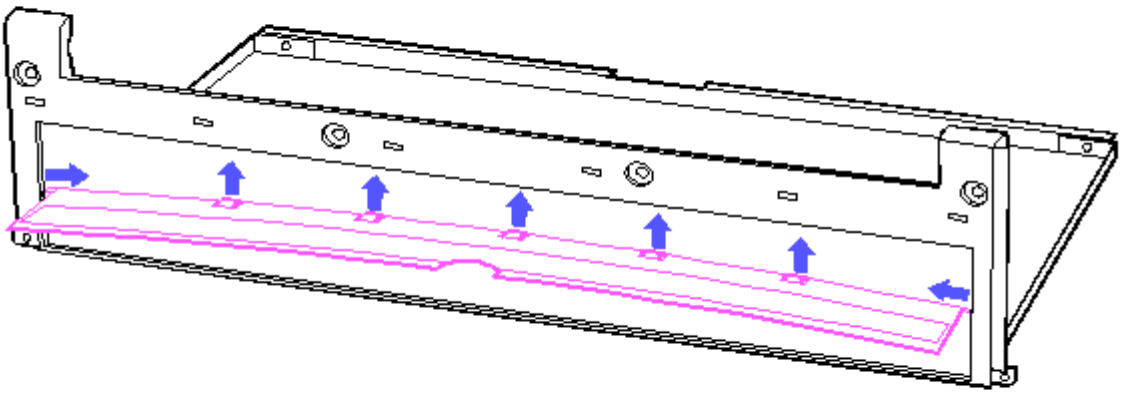


Figure 5-35. Removing the Cover from the Latches and Hinge Pins

To replace the rear connector cover, bow the plastic door out, insert the hinge pins and snap the latches in place.

Chapter 5.13 REAR BEZEL

Remove the rear bezel by gently working it loose from the latches.

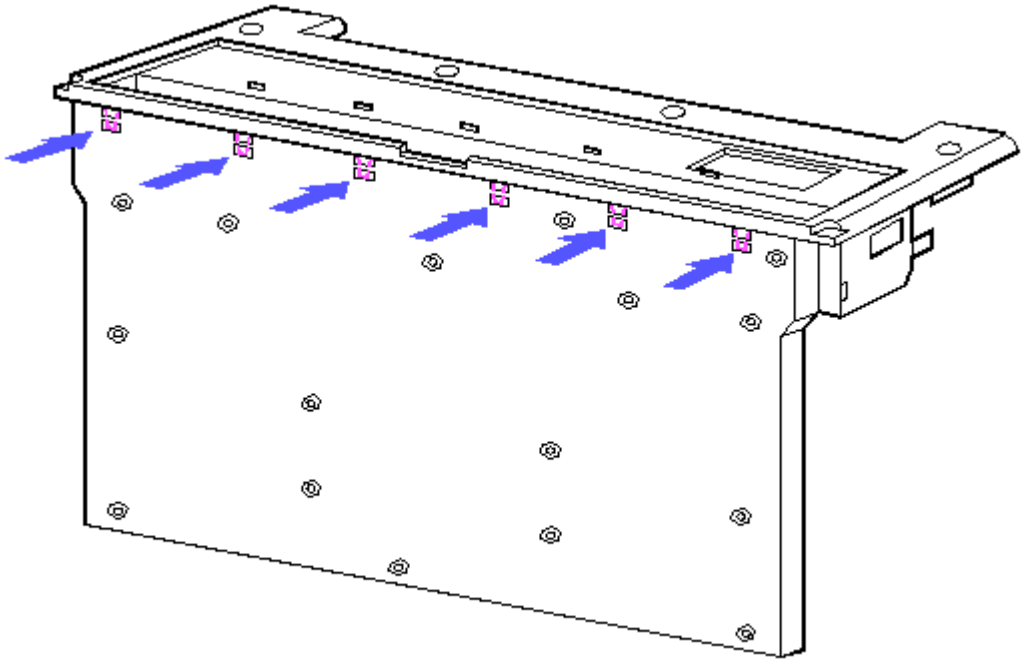


Figure 5-36. Removing the Rear Bezel

To replace the rear bezel, hook the top latches in place; then rotate downward.

Chapter 5.14 VGA BACKLIT DISPLAY

1. Remove the right hinge cover, section 5.5.

2. Remove the keyboard, section 5.5, to allow easy disassembly of the LCD panel.

3. Remove the battery pack, section 5.4.

Removing the LCD Panel

Use a Torx T-15 screwdriver to remove the screws.

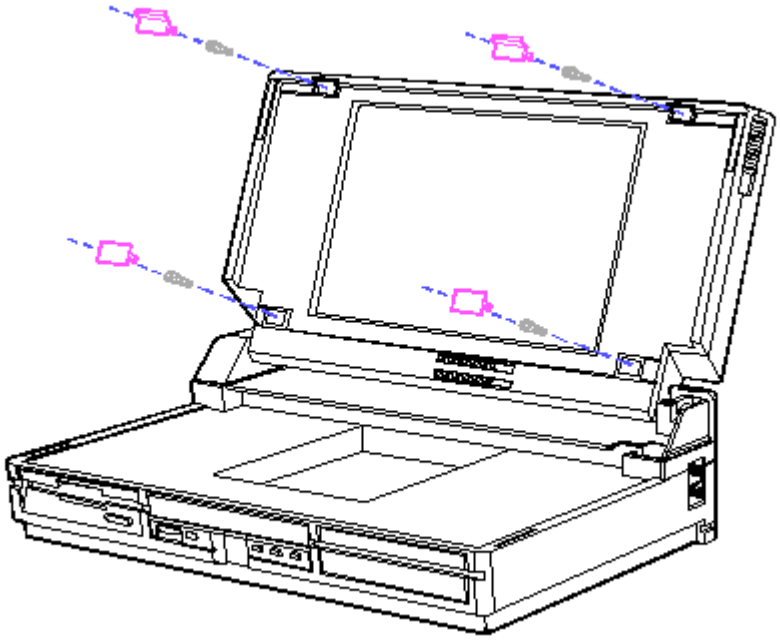


Figure 5-37. Removing the Screw Covers and Screws from the LCD Panel

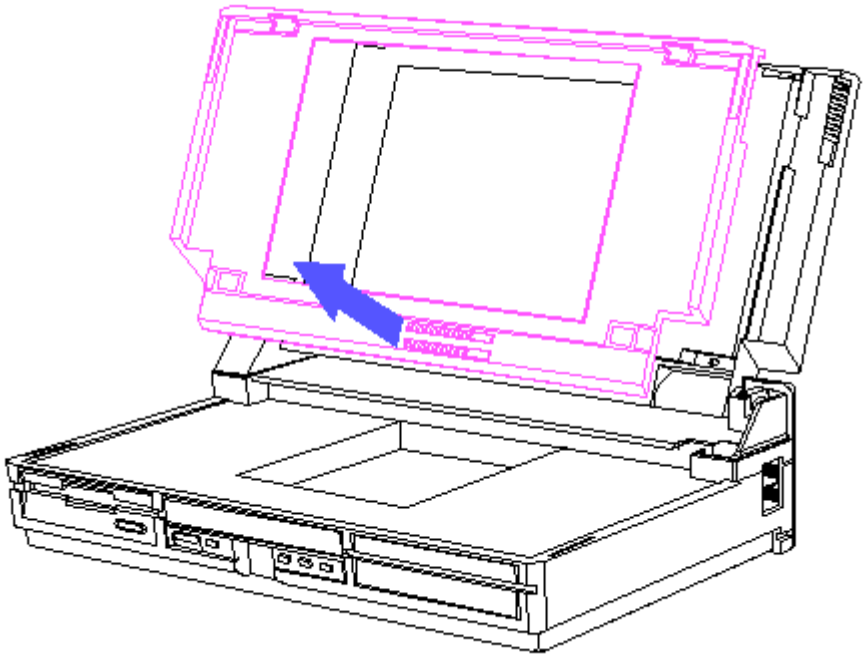


Figure 5-38. Removing the Display Bezel

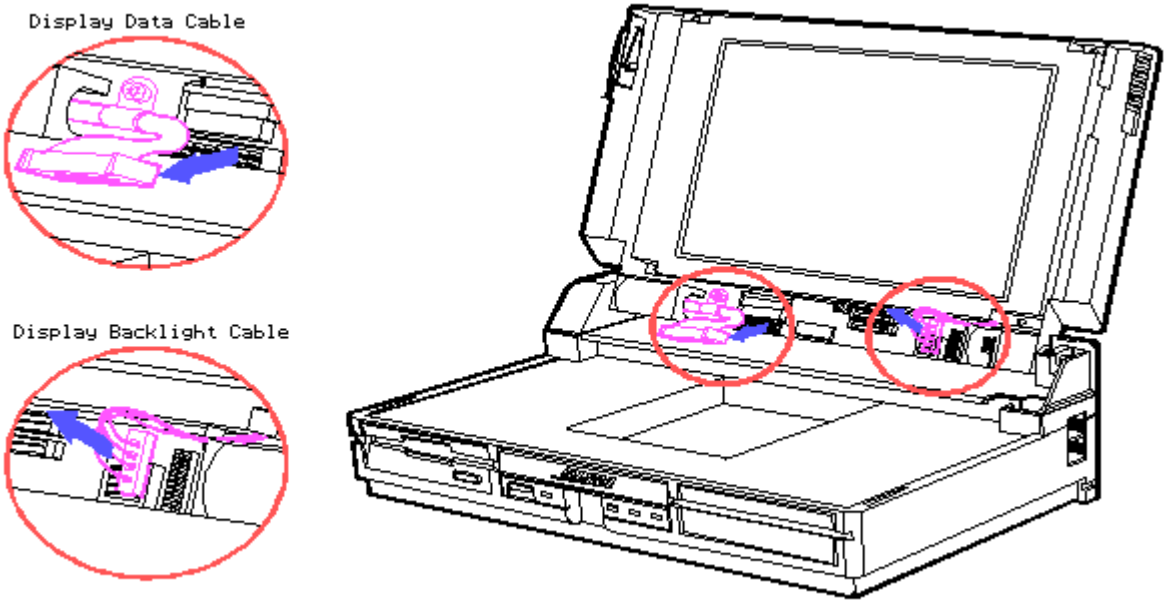


Figure 5-39. Disconnecting the Display Cables

CAUTION: TO PREVENT DAMAGE TO THE BACKLIGHT DISPLAY SIGNAL CABLE, BE SURE TO SLIDE THE RETAINING COLLAR UP BEFORE REMOVING THE CABLE.

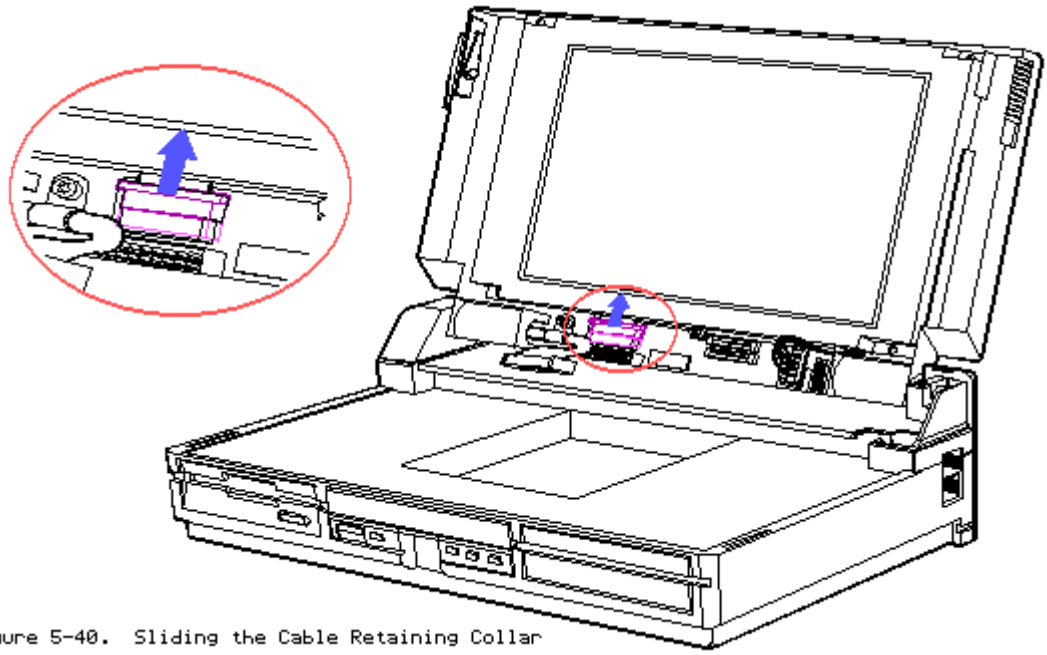


Figure 5-40. Sliding the Cable Retaining Collar

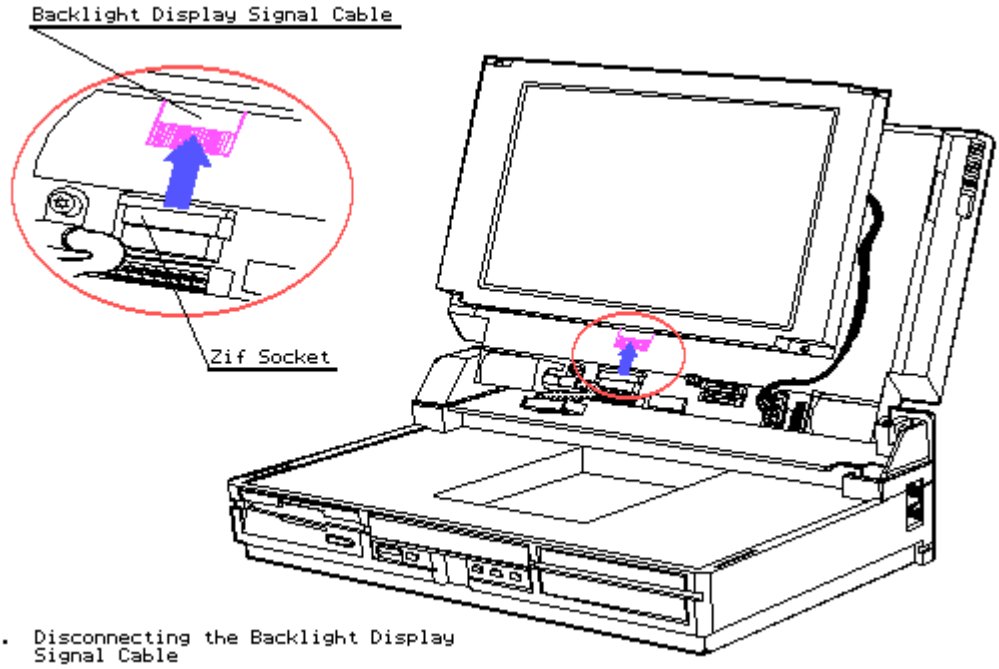


Figure 5-41. Disconnecting the Backlight Display Signal Cable

To replace the LCD panel, reverse the steps in the previous illustrations.

Removing the Display Shield Assembly

Use a Torx T-10 screwdriver to remove the screws.

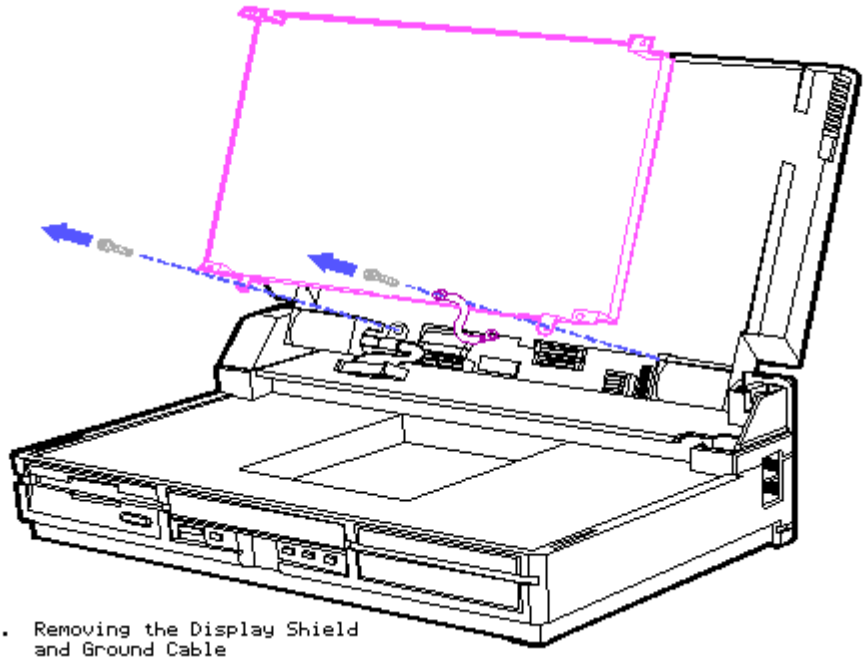


Figure 5-42. Removing the Display Shield and Ground Cable

To replace the Display Shield Assembly, reverse the step in the previous illustration.

Removing the Display Backlight Inverter Board

Use a Torx T-15 screwdriver to remove the screws.

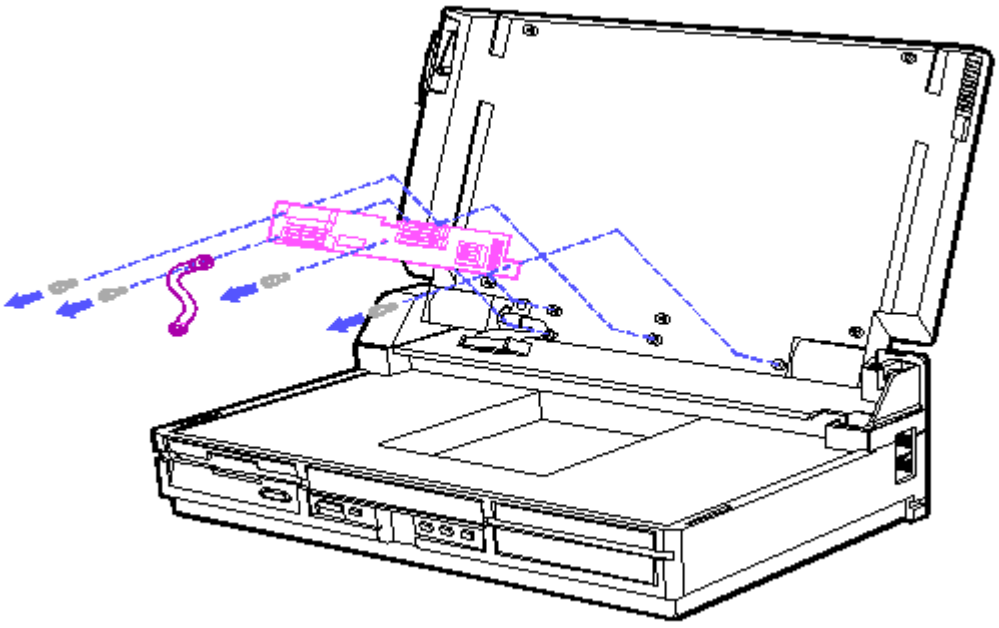


Figure 5-43. Removing the Display Backlight Inverter Board and Ground Cable

To replace the Display Backlight Inverter Board, reverse the step in the previous illustration.

Removing the VGA Backlit Display Enclosure

1. Lower the display.
2. Remove the left hinge cover, section 5.5.
3. Use a Torx T-15 screwdriver to remove the rear panel screws.

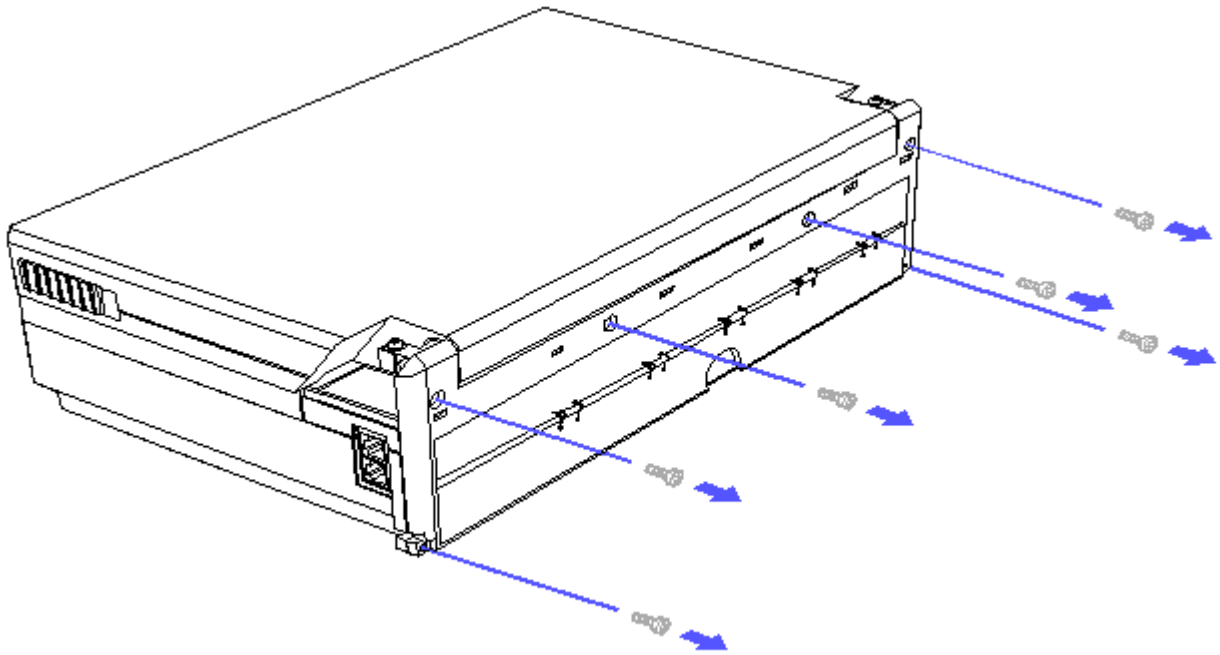


Figure 5-44. Removing the Screws from the Rear Panel

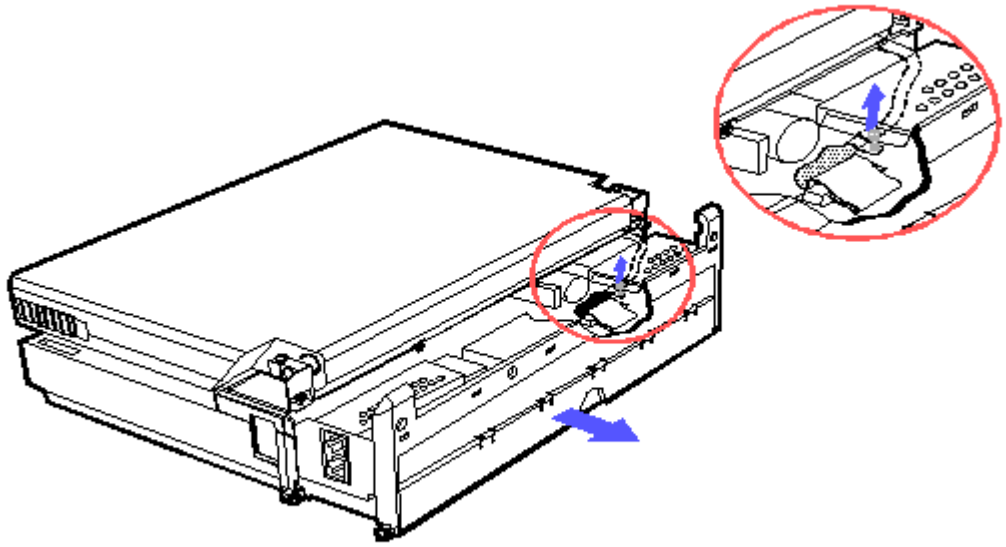


Figure 5-45. Removing the Screw of the Display Data Cable

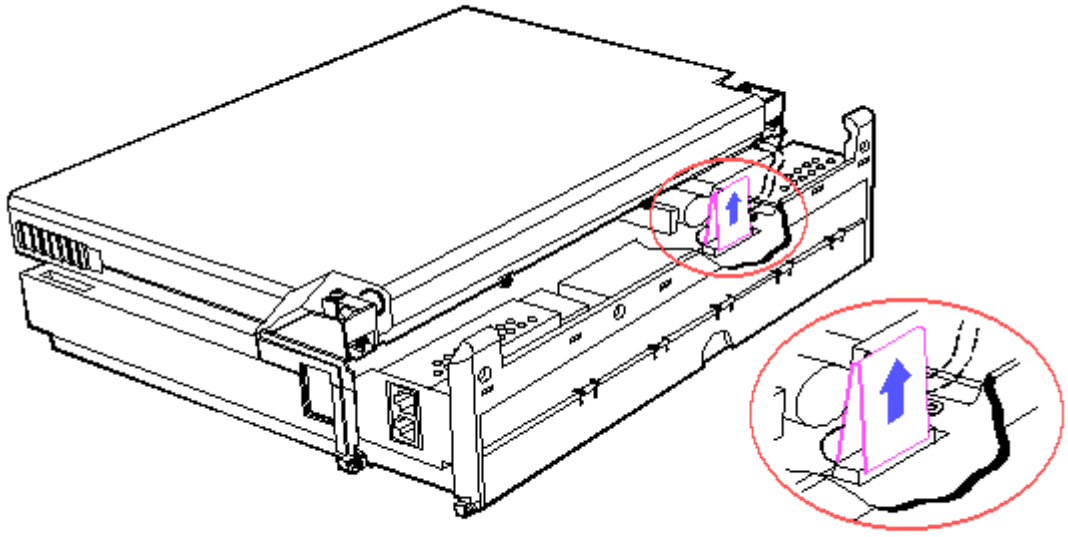


Figure 5-46. Lifting the Pull Tab

4. Raise the display.

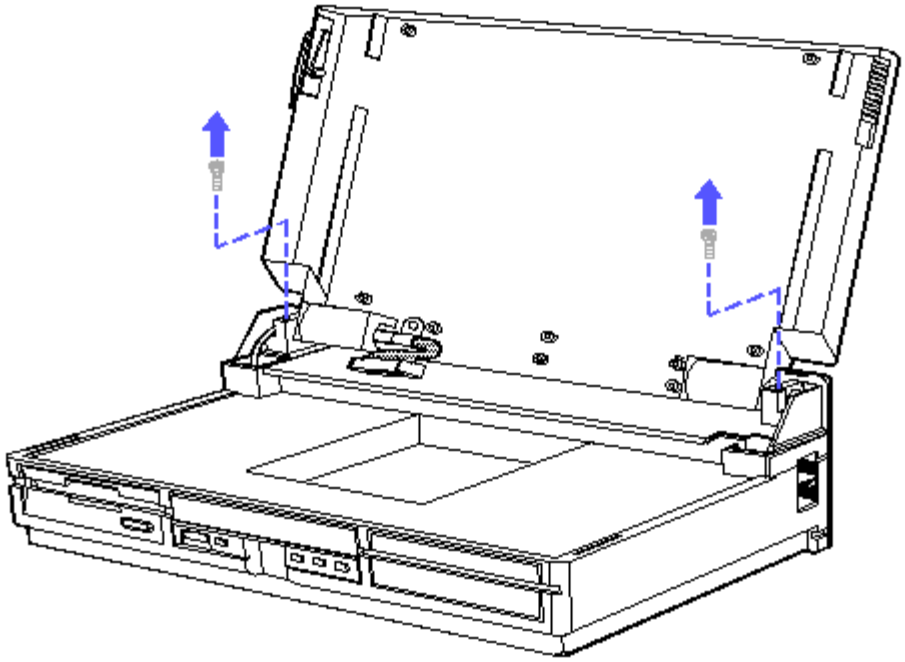


Figure 5-47. Removing the Screws from the Hinges

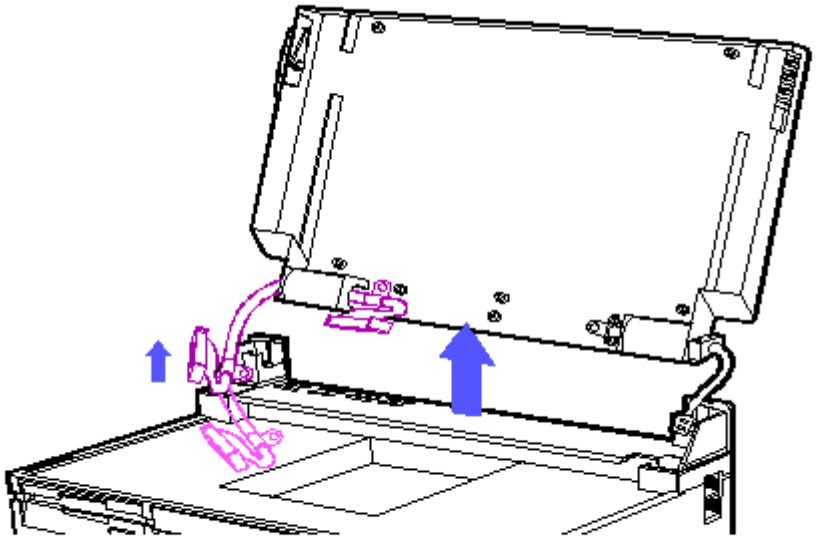


Figure 5-48. Disconnecting the Display Signal Cable

To replace the VGA Backlit Display Enclosure, reverse the steps in the previous illustrations.

Removing the Hinges

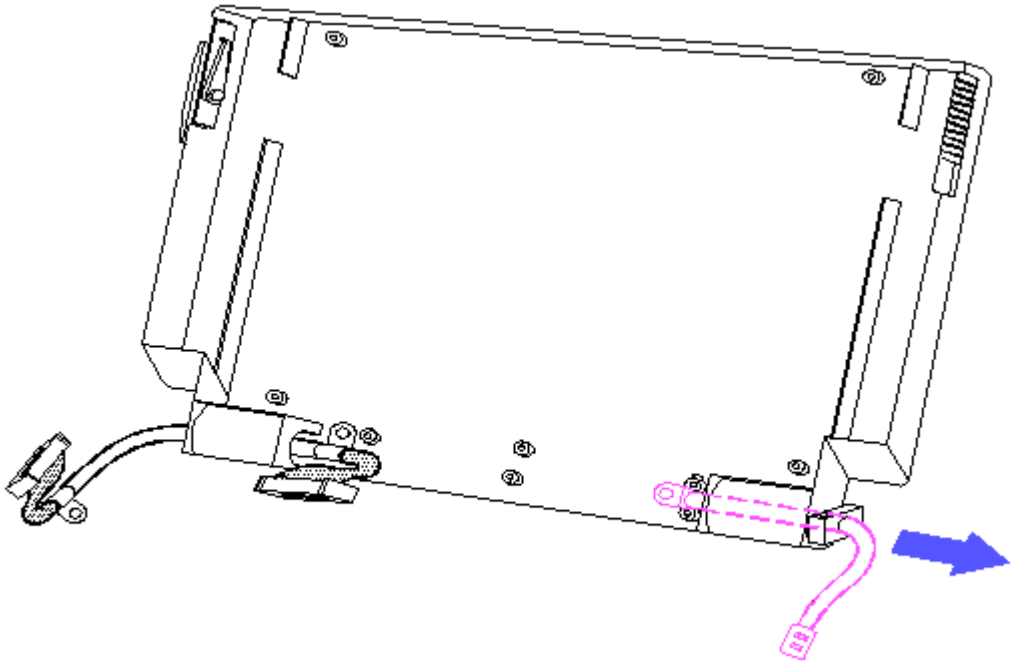


Figure 5-49. Removing the Ground Cable

CAUTION: DO NOT PULL APART THE HINGES.

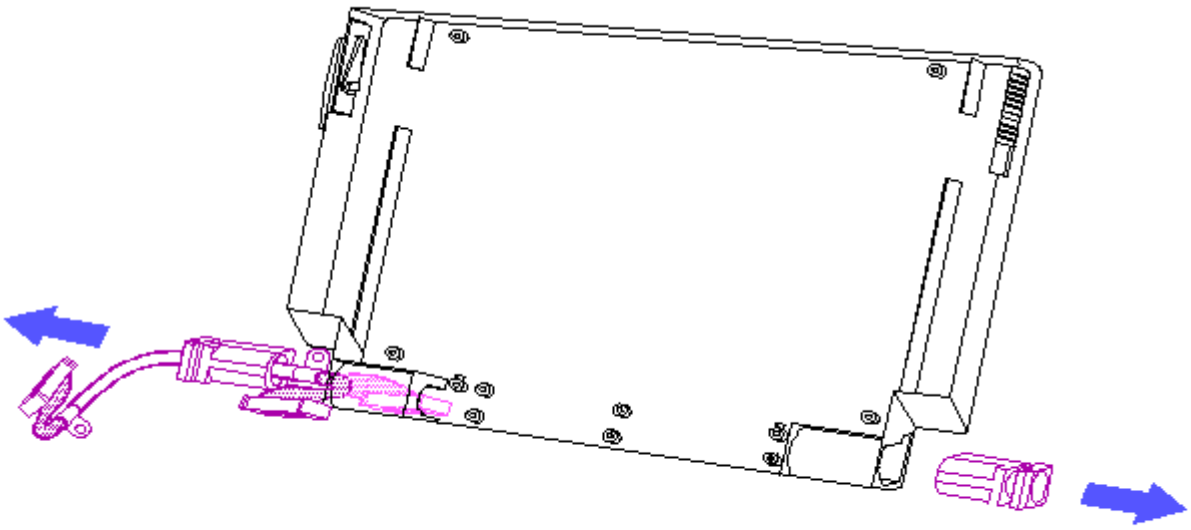


Figure 5-50. Removing the Hinges

To replace the hinges, reverse the steps in the previous illustrations.

Chapter 6 - Jumper and Switch Information

INTRODUCTION

This chapter provides jumper and switch settings for the COMPAQ SLT 386s/20 and COMPAQ SLT/286 system boards.

The default settings shown in the tables are set for the computer as configured by Compaq Computer Corporation. These settings need to be changed only when the system configuration changes.

Chapter 6.1 COMPAQ SLT 386s/20 SYSTEM BOARD

The COMPAQ SLT 386s/20 system board contains one switch. Table 6-1 lists the switch settings and describes the function for switch SW1. Figure 6-1 shows the location of the switch on the system board.

Table 6-1. Switch SW1 Settings - COMPAQ SLT 386s/20 Personal Computer

Switch	Position	Status	Function
SW1-1	OFF	Disables	Enables or disables the fail safe timer.
	ON (default)	Enables	
SW1-2	OFF (default)	Enables	Clears the power on password. Refer to "Clearing Power On Password" in Chapter 2 for procedures.
	ON	Disables	

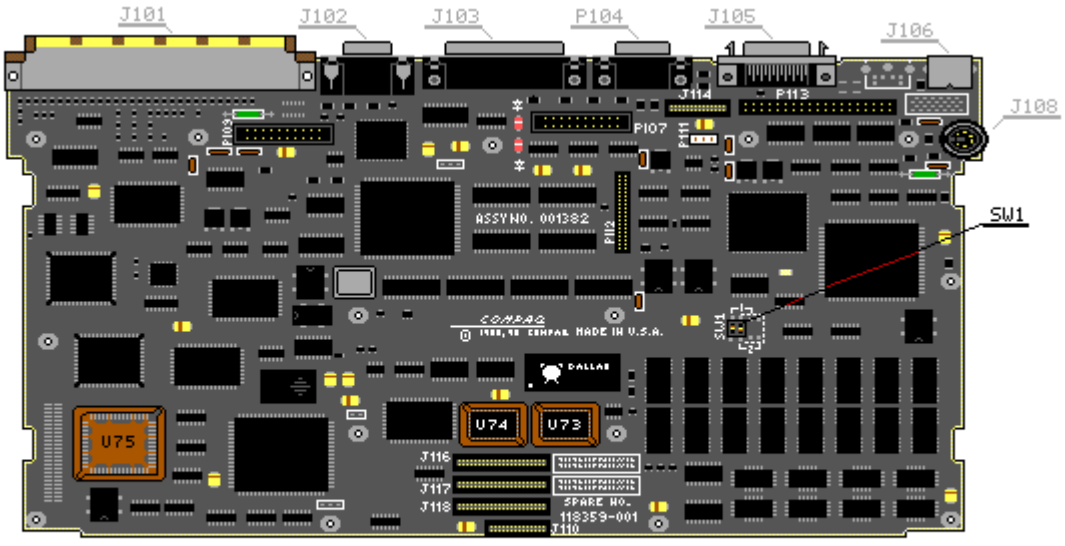


Figure 6-1. Switch on the COMPAQ SLT 386s/20 (Assy No. 001382)

Chapter 6.2 COMPAQ SLT/286 SYSTEM BOARD

The COMPAQ SLT/286 system boards contain one jumper. Table 6-2 lists the jumper positions and describes the function of jumper J1. Figure 6-2 and Figure 6-3 show the location of the jumper on the system board.

Table 6-2. Jumper J1 Settings - COMPAQ SLT/286 Personal Computer

Jumper	Position	Function
J1	1-2	Provides 8 MHz 80287 coprocessor configuration
J1	2-3 (default)	Provides 12 MHz 80C287 coprocessor configuration

NOTE: Jumpers E2, E3, and E4 are reserved. These jumpers must be installed for proper operation of the system board.

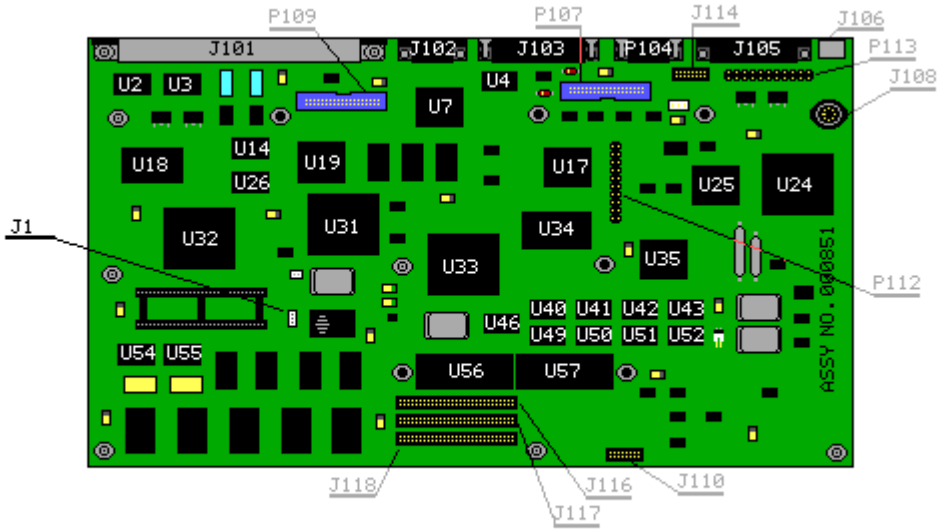


Figure 6-2. Jumper on the COMPAQ SLT/286 System Board (Assy No. 000851)

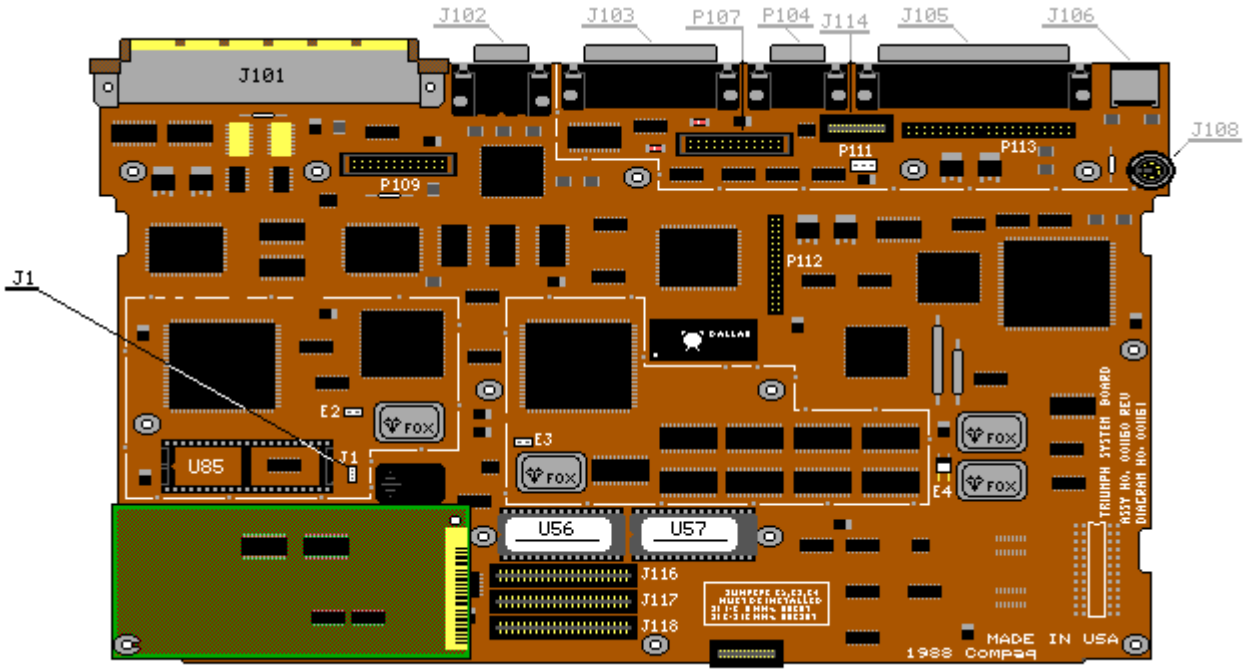


Figure 6-3. Jumper on the COMPAQ SLT/286 System Board (Assy No. 001160)