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Maintenance & Service Guide

Compaq TFT500 Flat Panel Monitor

First Edition (May 1997)
Part Number 285014-001

Compaq Computer Corporation

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preface

This *Maintenance and Service Guide* is a troubleshooting guide that can be used for reference when servicing the Compaq TFT500 Flat Panel Monitor. Only authorized technicians trained by Compaq should attempt to repair this equipment.

Compaq Computer Corporation reserves the right to make changes to the Compaq TFT500 Flat Panel Monitor without notice.

Symbols and Conventions

The following words and symbols mark special messages throughout this guide:



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.



Text set off in this manner presents commentary, sidelights, clarifying information, or specific instructions.

Technician Notes



WARNING: 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 components 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.



CAUTION: To properly ventilate your monitor, you must provide at least 3-inches (7.6-cm) of clearance at the back of the monitor.



CAUTION: The monitor is designed to be electrically grounded. To ensure proper operation, plug the AC power cord into a properly grounded AC outlet only.

System Serial Number

The serial number is displayed on the monitor's back panel.

Locating Additional Information

The following documentation is available to support the monitor:

- Users Guide
- Compaq Service Advisories and Bulletins
- Compaq QuickFind
- Compaq Service Quick Reference Guide

chapter 1

Removal and Replacement Procedures

This chapter provides removal and replacement assembly procedures for the Compaq TFT500 Flat Panel Monitor.

1.1 Serial Number

The monitor serial number should be provided to Compaq when requesting information or ordering spare parts. The serial number is displayed on the monitor's back panel.

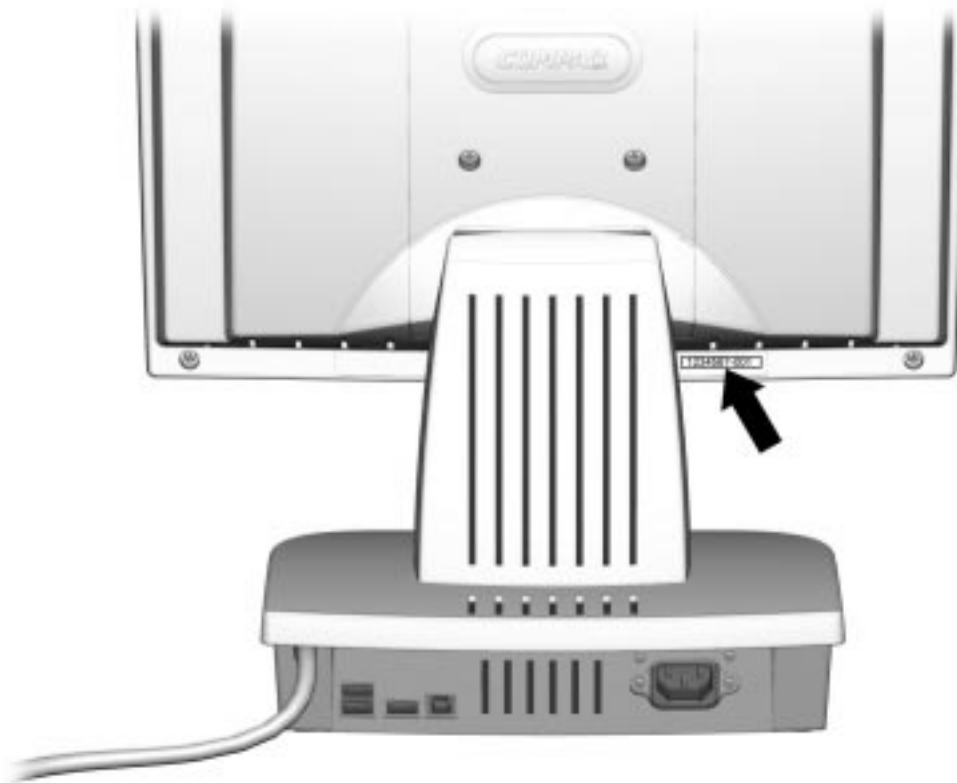


Figure 1-1. Locating the serial number

1.2 Features

Feature Summary



- 15.1-inch (38.35 cm) viewable area display
- Screen customizing adjustments displayed on-screen in five different languages: English, Dutch, French, German, and Spanish
- Universal Serial Bus Hub interface—Plug and Play connectors for use with USB peripherals (mouse, keyboard, video camera, etc.)
- Plug and Play capability if supported by your system
- Fault Management and Asset Control
- Desk arm mount (optional)
- Multisync with screen expansion
- 1024 × 768 maximum resolution
- Wide viewing angle to allowing viewing from a sitting or standing position, or moving side-to-side
- Energy Saver feature

1.3 Front Panel Controls and LEDs

The controls and LEDs located on the monitor's front panel are identified below.



Figure 1-2. Front Panel Controls

Front Control Panel		
No./Icon	Control	Function
① 	Select button	1. Launches on-screen display. 2. Selects function adjustments. 3. Exits menus and on-screen display.
② -	Minus button	Selects and adjusts the functions.
③ +	Plus button	Selects and adjusts the functions.
④ 	Power switch	Turns the monitor on and off.
⑤	Power LED	1. Green indicates monitor is turned on. 2. Yellow indicates suspend mode. 3. Amber indicates sleep mode.

1.4 Rear Panel Connectors

The following illustration shows the rear panel connectors and the attached signal cable on the Compaq TFT500 Flat Panel Monitor. Each connector includes an icon to help you identify its function.

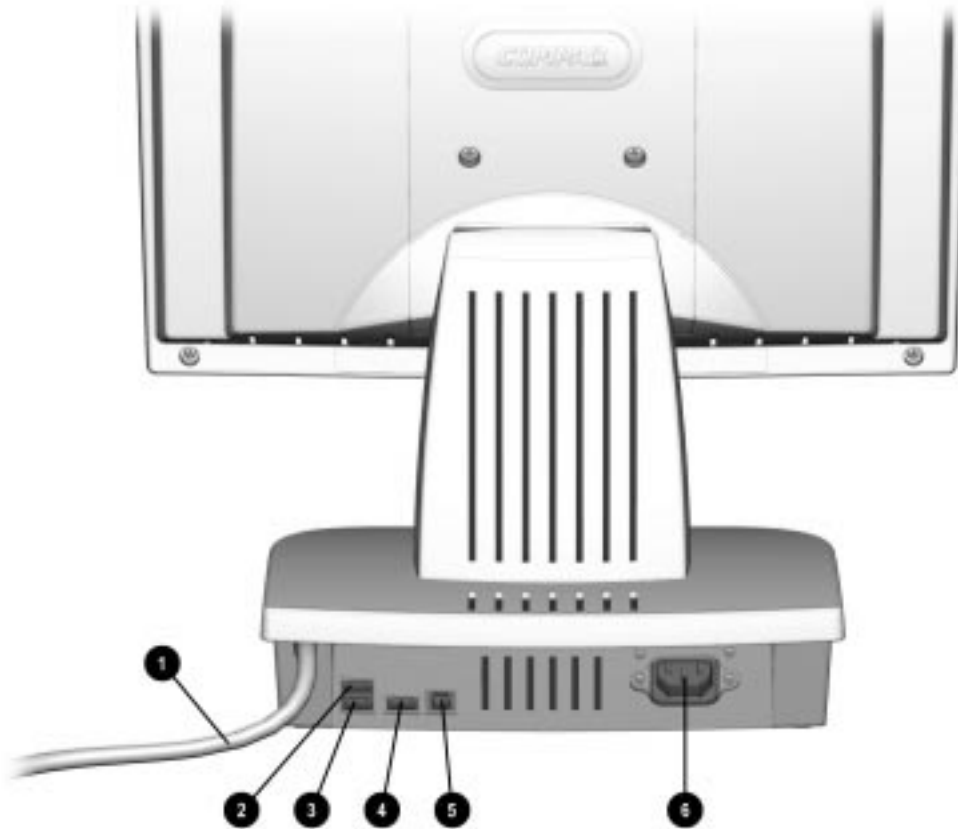


Figure 1-3. Rear Panel Connectors

Rear Panel Cable and Connectors		
No.	Cable/Connector	Function
①	Signal Cable	Connects the monitor to a computer.
②	USB* Connector	Connects a USB peripheral to the monitor.
③	USB* Connector	Connects a USB peripheral to the monitor.
④	USB* Connector	Connects a USB peripheral to the monitor.
⑤	USB* Cable Connector	Connects the USB signal cable to the computer.
⑥	Power Connector	Connects the power cable to the electrical outlet.

*Universal Serial Bus connectors for USB peripherals such as a keyboard, mouse, video camera, etc., are fully functional Plug and Play connectors.

1.5 Disassembly and Assembly Procedures

This section provides disassembly and assembly procedures for the Compaq TFT500 Flat Panel Monitor. Before you begin any of these procedures, be sure to turn off the power to the monitor, computer system, and other attached devices; then disconnect the power cable from the electrical outlet.



CAUTION: As you disassemble the monitor, be sure to place the screws in a safe place, and separate them according to their groupings.

1.5.1 Power Supply

1. Before removing the power supply (spare part no. 296473-001), disconnect the AC cable and all USB peripheral cables from the power supply.
2. Lay the monitor down on the front bezel on a soft, stable area.
3. Remove the power supply from the monitor base by pulling out on the two clips - one on each side of the power supply, then pull the power supply outwards and lift it out.
4. Disconnect the DC cable from the power supply.

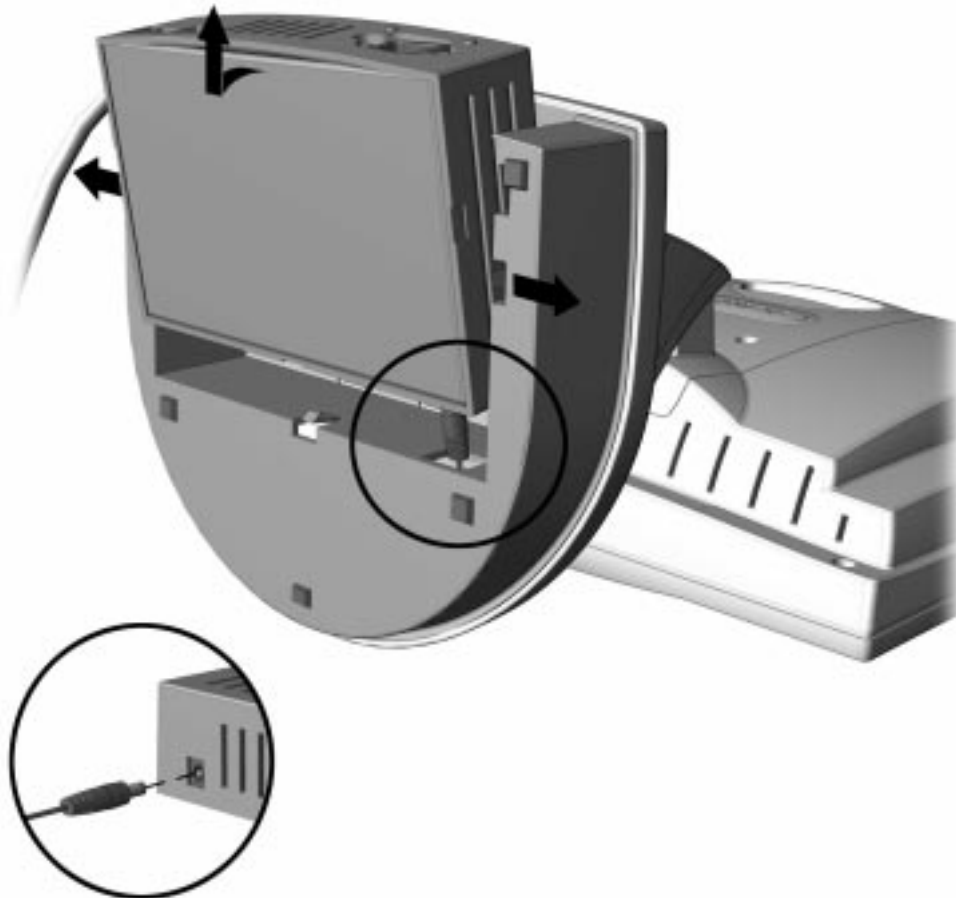


Figure 1-4. Removing the power supply

To reinstall the power supply, reverse this procedure.

1.5.2 Monitor Panel

1. Lift up and pull off the back side of the monitor base (spare part no. 296474-001).



Figure 1-5. Removing the back side of the monitor base

2. Remove the single screw from inside the monitor base as shown below.

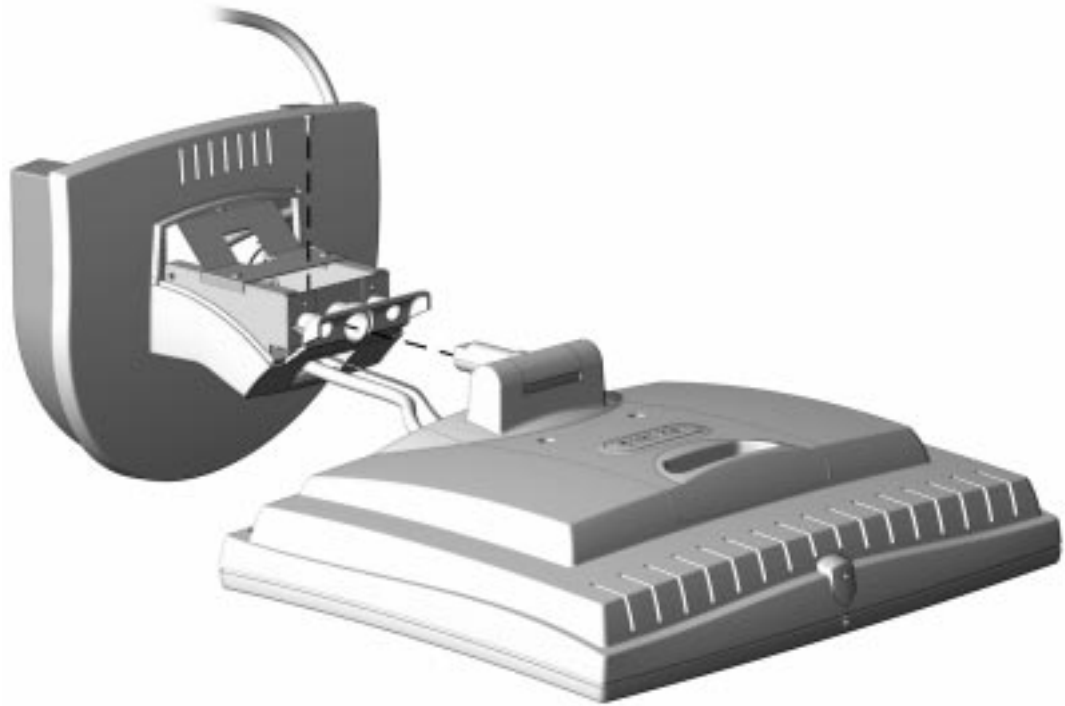


Figure 1-6. Removing the single screw and separating the monitor panel

3. Loosen the data and DC power cables between the monitor panel and the base to allow enough slack to separate the monitor panel from the base.
4. Separate the monitor panel from the monitor base (spare part no. 296474-001).



CAUTION: Be sure the monitor front bezel is lying down on a soft area to prevent it from getting scratched, defaced, or broken.

To replace the monitor panel back onto the monitor base, reverse this procedure.

1.5.3 Security Lock Provision Bracket

1. Remove the padlock-type of device if you have installed one.
2. Remove the screw head cover.
3. Remove the two screws from the spacers.
4. Remove the security lock provision bracket (spare part number 296483-001).
5. Remove the two spacers.

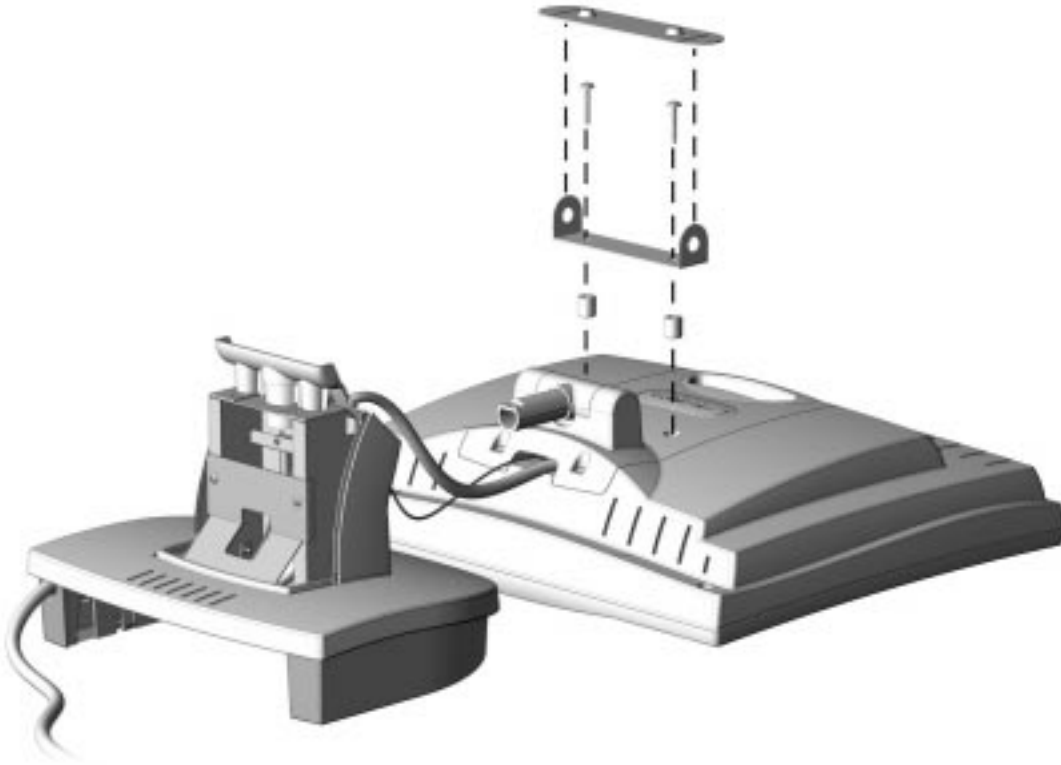


Figure 1-7. Removing the security lock provision bracket

To secure the monitor, a padlock-type of device needs to be inserted through the two end tabs. This device is not included with the security lock provision bracket kit. It must be purchased separately.

1.5.4 Cable Access Cover Assembly

1. Remove four screws from the back of the cable access cover.
2. Remove the cable access cover (spare part no. 296475-001).

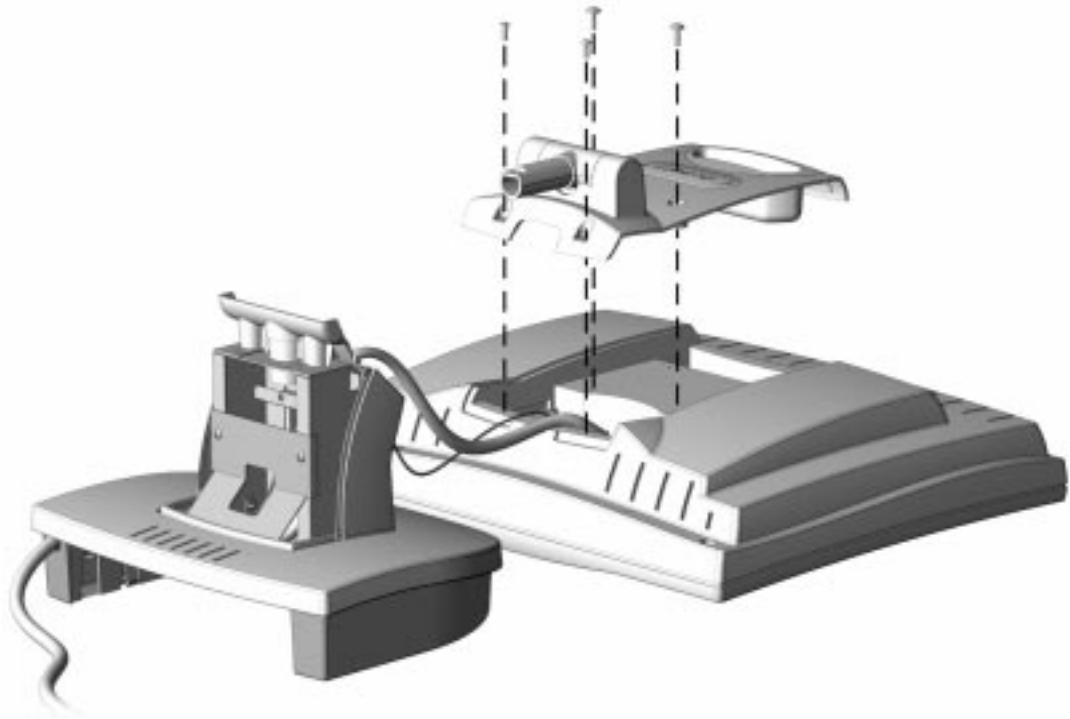


Figure 1-8. Removing the cable access cover

3. Disconnect the signal cable and DC power cable from the monitor panel.

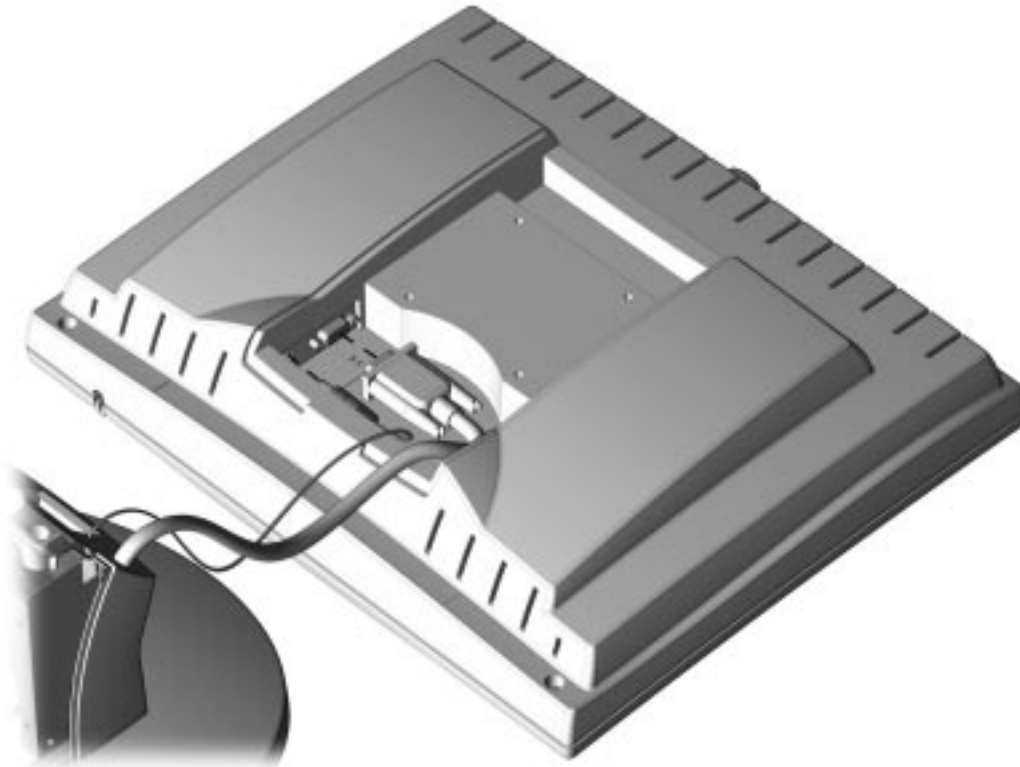


Figure 1-9. Disconnecting the signal cable and DC power cable.

To replace the cable access cover assembly, reverse this procedure.

- ✎ The monitor base (spare part no. 296474-001) is now disassembled and can be replaced.

1.5.5 Rear Enclosure

1. Remove two screws from the rear enclosure.
2. Separate the rear enclosure (spare part no. 296476-001) from the monitor panel using the Compaq Case Utility tool (Compaq tool kit #100767-001) to loosen the eight snaps (four on top and two on the sides of the enclosure).

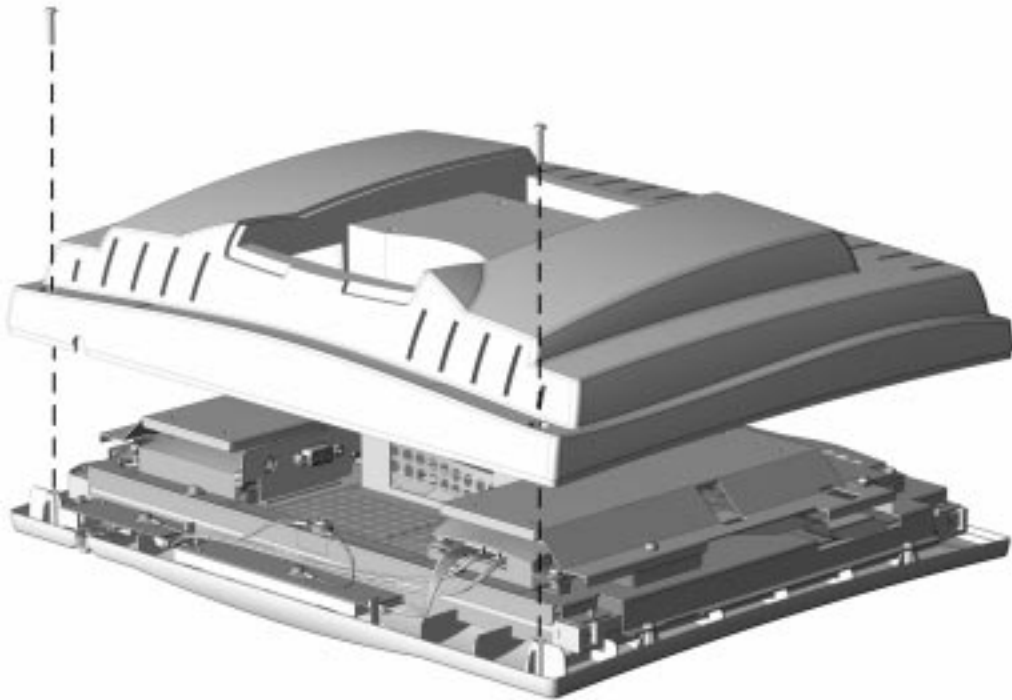


Figure 1-10. Removing the rear enclosure

To replace the rear enclosure, reverse this procedure.

- ✎ If you are replacing the antireflective screen only, skip the next few sections and turn to section 1.5.9, Front Bezel Assembly.

1.5.6 Support Bracket

1. Remove four screws from the support bracket (spare part no. 296477-001).
2. Remove the support bracket by sliding it down slightly from the top of the panel and lifting up.

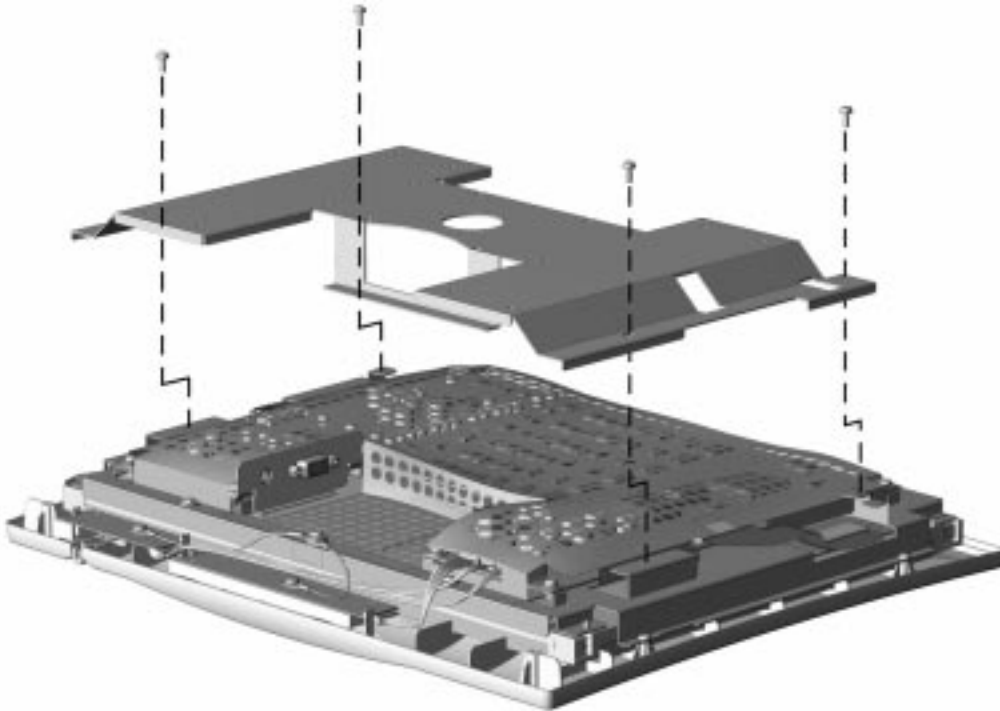


Figure 1-11. Removing the support bracket

To replace the support bracket, reverse this procedure.

1.5.7 Printed Circuit Board Shield

1. Remove the seven screws from the printed circuit board (PCB) shield (spare part no. 296477-001).
2. Carefully peel off the conductive tape located in several positions around the shield.
3. Remove the PCB shield.

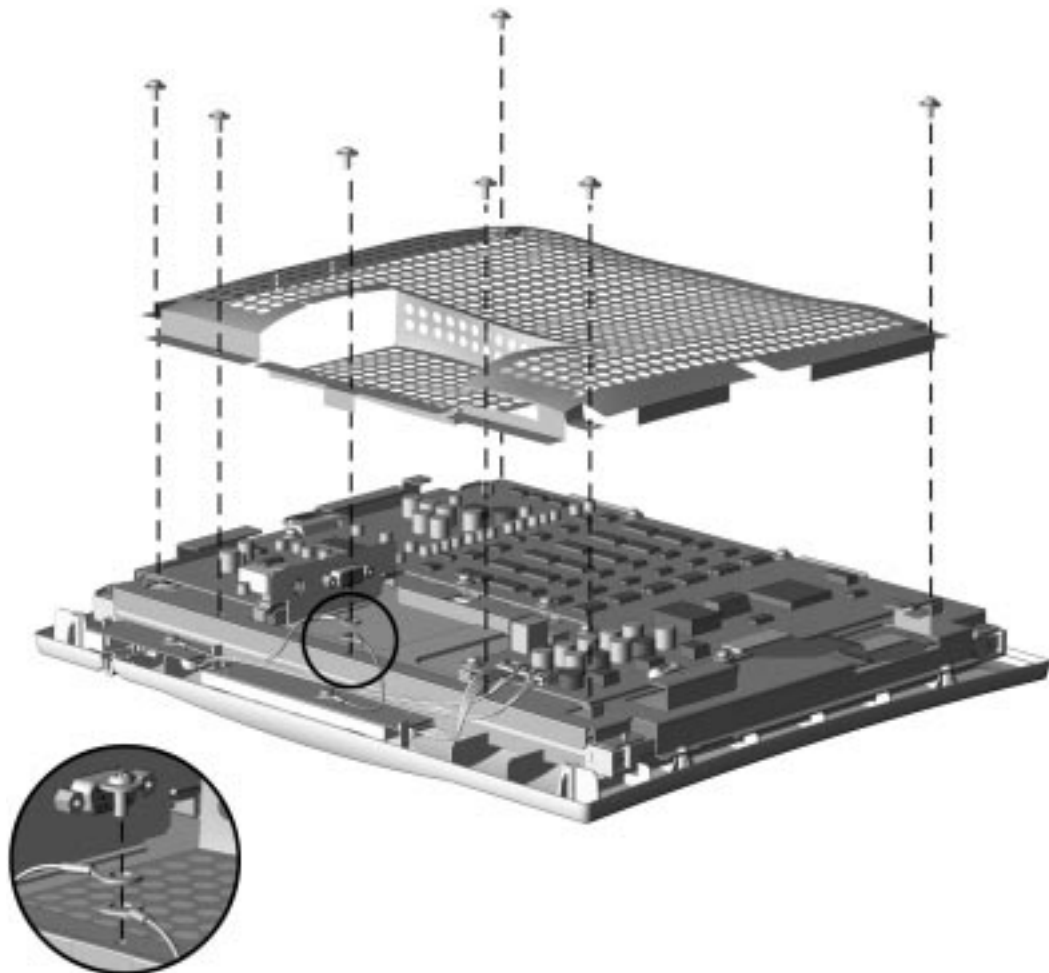


Figure 1-12. Removing the PCB shield

- ✎ When reinstalling the PCB shield, be sure to reapply the conductive tape in the correct positions.

1.5.8 Printed Circuit Board (PCB)

1. Remove ten screws from the PCB (spare part no. 296478-001).
2. Disconnect the five cables (spare part kit no. 296482-001) from the PCB.

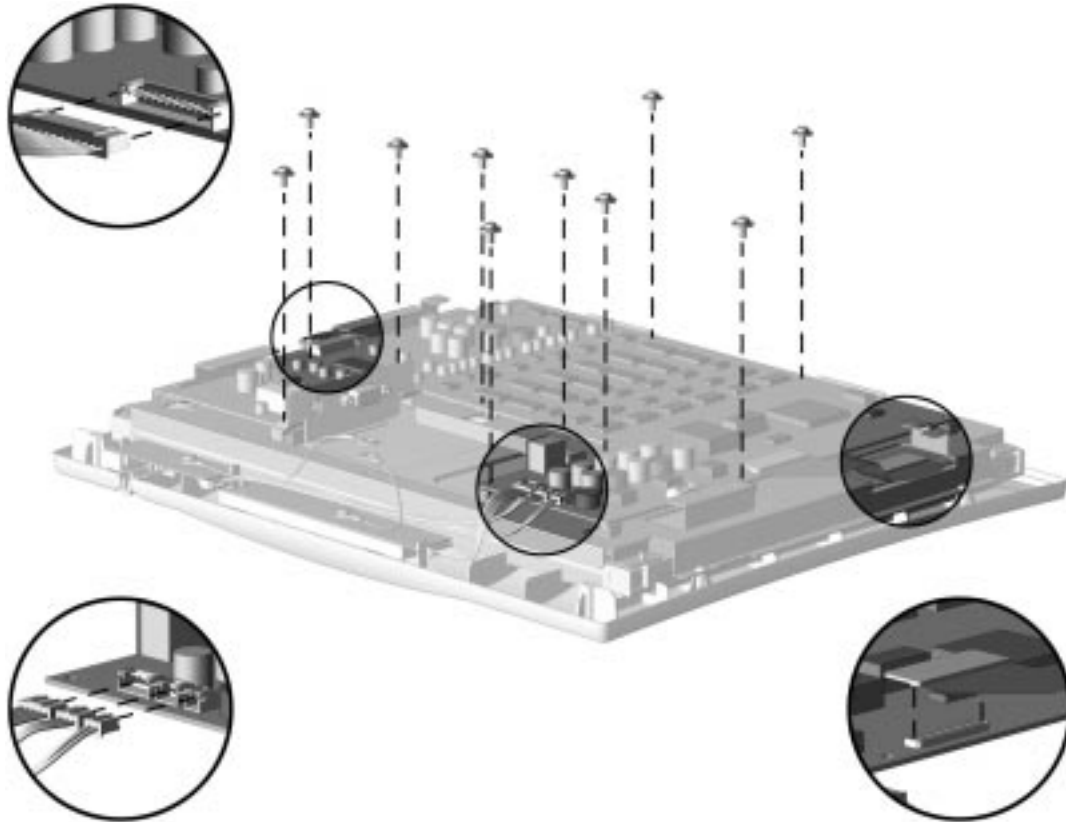


Figure 1-13. Removing the screws and disconnecting the cables from the PCB

3. As you remove the PCB, disconnect the sixth cable from the board.

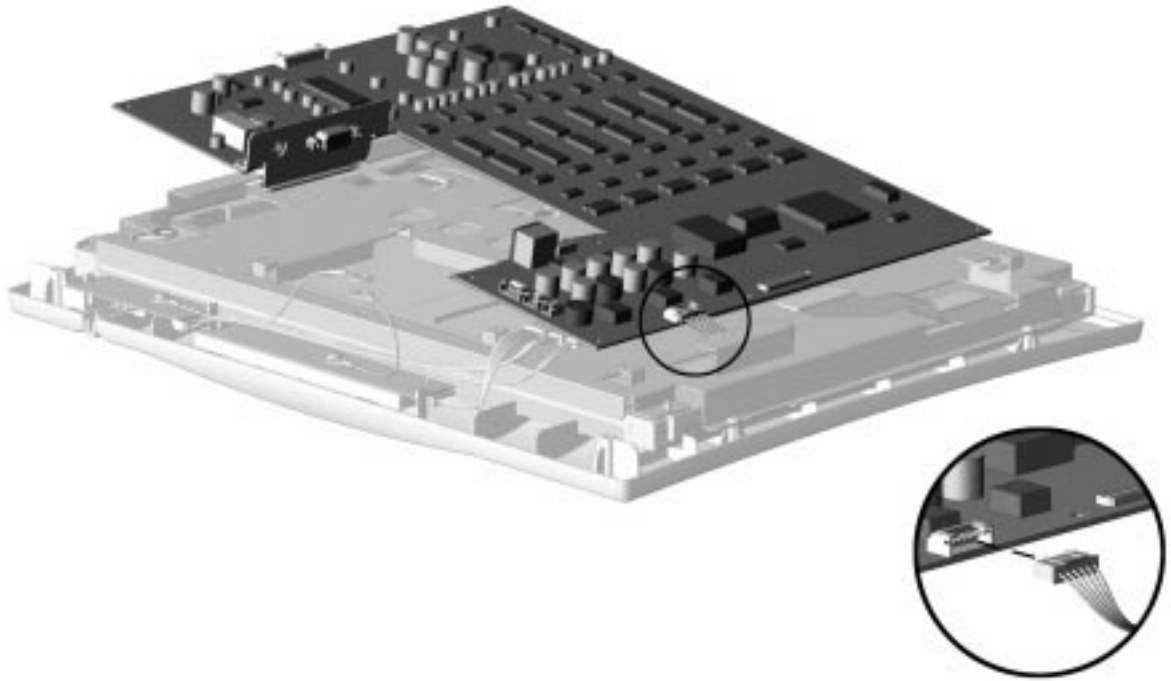


Figure 1-14. Disconnecting the sixth cable from the PCB

To replace the printed circuit board, reverse this procedure and connect this last disconnected cable first.

1.5.9 Front Bezel Assembly

1. Remove four screws from the front bezel (spare part no. 296479-001).
2. Lift off the LCD panel.

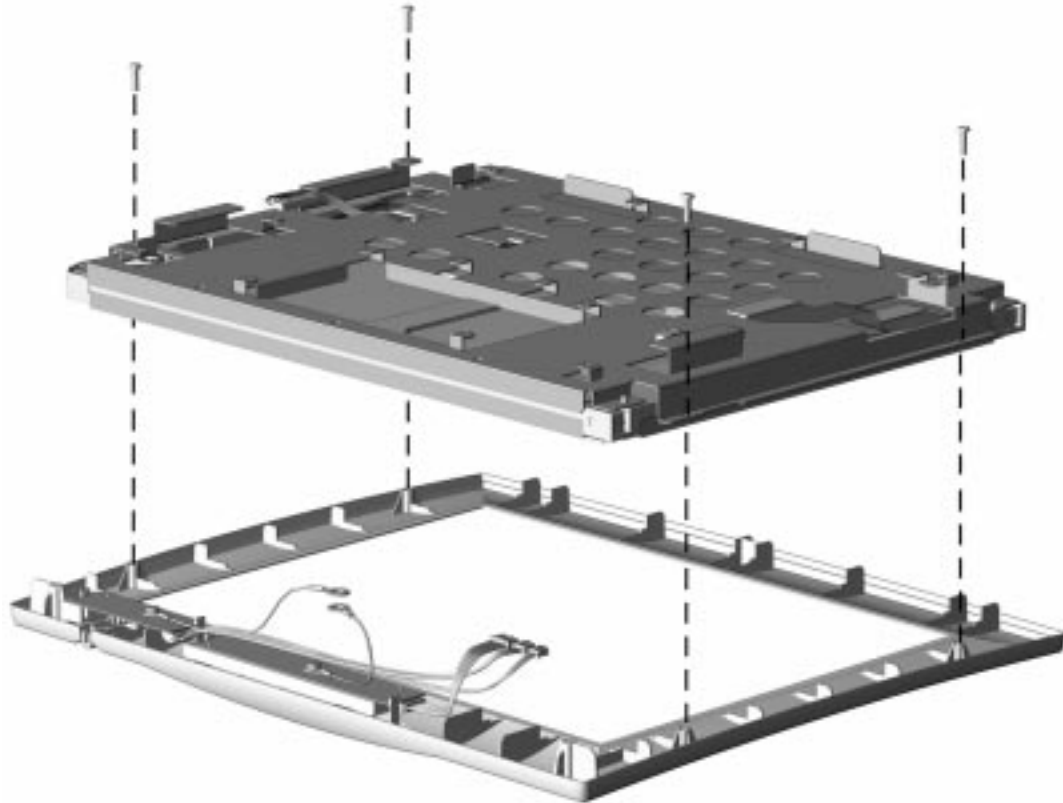


Figure 1-15. Removing the front bezel assembly

To replace the front bezel assembly, reverse this procedure.

1.5.10 Antireflective Screen/Protective Cover

Using the Compaq Case Utility tool (Compaq tool kit 100767-001), separate the antireflective screen (spare part no. 296738-001) from the LCD.

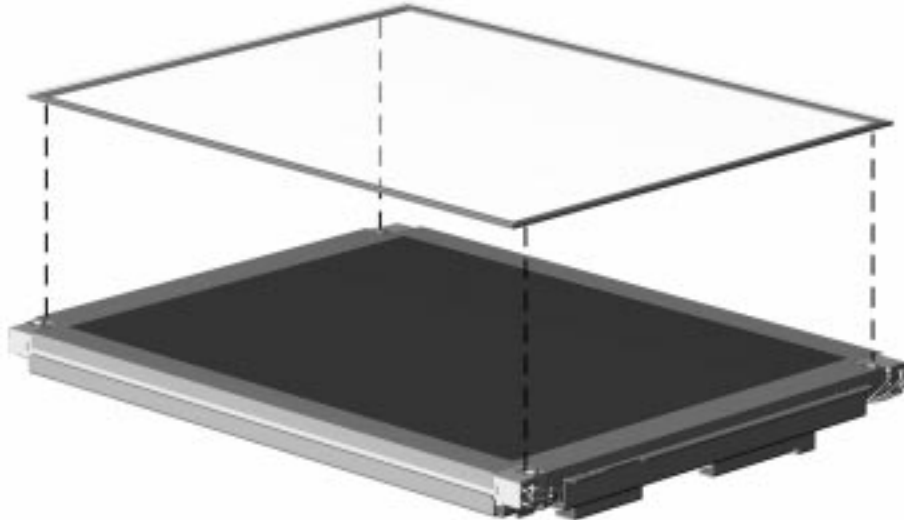


Figure 1-16. Removing the antireflective screen

Before replacing the antireflective screen, remove any backing residue left on the LCD plastic borders using the Compaq Case Utility tool. You may also use a soft dry cloth to remove the residue.



CAUTION: Never use water to clean an LCD screen.

To replace the antireflective screen, reverse this procedure.

1.5.11 TFT Liquid Crystal Display (LCD) Panel Assembly

1. Remove four screws from the viewing side of the TFT-LCD assembly.
2. Remove the LCD assembly (spare part no. 296481-001) from the inner shield.

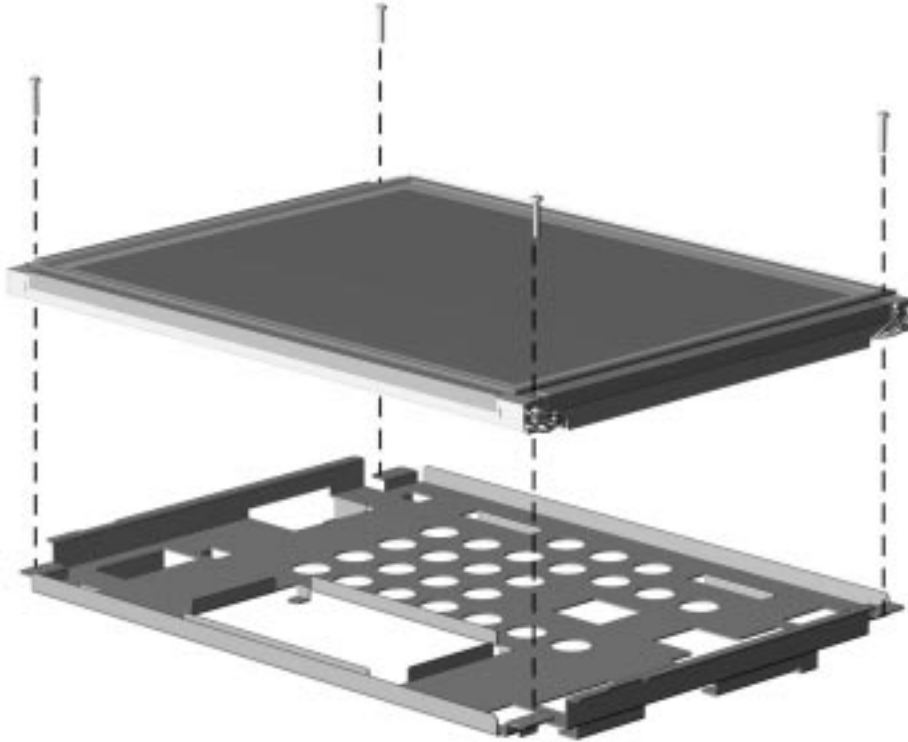


Figure 1-17. Removing the TFT-LCD panel assembly

To replace the TFT-LCD panel assembly, reverse this procedure.



CAUTION: Never use water to clean an LCD screen.

1.5.12 Backlight Bulbs

1. Disconnect the backlight cables from the LCD.
2. Pull the backlights (spare part no. 296480-001) straight out of the LCD.

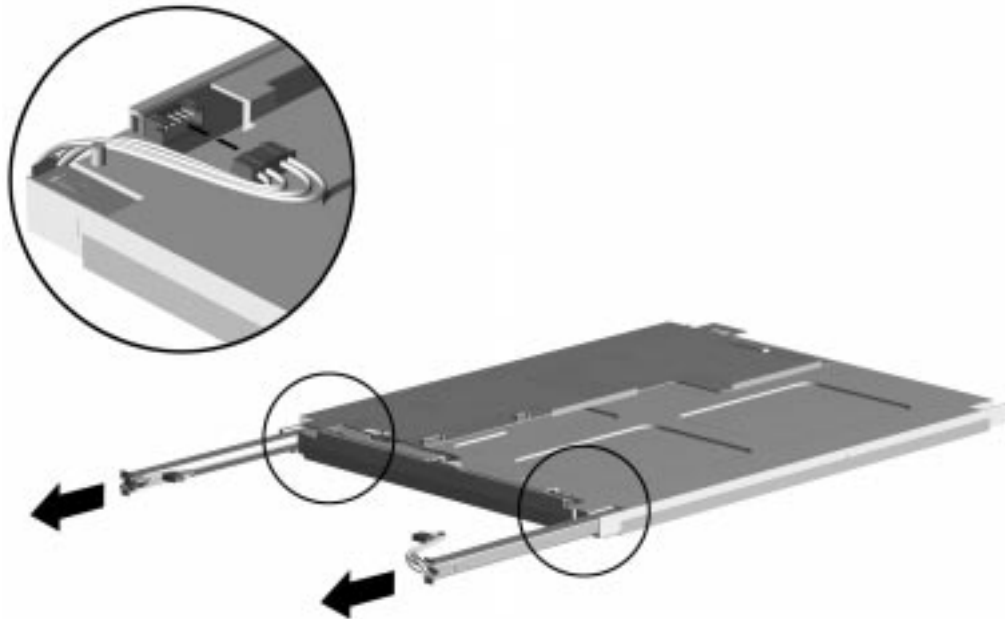


Figure 1-18. Removing the backlight bulbs

To replace the backlight bulbs, reverse this procedure.

- ⚠ When replacing the backlight bulbs, slide them in with the bulbs turned toward the center of the LCD. Both backlights must be replaced at the same time to maintain even lighting.

chapter 2

Illustrated Parts Map



Figure 2-1. Compaq TFT500 Flat Panel Monitor

Compaq TFT500 Flat Panel Monitor

Description	Part Number
1. Power Supply	296473-001
2. Monitor Base	296474-001
3. Cable Access Cover	296475-001
4. Rear Enclosure	296476-001
5. Shield/support Bracket	296477-001
6. Controller Assembly	296478-001
7. TFT Panel Shield	This is not a spare part.
8. TFT-LCD Panel Assembly	296481-001
9. Backlight Bulbs	296480-001
10. Protective Cover	296738-001
11. Front Bezel Assembly	296479-001
12. Security Locking Bracket	296483-001
13. Miscellaneous Cables*	296482-001
14. Mounting Arm*	285041-001
15. VGA Cable for mounting arm*	285042-001
16. Power Cable for mounting arm*	285043-001
17. Miscellaneous Screw Kit*	296739-001
18. User Guide*	285012-001
19. Return kit*	285010-001
20. Carton, Q-5 International*	285011-001

*Not included in the illustration

