

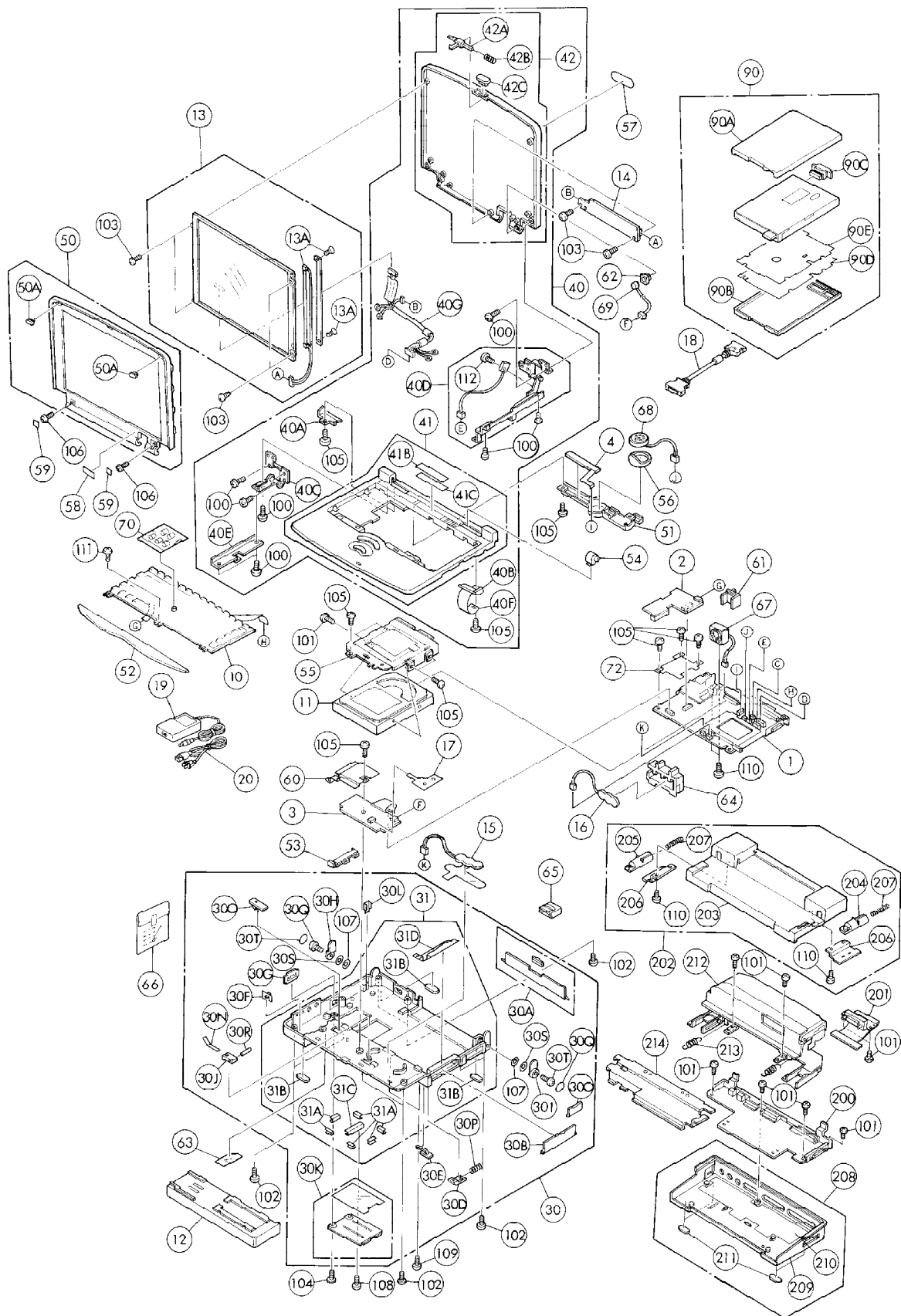
Portégé 620CT

General Specifications

Model 620CT

| | |
|----------------------|--|
| Model Number: | Portégé 620CT - PA1125U-T9A, limited production |
| Power: | Input Voltage: 100-240V, self-adjusting 50/60 Hz Output Voltage: 15 V 2.0A Main Battery: Lithium Ion, 3.6V x 1250mAh x 9 batteries |
| Processor: | Intel Pentium 100Mhz Integrated Co-processor 16KB internal cache |
| Memory: | 8MB EDO expandable to 40 MB |
| Drive(s): | FDD: 3 1/2" 1.44MB (External bundled w/unit) HDD: 1.26GB, 13ms |
| AccuPoint: | Integrated Pointing Device |
| Display: | 10.4" TFT Color Active Matrix 800 x 600 pixels |
| Expansion: | Interfaces: Serial, ECP Parallel, SVGA Monitor, PS/2 Mouse, PS/2 Keyboard, Port Replicator, Microphone/Headphone Jacks PC Card Slots: 2 Type II or 1 Type III Memory: 1 dedicated slot Plug and Play |
| Warranty: | 3 years parts and labor |

Portégé 620CT Exploded View



Portégé 620CT Part Numbers

| Ref. # | Code | Part # | Description | PIR | Comments |
|--------|------|--------------|-----------------------|-----|---|
| | C815 | PA1125UX | 620CT/1.2 | | Port 620CT with 1.2GB HDD |
| | C815 | PA1125U-T9A | 620CT/1.26 | | Port 620CT/1.26 |
| | C815 | PA1125U-T9AB | 620CT/1.26 REMFG | | Port 620CT/1.26 (Remf.) |
| 1 | C815 | P000220310 | PCB FM4SY3 | | Sys. Board, B36077801011 |
| 2 | C815 | P000210080 | PCB FM3PS3 | | Pwr Sply Board, B36075941016 |
| 3 | C815 | P000210090 | PCB FM3SD3 | | Sound Board, B36075671012 |
| 4 | C815 | P000204570 | PCB FM3LE1 | | LED Board, B36075141010 |
| 5-9 | | (reserved) | | | |
| 10 | C815 | P000197540 | Kybd UNIT | | UE0276P09 |
| 11 | C815 | P000218890 | HDD UNIT(1.35GB) | | Tosh. MV1200, MK1301MAV, HDD2172B |
| 12 | C815 | PA2489UR | MAIN Batt. (4000mAh) | | Lithium-Ion, 10.8V, 4000mAh w/recycle label |
| 13 | C815 | P000220320 | COLOR LCD Mod. | | Tosh. (DTI) 10.4 inch, VF0170P01 |
| 13A | C815 | P000220330 | FL TUBE SET | | with cover & screws |
| 14 | C815 | P000220160 | FL INVERTER | | UA0392P04 |
| 15 | C815 | P000204630 | NI-MH Batt. | | Backup Batt., 6.0V, 110mAh |
| 16 | C815 | P000204640 | NI-MH Batt. | | RTC Batt., 3.6V, 30mAh |
| 17 | C815 | P000204650 | MEMBRANE SWITCH | | AccuPoint control button contact |
| 18 | C815 | P000203500 | FDD CABLE | | UL0196P04 |
| 19 | C815 | PA2438U | AC ADAPTER | | Input:100-240VAC,0.7A-0.4A,50-60HZ, Output:15VDC,2A |
| 20 | C815 | P000182200 | AC CORD SET | | |
| 21-29 | | (reserved) | | | |
| 30 | C815 | P000204610 | BASE Assy | | |
| N/S | C815 | P000251740 | INSULATOR | | Attached to Base Assy, protects reset switch |
| 30A | C815 | P000204870 | Conn. COVER Assy | | |
| 30B | C815 | P000204880 | PC CARD COVER | | |
| 30C | C815 | P000204890 | FDD Conn. COVER | | |
| 30D | C815 | P000204900 | Batt. LEVER | | Batt. Release Latch |
| 30E | C815 | P000204910 | Batt. KNOB | | Batt. Lock |
| 30F | C815 | P000204920 | LED LENS | | |
| 30G | C815 | P000196900 | SWITCH BUTTON | | |
| 30H | C815 | P000193180 | TILT ANGLE, LEFT | | |
| 30I | C815 | P000193190 | TILT ANGLE, RIGHT | | |
| 30J | C815 | P000193300 | Batt. STOPPER | | |
| 30K | C815 | P000204930 | Mem. CARD COVER Assy | | Mem. Mod. Socket Cover |
| 30L | C815 | P000193340 | KEY PLATE | | |
| 30N | C815 | P000193310 | STOPPER SPRING | | |
| 30O | C815 | P000193320 | SAFETY CONTACT SPRING | | |
| 30P | C815 | P000204950 | SPRING, Batt. LOCK | | |
| 30Q | C815 | P000193240 | BLIND SEAL | | |
| 30R | C815 | P000193350 | SPRING PIN | | |
| 30S | C815 | P000193260 | WAVE WASHER | | |
| 30T | C815 | P000193230 | TILT SCREW | | |
| 31 | C815 | P000204860 | BASE SUB Assy | | |
| 31A | C815 | P000202280 | EARTH SPRING | | |
| 31B | C815 | P000198350 | BOTTOM CUSHION | | |
| 31C | C815 | P000205680 | BRG EARTH SPRING | | |
| 31D | C815 | P000204940 | EJECTOR EARTH SPRING | | |
| 32-39 | | (reserved) | | | |
| 40 | C815 | P000220340 | COVER Assy | | |
| 40-1 | C815 | P000223730 | COVER Assy | CEE | |
| 40A | C815 | P000205010 | HINGE COVER, LEFT | | |
| 40B | C815 | P000205020 | HINGE COVER, RIGHT | | |
| 40C | C815 | P000220360 | BRAKE HINGE, LEFT | | |
| 40D | C815 | P000220370 | SENSOR HARNESS | | |
| 40E | C815 | P000205050 | HINGE BRACKET | | |
| 40F | C815 | P000205060 | INSULATOR CORE HOLDER | | |
| 40G | C815 | P000220380 | LCD HARNESS | | LCD Cable, UL0248P06 |
| 41 | C815 | P000204960 | COVER SUB Assy | | Top Cover |
| 41B | C815 | P000193380 | LED LABEL | | |
| 41C | C815 | P000194670 | DISPERSIVE FILM | | |
| 42 | C815 | P000220350 | LCD COVER Assy | | |
| 42-1 | C815 | P000223560 | LCD COVER Assy | CEE | |
| 42A | C815 | P000204990 | LATCH HOOK | | |
| 42B | C815 | P000205000 | LATCH KNOB | | |
| 42C | C815 | P000180400 | SPRING B | | |
| 43-49 | | (reserved) | | | |
| 50 | C815 | P000220390 | LCD MASK Assy | | |
| 50A | C815 | P000204670 | LCD CUSHION | | |
| 51 | C815 | P000204680 | SPEAKER HOLDER Assy | | |

Portégé 620CT Part Numbers, (cont.)

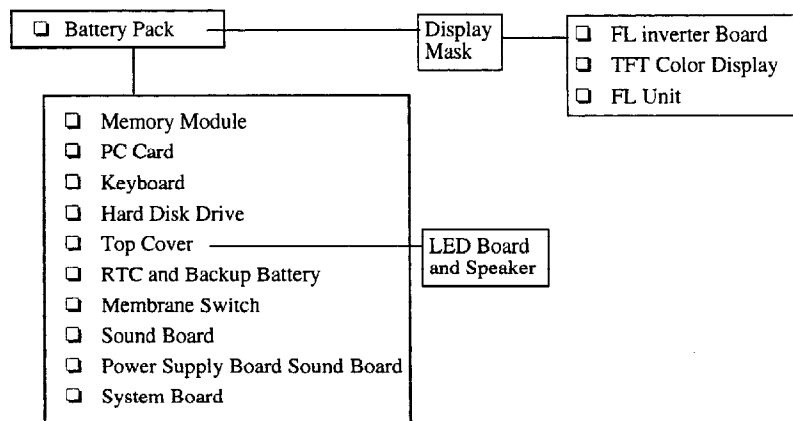
| Ref. # | Code | Part # | Description | PIR | Comments |
|--------|------|----------------------|---------------------------|-----|---|
| 52 | C815 | P000204690 | Kybd MASK | | Kybd Cover |
| 53 | C815 | P000204700 | Batt. Conn. COVER | | |
| 54 | C815 | P000222340 | CABLE GUIDE | | |
| 55 | C815 | P000204720 | HDD BRACKET Assy | | |
| 56 | C815 | P000204730 | SPEAKER CUSHION | | Protective Cover for Speaker |
| 57 | C815 | P000220400 | PC NAME SEAL (C) | | |
| 57-1 | C815 | NP620T2 | PC NAME SEAL (C) | CBF | |
| 58 | C815 | P000220410 | PC NAME SEAL (M) | | |
| 58-1 | C815 | NP620CT | PC NAME SEAL (M) | CBF | |
| 59 | C815 | P000193590 | LCD MASK SEAL | | Rubber Seal |
| 60 | C815 | P000204760 | SOUND SHIELD Assy | | Sound Board Cover |
| 61 | C815 | P000222180 | BLIND FAN SEAL | | Fan Hole Seal |
| 62 | C815 | P000204780 | MIC HOLDER | | |
| 63 | C815 | P000204790 | CARE LABEL | | |
| 64 | C815 | P000204800 | RTC Batt. HOLDER | | |
| 65 | C815 | P000222170 | TRANSFER Conn. | | |
| 66 | C815 | P000204810 | PC SLOT COVER | | |
| 67 | | (reserved) | | | |
| 68 | C815 | P000204830 | SPEAKER | | 8 Ohm, 0.5W |
| 69 | C815 | P000204840 | MICROPHONE | | |
| 70 | C815 | P000193060 | STICK CAP SET | | |
| 71 | | (reserved) | | | |
| 72 | C815 | P000205690 | SYSTEM SHIELD Assy | | |
| 73-89 | | (reserved) | | | |
| 90 | C815 | P000220790 | FDD 3.5 Inch | | Citizen, ZA1215P02 |
| 90A | C815 | P000221810P000221820 | FDD COVER, UPPER | | |
| 90B | C815 | P000221820 | FDD COVER, LOWER | | |
| 90C | C815 | P000221830 | FDD Conn. | | |
| 90D | C815 | P000221840 | FDD SHIELD | | |
| 90E | C815 | P000221850 | FDD INSULATOR | | |
| 91-99 | | (reserved) | | | |
| 100 | C815 | P000172160 | SCREW M2.5X6Z | | |
| 101 | C815 | P000163450 | SCREW M3X4 | | |
| 102 | C815 | P000094030 | SCREW,M2X8 | | |
| 102-1 | C815 | P000229530 | SCREW M2X8L | | Grip Type Screw |
| 103 | C815 | P000171690 | SCREW M2X6 | | |
| 104 | C815 | P000171940 | SCREW M2X4 | | |
| 105 | C815 | P000161040 | SCREW M2X4 | | |
| 106 | C815 | P000172160 | SCREW M2.5X6Z | | |
| 107 | C815 | P000193250 | WASHER | | |
| 108 | C815 | P000188300 | SCREW | | |
| 109 | C815 | P000169570 | SCREW M2X6 | | |
| 109-1 | C815 | P000229520 | SCREW M2X6L | | Grip Type Screw |
| 110 | C815 | P000160830 | SCREW M2.5X4 | | |
| 111 | C815 | P000206850 | SCREW | | |
| 112 | C815 | P000101750 | SCREW M2X5 | | |
| OP | C815 | NW2031U | NW, 8MB Mem. Mod. | | |
| OP | C815 | KTT610/8 | KINGSTON, 8MB Mem. | | |
| OP | C815 | NW2032U | NW, 16MB Mem. Mod. | | |
| OP | C815 | KTT610/16 | KINGSTON, 16MB Mem. | | |
| OP | C815 | NW2034U | NW, 32MB Mem. Mod. | | |
| OP | C815 | KTT610/32 | KINGSTON, 32MB Mem. | | |
| N/S | C815 | P000220800-V510 | SYSTEM BIOS DISK - V5.10 | | BIOS Disk Version V5.10, marking F36000368000 |
| N/S | C815 | P000220800-V520 | SYSTEM BIOS DISK - V5.20 | CBA | BIOS Disk Version V5.20, marking F36000368017 |
| N/S | C815 | P000220800-V530 | SYSTEM BIOS DISK - V5.30 | CBA | BIOS Disk Version V5.30 |
| 50M | C1G1 | P000247320 | FIR COVER | | |
| 51-69 | | (Reserved) | | | |
| 70 | C1G1 | P000295350 | LCD MASK ASSEMBLY | | Display Mask |
| 70A | C1G1 | P000266750 | LCD CUSHION | | |
| 71 | | (Reserved) | | | |
| 72 | C1G1 | P000257830 | SPEAKER GUM | | |
| 73 | C1G1 | P000258050 | LCD MASK SEAL | | |
| 74 | C1G1 | P000286280 | FL HARNESS INSULATOR | | |
| 75 | C1G1 | P000273710 | LCD EARTH SPRING | | |
| 76 | C1G1 | P000287280 | LCD HARNESS HOLDER | | |
| 77 | C1G1 | P000295360 | "LCD BRACKET, LEFT 133A" | | |
| 78 | C1G1 | P000295370 | "LCD BRACKET, RIGHT 133A" | | |
| 79 | | (Reserved) | | | |
| 80 | C1G1 | P000286010 | BASE ASSEMBLY | | |

Portégé 620CT Part Numbers, (cont.)

| Ref. # | Code | Part # | Description | PIR | Comments |
|-----------------|------|---------------|-----------------------------|-----|--|
| 80A | C1G1 | P000286060 | BATTERY CASE ASSY | | |
| 80B | C1G1 | P000286070 | POWER SWITCH ASSY | | |
| 80C | C1G1 | P000286080 | MEMORY COVER ASSY | | |
| 80D | C1G1 | P000264210 | BATTERY SPRING ASSY | | |
| 80E | C1G1 | P000264220 | SWITCH LOCK LEVER | | |
| 80F | C1G1 | P000264230 | PCMCIA LOCK LEVER | | |
| 80G | C1G1 | P000257770 | EARTH SPRING | | |
| 80H | C1G1 | P000258980 | BOTTOM CUSHION | | |
| 81-89 | | (Reserved) | | | |
| 90 | C1G1 | P000286210 | SHUTTER ASSEMBLY | | PC Card Slot Cover |
| 91 | C1G1 | P000286220 | RTC BATTERY HOLDER | | RTC Battery Cover |
| 92 | C1G1 | P000286230 | HDD EJECTOR ASSEMBLY | | HDD Bracket |
| 93 | C1G1 | P000295380 | CD-ROM BRACKET | | |
| 94 | | Not used | | | |
| 95 | C1G1 | P000273720 | EXPANSION CONN COVER | | |
| 96 | C1G1 | P000286260 | BATTERY PCB STUD | | |
| 97 | C1G1 | P000286340 | MODEM COVER | | |
| S01 | C1G1 | P000227770 | SCREW M2.5X2.6B | | |
| S02 | C1G1 | P000215140 | SCREW M2X3C | | |
| S03 | C1G1 | P000207940 | SCREW M2X6Z | | |
| S04 | C1G1 | P000239510 | GRIP SCREW M2.5X5Z | | |
| S05 | C1G1 | P000207950 | GRIP SCREW M2X4Z | | |
| S06 | C1G1 | P000233430 | SCREW M2.5X6Z | | |
| S07 | C1G1 | P000256890 | TY SCREW M2.5X6BZ | | |
| S08 | C1G1 | P000278250 | GRIP SCREW M2X5.5Z | | |
| S09 | C1G1 | P000209920 | SCREW M2.5X4Z | | |
| S10 | C1G1 | P000261930 | GRIP SCREW M2X4BN | | |
| S11 | C1G1 | P000225470 | SCREW M2X10Z | | |
| S12 | C1G1 | P000261220 | GRIP SCREW M2.5X6BN | | |
| S13 | C1G1 | P000244070 | GRIP SCREW M2.5X8Z | | |
| S14 | C1G1 | P000254870 | GRIP SCREW M3X4Z | | |
| S15 | C1G1 | P000267150 | GRIP SCREW M2.5X20B | | |
| S16 | C1G1 | P000295460 | TG SCREW M2.5X4Z | | |
| OP01 | C1G1 | KTT-SO100/32 | 32MB SDRAM MEMORY | | Kingston 32MB SDRAM Memory Module |
| OP01-A | C1G1 | KTT-SO100/64 | 64MB SDRAM MEMORY | | Kingston 64MB SDRAM Memory Module |
| OP01-B | C1G1 | KTT-SO100/128 | 128MB SDRAM MEMORY | | Kingston 128MB SDRAM Memory Module |
| OP02 | C1G1 | PA2450U | UNIVERSAL AC ADAPTER | | "Input: 100-240VAC 0.95-0.55A 50/60Hz, Output: 15VDC 3A, "Lithium-Ion, 10.8V, 4,000mAh with Recycle Label" |
| (U,C,Z)" OP03 | C1G1 | PA2487URG | BATTERY PACK | | "(U,C,Z)" |
| OP04 | C1G1 | PA2488U | BATTERY CHARGER | | "(U,C,Z)" |
| OP5 | C1G1 | PA2717U | ENHANCED PORT REP. III | | "U,C,Z" |
| OP5-A | C1G1 | PA2717UN | ENHANCED PORT REP. III | | "U,C,Z (Wave Gray)" |
| OP6 | C1G1 | PA2730U | "ADAPTER, ENH PORT REP III" | | |
| OP7 | C1G1 | PA3024U-1PRP | ENHANCED PORT REP. IV | | |
| OP8 | C1G1 | PA2731U | PORT REPLICATOR | | "U,C,Z" BIOS updates can be obtained for the Toshiba Web Site |
| OP = Option | | | | | |
| N/S = Not Shown | | | | | |

Portégé 620CT Disassembly Overview

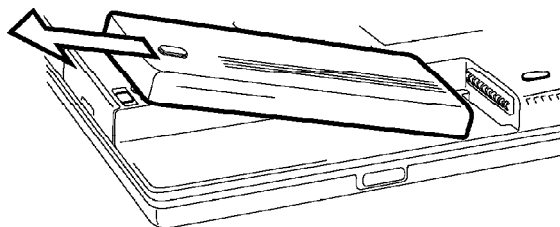
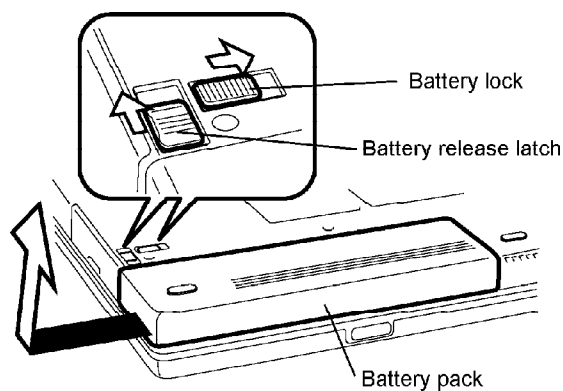
The information offered in this section is an overview of the Maintenance Manual, Chapter 4, Replacement Procedures. If you have any questions or concerns regarding the proper procedure please refer to the Maintenance Manual through the Toshiba Service and Support Website *before* you proceed.



This section explains how to remove Field Replaceable Units (FRUs). It may not be necessary to remove all the FRUs in order to replace one.

The chart is a guide to which FRUs need to be removed in order to remove others. The section numbers on the chart refer to the sections in the Maintenance Manual, Chapter 4.

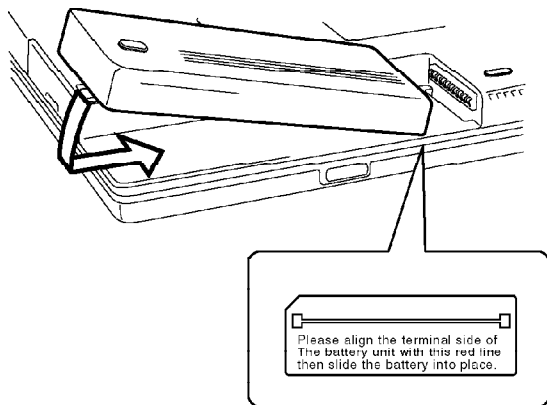
Always start by removing the battery pack, next, optional items such as the optional PC card and optional memory module, then follow the line on the chart to determine which FRU you must remove next in order to repair the one you think is causing the computer to operate improperly.



To remove the battery pack, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Close the display if it is open.
3. Turn the computer upside down.
4. Slide the **battery lock** to free the **battery release latch**, then slide the battery release latch to pop the **battery pack** out about one centimeter to the left.
5. A slight gap will open between the right end of the battery pack and the computer. Slip your fingers into the gap and pull the battery pack to the left until it stops (about 1 cm or half an inch).
6. Grasp the left end of the battery pack and lift it up to remove it.

Portégé 620CT Disassembly Overview (cont.)

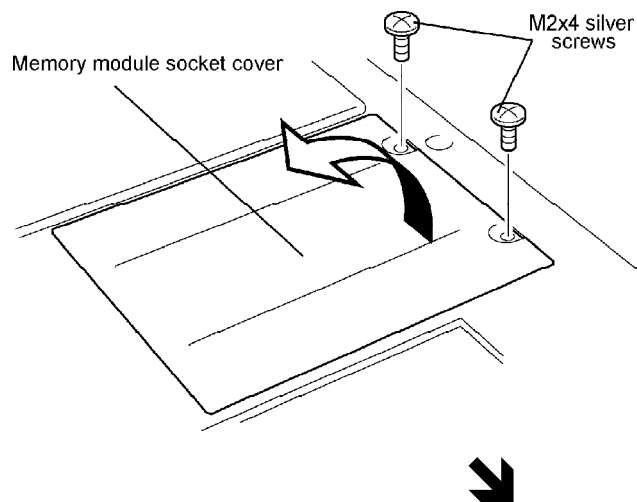


To install the battery pack, follow the steps below.

WARNING: The battery is a lithium ion battery and can explode if not properly replaced, used, handled, or disposed of. Use only batteries recommended by Toshiba as replacements.

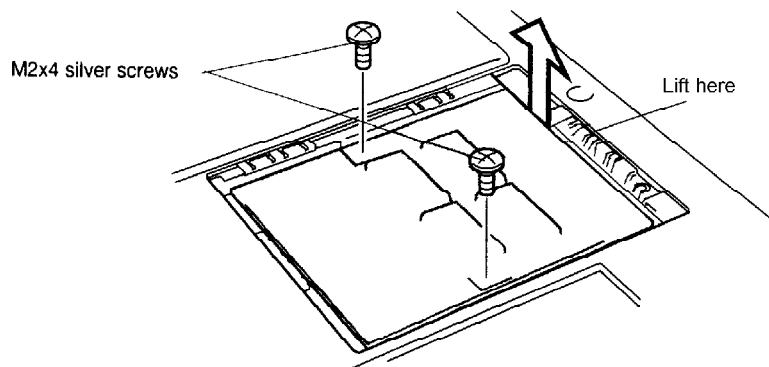
NOTE: Check the battery terminals before you install the battery. If they are dirty, wipe them clean with a dry cloth.

1. Place the right end of the battery pack at the **red line** marked on an alignment guide. The battery pack should seat level with the computer.
2. Gently press down on the center of the battery pack and at the same time push it to the right. When the battery is nearly seated, you will feel a slight resistance. Press the battery in carefully until you feel it click into place, then lock the battery lock.

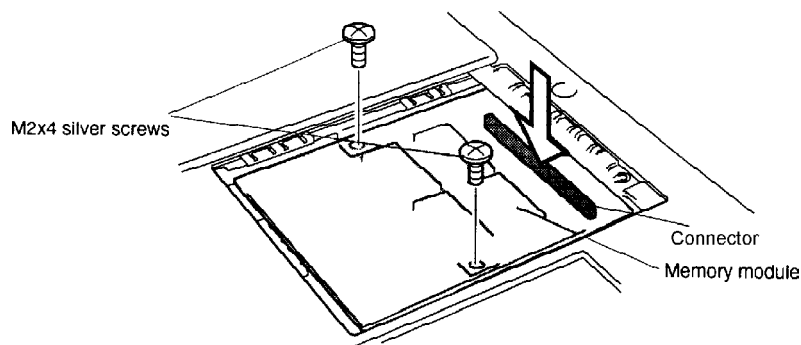


To remove the memory module from the computer, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack.
3. Turn the computer upside down.
4. Remove **two M2x4 silver screws** securing the **memory module socket cover**.
5. Slide your fingernail or a thin object under the cover and remove it.
6. Remove **two M2x4 silver screws** securing the module to a brace at the center of the module and set them aside.
7. Insert a thin object under the upper edge of the module and lift up to disengage the connector, then grasp the module by the edges and remove it.

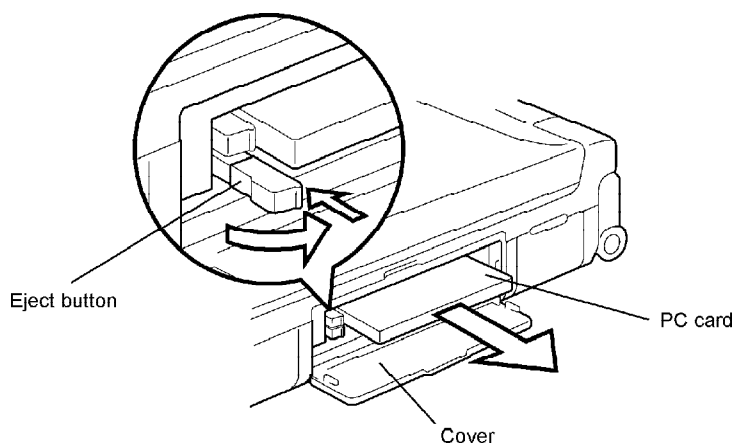


Portégé 620CT Disassembly Overview (cont.)



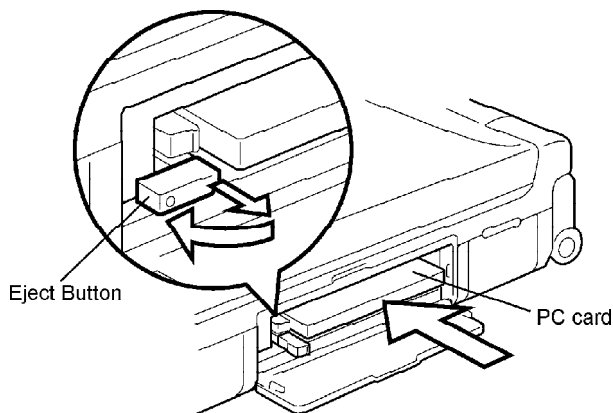
To install the memory module in the computer, follow the steps below.

1. Position the connector on the bottom of the module over the corresponding connector on the computer (align the holes on the side of the module over the screw holes on the brace). Place your fingers above the connector and press firmly but gently to assure a solid connection. The module should be seated level.
2. Secure the module to the brace with **two M2x4 silver screws**.
3. Lay the cover in place. Secure it with **two M2x4 silver screws**. If the memory module has a plastic tab, fold it down first then place the cover.
4. When you turn the computer on, it should automatically recognize the total memory capacity. Verify that the added memory is recognized.
5. Install the battery pack.



To remove the PC card from the computer, follow the steps below.

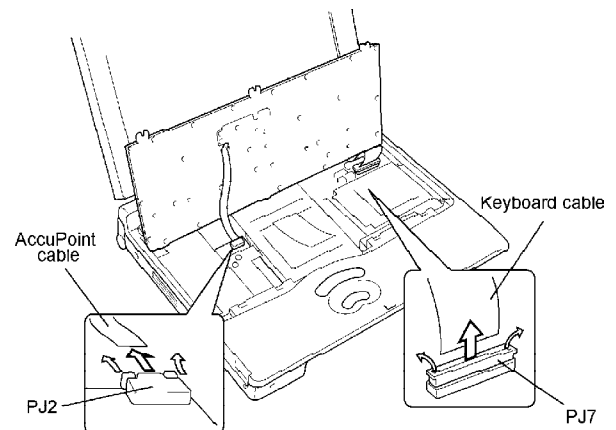
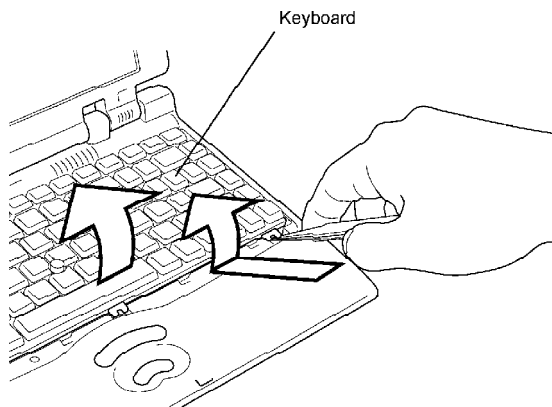
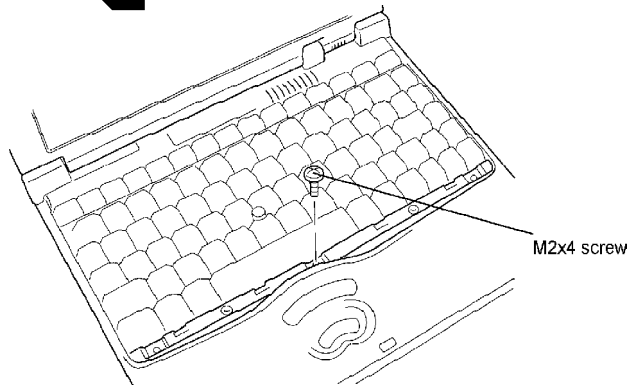
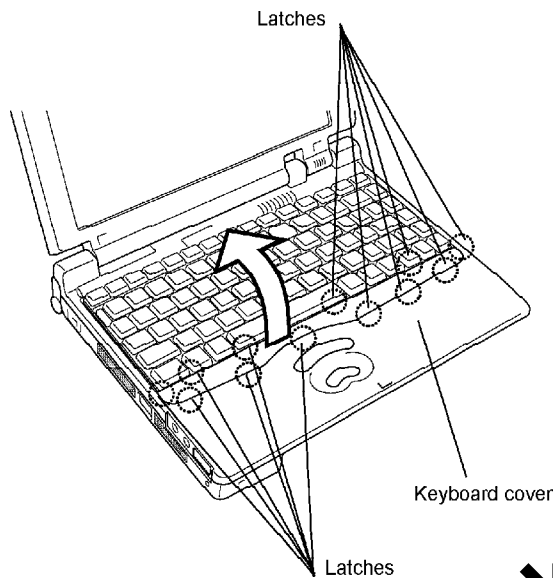
1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack.
3. Open the **cover** to the PC card slot.
4. Pull out the **eject button** for the card you want to remove and press the button. The card will pop out slightly.
5. Grasp the **PC card** and pull it out.



To install the PC card in the computer, follow the steps below.

1. Insert the **PC card**. When the card is almost fully seated, you will feel some resistance. Press gently to assure a firm connection, but do not force the card into position.
2. When the card is fully seated, an **eject button** will pop out; the top button for the top connector and the bottom button for the bottom connector.
3. Pull the eject button slightly and bend it to lock the card.
4. Close the cover.
5. Install the battery pack.

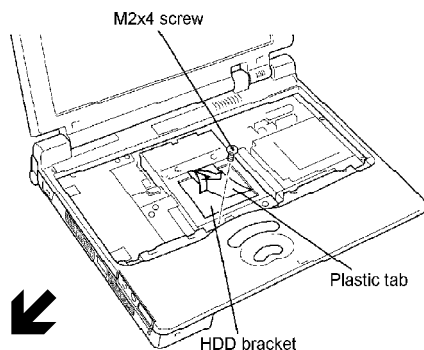
Portégé 620CT Disassembly Overview (cont.)



To remove the keyboard, follow the steps below.

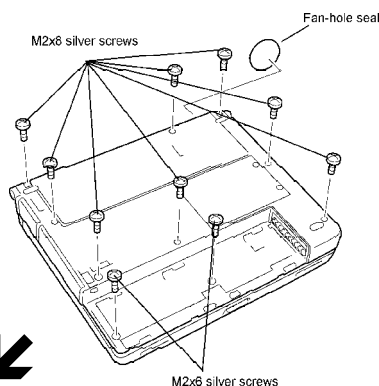
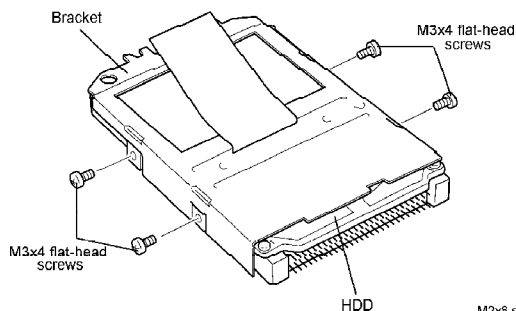
1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, and PC card.
3. Use a case separator to release **12 latches** that secure the **keyboard cover**. Begin with the latches at the front.
4. Remove **one M2x4 screw with washer** in front of the keyboard.
5. Insert a thin object between the keyboard and the top cover to lift up the **keyboard**. Lift up slightly so the extensions at the back of the keyboard clear the corresponding holes on the top cover. Do not remove the keyboard cable.
6. Disconnect the **AccuPoint cable** from **PJ2** and the **keyboard cable** from **PJ7**.
7. Lift out the keyboard.

Portégé 620CT Disassembly Overview (cont.)



To remove the HDD, follow the steps below.

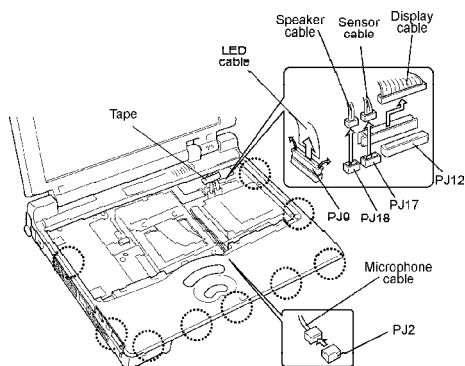
1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, and keyboard.
3. Remove **one M2x4 screw** securing the **HDD bracket**.
4. Lift up on the **plastic tab** on the HDD bracket and lift up the HDD.
5. Carefully pull the HDD to disconnect it from the connector then remove it.
6. Remove **four M3x4 flat-head screws** securing the bracket to the **HDD** and remove the **bracket**.



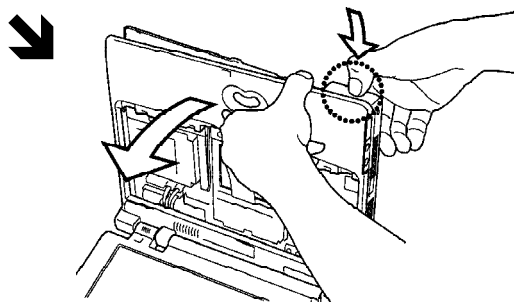
To remove the top cover and display assembly, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, keyboard, and HDD.
3. Close the display and turn the computer upside down.
4. Remove the **fan-hole seal**.
5. Remove **eight M2x8 silver screws** from the bottom of the computer and **two M2x6 silver screws** from the battery seating area. These screws secure the top cover to the bottom cover.

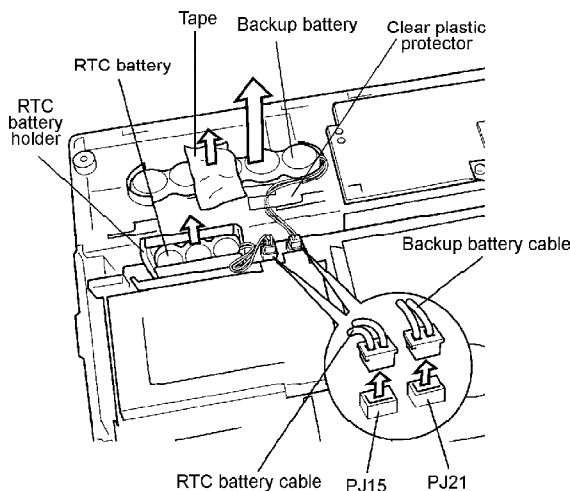
NOTE: If you remove the top cover, be sure to replace the fan hole seal with a new one.



6. Turn the computer back over and open the display panel. Remove the tape, then disconnect the following cables: **LED** from **PJ9**, **display** from **PJ12**, **speaker** from **PJ18**, **sensor** from **PJ17**, and **microphone** from **PJ2**.
7. Stand the computer on end and release nine latches securing the top cover. Begin with the latches along the front edge as shown.
8. Work around to the side latches, then remove the top cover and display assembly.

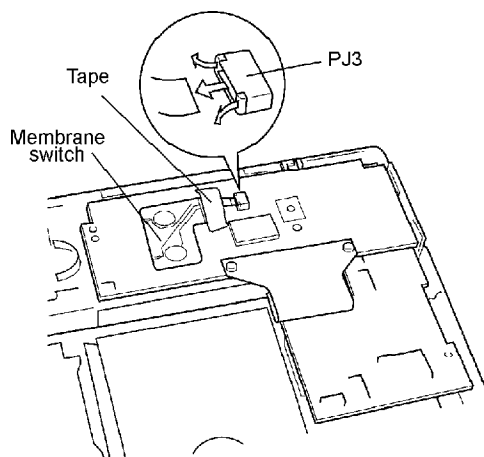


Portégé 620CT Disassembly Overview (cont.)



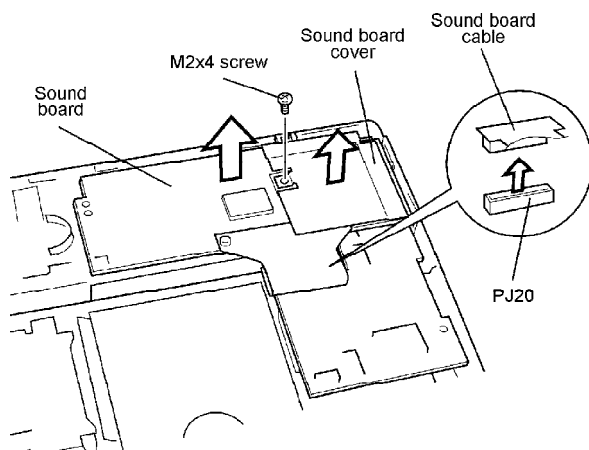
To remove the RTC and backup batteries, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, keyboard, top cover and display assembly.
3. Peel off the **tape** securing the **backup battery cable**.
4. Disconnect the **RTC battery cable** from **PJ15** on the system board.
5. Slide the **RTC battery** and **RTC battery holder** free of the brackets holding it in place and remove the battery and battery holder.
6. Use a thin object to carefully work the RTC battery out of the holder.
7. Disconnect the **backup battery cable** from **PJ21** on the power supply board and lift out the battery. Note that the cable is routed under the clear plastic protector.



To remove the membrane switch, follow the steps below.

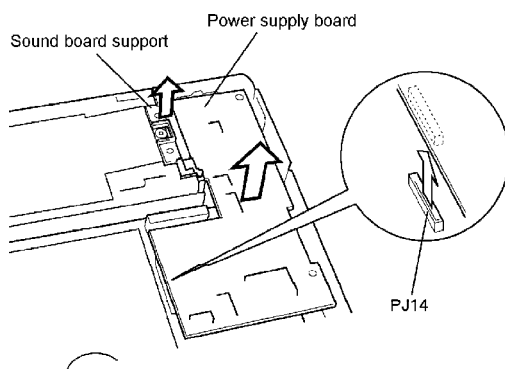
1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, keyboard, HDD, top cover and display assembly, RTC battery, and backup battery.
3. Remove the tape from the membrane switch cable.
4. Disconnect the cable from **PJ3** on the sound board and lift off the **membrane switch**.



To remove the sound board, follow the steps below.

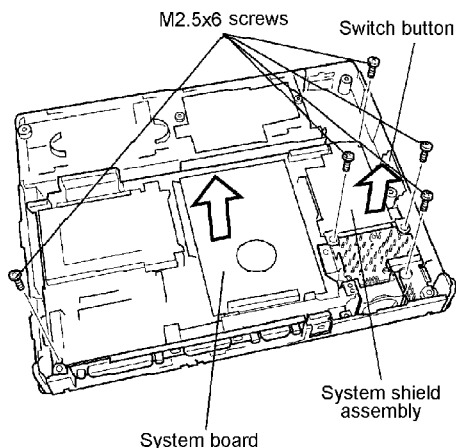
1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, keyboard, HDD, top cover and display assembly, RTC battery, backup battery, and membrane switch.
3. Remove **one M2x4 screw**.
4. Remove the **sound board cover**.
5. Disconnect the **sound board cable** from **PJ20**.
6. Lift out the **sound board**.

Portégé 620CT Disassembly Overview (cont.)



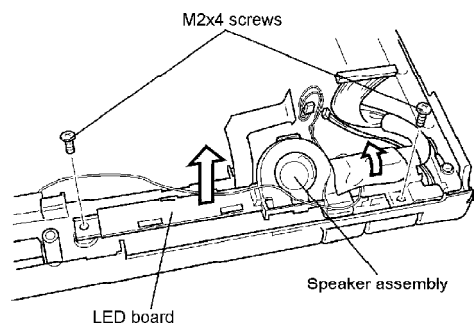
To remove the power supply board, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, keyboard, HDD, top cover and display assembly, RTC battery, backup battery, membrane switch, and sound board.
3. Lift out the **sound board support**.
4. Disconnect the **power supply board** from **PJ14** on the system board.
5. Lift out the power supply board.



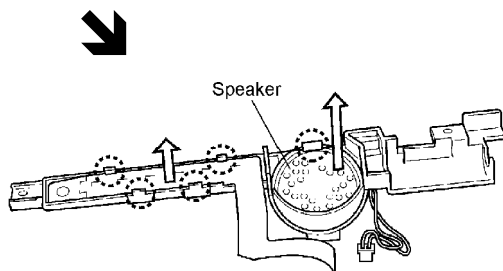
To remove the system board, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, top cover and display assembly, HDD, RTC battery, backup battery, membrane switch, sound board, and power supply board.
3. Remove **five M2x6 screws**.
4. Lift out the **system board**.
5. The system shield assembly will be unattached. Be sure to note its position.
6. Remove the **switch button**.

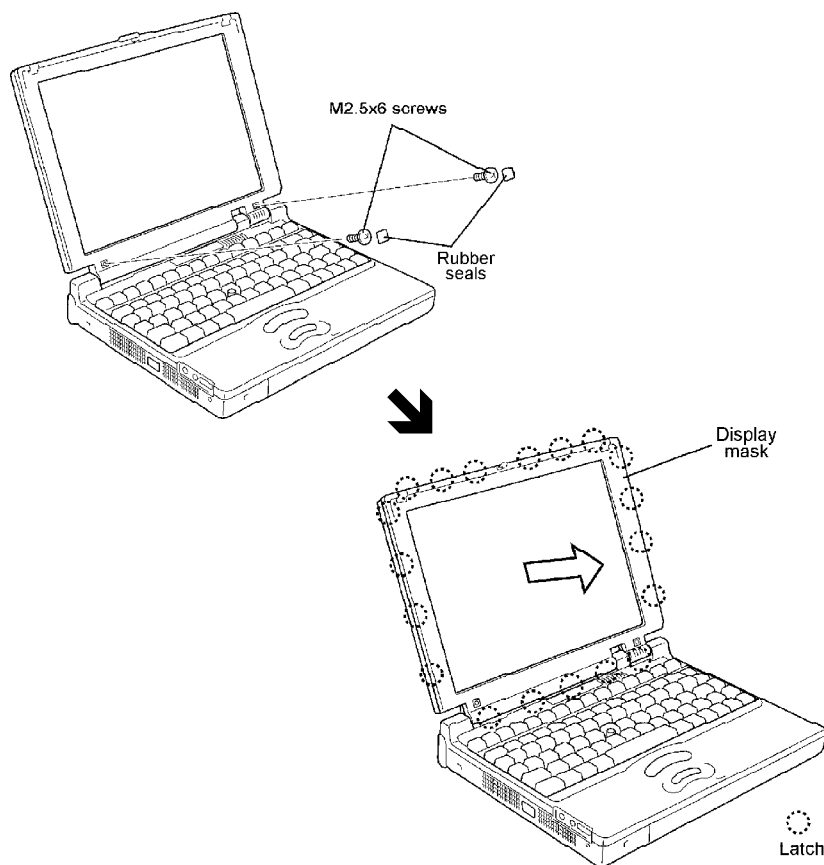


To remove the LED board and speaker, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, keyboard, HDD, and top cover and display assembly.
3. Remove **two M2x4 screws**.
4. Remove the **LED board and speaker assembly**.
5. Release **four latches** to remove the LED board.
6. Release **one latch** to remove the **speaker**.
7. Remove the **protective rubber cover**.



Portégé 620CT Disassembly Overview (cont.)



To remove the display mask, follow the steps below.

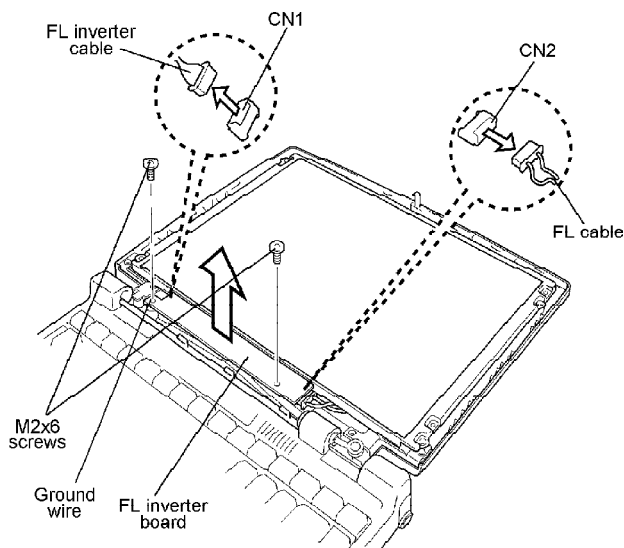
1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, and PC card.

NOTE: You do not have to remove the top cover and display assembly to remove the display mask.

3. Remove **two rubber seals** from the display hinges to expose screws securing the display mask.
4. Remove **two M2.5x6 screws** at the bottom corners of the display mask.

NOTE: When you remove the screws, support the back of the display panel with your hand.

5. Slip your fingers between the top of the display cover and the display mask and pull out gently to release **six latches**. Start with the latches at the center.
6. Continue around the plastic cover to release **four latches** on each side and **five latches** at the bottom.



WARNING: If you have to turn on the power to check the FL inverter during disassembly, never touch the exposed areas that carry high-voltage.

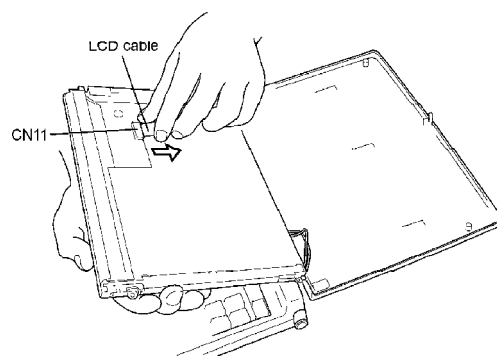
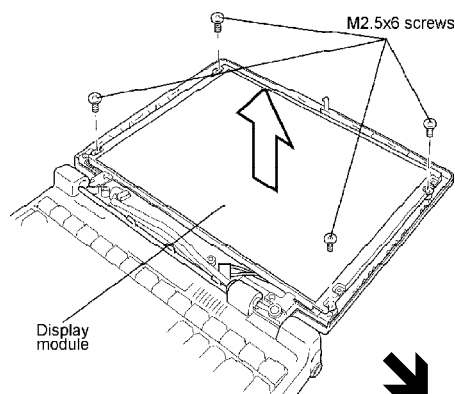
To remove the FL inverter board, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, and display mask.
3. Remove **two M2x6 screws** from the **FL inverter board**. Note the ground wire on the left screw.

NOTE: When you remove the screws, support the back of the display with your hand.

4. Turn the board over and disconnect the **FL inverter cable** from **CN1** and the **FL cable** from **CN2**.

Portégé 620CT Disassembly Overview (cont.)



To remove the TFT color display module, follow the steps below.

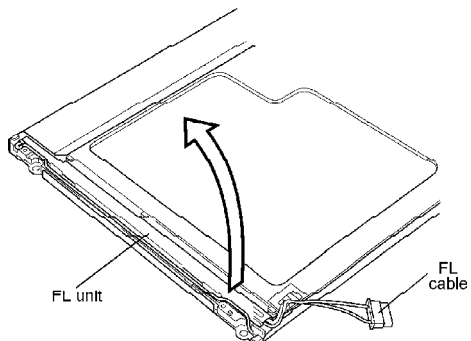
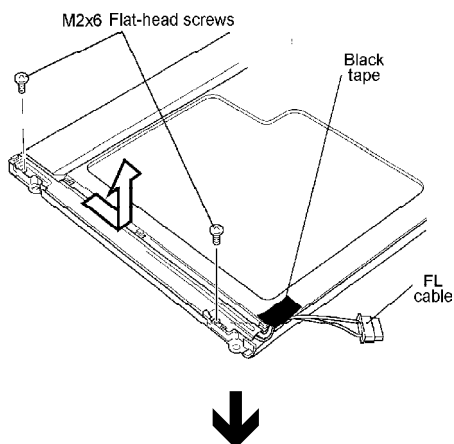
CAUTION: When you remove the FL unit, be careful that dust or other foreign matter does not contaminate the LCD panel. Any contamination can affect the performance of the unit.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, display mask, and FL inverter board.
3. Remove **four M2x6 screws** at each corner of the display module.

NOTE: When you remove the screws, support the back of the display with your hand.

4. Rotate the **display module** partially out of the cover from left to right.
5. Carefully disconnect the **LCD cable** from the display panel.

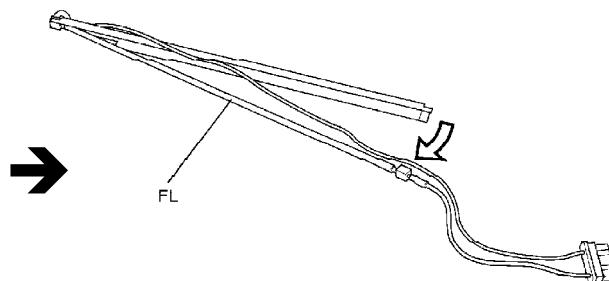
NOTE: When you secure the LCD cable, support the display panel with your hand.



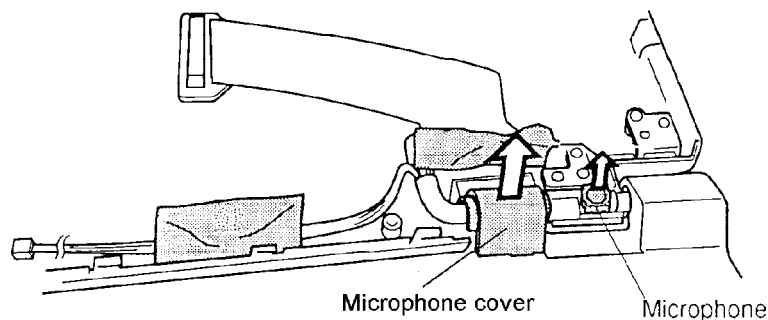
CAUTION: When you remove the FL, be sure no dust or foreign matter contaminates the display panel.

To remove the FL, follow the steps below.

1. Turn off the power to the computer. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, display mask, FL inverter board, and display module.
3. Place the **display module** face down and remove **two M2x6 flat-head screws** securing the FL unit cover.
4. Carefully slide the cover to the right, then lift up to remove the FL unit cover.
5. Remove the black tape.
6. Free the **FL cable unit** and remove it. Note how the FL cable is routed.
7. Remove the **FL unit**.
8. Remove the **FL**.

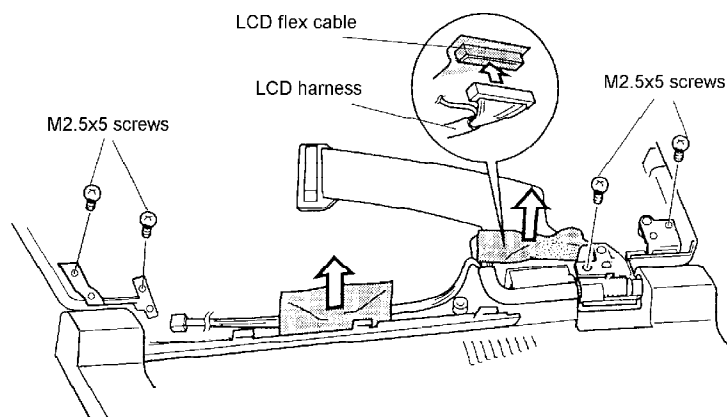


Portégé 620CT Disassembly Overview (cont.)



To remove the microphone, follow the steps below.

1. Turn off the power to the 620CT. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, display mask, FL inverter board, and display module.
3. Pinch the **microphone cover** to free it from **two latches**, then remove the cover.
4. Remove the **microphone**.
5. Remove the **protective rubber cover** from the microphone.



To remove the display cable, follow the steps below.

1. Turn off the power to the 620CT. Disconnect the AC adapter, power cord, and all external cables connected to the computer.
2. Remove the battery pack, memory module, PC card, display mask, FL inverter board, display module, and microphone.
3. Remove **four M2.5x5 screws** to release the **cover assembly** from the display assembly.
4. Disconnect the **LCD harness** from the **LCD flex cable** and remove it from the unit.

Portégé 620CT Interrupts / Memory Map

Interrupt Assignments

| Interrupt | Level | Assigned to: |
|-----------|-------|-------------------------------------|
| — | NMI | RAM Parity Error, I/O Channel Error |
| 1 | 0 | Timer |
| | 1 | Keyboard |
| | 2 | PIC 2 for level 8 to 15 |
| | 3 | Secondary Communications (COM 2/4)* |
| | 4 | Primary Communications (COM 1/3)* |
| | 5 | PRT 2* / Sound system* |
| | 6 | FDC |
| | 7 | PRT 1* /Sound system* |
| 2 | 8 | RTC |
| | 9 | sound system* |
| | 10 | sound system* |
| | 11 | Reserved |
| | 12 | PS/2 Mouse |
| | 13 | Math co-processor |
| | 14 | HDC |
| | 15 | Reserved |

* These I/O assignments are controlled by system setup.

System Memory Map

| Address range | Space (Kbytes) | Use |
|--------------------------|----------------|------------------------------------|
| '00000000' to '0009FFFF' | 640 | Conventional memory |
| '000A0000' to '000BFFFF' | 128 | Video RAM |
| '000C0000' to '000CFFFF' | 64 | Reserved |
| '000D0000' to '000DFFFF' | 64 | Reserved |
| '000E0000' to '000EFFFF' | 64 | VGA BIOS |
| '000F0000' to '000FFFFF' | 64 | System BIOS ROM (shadow RAM) |
| '00100000' to '007FFFFF' | 7,168 | System working memory |
| '00800000' to '027FFFFF' | 32,768 | Optional working memory |
| '02800000' to '0282FFFF' | 192 | The rest of system working memory |
| '02830000' to '07FDFFFF' | | Memory expansion in expansion port |
| 07FE0000' to '07FEFFFF' | 64 | System Management RAM |
| '07FF0000' to '07FFFFFF' | 64 | System BIOS ROM (duplicated) |

Portégé 620CT Input/Ouput Port Assignments

Port Map

| Port address | Device/function | Port address | Device/function |
|----------------|-------------------------|----------------|------------------------|
| '000' to '01F' | 82C37: DMA Controller 1 | '280' to '2AF' | Not used |
| '020' to '03F' | 82C59: PIC 1 | '2A8' to '2AF' | Not used |
| '040' to '05F' | 82C54: Timer | '2B0' to '2B7' | Not used |
| '060' to '06F' | KBC | '2B8' to '2BF' | Not used |
| '070' | NMI Mask Register | '2C0' to '2DF' | Not used |
| '070' to '07F' | RTC | '2E8' to '2EF' | Not used |
| '080' to '09F' | DMA Page Register | '2E0' to '2E7' | Serial Port 4 (COM 4)* |
| '0A0' to '0BF' | 82C59: PIC 2 | '2E8' to '2EF' | Not used |
| '0C0' to '0DF' | 82C37: DMA Controller 2 | '2F0' to '2F7' | Serial Port 2 (COM 2)* |
| '0E0' to '0EF' | Special Register | '2F8' to '2FF' | Not used |
| '0F0' to '0F7' | Math Coprocessor | '320' to '31F' | Not used |
| '100' to '1EF' | VGA | '330' to '33F' | Not used |
| '1F0' to '1FF' | HDC | '340' to '377' | Not used |
| '200' to '207' | Not used | '378' to '37F' | Parallel PRT 1* |
| '208' to '20F' | Not used | '380' to '387' | Not used |
| '210' to '217' | Not used | '388' to '38B' | Sound system (OPL3) |
| '218' to '21F' | Not used | '38C' to '38F' | Not used |
| '202' to '20F' | Not used | '390' to '39F' | Not used |
| '210' to '217' | Not used | '3A0' to '3AF' | Not used |
| '218' to '21F' | Not used | '3B0' to '3BF' | Parallel PRT 3* |
| '220' to '22F' | Sound system* | '3C0' to '3DF' | CGA, EGA, VGA |
| '230' to '23F' | Sound system* | '3E0' to '3E7' | Not used |
| '240' to '24F' | Sound system* | '3E8' to '3EF' | Serial Port 3(COM 3)* |
| '250' to '25F' | Sound system* | '3F0' to '3F7' | FDC, HDC |
| '260' to '26F' | Not used | '3F8' to '3FF' | Serial Port 1(COM 1)* |
| '270' to '277' | Not used | '400' to '47F' | Not used |
| '278' to '27F' | Parallel PRT 2* | '480' to '49F' | DMA Hi-Page Register |

* These port addresses can be specified by System Setup.