



Maintenance and Service Guide

Compaq Evo Notebook N620c Series

Compaq Evo Notebook N610c Series

Compaq Evo Notebook N610v Series

Compaq Evo Notebook N600c Series

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This guide is a troubleshooting reference used for maintaining and servicing the notebook. It provides comprehensive information on identifying notebook features, components, and spare parts, troubleshooting notebook problems, and performing notebook disassembly procedures.

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Maintenance and Service Guide

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Product Description

The Compaq Evo Notebook N620c, N610c, N610v, and N600c Series offer advanced modularity, Mobile Intel Pentium 4 and Pentium III processors with 64-bit architecture, industry-leading Accelerated Graphics Port (AGP) implementation, and extensive multimedia support.



Figure 1-1. Compaq Evo Notebook N620c, N610c, N610v, and N600c Series

1.1 Models

Computer models are shown in Tables 1-1 through 1-5.

**Table 1-1
Compaq Evo Notebook N620c, N610c, N610v, and N600c
Model Naming Conventions**

| Key | | | | | | | | | |
|------------|-------------------------|---|----------|----------|----------|--|----------|----------|--------------|
| N620 | P4 | 200 | P4 | 40 | V | C | 25 | O | XXXXXXXX-XXX |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Key | Description | Options | | | | | | | |
| 1 | Brand/Series designator | N = Notebook | | | | 620 = N620c series 6c = N610c series 6v = N610v series 600 = N600c series | | | |
| 2 | Processor type | P4 = Intel Pentium 4 | | | | P3 = Intel Pentium III P = Intel Pentium-M | | | |
| 3 | Processor speed | 200 = 2.0 Ghz 190 = 1.9 GHz 180 = 1.8 GHz 170 = 1.7 GHz 160 = 1.6 GHz | | | | 150 = 1.5 GHz 140 = 1.4 GHz 130 = 1.3 GHz 106 = 1.06 GHz 866 = 866 MHz | | | |

Table 1-1
Compaq Evo Notebook N620c, N610c, N610v, and N600c
Model Naming Conventions (*Continued*)

| | | | |
|----|----------------------------------|---|--|
| 4 | Display type/ size/resolution | P = SXGA+ (1400 × 1050) X = XGA (1024 × 768) | 4 = 14.x-inch |
| 5 | Hard drive size | 60 = 60 GB 40 = 40 GB 30 = 30 GB | 20 = 20 GB 15 = 15 GB 10 = 10 GB |
| 6 | Optical drive designator | W = DVD-RW drive V = DVD-ROM drive | R = CD-RW drive D = CD-ROM drive |
| 7 | Integrated communication | M = Modem 0 = None | C = Modem/NIC combination card |
| 8 | RAM | 51 = 512 MB 38 = 384 MB | 25 = 256 MB 12 = 128 MB |
| 9 | Operating system | 8 = Windows 98 SE 6 = Windows 2000 and Windows XP | 2 = Windows 2000 O = Windows XP Pro E = Windows XP Home |
| 10 | SKU# | | |

**Table 1-2
Compaq Evo Notebook N620c Models**

The following Evo Notebook N620c models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.4-Ah lithium ion (Li ion) battery pack
- 3-year warranty on parts, labor, and on-site, next business day response
- 32 MB of discrete video memory
- **no configuration code used**

| | | | | | | | | | | |
|---------------|---|-----|----|----|------------|---|----|---|--|--|
| N620c | P | 140 | X4 | 40 | C | X | 25 | 2 | | |
| United States | | | | | DE267A ABA | | | | | |
| N620c | P | 140 | X4 | 40 | C | X | 25 | O | | |
| United States | | | | | DE266A ABA | | | | | |

The following Evo Notebook N620c models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.4-Ah Li ion battery pack
- 3-year warranty on parts and labor
- 32 MB of discrete video memory
- configuration code **KY2Z**

| | | | | | | | | | |
|---------------|---|-----|------------|----|---|---------------|----|---|------------|
| N620c | P | 160 | P4 | 60 | C | G | 51 | 2 | |
| Brazil | | | DE273A AC4 | | | Latin America | | | DE273A ABM |
| French Canada | | | DE273A ABC | | | United States | | | DE273A ABA |
| N620c | P | 160 | P4 | 60 | C | G | 51 | O | |
| Brazil | | | DE272A AC4 | | | Latin America | | | DE272A ABM |
| French Canada | | | DE272A ABC | | | United States | | | DE272A ABA |

Table 1-2
Compaq Evo Notebook N620c Models (Continued)

| N620c | P | 150 | P4 | 60 | C | G | 51 | 2 | |
|-----------------|---|-----|--------|-----|---|-----------------|----|---|------------|
| Asia Pacific | | | DE271A | UUF | | Korea | | | DE271A AB1 |
| Australia | | | DE271A | ABG | | The Netherlands | | | DE271A ABH |
| Belgium | | | DE271A | UUG | | Norway | | | DE271A ABN |
| Czech Republic | | | DE271A | AKB | | People's | | | DE271A AB2 |
| Denmark | | | DE271A | ABY | | Republic | | | |
| European | | | DE271A | ABB | | of China | | | |
| International | | | | | | Poland | | | DE271A AKD |
| France | | | DE271A | ABF | | Portugal | | | DE271A AB9 |
| Germany | | | DE271A | ABD | | Russia | | | DE271A ACB |
| Greece | | | DE271A | ABV | | Saudi Arabia | | | DE271A ABV |
| Hong Kong | | | DE271A | AB5 | | Slovenia | | | DE271A AKN |
| Hungary | | | DE271A | AKC | | Spain | | | DE271A ABE |
| Iceland | | | DE271A | A2M | | Sweden/Finland | | | DE271A AK8 |
| India | | | DE271A | ACJ | | Switzerland | | | DE271A UUZ |
| Israel | | | DE271A | ABT | | Taiwan | | | DE271A AB0 |
| Italy | | | DE271A | ABZ | | Thailand | | | DE271A AKL |
| Japan | | | DE271A | ABJ | | Turkey | | | DE271A AB8 |
| Japan (English) | | | DE271A | ACF | | United Kingdom | | | DE271A ABU |

Table 1-2
Compaq Evo Notebook N620c Models (Continued)

| N620c | P | 150 | P4 | 60 | C | G | 51 | O | |
|-----------------|---|-----|------------|----|---|-----------------|----|---|------------|
| Asia Pacific | | | DE270A UUF | | | Korea | | | DE270A AB1 |
| Australia | | | DE270A ABG | | | The Netherlands | | | DE270A ABH |
| Belgium | | | DE270A UUG | | | Norway | | | DE270A ABN |
| Czech Republic | | | DE270A AKB | | | People's | | | DE270A AB2 |
| Denmark | | | DE270A ABY | | | Republic | | | |
| European | | | DE270A ABB | | | of China | | | |
| International | | | DE270A ABF | | | Poland | | | DE270A AKD |
| France | | | | | | Portugal | | | DE270A AB9 |
| Germany | | | DE270A ABD | | | Russia | | | DE270A ACB |
| Greece | | | DE270A ABV | | | Saudi Arabia | | | DE270A ABV |
| Hong Kong | | | DE270A AB5 | | | Slovenia | | | DE270A AKN |
| Hungary | | | DE270A AKC | | | Spain | | | DE270A ABE |
| Iceland | | | DE270A A2M | | | Sweden/Finland | | | DE270A AK8 |
| India | | | DE270A ACJ | | | Switzerland | | | DE270A UUZ |
| Israel | | | DE270A ABT | | | Taiwan | | | DE270A AB0 |
| Italy | | | DE270A ABZ | | | Thailand | | | DE270A AKL |
| Japan | | | DE270A ABJ | | | Turkey | | | DE270A AB8 |
| Japan (English) | | | DE270A ACF | | | United Kingdom | | | DE270A ABU |

Table 1-2
Compaq Evo Notebook N620c Models (Continued)

| N620c | P | 140 | X4 | 40 | C | X | 25 | 2 | |
|-----------------|---|-----|--------|-----|---|-----------------|----|---|------------|
| Asia Pacific | | | DE265A | UUF | | Koran | | | DE265A AB1 |
| Australia | | | DE265A | ABG | | Latin America | | | DE265A ABM |
| Belgium | | | DE265A | UUG | | The Netherlands | | | DE265A ABH |
| Brazil | | | DE265A | AC4 | | Norway | | | DE265A ABN |
| Czech Republic | | | DE265A | AKB | | People's | | | DE265A AB2 |
| Denmark | | | DE265A | ABY | | Republic | | | |
| European | | | DE265A | ABB | | of China | | | |
| International | | | | | | Poland | | | DE265A AKD |
| France | | | DE265A | ABF | | Portugal | | | DE265A AB9 |
| French Canada | | | DE265A | ABC | | Russia | | | DE265A ACB |
| Germany | | | DE265A | ABD | | Saudi Arabia | | | DE265A ABV |
| Greece | | | DE265A | ABV | | Slovenia | | | DE265A AKN |
| Hong Kong | | | DE265A | AB5 | | Spain | | | DE265A ABE |
| Hungary | | | DE265A | AKC | | Sweden/Finland | | | DE265A AK8 |
| Iceland | | | DE265A | A2M | | Switzerland | | | DE265A UUZ |
| India | | | DE265A | ACJ | | Taiwan | | | DE265A AB0 |
| Israel | | | DE265A | ABT | | Thailand | | | DE265A AKL |
| Italy | | | DE265A | ABZ | | Turkey | | | DE265A AB8 |
| Japan | | | DE265A | ABJ | | United Kingdom | | | DE265A ABU |
| Japan (English) | | | DE265A | ACF | | United States | | | DE265A ABA |

Table 1-2
Compaq Evo Notebook N620c Models (Continued)

| N620c | P | 140 | X4 | 40 | C | X | 25 | O | |
|-----------------|---|-----|--------|-----|---|-----------------|----|---|------------|
| Asia Pacific | | | DE264A | UUF | | Korea | | | DE264A AB1 |
| Australia | | | DE264A | ABG | | Latin America | | | DE264A ABM |
| Belgium | | | DE264A | UUG | | The Netherlands | | | DE264A ABH |
| Brazil | | | DE264A | AC4 | | Norway | | | DE264A ABN |
| Czech Republic | | | DE264A | AKB | | People's | | | DE264A AB2 |
| Denmark | | | DE264A | ABY | | Republic | | | |
| European | | | DE264A | ABB | | of China | | | |
| International | | | | | | Poland | | | DE264A AKD |
| France | | | DE264A | ABF | | Portugal | | | DE264A AB9 |
| French Canada | | | DE264A | ABC | | Russia | | | DE264A ACB |
| Germany | | | DE264A | ABD | | Saudi Arabia | | | DE264A ABV |
| Greece | | | DE264A | ABV | | Slovenia | | | DE264A AKN |
| Hong Kong | | | DE264A | AB5 | | Spain | | | DE264A ABE |
| Hungary | | | DE264A | AKC | | Sweden/Finland | | | DE264A AK8 |
| Iceland | | | DE264A | A2M | | Switzerland | | | DE264A UUZ |
| India | | | DE264A | ACJ | | Taiwan | | | DE264A AB0 |
| Israel | | | DE264A | ABT | | Thailand | | | DE264A AKL |
| Italy | | | DE264A | ABZ | | Turkey | | | DE264A AB8 |
| Japan | | | DE264A | ABJ | | United Kingdom | | | DE264A ABU |
| Japan (English) | | | DE264A | ACF | | United States | | | DE264A ABA |
| N620c | P | 140 | X4 | 40 | C | 8 | 25 | 2 | |
| Denmark | | | DE269A | ABY | | Switzerland | | | DE269A UUZ |
| Germany | | | DE269A | ABD | | United Kingdom | | | DE269A ABU |
| Italy | | | DE269A | ABZ | | United States | | | DE269A ABA |
| Norway | | | DE269A | ABN | | | | | |
| N620c | P | 140 | X4 | 40 | C | 8 | 25 | O | |
| Denmark | | | DE268A | ABY | | Switzerland | | | DE268A UUZ |
| Germany | | | DE268A | ABD | | United Kingdom | | | DE268A ABU |
| Italy | | | DE268A | ABZ | | United States | | | DE268A ABA |
| Norway | | | DE268A | ABN | | | | | |

Table 1-2
Compaq Evo Notebook N620c Models (Continued)

| N620c | P | 130 | X4 | 30 | C | X | 25 | 2 | |
|-----------------|---|-----|--------|-----|---|-----------------|----|---|------------|
| Asia Pacific | | | DE263A | UUF | | Korea | | | DE263A AB1 |
| Australia | | | DE263A | ABG | | Latin America | | | DE263A ABM |
| Belgium | | | DE263A | UUG | | The Netherlands | | | DE263A ABH |
| Brazil | | | DE263A | AC4 | | Norway | | | DE263A ABN |
| Czech Republic | | | DE263A | AKB | | People's | | | DE263A AB2 |
| Denmark | | | DE263A | ABY | | Republic | | | |
| European | | | DE263A | ABB | | of China | | | |
| International | | | | | | Poland | | | DE263A AKD |
| France | | | DE263A | ABF | | Portugal | | | DE263A AB9 |
| French Canada | | | DE263A | ABC | | Russia | | | DE263A ACB |
| Germany | | | DE263A | ABD | | Saudi Arabia | | | DE263A ABV |
| Greece | | | DE263A | ABV | | Slovenia | | | DE263A AKN |
| Hong Kong | | | DE263A | AB5 | | Spain | | | DE263A ABE |
| Hungary | | | DE263A | AKC | | Sweden/Finland | | | DE263A AK8 |
| Iceland | | | DE263A | A2M | | Switzerland | | | DE263A UUZ |
| India | | | DE263A | ACJ | | Taiwan | | | DE263A AB0 |
| Israel | | | DE263A | ABT | | Thailand | | | DE263A AKL |
| Italy | | | DE263A | ABZ | | Turkey | | | DE263A AB8 |
| Japan | | | DE263A | ABJ | | United Kingdom | | | DE263A ABU |
| Japan (English) | | | DE263A | ACF | | United States | | | DE263A ABA |

Table 1-2
Compaq Evo Notebook N620c Models (Continued)

| N620c | P | 130 | X4 | 30 | C | X | 25 | O | |
|-----------------|---|-----|--------|-----|---|-----------------|----|---|------------|
| Asia Pacific | | | DE262A | UUF | | Korea | | | DE262A AB1 |
| Australia | | | DE262A | ABG | | Latin America | | | DE262A ABM |
| Belgium | | | DE262A | UUG | | The Netherlands | | | DE262A ABH |
| Brazil | | | DE262A | AC4 | | Norway | | | DE262A ABN |
| Czech Republic | | | DE262A | AKB | | People's | | | DE262A AB2 |
| Denmark | | | DE262A | ABY | | Republic | | | |
| European | | | DE262A | ABB | | of China | | | |
| International | | | | | | Poland | | | DE262A AKD |
| France | | | DE262A | ABF | | Portugal | | | DE262A AB9 |
| French Canada | | | DE262A | ABC | | Russia | | | DE262A ACB |
| Germany | | | DE262A | ABD | | Saudi Arabia | | | DE262A ABV |
| Greece | | | DE262A | ABV | | Slovenia | | | DE262A AKN |
| Hong Kong | | | DE262A | AB5 | | Spain | | | DE262A ABE |
| Hungary | | | DE262A | AKC | | Sweden/Finland | | | DE262A AK8 |
| Iceland | | | DE262A | A2M | | Switzerland | | | DE262A UUZ |
| India | | | DE262A | ACJ | | Taiwan | | | DE262A AB0 |
| Israel | | | DE262A | ABT | | Thailand | | | DE262A AKL |
| Italy | | | DE262A | ABZ | | Turkey | | | DE262A AB8 |
| Japan | | | DE262A | ABJ | | United Kingdom | | | DE262A ABU |
| Japan (English) | | | DE262A | ACF | | United States | | | DE262A ABA |

Table 1-3
Compaq Evo Notebook N610c Models

The following Evo Notebook N610c models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.0-Ah Li ion battery pack
- 3-year warranty on parts, labor, and on-site, next business day response
- 32 MB of discrete video memory
- configuration code **KT81**

| | | | | | | | | | |
|---------------|----|-----|----|----|---|------------|----|---|--|
| N6c | P4 | 200 | X4 | 30 | V | C | 25 | 2 | |
| United States | | | | | | 470050-082 | | | |
| N6c | P4 | 200 | X4 | 30 | V | C | 25 | O | |
| United States | | | | | | 470050-083 | | | |
| N6c | P4 | 200 | X4 | 30 | C | 0 | 0 | 2 | |
| United States | | | | | | 470050-733 | | | |
| N6c | P4 | 200 | X4 | 30 | C | 0 | 0 | O | |
| United States | | | | | | 470050-734 | | | |
| N6c | P4 | 180 | X4 | 30 | V | C | 25 | 2 | |
| United States | | | | | | 470037-720 | | | |
| N6c | P4 | 180 | X4 | 30 | V | C | 25 | O | |
| United States | | | | | | 470037-722 | | | |
| N6c | P4 | 180 | X4 | 30 | O | C | 0 | 2 | |
| United States | | | | | | 470037-542 | | | |
| N6c | P4 | 180 | X4 | 30 | O | C | 0 | O | |
| United States | | | | | | 470037-549 | | | |

Table 1-3
Compaq Evo Notebook N610c Models (Continued)

The following Evo Notebook N610c models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.0-Ah Li ion battery pack
- 3-year warranty on parts and labor
- 32 MB of discrete video memory
- configuration code **KT8Z**

| N6c | P4 | 200 | P4 | 40 | W | C | 25 | 2 | |
|-----------------|----|-----|----|----|------------|----------------|----|---|------------|
| Belgium | | | | | 470050-913 | Norway | | | 470050-927 |
| Czech Republic | | | | | 470050-914 | Portugal | | | 470050-928 |
| Denmark | | | | | 470050-919 | Russia | | | 470050-929 |
| France | | | | | 470050-920 | Saudi Arabia | | | 470050-911 |
| French Canada | | | | | 470037-754 | Slovenia | | | 470050-930 |
| Germany | | | | | 470050-921 | Spain | | | 470050-931 |
| Greece/Poland | | | | | 470050-922 | Sweden/Finland | | | 470050-932 |
| Hungary | | | | | 470050-923 | Switzerland | | | 470050-933 |
| Israel | | | | | 470050-924 | Turkey | | | 470050-934 |
| Italy | | | | | 470050-925 | United Kingdom | | | 470050-936 |
| The Netherlands | | | | | 470050-926 | United States | | | 470037-749 |

Table 1-3
Compaq Evo Notebook N610c Models (Continued)

| N6c | P4 | 200 | P4 | 40 | W | C | 25 | E | |
|---------------------------|----|-----|------------|----|---|----------------------------------|----|---|------------|
| Asia Pacific | | | 470050-987 | | | Korea | | | 470050-991 |
| Australia | | | 470050-986 | | | Latin America | | | 470050-984 |
| Belgium | | | 470050-963 | | | The Netherlands | | | 470050-972 |
| Brazil | | | 470050-985 | | | Norway | | | 470050-973 |
| Czech Republic | | | 470050-964 | | | People's Republic of China | | | 470050-988 |
| Denmark | | | 470050-965 | | | Portugal | | | 470050-974 |
| European International | | | 470054-625 | | | Russia | | | 470050-975 |
| France | | | 470050-966 | | | Saudi Arabia | | | 470050-962 |
| French Canada | | | 470050-961 | | | Slovenia | | | 470050-976 |
| Germany | | | 470050-967 | | | Spain | | | 470050-977 |
| Greece/Poland | | | 470050-968 | | | Sweden/Finland | | | 470050-978 |
| Hong Kong | | | 470050-990 | | | Switzerland | | | 470050-979 |
| Hungary | | | 470050-969 | | | Taiwan | | | 470050-989 |
| Israel | | | 470050-970 | | | Turkey | | | 470050-980 |
| Italy | | | 470050-971 | | | United Kingdom | | | 470050-981 |
| Japan | | | 470050-982 | | | United States | | | 470050-960 |
| Japan (English) | | | 470050-983 | | | | | | |
| N6c | P4 | 200 | P4 | 40 | W | C | 25 | O | |
| Belgium | | | 470050-939 | | | Norway | | | 470050-951 |
| Czech Republic | | | 470050-940 | | | Portugal | | | 470050-952 |
| Denmark | | | 470050-941 | | | Russia | | | 470050-953 |
| France | | | 470050-942 | | | Saudi Arabia | | | 470050-938 |
| French Canada | | | 470037-755 | | | Slovenia | | | 470050-954 |
| Germany | | | 470050-943 | | | Spain | | | 470050-955 |
| Greece/Poland | | | 470050-944 | | | Sweden/Finland | | | 470050-956 |
| Hungary | | | 470050-946 | | | Switzerland | | | 470050-957 |
| Israel | | | 470050-948 | | | Turkey | | | 470050-958 |
| Italy | | | 470050-949 | | | United Kingdom | | | 470050-959 |
| The Netherlands | | | 470050-950 | | | United States | | | 470037-757 |

**Table 1-3
Compaq Evo Notebook N610c Models (Continued)**

| N6c | P4 | 200 | X4 | 30 | V | C | 25 | 2 | |
|------------------------------|----|-----|------------|----|---|-----------------|----|---|------------|
| Asia Pacific | | | 470050-438 | | | The Netherlands | | | 470050-398 |
| Australia | | | 470050-421 | | | Norway | | | 470050-400 |
| Belgium | | | 470050-371 | | | People's | | | 470050-439 |
| Brazil | | | 470050-419 | | | Republic | | | |
| Czech Republic | | | 470050-374 | | | of China | | | |
| Denmark | | | 470050-378 | | | Portugal | | | 470050-403 |
| France | | | 470050-379 | | | Russia | | | 470050-404 |
| French Canada | | | 470050-358 | | | Saudi Arabia | | | 470050-360 |
| Germany | | | 470050-386 | | | Slovenia | | | 470050-405 |
| Greece/Poland | | | 470050-392 | | | Spain | | | 470050-407 |
| Hong Kong | | | 470050-443 | | | Sweden/Finland | | | 470050-410 |
| Hungary | | | 470050-393 | | | Switzerland | | | 470050-412 |
| Israel | | | 470050-395 | | | Taiwan | | | 470050-440 |
| Italy | | | 470050-396 | | | Turkey | | | 470050-414 |
| Japan | | | 470050-416 | | | United Kingdom | | | 470050-415 |
| Japan (English) | | | 470050-417 | | | United States | | | 470050-020 |
| Korea | | | 470050-446 | | | United States | | | 470050-531 |
| Latin America | | | 470050-418 | | | (GEM/NAFTA) | | | |
| Latin America (GEM/NAFTA) | | | 470050-532 | | | | | | |

Table 1-3
Compaq Evo Notebook N610c Models (Continued)

| N6c | P4 | 200 | X4 | 30 | V | C | 25 | E | |
|-----------------|----|-----|------------|----|---|-----------------|----|---|------------|
| Asia Pacific | | | 470050-572 | | | Latin America | | | 470050-569 |
| Australia | | | 470050-571 | | | The Netherlands | | | 470050-555 |
| Belgium | | | 470050-538 | | | Norway | | | 470050-558 |
| Brazil | | | 470050-570 | | | People's | | | 470050-573 |
| Czech Republic | | | 470050-539 | | | Republic | | | |
| Denmark | | | 470050-541 | | | of China | | | |
| France | | | 470050-544 | | | Portugal | | | 470050-559 |
| French Canada | | | 470050-536 | | | Russia | | | 470050-560 |
| Germany | | | 470050-547 | | | Saudi Arabia | | | 470050-537 |
| Greece/Poland | | | 470050-548 | | | Slovenia | | | 470050-561 |
| Hong Kong | | | 470050-575 | | | Spain | | | 470050-562 |
| Hungary | | | 470050-549 | | | Sweden/Finland | | | 470050-563 |
| Israel | | | 470050-550 | | | Switzerland | | | 470050-564 |
| Italy | | | 470050-552 | | | Taiwan | | | 470050-574 |
| Japan | | | 470050-567 | | | Turkey | | | 470050-565 |
| Japan (English) | | | 470050-568 | | | United Kingdom | | | 470050-566 |
| Korea | | | 470050-576 | | | United States | | | 470050-535 |

Table 1-3
Compaq Evo Notebook N610c Models (Continued)

| N6c | P4 | 200 | X4 | 30 | V | C | 25 | O | |
|------------------------------|----|-----|------------|----|---|-----------------|----|---|------------|
| Asia Pacific | | | 470050-502 | | | The Netherlands | | | 470050-471 |
| Australia | | | 470050-498 | | | Norway | | | 470050-473 |
| Belgium | | | 470050-456 | | | People's | | | 470050-505 |
| Brazil | | | 470050-497 | | | Republic | | | |
| Czech Republic | | | 470050-457 | | | of China | | | |
| Denmark | | | 470050-458 | | | Portugal | | | 470050-477 |
| France | | | 470050-459 | | | Russia | | | 470050-478 |
| French Canada | | | 470050-454 | | | Saudi Arabia | | | 470050-455 |
| Germany | | | 470050-460 | | | Slovenia | | | 470050-480 |
| Greece/Poland | | | 470050-462 | | | Spain | | | 470050-482 |
| Hong Kong | | | 470050-507 | | | Sweden/Finland | | | 470050-486 |
| Hungary | | | 470050-468 | | | Switzerland | | | 470050-487 |
| Israel | | | 470050-469 | | | Taiwan | | | 470050-506 |
| Italy | | | 470050-470 | | | Turkey | | | 470050-488 |
| Japan | | | 470050-490 | | | United Kingdom | | | 470050-489 |
| Japan (English) | | | 470050-491 | | | United States | | | 470050-021 |
| Korea | | | 470050-512 | | | United States | | | 470050-533 |
| Latin America | | | 470050-496 | | | (GEM/NAFTA) | | | |
| Latin America (GEM/NAFTA) | | | 470050-534 | | | | | | |

Table 1-3
Compaq Evo Notebook N610c Models (Continued)

| N6c | P4 | 180 | X4 | 30 | V | C | 25 | 2 | |
|------------------------------|----|-----|------------|----|---|-----------------|----|---|------------|
| Asia Pacific | | | 470037-572 | | | The Netherlands | | | 470037-541 |
| Australia | | | 470037-570 | | | Norway | | | 470037-543 |
| Belgium | | | 470037-529 | | | People's | | | 470037-577 |
| Brazil | | | 470037-569 | | | Republic | | | |
| Czech Republic | | | 470037-530 | | | of China | | | |
| Denmark | | | 470037-531 | | | Portugal | | | 470037-545 |
| European | | | 470048-135 | | | Russia | | | 470037-546 |
| International | | | | | | Saudi Arabia | | | 470037-528 |
| France | | | 470037-532 | | | Slovenia | | | 470037-548 |
| French Canada | | | 470037-527 | | | Spain | | | 470037-551 |
| Germany | | | 470037-533 | | | Sweden/Finland | | | 470037-552 |
| Greece/Poland | | | 470037-535 | | | Switzerland | | | 470037-555 |
| Hong Kong | | | 470037-584 | | | Taiwan | | | 470037-580 |
| Hungary | | | 470037-537 | | | Turkey | | | 470037-556 |
| Israel | | | 470037-538 | | | United Kingdom | | | 470037-558 |
| Italy | | | 470037-539 | | | United States | | | 470037-525 |
| Japan | | | 470037-561 | | | United States | | | 470037-724 |
| Japan (English) | | | 470037-563 | | | (GEM/NAFTA) | | | |
| Korea | | | 470037-587 | | | | | | |
| Latin America | | | 470037-566 | | | | | | |
| Latin America (GEM/NAFTA) | | | 470037-726 | | | | | | |

Table 1-3
Compaq Evo Notebook N610c Models (Continued)

| N6c | P4 | 180 | X4 | 30 | V | C | 25 | E | |
|-----------------|----|-----|------------|----|---|-----------------|----|---|------------|
| Asia Pacific | | | 470044-442 | | | Korea | | | 470044-446 |
| Australia | | | 470044-441 | | | Latin America | | | 470044-439 |
| Belgium | | | 470044-410 | | | The Netherlands | | | 470044-422 |
| Brazil | | | 470044-440 | | | Norway | | | 470044-423 |
| Czech Republic | | | 470044-411 | | | People's | | | 470044-443 |
| Denmark | | | 470044-412 | | | Republic | | | |
| European | | | 470048-137 | | | of China | | | |
| International | | | | | | Portugal | | | 470044-424 |
| France | | | 470044-416 | | | Russia | | | 470044-425 |
| French Canada | | | 470044-408 | | | Saudi Arabia | | | 470044-409 |
| Germany | | | 470044-417 | | | Slovenia | | | 470044-426 |
| Greece/Poland | | | 470044-418 | | | Spain | | | 470044-427 |
| Hong Kong | | | 470044-445 | | | Sweden/Finland | | | 470044-429 |
| Hungary | | | 470044-419 | | | Switzerland | | | 470044-431 |
| Israel | | | 470044-420 | | | Taiwan | | | 470044-444 |
| Italy | | | 470044-421 | | | Turkey | | | 470044-433 |
| Japan | | | 470044-436 | | | United Kingdom | | | 470044-434 |
| Japan (English) | | | 470044-438 | | | United States | | | 470042-693 |

Table 1-3
Compaq Evo Notebook N610c Models (Continued)

| N6c | P4 | 180 | X4 | 30 | V | C | 25 | O | |
|------------------------------|----|-----|------------|----|---|-----------------|----|---|------------|
| Asia Pacific | | | 470037-714 | | | The Netherlands | | | 470037-696 |
| Australia | | | 470037-713 | | | Norway | | | 470037-697 |
| Belgium | | | 470037-687 | | | People's | | | 470037-709 |
| Brazil | | | 470037-712 | | | Republic | | | |
| Czech Republic | | | 470037-688 | | | of China | | | |
| Denmark | | | 470037-689 | | | Portugal | | | 470037-699 |
| European | | | 470048-136 | | | Russia | | | 470037-700 |
| International | | | | | | Saudi Arabia | | | 470037-686 |
| France | | | 470037-690 | | | Slovenia | | | 470037-701 |
| French Canada | | | 470037-685 | | | Spain | | | 470037-702 |
| Germany | | | 470037-691 | | | Sweden/Finland | | | 470037-703 |
| Greece/Poland | | | 470037-692 | | | Switzerland | | | 470037-704 |
| Hong Kong | | | 470037-717 | | | Taiwan | | | 470037-715 |
| Hungary | | | 470037-693 | | | Turkey | | | 470037-705 |
| Israel | | | 470037-694 | | | United Kingdom | | | 470037-706 |
| Italy | | | 470037-695 | | | United States | | | 470037-684 |
| Japan | | | 470037-707 | | | United States | | | 470037-746 |
| Japan (English) | | | 470037-708 | | | (GEM/NAFTA) | | | |
| Korea | | | 470037-718 | | | | | | |
| Latin America | | | 470037-710 | | | | | | |
| Latin America (GEM/NAFTA) | | | 470037-747 | | | | | | |
| N6c | P4 | 180 | X4 | 20 | D | C | 25 | 2 | |
| Belgium | | | 470050-736 | | | Norway | | | 470050-749 |
| Czech Republic | | | 470050-737 | | | Portugal | | | 470050-750 |
| Denmark | | | 470050-739 | | | Russia | | | 470050-751 |
| France | | | 470050-740 | | | Saudi Arabia | | | 470050-735 |
| Germany | | | 470050-741 | | | Slovenia | | | 470050-752 |
| Greece/Poland | | | 470050-742 | | | Spain | | | 470050-753 |
| Hungary | | | 470050-743 | | | Sweden/Finland | | | 470050-754 |
| Israel | | | 470050-744 | | | Switzerland | | | 470050-755 |
| Italy | | | 470050-746 | | | Turkey | | | 470050-757 |
| The Netherlands | | | 470050-747 | | | United Kingdom | | | 470050-637 |

**Table 1-3
Compaq Evo Notebook N610c Models (Continued)**

| N6c | P4 | 180 | X4 | 20 | D | C | 25 | O | |
|-----------------|----|-----|----|----|------------|----------------|----|---|------------|
| Belgium | | | | | 470050-772 | Norway | | | 470050-785 |
| Czech Republic | | | | | 470050-773 | Portugal | | | 470050-786 |
| Denmark | | | | | 470050-774 | Russia | | | 470050-787 |
| France | | | | | 470050-775 | Saudi Arabia | | | 470050-771 |
| Germany | | | | | 470050-776 | Slovenia | | | 470050-790 |
| Greece/Poland | | | | | 470050-780 | Spain | | | 470050-792 |
| Hungary | | | | | 470050-781 | Sweden/Finland | | | 470050-825 |
| Israel | | | | | 470050-782 | Switzerland | | | 470050-826 |
| Italy | | | | | 470050-783 | Turkey | | | 470050-827 |
| The Netherlands | | | | | 470050-784 | United Kingdom | | | 470050-636 |
| N6c | P4 | 160 | X4 | 20 | V | C | 25 | 2 | |
| French Canada | | | | | 470037-664 | United States | | | 470037-738 |
| United States | | | | | 470037-661 | (GEM/NAFTA) | | | |
| N6c | P4 | 160 | X4 | 20 | V | C | 25 | O | |
| French Canada | | | | | 470037-736 | United States | | | 470037-741 |
| United States | | | | | 470037-733 | (GEM/NAFTA) | | | |

Table 1-3
Compaq Evo Notebook N610c Models (Continued)

| N6c | P4 | 160 | X4 | 20 | D | C | 25 | 2 | |
|-----------------|----|-----|----|----|------------|----------------|----|---|------------|
| Belgium | | | | | 470037-567 | Norway | | | 470037-602 |
| Czech Republic | | | | | 470037-571 | Portugal | | | 470037-604 |
| Denmark | | | | | 470037-573 | Russia | | | 470037-605 |
| France | | | | | 470037-578 | Saudi Arabia | | | 470037-562 |
| Germany | | | | | 470037-581 | Slovenia | | | 470037-606 |
| Greece/Poland | | | | | 470037-585 | Spain | | | 470037-607 |
| Hungary | | | | | 470037-586 | Sweden/Finland | | | 470037-608 |
| Israel | | | | | 470037-588 | Switzerland | | | 470037-613 |
| Italy | | | | | 470037-595 | Turkey | | | 470037-616 |
| The Netherlands | | | | | 470037-601 | United Kingdom | | | 470037-617 |
| N6c | P4 | 160 | X4 | 20 | D | C | 25 | O | |
| Belgium | | | | | 470037-619 | Norway | | | 470037-639 |
| Czech Republic | | | | | 470037-620 | Portugal | | | 470037-641 |
| Denmark | | | | | 470037-621 | Russia | | | 470037-644 |
| France | | | | | 470037-622 | Saudi Arabia | | | 470037-618 |
| Germany | | | | | 470037-623 | Slovenia | | | 470037-646 |
| Greece/Poland | | | | | 470037-625 | Spain | | | 470037-648 |
| Hungary | | | | | 470037-627 | Sweden/Finland | | | 470037-650 |
| Israel | | | | | 470037-630 | Switzerland | | | 470037-653 |
| Italy | | | | | 470037-633 | Turkey | | | 470037-656 |
| The Netherlands | | | | | 470037-636 | United Kingdom | | | 470037-658 |

**Table 1-4
Compaq Evo Notebook N610v Models**

The following Evo Notebook N610v models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.4-Ah Li ion battery pack
- 1-year warranty on parts and labor
- 32 MB of discrete video memory
- **no configuration code used**

| | | | | | | | | | |
|--------------|----|-----|------------|----|---|-----------|----|---|------------|
| N6v | P4 | 240 | X4 | 30 | W | C | 25 | O | |
| Asia Pacific | | | DL000P UUF | | | Australia | | | DL000P ABG |
| N6v | P4 | 200 | X4 | 30 | W | C | 25 | O | |
| Asia Pacific | | | DG348P UUF | | | Australia | | | DG348P ABG |

The following Evo Notebook N610v models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.0-Ah Li ion battery pack
- 1-year warranty on parts and labor
- 32 MB of discrete video memory
- diskette drive
- **no configuration code used**

| | | | | | | | | | |
|----------------------------|----|-----|------------|----|---|---|----|---|--|
| N6v | P4 | 240 | X4 | 30 | V | C | 25 | E | |
| People's Republic of China | | | DL002P AB2 | | | | | | |
| N6v | P4 | 220 | X4 | 30 | V | C | 25 | E | |
| People's Republic of China | | | DL001P AB2 | | | | | | |
| N6v | P4 | 200 | X4 | 30 | V | C | 25 | E | |
| People's Republic of China | | | DG351P AB2 | | | | | | |

Table 1-4
Compaq Evo Notebook N610v Models (Continued)

The following Evo Notebook N610v models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.0-Ah Li ion battery pack
- 1-year warranty on parts and labor
- 32 MB of discrete video memory
- **no configuration code used**

| | | | | | | | | | | |
|--------|----|-----|----|----|---|------------|----|---|--|--|
| N6v | P4 | 200 | X4 | 30 | V | C | 25 | E | | |
| Taiwan | | | | | | DG350P AB0 | | | | |
| N6v | P4 | 200 | X4 | 30 | D | C | 25 | O | | |
| Taiwan | | | | | | DG349P AB0 | | | | |

**Table 1-5
Compaq Evo Notebook N600c Models**

The following Evo Notebook N600c models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.0-Ah Li ion battery pack
- 3-year warranty on parts, labor, and on-site, next business day response
- 32 MB of discrete video memory
- configuration code **KBS1**

| | | | | | | | | | | |
|---------------|----|-----|----|----|---|------------|----|---|--|--|
| N600 | P3 | 120 | X4 | 30 | V | C | 25 | 2 | | |
| United States | | | | | | 470053-840 | | | | |
| N600 | P3 | 120 | X4 | 30 | V | C | 25 | 0 | | |
| United States | | | | | | 470053-832 | | | | |

The following Evo Notebook N600c models feature:

- Dual Stick pointing device (TouchPad and pointing stick)
- 8-cell, 4.0-Ah Li ion battery pack
- 3-year warranty on parts and labor
- 32 MB of discrete video memory
- configuration code **KBSZ**

| | | | | | | | | | | |
|---------------|----|-----|----|----|---|------------|----|---|--|--|
| N600 | P3 | 120 | P4 | 30 | W | C | 25 | 2 | | |
| United States | | | | | | 470023-406 | | | | |
| N600 | P3 | 120 | P4 | 30 | W | C | 25 | 0 | | |
| United States | | | | | | 470053-613 | | | | |

Table 1-5
Compaq Evo Notebook N600c Models (Continued)

| N600 | P3 | 120 | P4 | 30 | V | C | 25 | 2 | |
|------------------------|----|-----|----|----|------------|----------------|----|---|------------|
| Belgium | | | | | 470023-411 | Russia | | | 470023-436 |
| Czech Republic | | | | | 470023-412 | Saudi Arabia | | | 470023-430 |
| Denmark | | | | | 470023-415 | Slovakia/ | | | 470023-437 |
| France | | | | | 470023-416 | Slovenia | | | |
| Germany | | | | | 470023-419 | Spain | | | 470023-440 |
| Greece/Poland | | | | | 470023-420 | Sweden/Finland | | | 470023-441 |
| Hungary | | | | | 470023-422 | Switzerland | | | 470023-444 |
| Israel | | | | | 470023-426 | | | | and |
| Italy | | | | | 470023-427 | | | | 470023-447 |
| The Netherlands | | | | | 470053-660 | Turkey | | | 470023-448 |
| Norway | | | | | 470023-432 | United Kingdom | | | 470023-452 |
| Portugal | | | | | 470023-433 | | | | |
| N600 | P3 | 120 | P4 | 30 | V | C | 25 | O | |
| Belgium | | | | | 470053-561 | Russia | | | 470053-576 |
| Czech Republic | | | | | 470053-562 | Saudi Arabia | | | 470053-572 |
| Denmark | | | | | 470053-563 | Slovakia/ | | | 470053-577 |
| France | | | | | 470053-564 | Slovenia | | | |
| Germany | | | | | 470053-565 | Spain | | | 470053-578 |
| Greece/Poland | | | | | 470053-566 | Sweden/Finland | | | 470053-579 |
| Hungary | | | | | 470053-568 | Switzerland | | | 470053-580 |
| Israel | | | | | 470053-570 | | | | and |
| Italy | | | | | 470053-571 | | | | 470053-581 |
| The Netherlands | | | | | 470053-573 | Turkey | | | 470053-582 |
| Norway | | | | | 470053-574 | United Kingdom | | | 470053-583 |
| Portugal | | | | | 470053-575 | | | | |
| N600 | P3 | 120 | P4 | 30 | V | 0 | 25 | 2 | |
| European International | | | | | 470023-460 | | | | |
| N600 | P3 | 120 | P4 | 30 | V | 0 | 25 | 0 | |
| European International | | | | | 470053-691 | | | | |

**Table 1-5
Compaq Evo Notebook N600c Models (Continued)**

| N600 | P3 | 120 | X4 | 30 | V | C | 25 | 2 | |
|-----------------|----|-----|----|----|---|----------------|----|-----|------------|
| Asia Pacific | | | | | | Norway | | | 470053-662 |
| Australia | | | | | | People's | | | 470053-687 |
| Belgium | | | | | | Republic | | | |
| Brazil | | | | | | of China | | | |
| Czech Republic | | | | | | Portugal | | | 470053-664 |
| Denmark | | | | | | Russia | | | 470053-666 |
| France | | | | | | Saudi Arabia | | | 470053-657 |
| French Canada | | | | | | Slovakia/ | | | 470053-668 |
| Germany | | | | | | Slovenia | | | |
| Greece/Poland | | | | | | Spain | | | 470053-670 |
| Hong Kong | | | | | | Sweden/Finland | | | 470053-672 |
| Hungary | | | | | | Switzerland | | | 470053-674 |
| Israel | | | | | | | | and | |
| Italy | | | | | | | | | 470053-676 |
| Japan | | | | | | Taiwan | | | 470053-688 |
| Japan (English) | | | | | | Turkey | | | 470053-678 |
| Korea | | | | | | United Kingdom | | | 470053-680 |
| Latin America | | | | | | United States | | | 470053-607 |
| The Netherlands | | | | | | | | | |

Table 1-5
Compaq Evo Notebook N600c Models (Continued)

| N600 | P3 | 120 | X4 | 30 | V | C | 25 | O | |
|-----------------|----|-----|----|----|------------|----------------|----|-----|------------|
| Asia Pacific | | | | | 470053-592 | Norway | | | 470053-661 |
| Australia | | | | | 470053-594 | People's | | | 470053-597 |
| Belgium | | | | | 470053-624 | Republic | | | |
| Brazil | | | | | 470053-590 | of China | | | |
| Czech Republic | | | | | 470053-634 | Portugal | | | 470053-663 |
| Denmark | | | | | 470053-643 | Russia | | | 470053-665 |
| France | | | | | 470053-645 | Saudi Arabia | | | 470053-656 |
| French Canada | | | | | 470053-559 | Slovakia/ | | | 470053-667 |
| Germany | | | | | 470053-647 | Slovenia | | | |
| Greece/Poland | | | | | 470053-648 | Spain | | | 470053-669 |
| Hong Kong | | | | | 470053-603 | Sweden/Finland | | | 470053-671 |
| Hungary | | | | | 470053-650 | Switzerland | | | 470053-673 |
| Israel | | | | | 470053-652 | | | and | |
| Italy | | | | | 470053-654 | | | | 470053-675 |
| Japan | | | | | 470053-585 | Taiwan | | | 470053-600 |
| Japan (English) | | | | | 470053-586 | Turkey | | | 470053-677 |
| Korea | | | | | 470053-605 | United Kingdom | | | 470053-679 |
| Latin America | | | | | 470053-587 | United States | | | 470053-558 |
| The Netherlands | | | | | 470053-658 | | | | |
| N600 | P3 | 100 | X4 | 20 | D | C | 25 | 6 | |
| Greece/Poland | | | | | 470029-002 | Russia | | | 470029-058 |
| Hungary | | | | | 470029-054 | Turkey | | | 470029-060 |
| Portugal | | | | | 470029-056 | | | | |

Table 1-5
Compaq Evo Notebook N600c Models (Continued)

| N600 | P3 | 100 | X4 | 20 | D | C | 12 | 8 | |
|------------------------|----|-----|----|----|------------|----------------|----|---|------------|
| Belgium | | | | | 470029-930 | Russia | | | 470029-989 |
| Czech Republic | | | | | 470029-936 | Saudi Arabia | | | 470029-985 |
| Denmark | | | | | 470029-939 | Slovakia/ | | | 470029-990 |
| France | | | | | 470029-941 | Slovenia | | | |
| Germany | | | | | 470029-945 | Spain | | | 470029-991 |
| Greece/Poland | | | | | 470029-951 | Sweden/Finland | | | 470029-992 |
| Hungary | | | | | 470029-982 | Switzerland | | | 470029-993 |
| Israel | | | | | 470029-983 | | | | and |
| Italy | | | | | 470029-984 | | | | 470029-995 |
| The Netherlands | | | | | 470029-986 | Turkey | | | 470029-996 |
| Norway | | | | | 470029-987 | United Kingdom | | | 470029-997 |
| Portugal | | | | | 470029-988 | | | | |
| N600 | P3 | 100 | X4 | 20 | D | C | 12 | 6 | |
| Belgium | | | | | 470029-192 | Saudi Arabia | | | 470029-226 |
| Czech Republic | | | | | 470029-195 | Slovakia/ | | | 470029-231 |
| Denmark | | | | | 470029-207 | Slovenia | | | |
| France | | | | | 470029-212 | Spain | | | 470029-232 |
| Germany | | | | | 470029-214 | Sweden/Finland | | | 470029-234 |
| Israel | | | | | 470029-217 | Switzerland | | | 470029-238 |
| Italy | | | | | 470029-224 | | | | and |
| The Netherlands | | | | | 470029-227 | | | | 470029-240 |
| Norway | | | | | 470029-228 | United Kingdom | | | 470029-242 |
| N600 | P3 | 100 | X4 | 20 | D | 0 | 25 | O | |
| European International | | | | | 470030-001 | | | | |
| N600 | P3 | 100 | X4 | 20 | D | 0 | 25 | 8 | |
| European International | | | | | 470029-998 | | | | |

1.2 Features

- The following processors are available, varying by notebook model:
 - The Evo Notebook N620c features an Intel Pentium-M 1.6-, 1.5-, 1.4-, or 1.3-GHz processor, with 512-KB integrated L2 cache.
 - The Evo Notebook N610c features a Mobile Intel Pentium 4 2.0-, 1.9-, 1.8-, 1.7-, or 1.6-GHz processor, with 512-KB integrated L2 cache.
 - The Evo Notebook N610v features a Mobile Intel Pentium 4 2.4-, 2.2-, or 2.0-GHz processor, with 512-KB integrated L2 cache.
 - The Evo Notebook N600c features a Mobile Intel Pentium III 1.066 GHz-M or 866-MHz-M processor, with 512-KB integrated L2 cache.
- ATI Mobility Radeon with 64-bit video graphics, 16-MB double data rate (DDR) SDRAM, 4X AGP graphics card
- The following memory configurations are available, varying by notebook model:
 - The Evo Notebook N620c, N610c, and N610v feature 256-MB high-performance Synchronous DRAM (SDRAM), expandable to 2048 MB
 - The Evo Notebook N600c features 256- or 128-MB high-performance Synchronous DRAM (SDRAM), expandable to 1024 MB
- Microsoft Windows 98 SE, Windows 2000, or Windows XP preinstalled, varying by notebook model
- 14.1-inch, SXGA+ (1400 × 1050) or XGA (1024 × 768), TFT display with over 16.8 million colors, varying by computer model

- Full-size TouchPad or Dual Stick keyboard, varying by notebook model
- Mini PCI 10/100 network interface card (NIC) or Mini PCI V.90 modem plus 10/100 NIC combination card, varying by notebook model
- Support for two Type II PC Card slots with support for both 32-bit CardBus and 16-bit PC Cards
- External AC adapter with power cord
- 8-cell Li ion battery pack
- 60-, 40-, 30-, 20-, 15-, or 10-GB high-capacity hard drive
- Connectors for:
 - RJ-11 modem
 - Mono microphone
 - Stereo line-out/headphone
 - MultiPort
 - Universal serial bus (USB)
 - Docking
 - Parallel devices
 - Serial devices
 - Composite TV
 - External keyboard/mouse
 - RJ-45 network
 - External monitor
 - AC power
- Stereo speakers providing Compaq Premier Sound 16-bit stereo sound

1.3 Clearing a Password

If the notebook you are servicing has an unknown password, follow these steps to clear the password. These steps also clear CMOS.

1. Prepare the notebook for disassembly (refer to Section 5.3, “Preparing the Notebook for Disassembly,” for more information).
2. Remove the RTC battery (refer to Section 5.6, “Disk Cell RTC Battery”).
3. Wait approximately five minutes.
4. Replace the RTC battery and reassemble the notebook.
5. Connect AC power to the notebook. Do **not** reinsert any battery packs at this time.
6. Turn on the notebook.

All passwords and all CMOS settings have been cleared.

1.4 Power Management

The notebook comes with power management features that extend battery operating time and conserve power. The notebook supports the following power management features:

- Standby
- Hibernation
- Setting customization by the user
- Hotkeys for setting level of performance
- Smart battery that provides an accurate battery power gauge
- Battery calibration
- Lid switch suspend/resume
- Power/suspend button
- Advanced Configuration and Power Management (ACP) compliance

1.5 Notebook External Components

The external components on the front and right side of the Evo Notebook N620c, N610c, N610v, and N600c are shown in Figure 1-2 and described in Table 1-5.

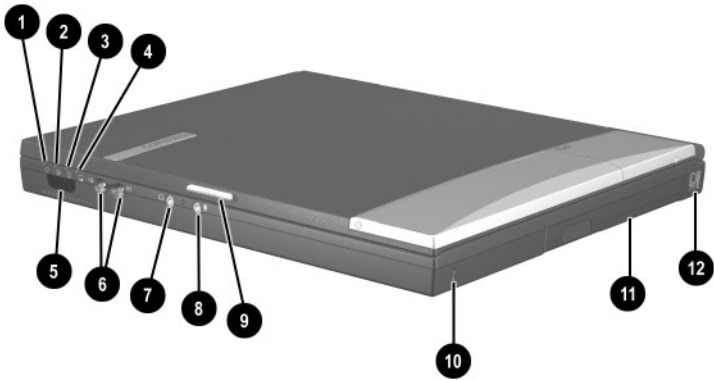


Figure 1-2. Front and Right Side Components

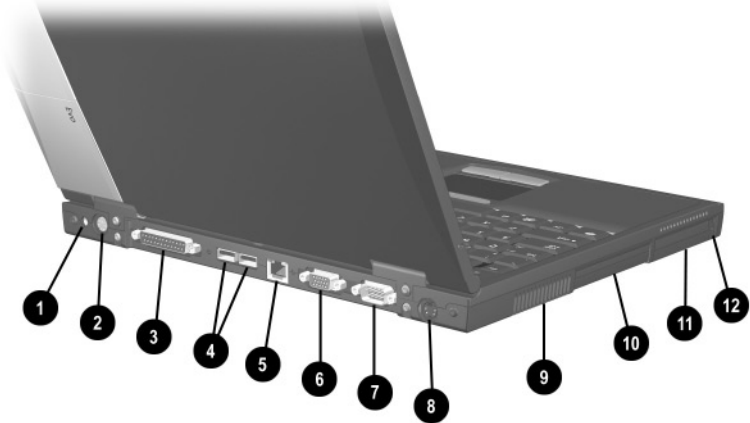
Table 1-5
Front and Right Side Panel Components

| Item | Component | Function |
|------|---------------|---|
| 1 | Power light | On: Power is turned on. Blinking: Notebook is in Standby. The power light also blinks if a battery pack that is the only available power source reaches a low-battery condition. |
| 2 | Battery light | On: A battery pack is charging. Blinking: A battery pack that is the only available power source has reached a low-battery condition. |

Table 1-5
Front and Right Side Panel Components (Continued)

| Item | Component | Function |
|-------------|--|--|
| 3 | Drive activity light | Turns on when the hard drive, CD-, or DVD-ROM drive is accessed. |
| 4 | Media Bay light | Turns on when the diskette drive in the Media Bay or the optional external diskette drive is accessed. |
| 5 | Infrared port | Links to another IrDA-compliant device for wireless communication. |
| 6 | Volume control buttons | Adjust the volume of the stereo speakers. |
| 7 | Stereo line-out/ headphone jack | Connects stereo speakers, headphones, headset, or television audio. |
| 8 | Mono microphone jack | Connects a mono microphone, disabling the built-in microphone. |
| 9 | Display release latch | Opens the notebook. |
| 10 | Security cable slot | Attaches an optional security cable to the notebook. |
| 11 | Media Bay | Accepts a diskette drive, CD- or DVD-ROM drive, or secondary battery pack. |
| 12 | RJ-11 jack (internal modem models only) | Connects the modem cable to an internal modem. A modem cable is included with internal modem models. |

The Evo Notebook N620c, N610c, N610v, and N600c right side and rear panel components are shown in Figure 1-3 and described in Table 1-6.




**Figure 1-3. Right Side and Rear Panel Components—
Evo Notebook N620c, N610c and N610v**

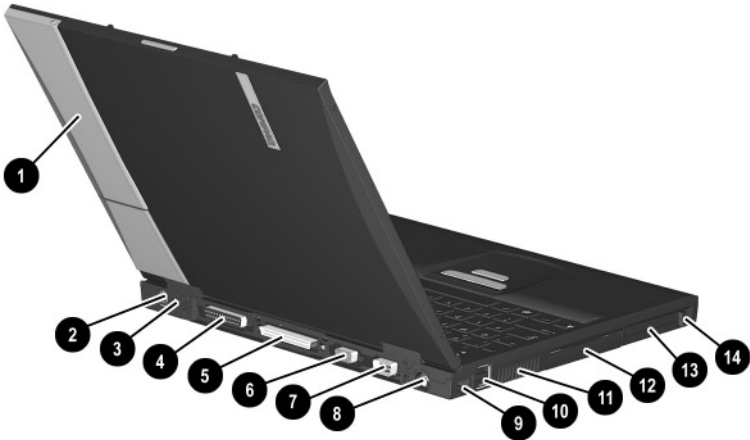
**Table 1-6
Right Side and Rear Panel Components**

| Item | Component | Function |
|------|--------------------------|---|
| 1 | DC power jack | Connects any one of the following: <ul style="list-style-type: none">■ AC adapter■ Optional automobile power adapter/charger■ Optional aircraft power adapter |
| 2 | Keyboard/mouse connector | Connects an external keyboard or PS/2-compatible external mouse. To connect a keyboard and a mouse at the same time, use an optional Y-adapter. |

Table 1-6
Right Side and Rear Panel Components (Continued)

| Item | Component | Function |
|-------------|-------------------------------------|--|
| 3 | Parallel connector | Connects a parallel device. |
| 4 | USB connectors (2) | Connect USB devices. |
| 5 | RJ-45 jack (network models only) | Connects the network cable. A network cable is not included with the notebook. |
| 6 | Serial connector | Connects a serial device. |
| 7 | External monitor connector | Connects an external monitor or overhead projector. |
| 8 | S-Video connector | Connects a television, VCR, camcorder, or overhead projector. |
| 9 | Vent | Allows airflow to cool internal components.  To prevent damage, the notebook shuts down if an overheating condition occurs. Do not block the cooling vent. Avoid placing the notebook on a blanket, rug, or other flexible surface that may cover the vent area. |
| 10 | Hard drive | Supports the removable primary hard drive. |
| 11 | PC Card slots | Support a 32-bit (CardBus) or 16-bit PC Card. |
| 12 | PC Card eject buttons | Eject a PC Card from a PC Card slot. |

The Evo Notebook N600c right side and rear panel components are shown in Figure 1-4 and described in Table 1-7.




**Figure 1-4. Right Side and Rear Panel Components—
Evo Notebook N600c**

**Table 1-7
Right Side and Rear Panel Components**

| Item | Component | Function |
|------|---------------|---|
| 1 | MultiPort | Connects wireless communication devices, such as an optional Bluetooth or 802.11b MultiPort module, and other options. |
| 2 | DC power jack | Connects any one of the following: <ul style="list-style-type: none">■ AC adapter■ Optional automobile power adapter/charger■ Optional aircraft power adapter |

Table 1-7
Right Side and Rear Panel Components (Continued)

| Item | Component | Function |
|-------------|----------------------------------|--|
| 3 | Keyboard/mouse connector | Connects an external keyboard or PS/2-compatible external mouse. To connect a keyboard and a mouse at the same time, use an optional Y-adapter. |
| 4 | Parallel connector | Connects a parallel device. |
| 5 | Docking connector | Connects the computer to the optional expansion base, convenience base, or port replicator. |
| 6 | Serial connector | Connects a serial device. |
| 7 | External monitor connector | Connects an external monitor or overhead projector. |
| 8 | S-Video connector | Connects a television, VCR, camcorder, or overhead projector. |
| 9 | RJ-45 jack (network models only) | Connects the network cable. A network cable is not included with the computer. |
| 10 | USB connectors (2) | Connect USB devices. |
| 11 | Vent | Allows airflow to cool internal components.  To prevent damage, the notebook shuts down if an overheating condition occurs. Do not block the cooling vent. Avoid placing the notebook on a blanket, rug, or other flexible surface that may cover the vent area. |
| 12 | Hard drive | Supports the removable primary hard drive. |
| 13 | PC Card slots | Support 32-bit (CardBus) or 16-bit PC Cards. |
| 14 | PC Card eject buttons | Eject PC Cards from the PC Card slots. |

The Evo Notebook N620c, N610c, and N610v bottom components are shown in Figure 1-5 and described in Table 1-8.

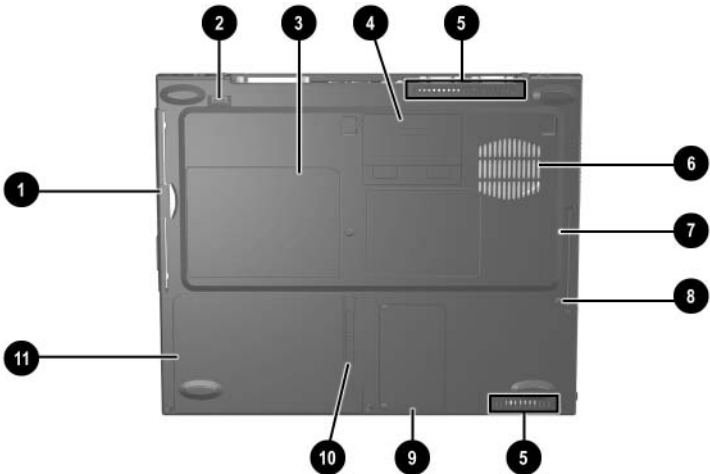


Figure 1-5. Bottom Components—Evo Notebook N620c, N610c, and N610v

**Table 1-8
Bottom Components**

| Item | Component | Function |
|------|-------------------------|--|
| 1 | Media Bay | Accepts a diskette drive, CD- or DVD-ROM drive, or secondary battery pack. |
| 2 | Media Bay release latch | Releases the Media Bay device from the connector. |

Table 1-8
Bottom Components (*Continued*)

| Item | Component | Function |
|-------------|----------------------------|---|
| 3 | Serial number | Identifies the notebook; needed when you call Compaq customer support. |
| 4 | Docking connector | Connects the notebook to the optional expansion base, convenience base, or port replicator. |
| 5 | Air vents (2) | Allow airflow to cool internal components. |
| 6 | Fan | Provides airflow to cool internal components. |
| 7 | Hard drive | Supports the removable primary hard drive. |
| 8 | Hard drive security screw | Secures the hard drive. |
| 9 | Mini PCI compartment cover | Covers the memory expansion compartment that contains two memory expansion slots for memory expansion boards. |
| 10 | Battery release latch | Releases the battery pack from the battery compartment. |
| 11 | Battery compartment | Holds the battery pack. |

The Evo Notebook N600c bottom components are shown in Figure 1-6 and described in Table 1-9.

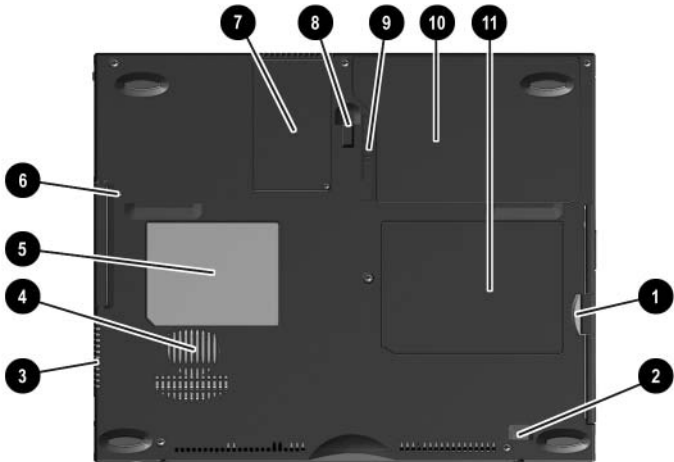


Figure 1-6. Bottom Components—Evo Notebook N600c

**Table 1-9
Bottom Components**

| Item | Component | Function |
|------|-------------------------|---|
| 1 | Media Bay | Accepts a diskette drive, optical drive, or secondary battery pack. |
| 2 | Media Bay release latch | Releases the Media Bay device from the connector. |

Table 1-9
Bottom Components (*Continued*)

| Item | Component | Function |
|-------------|------------------------------------|---|
| 3 | Vent | Allows airflow to cool internal components. |
| 4 | Fan | Provides airflow to cool internal components. |
| 5 | Certificate of Authenticity label | Contains the Product Key, which may need to be entered before using some Windows operating systems. |
| 6 | Hard drive security screw | Secures the hard drive. |
| 7 | Memory expansion compartment cover | Covers the memory expansion compartment that contains two memory expansion slots for memory expansion boards. |
| 8 | Docking recess latch | Secures the computer to an optional expansion base, convenience base, or port replicator. |
| 9 | Battery release latch | Releases the battery pack from the battery compartment. |
| 10 | Battery compartment | Holds the battery pack. |
| 11 | Serial number | Identifies the computer; needed when you call Compaq customer support. |

The components on the top of the Evo Notebook N620c, N610c, N610v, and N600c are shown in Figure 1-7 and described in Table 1-10.

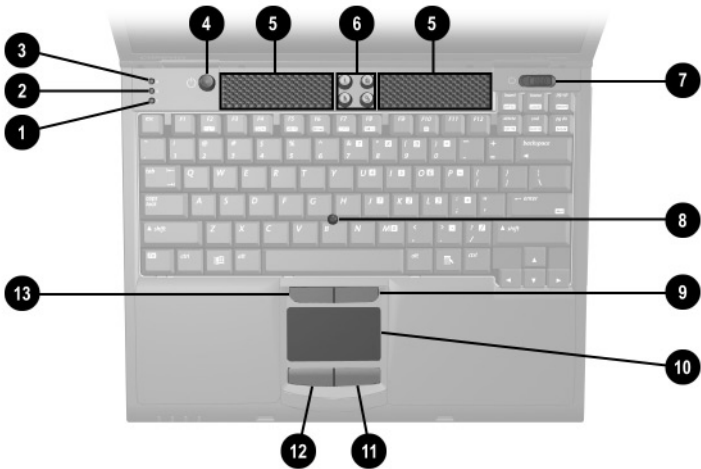


Figure 1-7. Top Components

**Table 1-10
Top Components**

| Item | Component | Function |
|------|-------------------|--|
| 1 | Num lock light | On: Num lock is on and the embedded numeric keypad is enabled. |
| 2 | Scroll lock light | On: Scroll is on. |
| 3 | Caps lock light | On: Caps lock is on. |

Table 1-10
Top Components (Continued)

| Item | Component | Function |
|------|-----------------------------|--|
| 4 | Standby button | Turns on the notebook if it is off. Initiates and exits Standby. When pressed with the Fn key, initiates Hibernation. |
| 5 | Stereo speakers (2) | Produce stereo sound. |
| 6 | Easy Access buttons (4) | Provide quick access to the Internet. Refer to the <i>Hardware Guide</i> that ships with the notebook for information about these buttons. |
| 7 | Power switch | Turns on the notebook. To turn off the notebook, use the operating system Shut Down command. |
| 8 | Pointing stick | Moves the mouse cursor. |
| 9 | Right pointing stick button | Functions like the right mouse button on an external mouse. |
| 10 | TouchPad | Moves the mouse cursor. |
| 11 | Right TouchPad button | Functions like the right mouse button on an external mouse. |
| 12 | Left TouchPad button | Functions like the left mouse button on an external mouse. |
| 13 | Left pointing stick button | Functions like the left mouse button on an external mouse. |

The keyboard components of the Evo Notebook N620c, N610c, N610v, and N600c are shown in Figure 1-8 and described in Table 1-11.

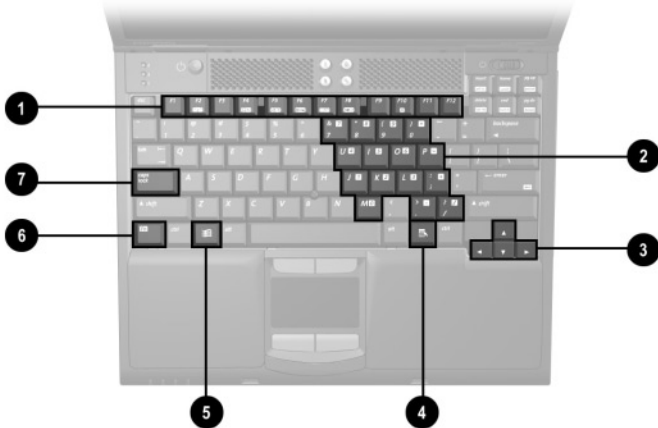


Figure 1-8. Keyboard Components

**Table 1-11
Keyboard Components**

| Item | Component | Function |
|------|--|--|
| 1 | F1 through F12 function keys | Perform preset functions. |
| 2 | Embedded numeric keypad | Converts keys to a numeric keypad. |
| 3 | Cursor control keys | Move the cursor around the screen. |
| 4 | Windows application key | Displays a menu when using a Microsoft application. The menu is the same one that is displayed by pressing the right mouse button. |
| 5 | Windows logo key | Displays the Windows Start menu. |
| 6 | Fn key | Used with hotkeys to perform preset hotkey functions. |
| 7 | Caps lock key | Turns on the caps lock function. |

1.6 Design Overview

This section presents a design overview of key parts and features of the notebook. Refer to Chapter 3, “Illustrated Parts Catalog,” to identify replacement parts, and Chapter 5, “Removal and Replacement Procedures,” for disassembly steps. The system board provides the following device connections:

- Memory expansion board
- Hard drive
- Display
- Keyboard/TouchPad or pointing stick
- Audio
- Intel Pentium 4 and Pentium III processors
- Fan
- PC Card
- Modem or modem/NIC

The notebook uses an electrical fan for ventilation. The fan is controlled by a temperature sensor and is designed to turn on automatically when high temperature conditions exist. These conditions are affected by high external temperatures, system power consumption, power management/battery conservation configurations, battery fast charging, and software applications. Exhaust air is displaced through the ventilation grill located on the left side of the notebook.



CAUTION: To properly ventilate the notebook, allow at least a 7.6-cm (3-inch) clearance on the left and right sides of the notebook.

Troubleshooting



WARNING: Only authorized technicians trained by Compaq should 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 make modifications to any printed wiring board. Improper repairs can create a safety hazard. Any indication of component replacement or printed wiring board modification may void any warranty or exchange allowances.

2.1 Computer Setup and Diagnostics Utilities

The computer features two Compaq system management utilities:

- **Computer Setup**—A system information and customization utility that can be used even when your operating system is not working or will not load. This utility includes settings that are not available in Windows.

- **Compaq Diagnostics**—A system information and diagnostic utility that is used within your Windows operating system. Use this utility whenever possible to:

- Display system information.
- Test system components.
- Troubleshoot a device configuration problem in Windows 2000, Windows XP Professional, or Windows XP Home.

Using Computer Setup

Information and settings in Computer Setup are accessed from the File, Security, or Advanced menus:

1. Turn on or restart the computer. Press **F10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - To change the language, press **F2**.
 - To view navigation information, press **F1**.
 - To return to the Computer Setup menu, press **esc**.
2. Select the File, Security, or Advanced menu.
3. To close Computer Setup and restart the computer:
 - Select File > Save Changes and Exit and press **enter**.
 - or
 - Select File > Ignore Changes and Exit and press **enter**.
4. When you are prompted to confirm your action, press **F10**.




Selecting from the File Menu

Table 2-1
File Menu

| Select | To Do This |
|-------------------------|--|
| System Information | <ul style="list-style-type: none"> ■ View identification information about the computer, a docking base, and any battery packs in the system. ■ View specification information about the processor, memory and cache size, and system ROM. |
| Save to Floppy | Save system configuration settings to a diskette. |
| Restore from Floppy | Restore system configuration settings from a diskette. |
| Restore Defaults | Replace configuration settings in Computer Setup with factory default settings. (Identification information is retained.) |
| Ignore Changes and Exit | Cancel changes entered during the current session, then exit and restart the computer. |
| Save Changes and Exit | Save changes entered during the current session, then exit and restart the computer. |

Selecting from the Security Menu

Table 2-2
Security Menu

| Select | To Do This |
|--|---|
| Setup Password | Enter, change, or delete a setup password. (The setup password is called an administrator password in Compaq Computer Security, a program accessed from the Windows Control Panel.) |
| Power-on Password | Enter, change, or delete a power-on password. |
| DriveLock Passwords | Enable/disable DriveLock; change a DriveLock User or Master password.  Drive Lock Settings are accessible only when you enter Computer Setup by turning on (not restarting) the computer. |
| Password Options Password options can be selected only when a power-on password has been set. | Enable/disable: <ul style="list-style-type: none">■ QuickLock■ QuickLock on Standby■ QuickBlank  To enable QuickLock on Standby or QuickBlank, you must first enable QuickLock. |
| Device Security | Enable/disable: <ul style="list-style-type: none">■ Ports or diskette drives*■ Diskette write*■ CD-ROM or diskette startup  Settings for a DVD-ROM can be entered in the CD-ROM field. |
| System IDs | Enter identification numbers for the computer, a docking base, and all battery packs in the system. |

*Not applicable to SuperDisk LS-120 drives.

Selecting from the Advanced Menu

Table 2-3
Advanced Menu

| Select | To Do This |
|--------------------------------|---|
| Language (or press F2) | Change the Computer Setup language. |
| Boot Options | <p>Enable/disable:</p> <ul style="list-style-type: none"> ■ QuickBoot, which starts the computer more quickly by eliminating some startup tests. (If you suspect a memory failure and want to test memory automatically during startup, disable QuickBoot.) ■ MultiBoot, which sets a startup sequence that can include most bootable devices and media in the system. |
| Device Options | <ul style="list-style-type: none"> ■ Enable/disable the embedded numeric keypad at startup. ■ Enable/disable multiple standard pointing devices at startup. (To set the computer to support only a single, usually nonstandard, pointing device at startup, select Disable.) ■ Enable/disable USB legacy support for a USB keyboard. (When USB legacy support is enabled, the keyboard works even when a Windows operating system is not loaded.) ■ Set an optional external monitor or overhead projector connected to a video card in a docking base as the primary device. (When the computer display is set as secondary, the computer must be shut down before undocking from a docking base.) |

Table 2-3
Advanced Menu (*Continued*)

| Select | To Do This |
|--|--|
| Device Options (<i>continued</i>) | <ul style="list-style-type: none">■ Change the parallel port mode from Enhanced Parallel Port (EPP, the default setting) to standard, bidirectional, EPP or Enhanced Capabilities Port (ECP).■ Set video-out mode to NTSC (default), PAL, NTSC-J, or PAL-M.*■ Enable/disable all settings in the SpeedStep window. (When Disable is selected, the computer runs in Battery Optimized mode.)■ Specify how the computer recognizes multiple identical docking bases that are identically equipped. (Select Disable to recognize the docking bases as a single docking base; select Enable to recognize the docking bases individually, by serial number.)■ Enable/disable the reporting of the processor serial number by the processor to the software. |
| HDD Self Test Options | Run a quick comprehensive self test on hard drives in the system that support the test features. |

* Video modes vary even within regions. However, NTSC is common in North America; PAL, in Europe, Africa, and the Middle East; NTSC-J, in Japan; and PAL-M, in Brazil. Other South and Central American regions may use NTSC, PAL, or PAL-M.

2.2 Using Compaq Diagnostics

When you access Compaq Diagnostics, a scan of all system components is displayed on the screen before the Compaq Diagnostics window opens.

You can display more or less information from anywhere within Compaq Diagnostics by selecting Level on the menu bar.

Compaq Diagnostics is designed to test Compaq components. If non-Compaq components are tested, the results may be inconclusive.

Obtaining, Saving, or Printing Configuration Information

1. Access Compaq Diagnostics by selecting Start > Settings > Control Panel > Compaq Diagnostics.
2. Select Categories, then select a category from the drop-down list.
 - To save the information, select File > Save As.
 - To print the information, select File > Print.
3. To close Compaq Diagnostics, select File > Exit.

Obtaining, Saving, or Printing Diagnostic Test Information

1. Access Compaq Diagnostics by selecting Start > Settings > Control Panel > Compaq Diagnostics.
2. Select the Test tab.
3. In the scroll box, select the category or device you want to test.
4. Select a test type:
 - Quick Test**—Runs a quick, general test on each device in a selected category.
 - Complete Test**—Performs maximum testing on each device in a selected category.
 - Custom Test**—Performs maximum testing on a selected device.
 - ◆ To run all tests for your selected device, click Check All.
 - ◆ To run only the tests you select, click Uncheck All, then select the checkbox for each test you want to run.

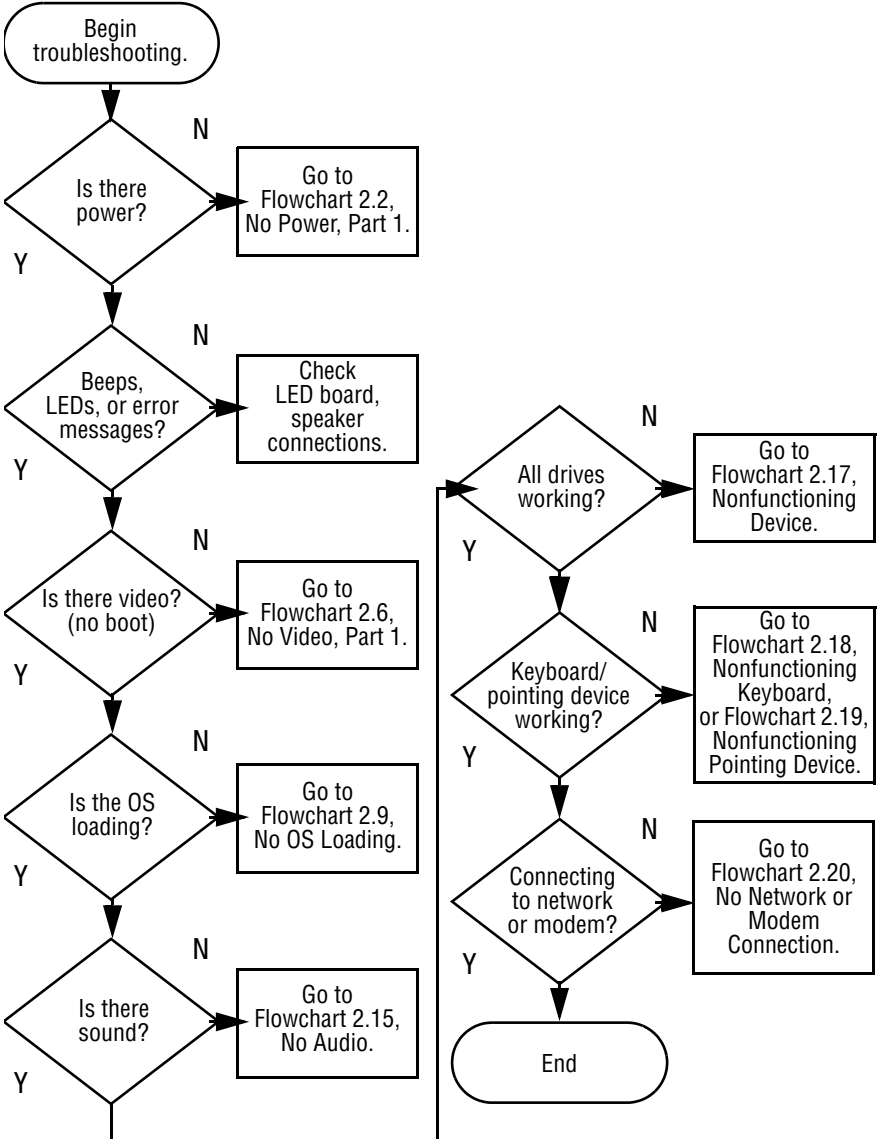
5. Select a test mode:
 - Interactive Mode**—Provides maximum control over the testing process. You determine whether the test was passed or failed, and you may be prompted to insert or remove devices.
 - Unattended Mode**—Does not display prompts. If errors are found, they are displayed when testing is complete.
6. Click Begin Testing.
7. Select a tab to view a test report:
 - Status tab**—Summarizes the tests run, passed, and failed during the current testing session.
 - Log tab**—Lists tests run on the system, the number of times each test has run, the number of errors found on each test, and the total run time of each test.
 - Error tab**—Lists all errors found in the computer with their error codes.
8. Select a tab to save the report:
 - Log tab**—Select Save.
 - Error tab**—Select Save.
9. Select a tab to print the report:
 - Log tab**—Select File > Save As, then print the file from your folder.

2.3 Troubleshooting Flowcharts

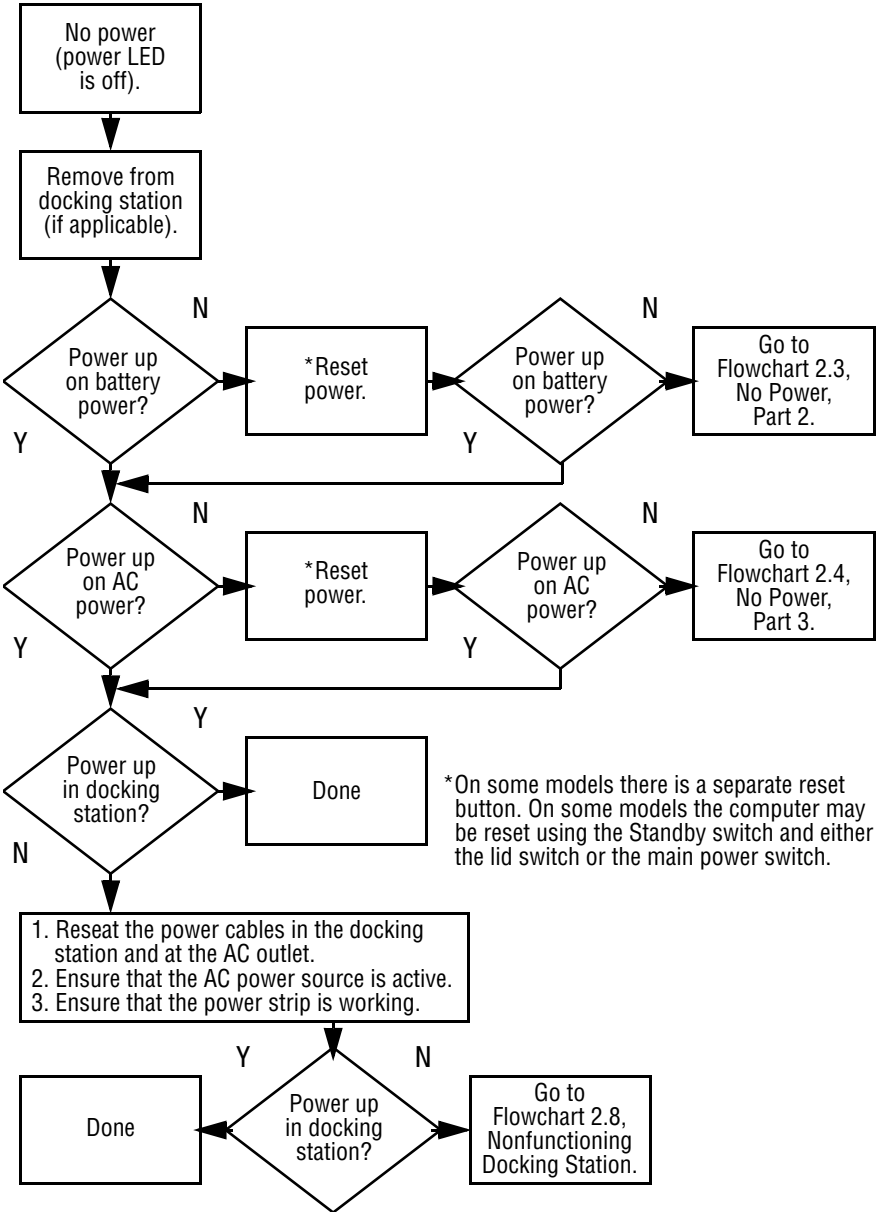
Table 2-4
Troubleshooting Flowcharts Overview

| Flowchart | Description |
|------------------|---|
| 2.1 | Initial Troubleshooting |
| 2.2 | No Power, Part 1 |
| 2.3 | No Power, Part 2 |
| 2.4 | No Power, Part 3 |
| 2.5 | No Power, Part 4 |
| 2.6 | No Video, Part 1 |
| 2.7 | No Video, Part 2 |
| 2.8 | Nonfunctioning Docking Station |
| 2.9 | No Operating System (OS) Loading |
| 2.10 | No OS Loading From Hard Drive, Part 1 |
| 2.11 | No OS Loading From Hard Drive, Part 2 |
| 2.12 | No OS Loading From Hard Drive, Part 3 |
| 2.13 | No OS Loading From Diskette Drive |
| 2.14 | No OS Loading From CD- or DVD-ROM Drive |
| 2.15 | No Audio, Part 1 |
| 2.16 | No Audio, Part 2 |
| 2.17 | Nonfunctioning Device |
| 2.18 | Nonfunctioning Keyboard |
| 2.19 | Nonfunctioning Pointing Device |
| 2.20 | No Network or Modem Connection |

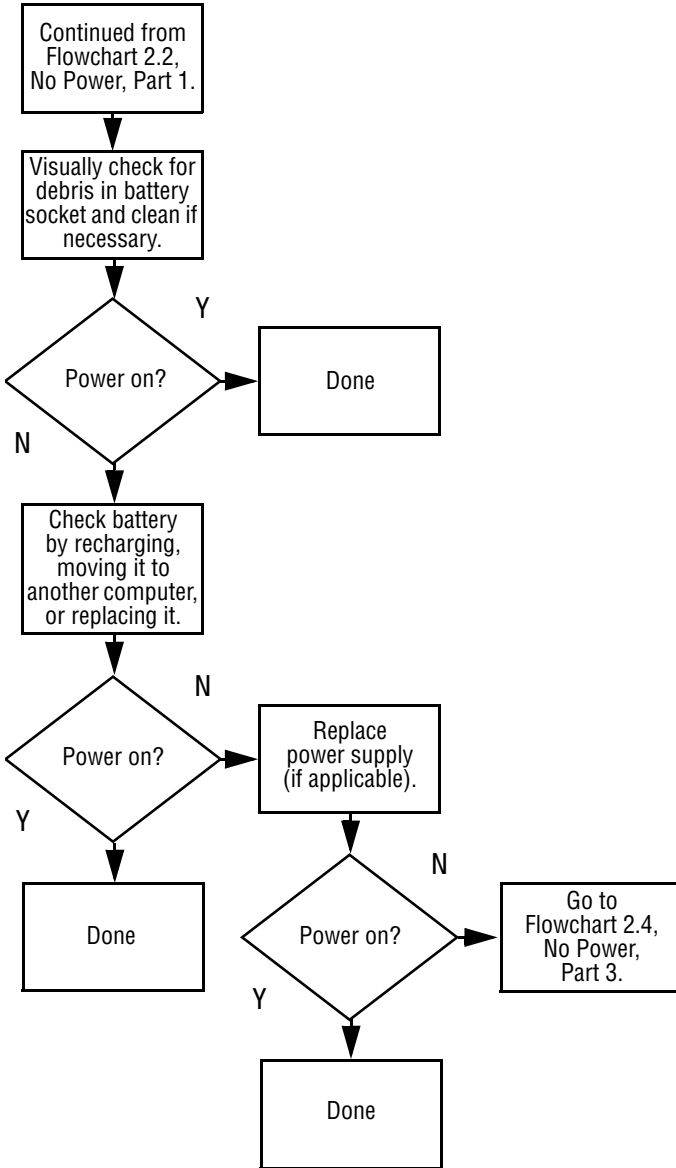
Flowchart 2.1 - Initial Troubleshooting



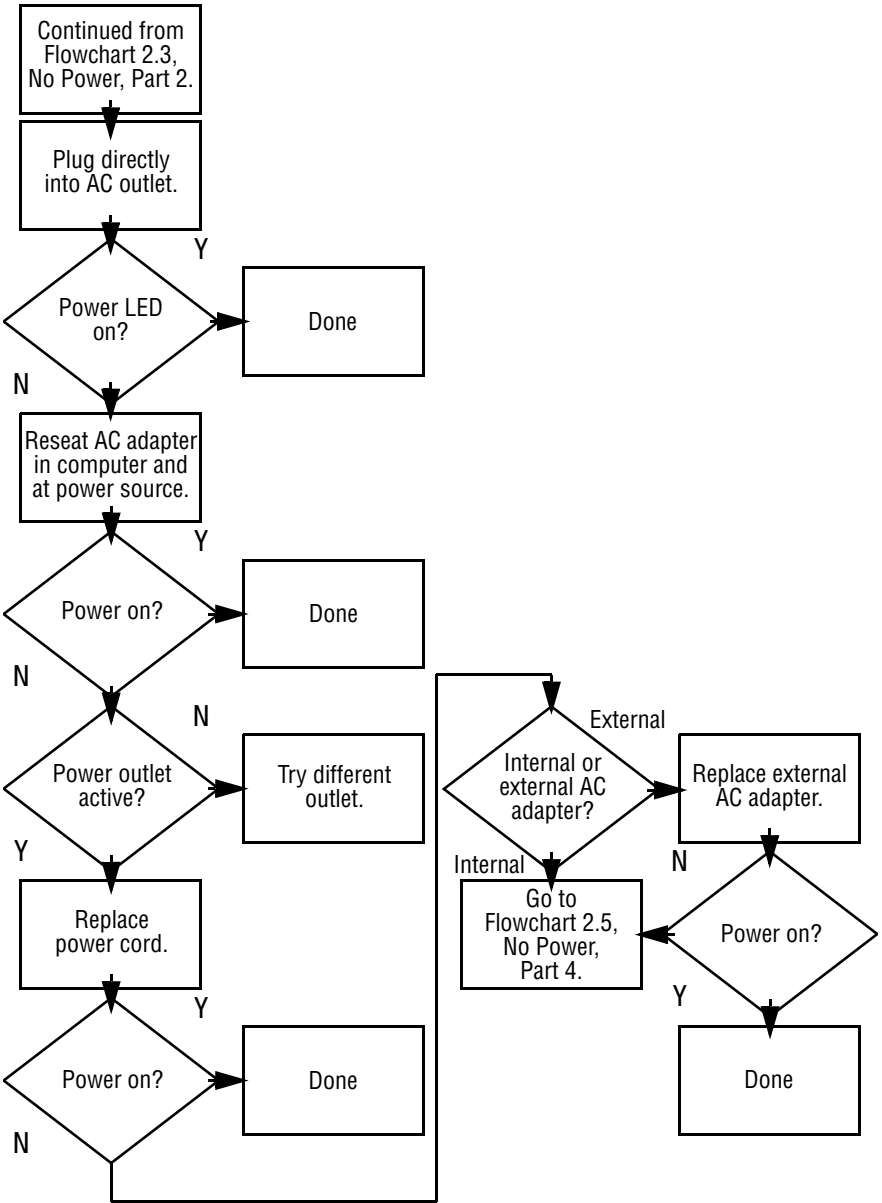
Flowchart 2.2 - No Power, Part 1



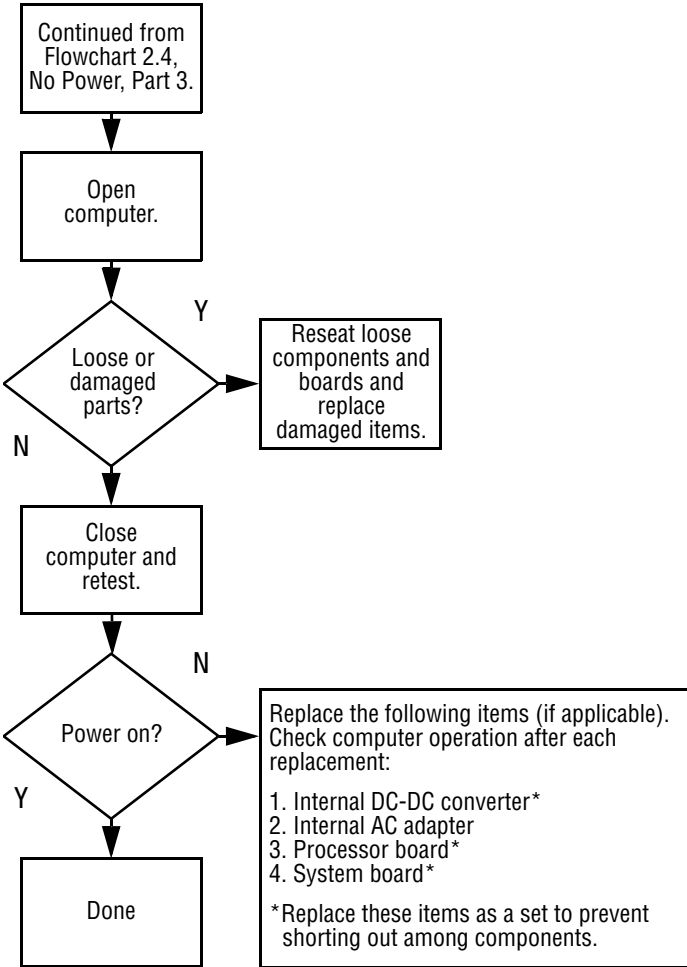
Flowchart 2.3 - No Power, Part 2



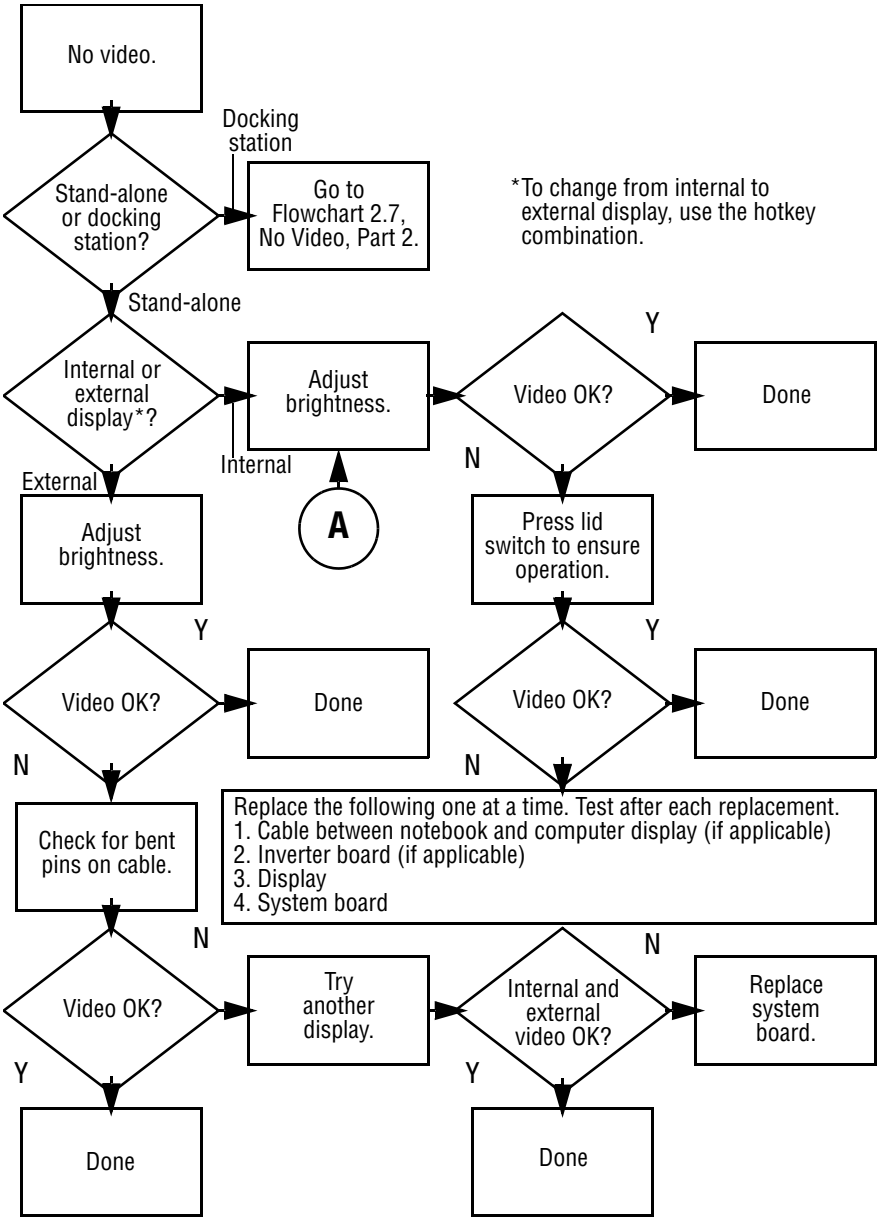
Flowchart 2.4 - No Power, Part 3



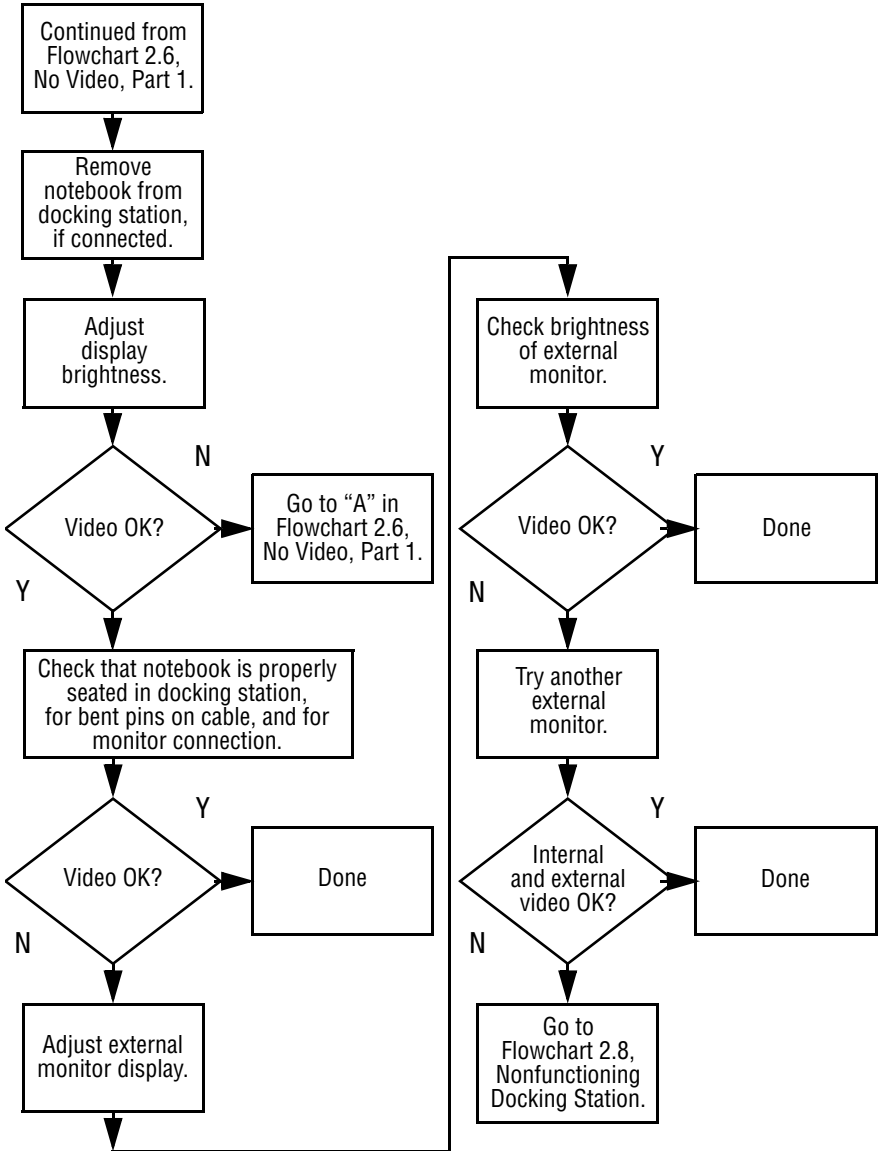
Flowchart 2.5 - No Power, Part 4



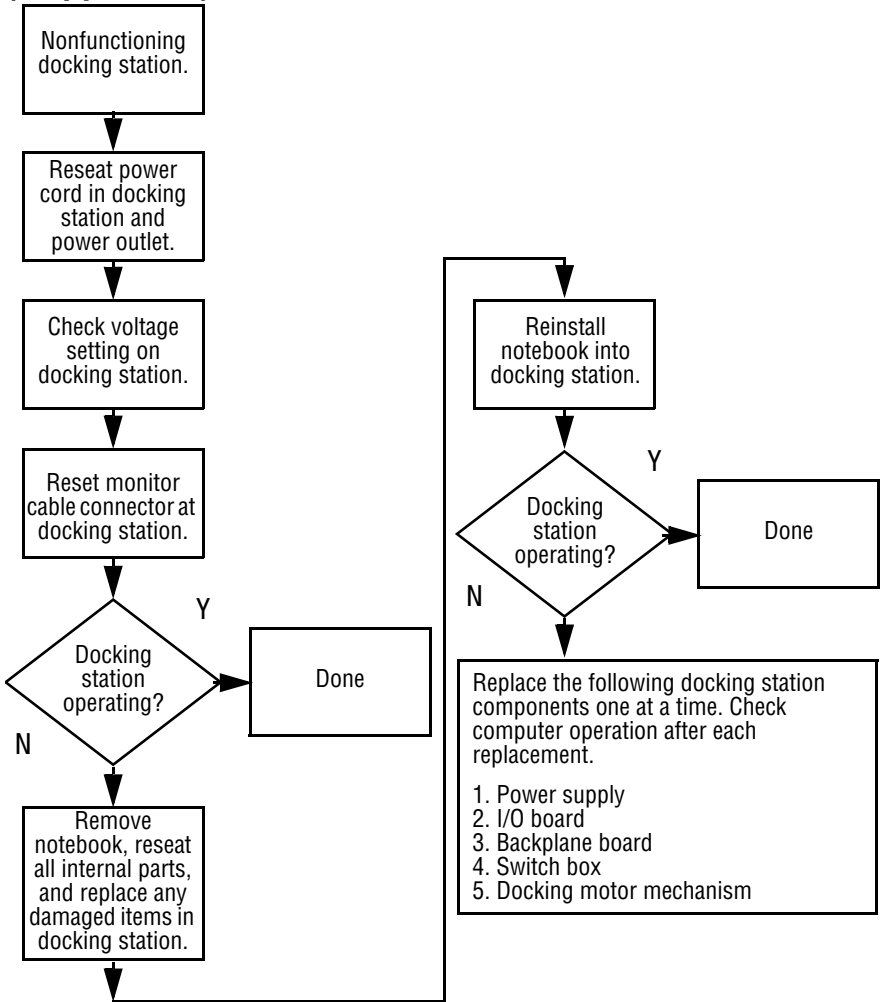
Flowchart 2.6 - No Video, Part 1



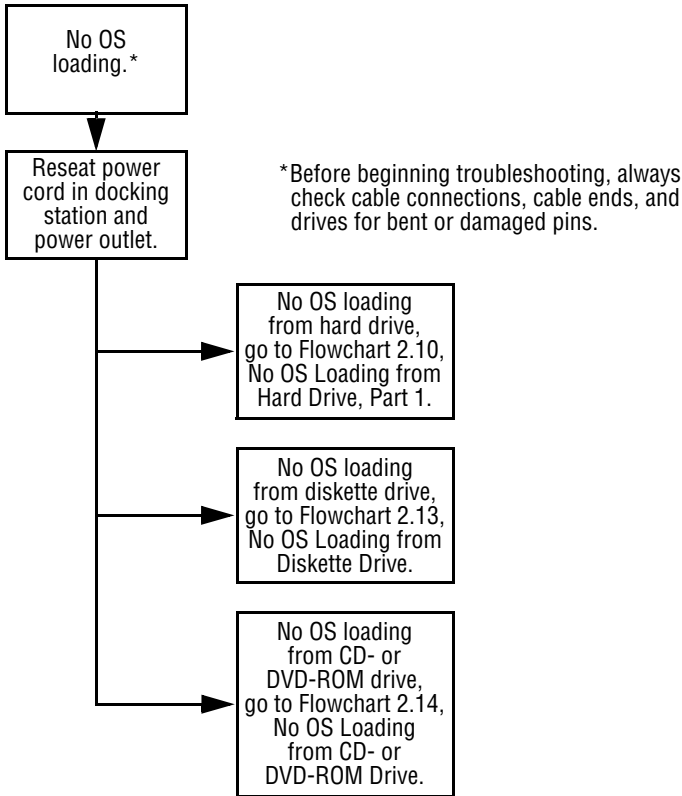
Flowchart 2.7 - No Video, Part 2



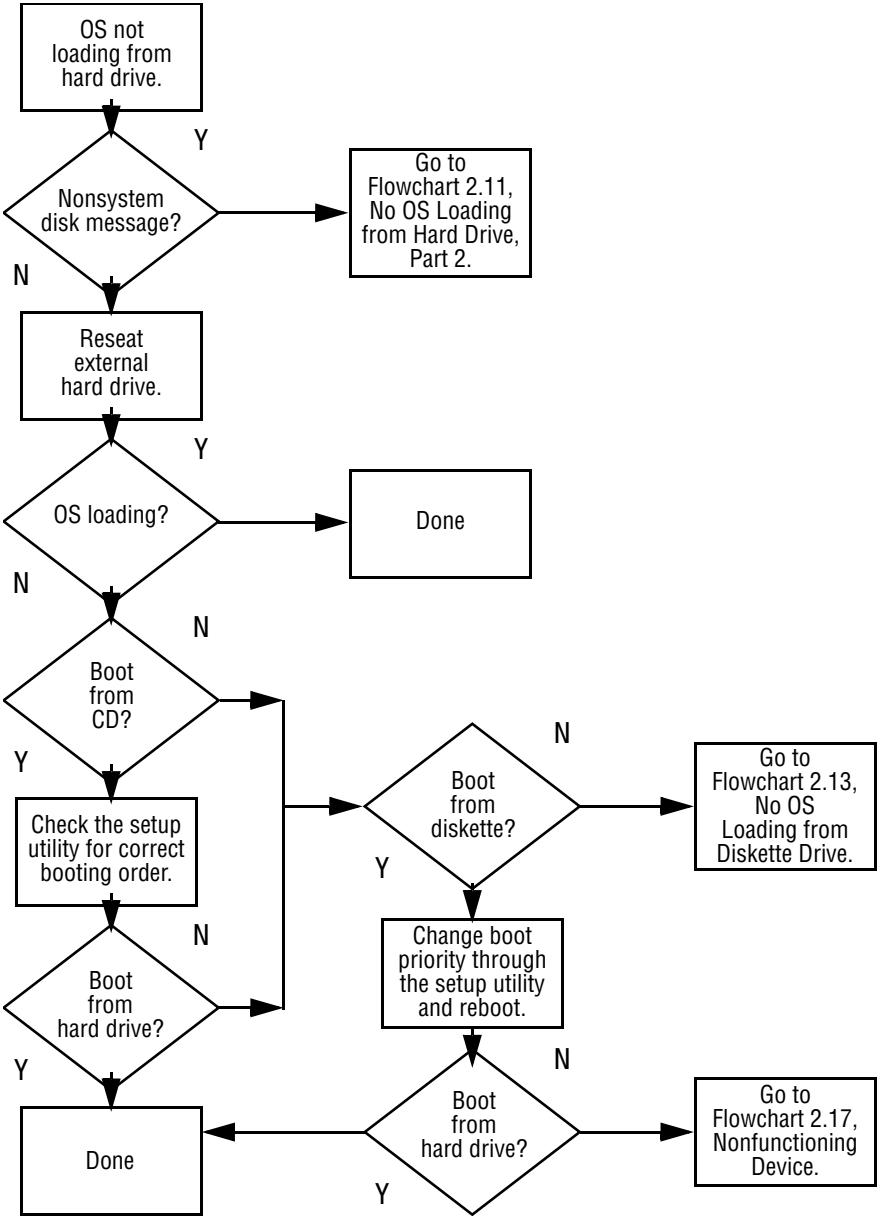
Flowchart 2.8 - Nonfunctioning Docking Station (if applicable)



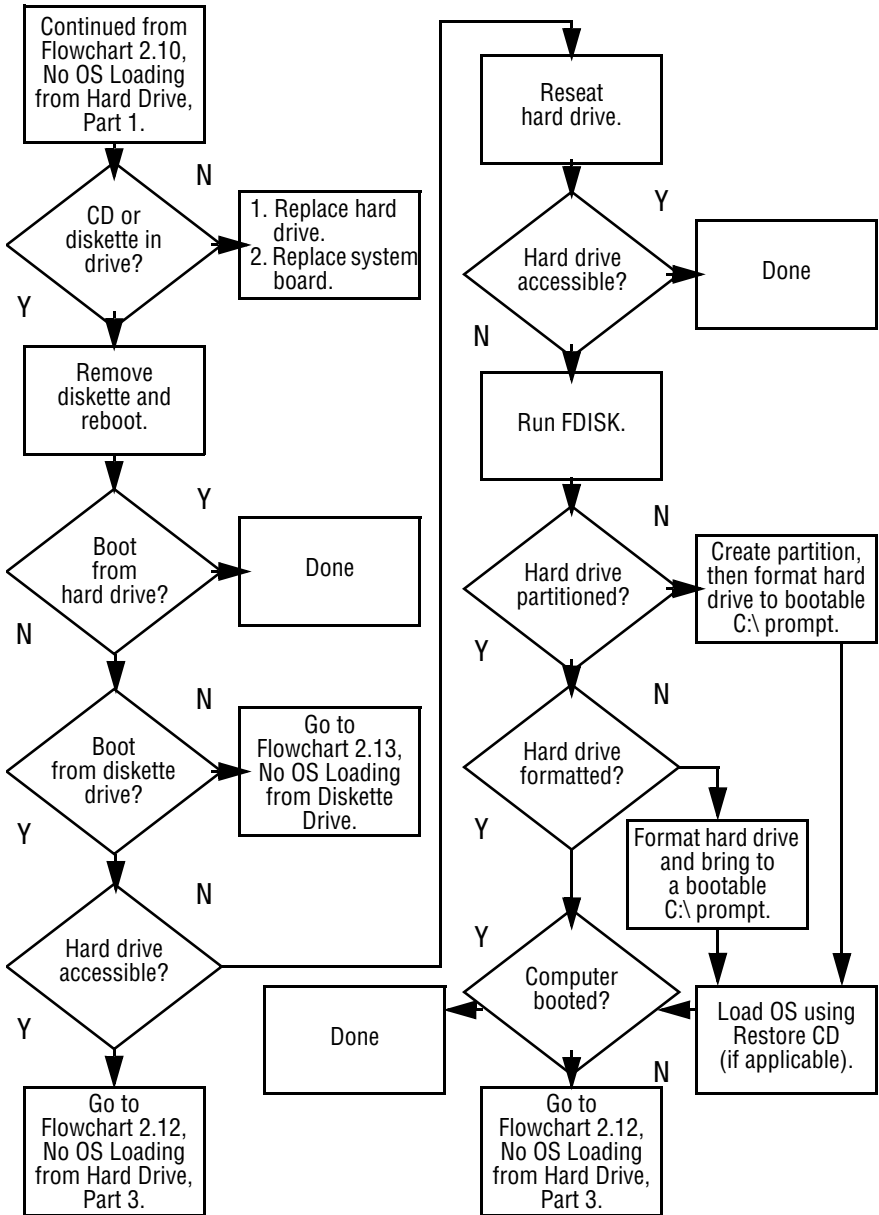
Flowchart 2.9 - No Operating System (OS) Loading



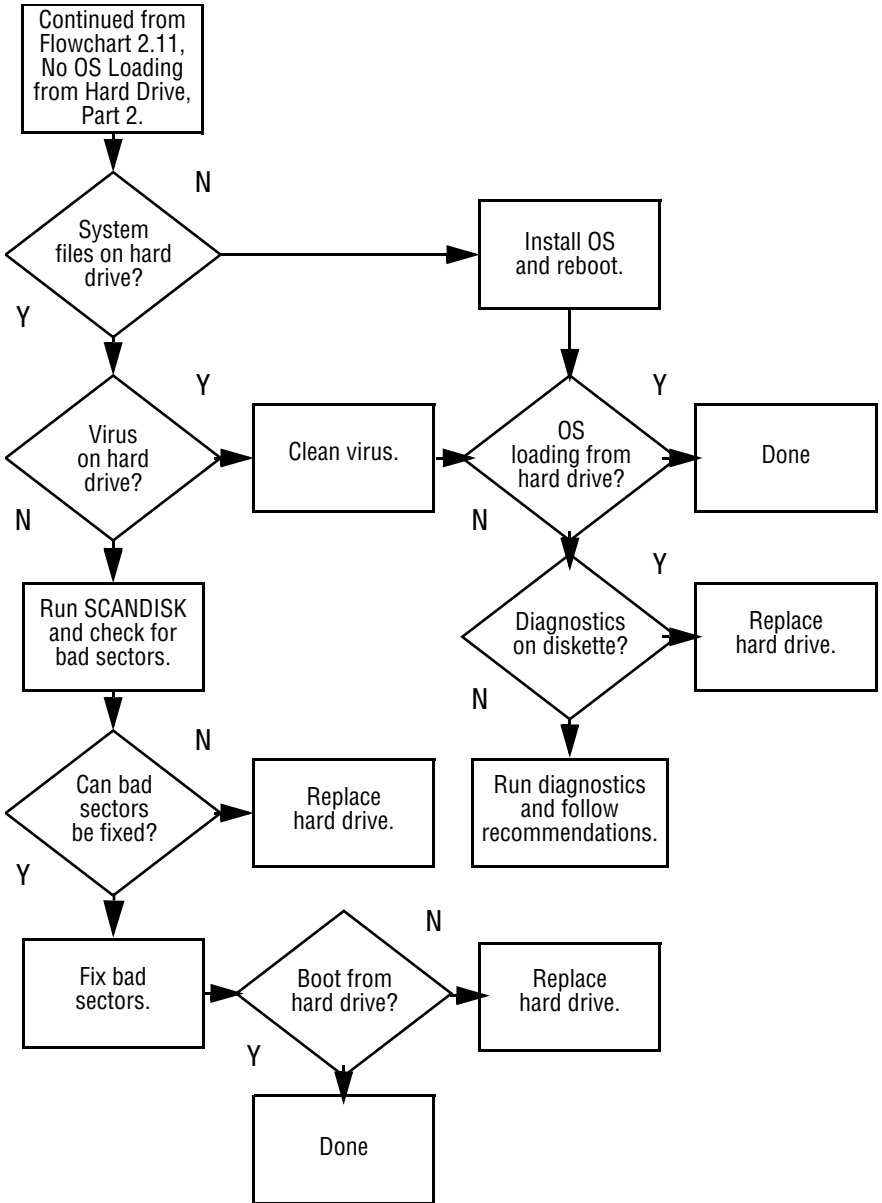
Flowchart 2.10 - No OS Loading from Hard Drive, Part 1



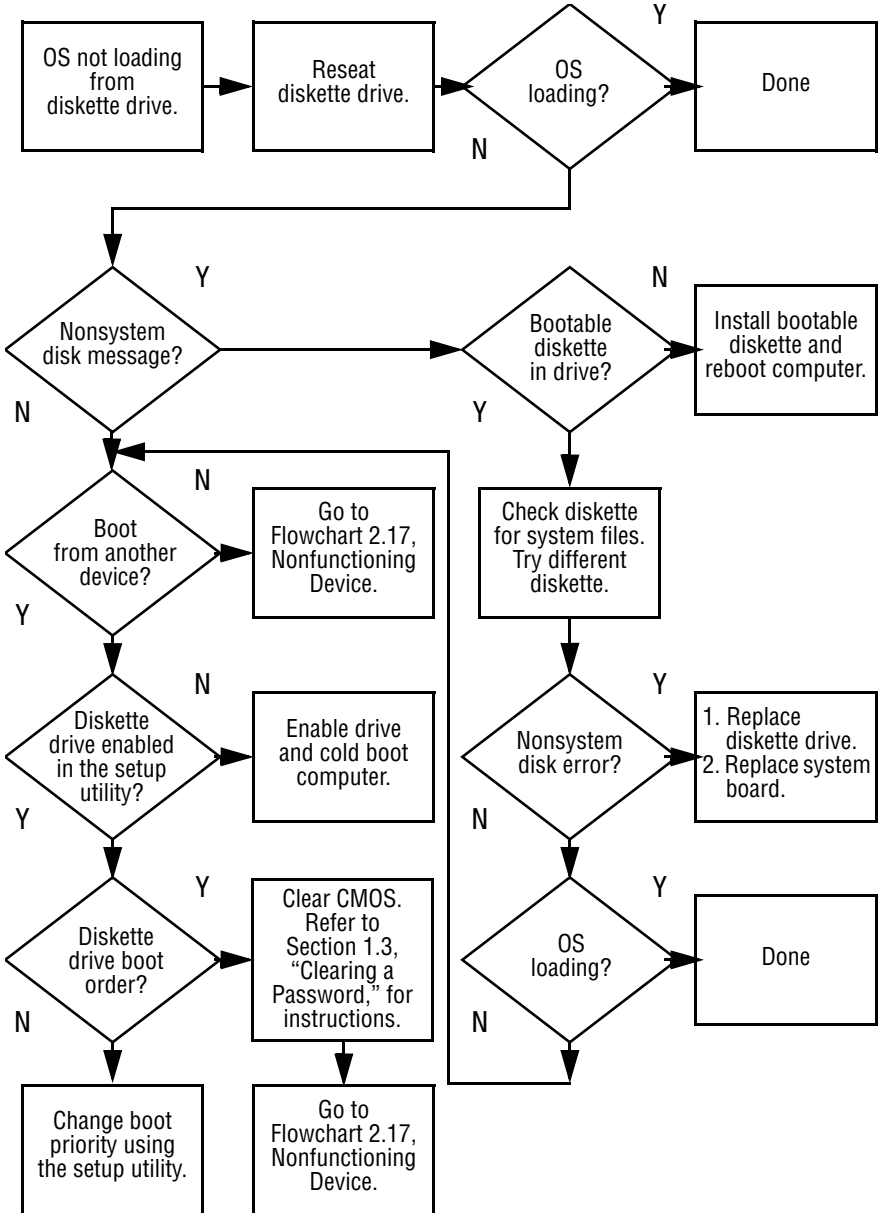
Flowchart 2.11 - No OS Loading from Hard Drive, Part 2



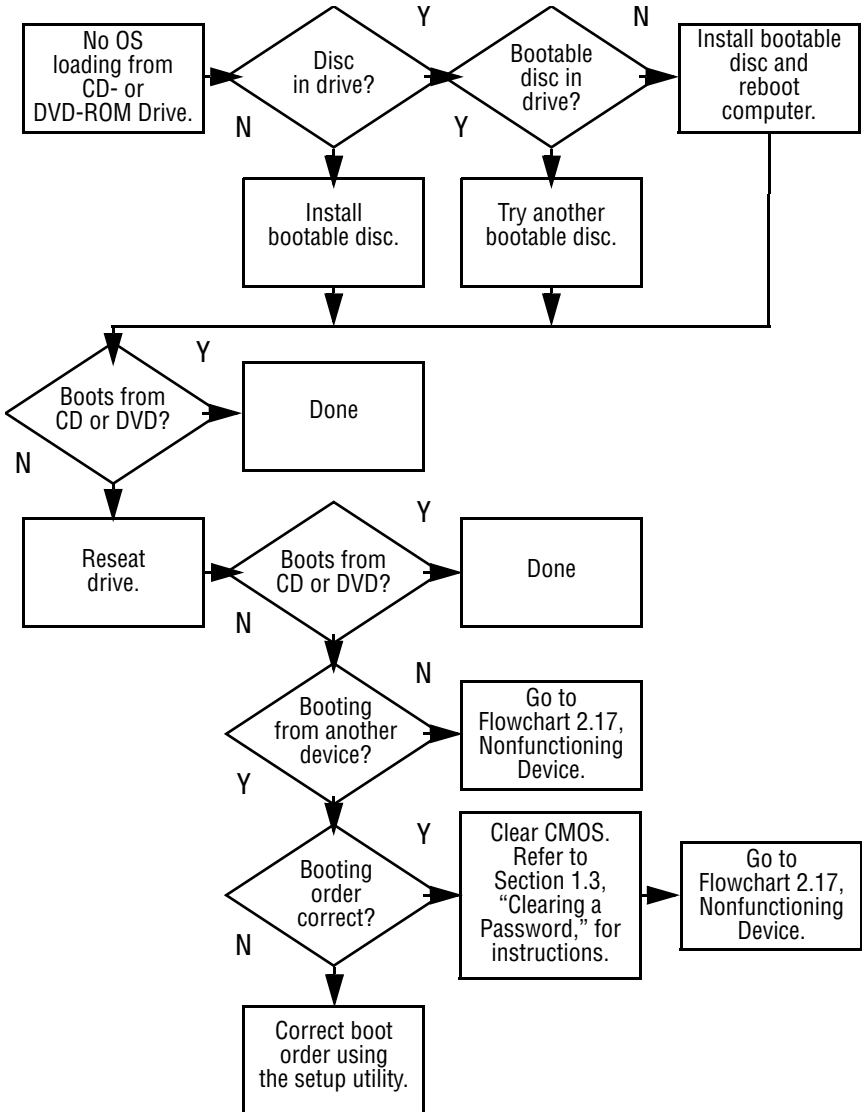
Flowchart 2.12 - No OS Loading from Hard Drive, Part 3



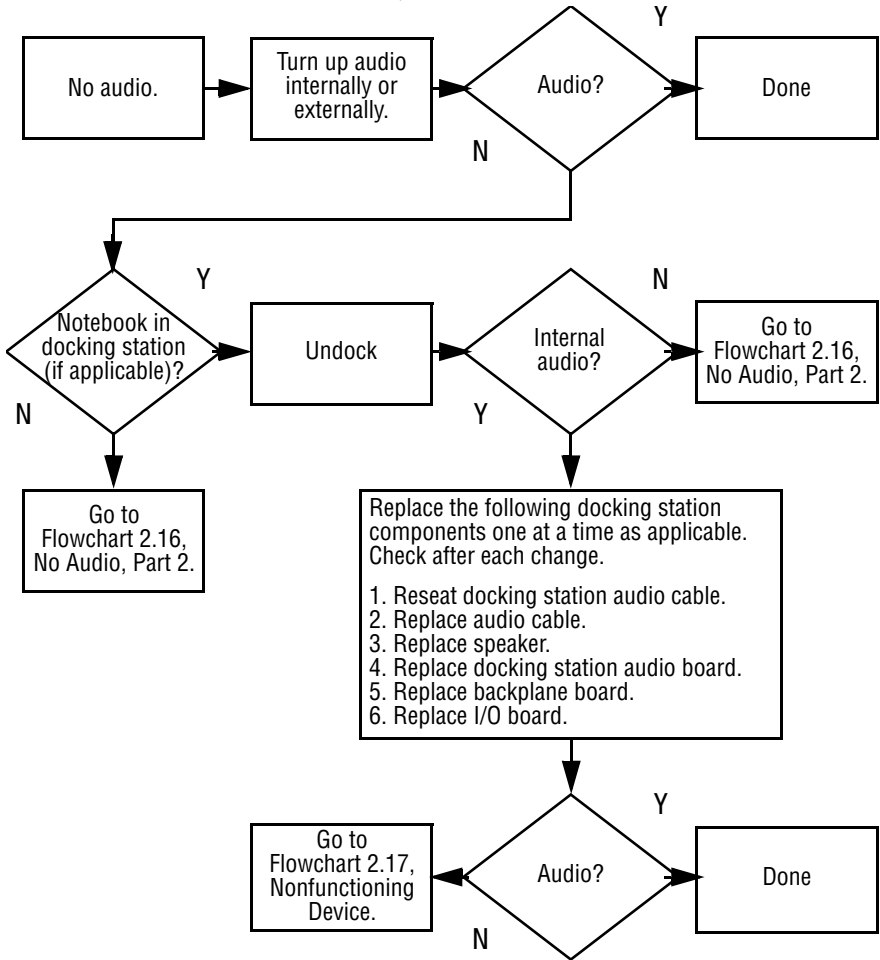
Flowchart 2.13 - No OS Loading from Diskette Drive



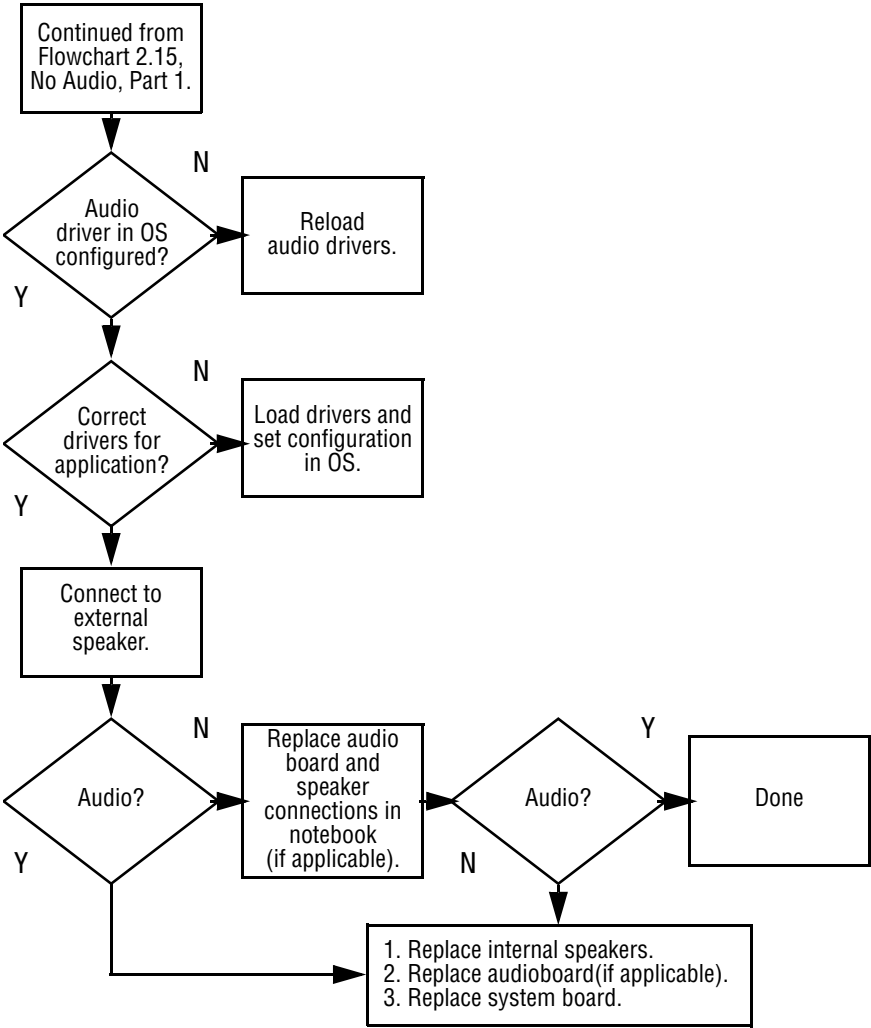
Flowchart 2.14 - No OS Loading from CD- or DVD-ROM Drive



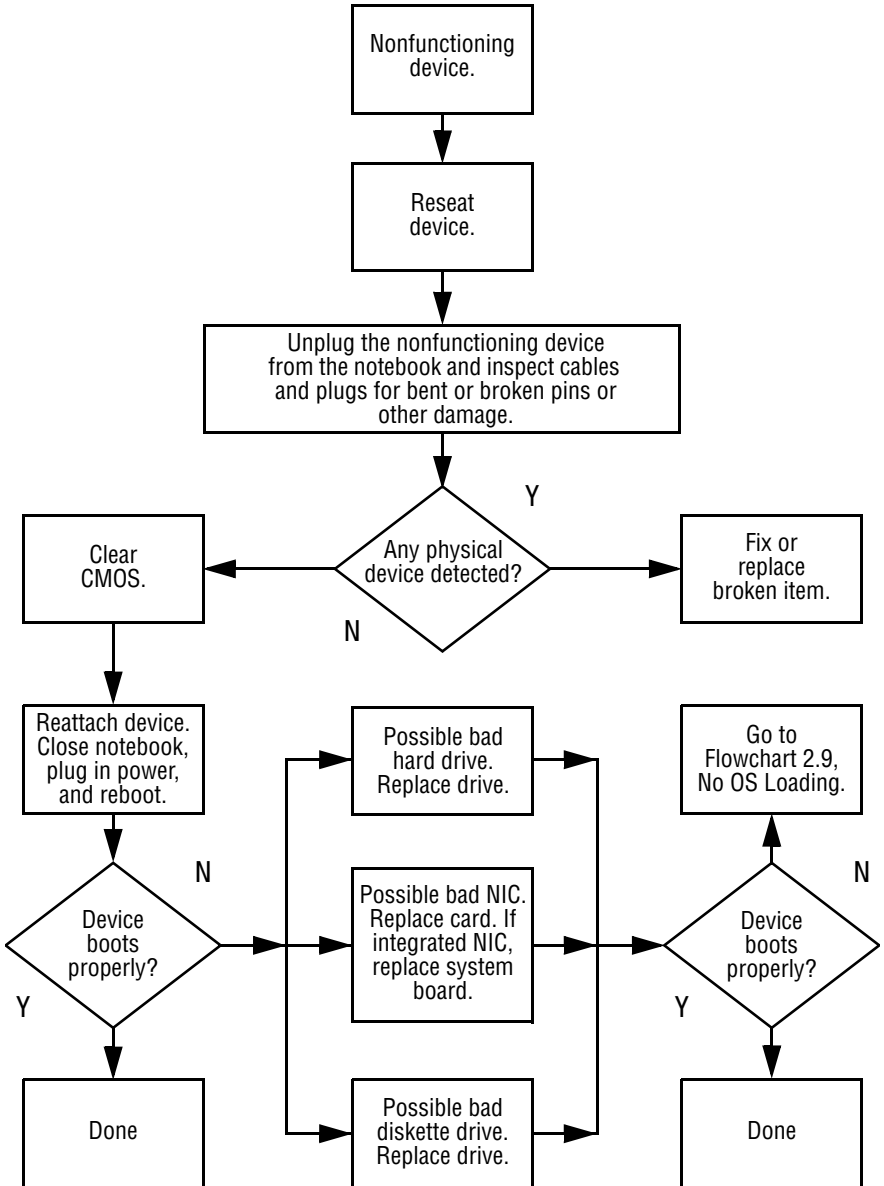
Flowchart 2.15 - No Audio, Part 1



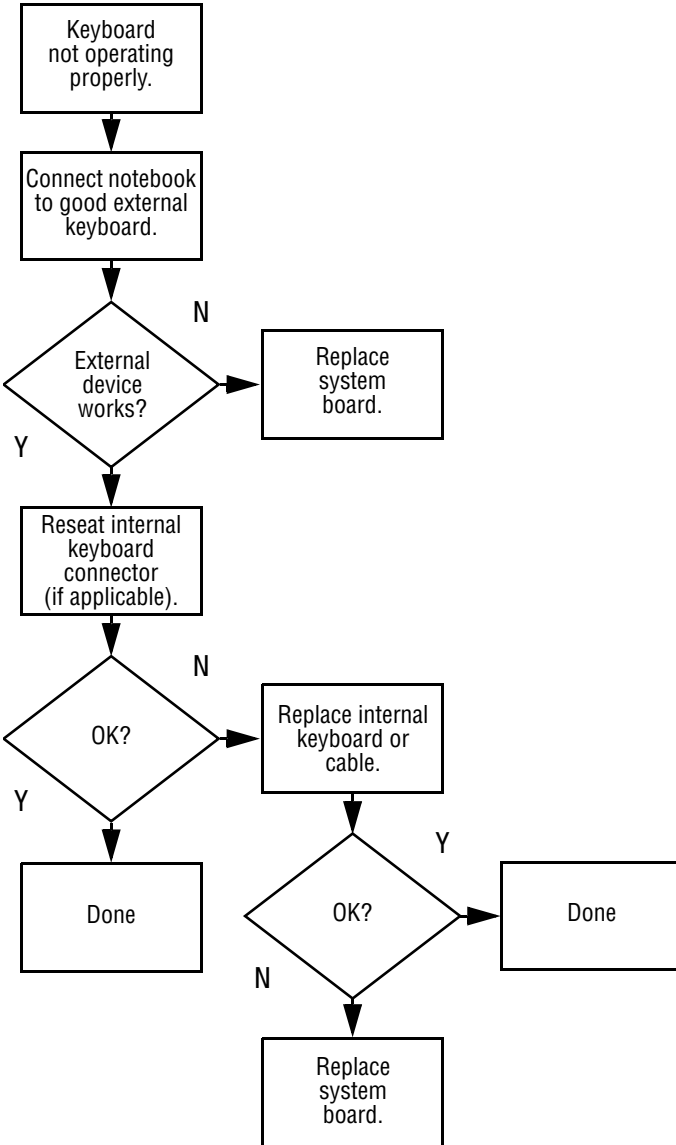
Flowchart 2.16 - No Audio, Part 2



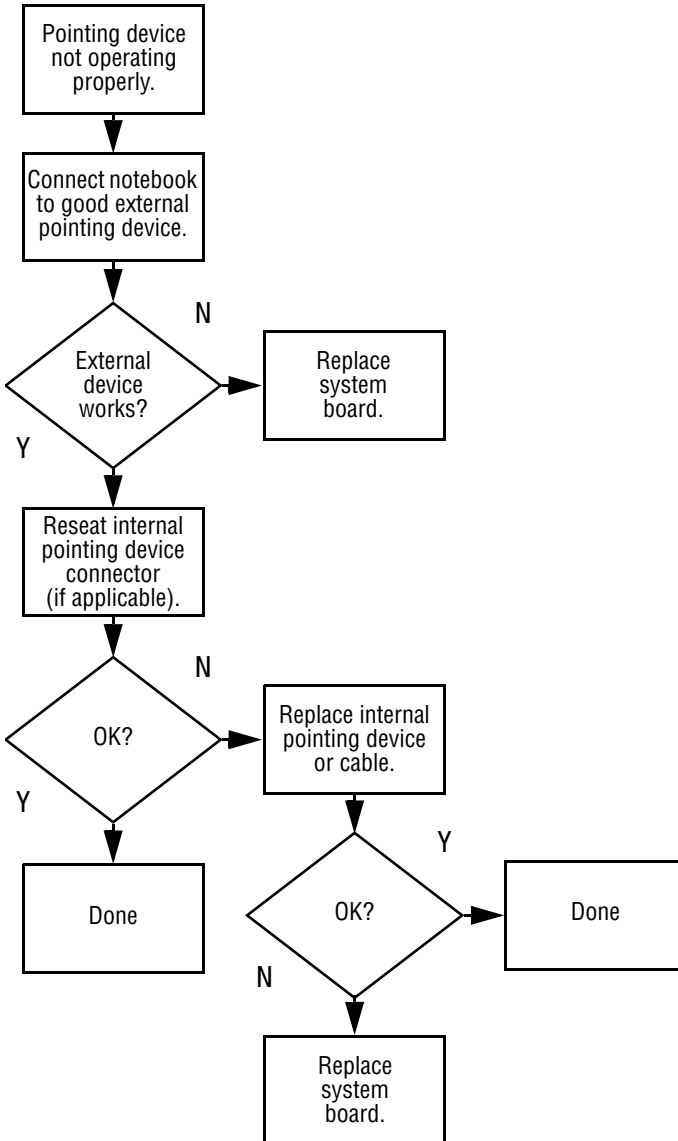
Flowchart 2.17 - Nonfunctioning Device



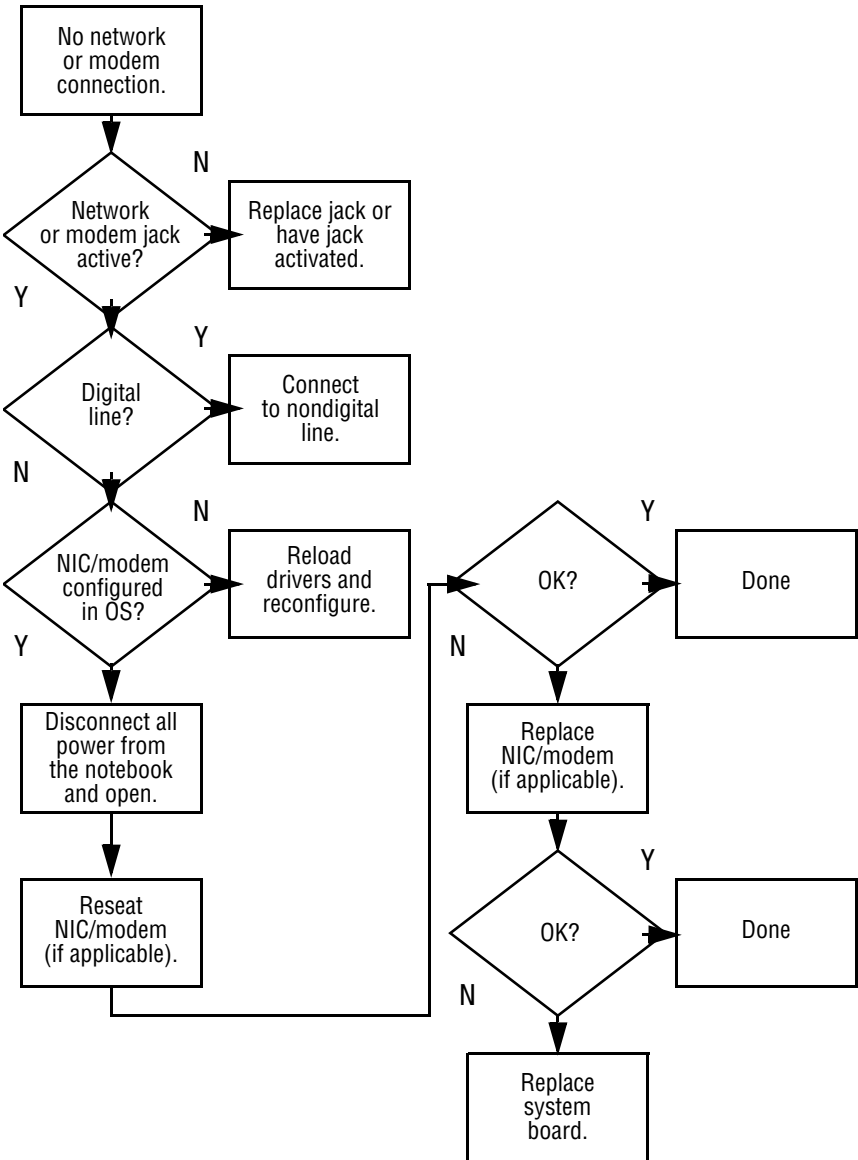
Flowchart 2.18 - Nonfunctioning Keyboard



Flowchart 2.19 - Nonfunctioning Pointing Device



Flowchart 2.20 - No Network or Modem Connection



Illustrated Parts Catalog

This chapter provides an illustrated parts breakdown and a reference for spare part numbers and option part numbers.

3.1 Serial Number Location

When ordering parts or requesting information, provide the notebook serial number and model number located on the bottom of the notebook (Figure 3-1).

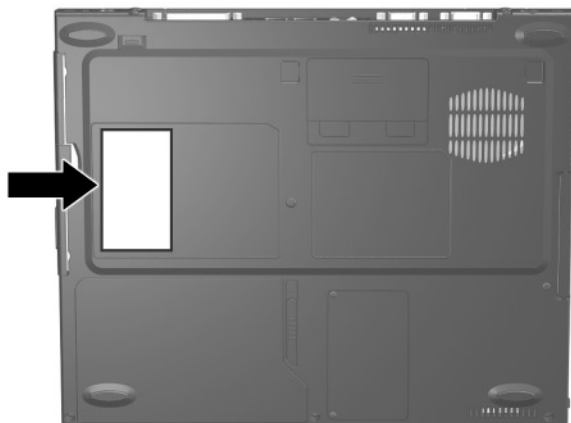


Figure 3-1. Serial Number Location

3.2 Notebook System Major Components

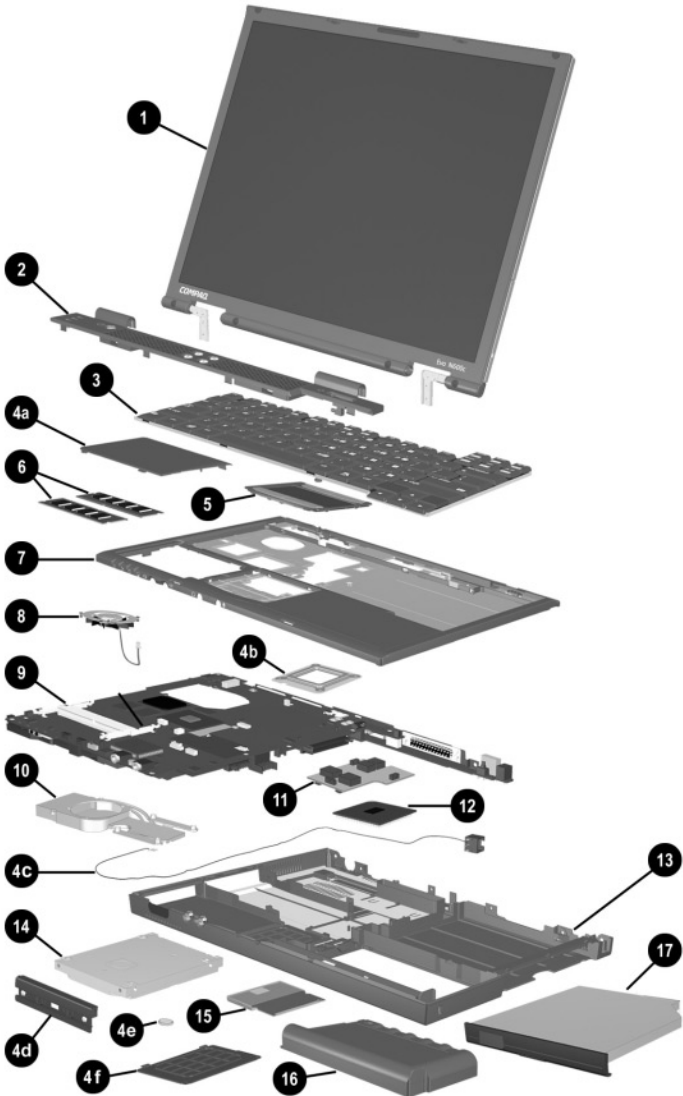
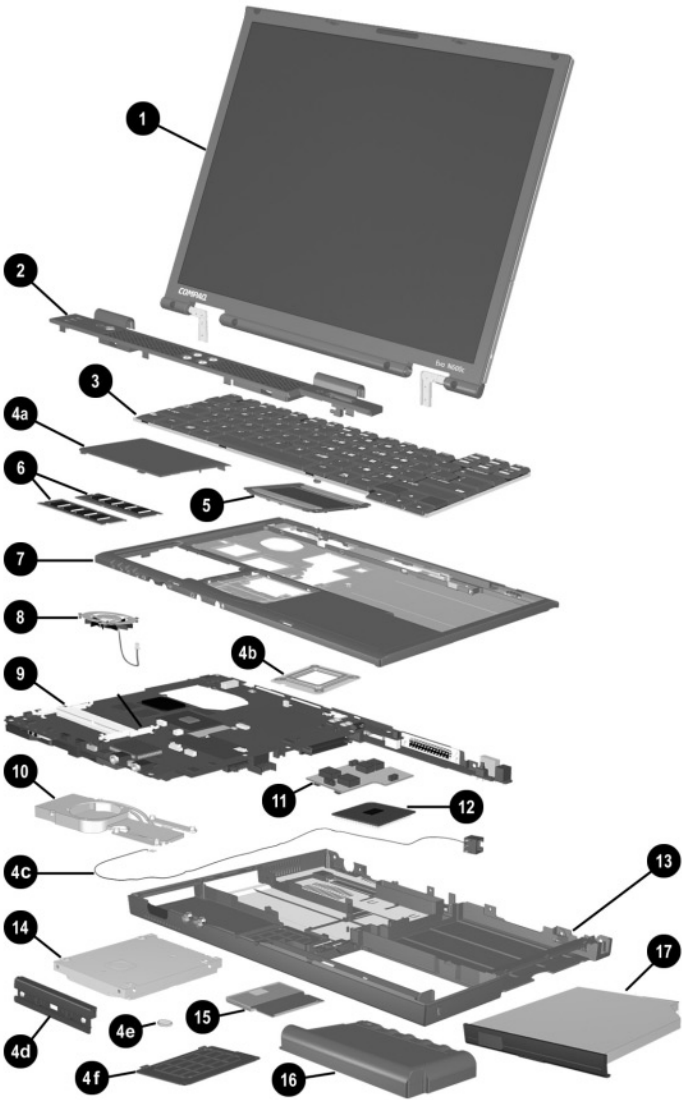


Figure 3-2. Notebook System Major Components

Table 3-1
Spare Parts: Notebook System Major Components

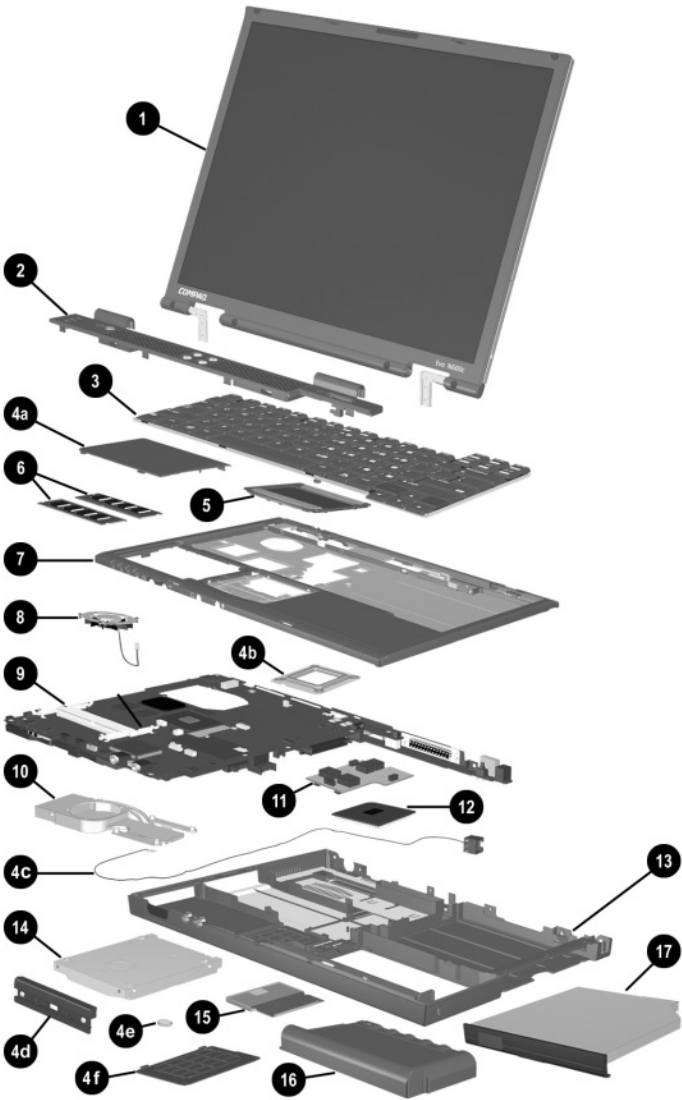
| Item | Description | Spare Part Number |
|-------------|--|---------------------------|
| 1 | Displays | |
| | For use with Evo Notebook N620c models only 14.1-inch, SXGA+, CTFT | 319733-001 |
| | For use with Evo Notebook N610c and N610v models only: 14.1-inch, SXGA+, CTFT | 291261-001 |
| | 14.1-inch, XGA, CTFT | 291262-001 |
| | For use with Evo Notebook N600c models only: 14.1-inch, SXGA+, CTFT | 241433-001 |
| | 14.1-inch, XGA, CTFT | 241434-001 |
| 2 | Switch cover | 241438-001 |
| 3 | Keyboard with pointing stick (for use with Dual Stick models) | |
| | Bosnia- 241427-B41 | Israel 241427-BB1 |
| | Herzegovina/ | Italy 241427-061 |
| | Croatia/ | Japan 241427-291 |
| | Slovenia/ | Korea 241427-AD1 |
| | Yugoslavia | Latin America 241427-161 |
| | Brazil 241427-201 | Norway 241427-091 |
| | Czech 241427-221 | Portugal 241427-131 |
| | Republic | Russia 241427-251 |
| | Denmark 241427-081 | Saudi Arabia 241427-171 |
| | Europe 241427-021 | Slovakia 241427-231 |
| | France 241427-051 | Spain 241427-071 |
| | French 241427-121 | Sweden/Finland 241427-101 |
| | Canada | Switzerland 241427-111 |
| | Germany 241427-041 | Taiwan 241427-AB1 |
| | Greece 241427-151 | Turkey 241427-141 |
| | Hungary 241427-211 | United Kingdom 241427-031 |
| | International 241427-002 | United States 241427-001 |



Notebook System Major Components (continued)

Table 3-1
Spare Parts: Notebook System Major Components (Continued)

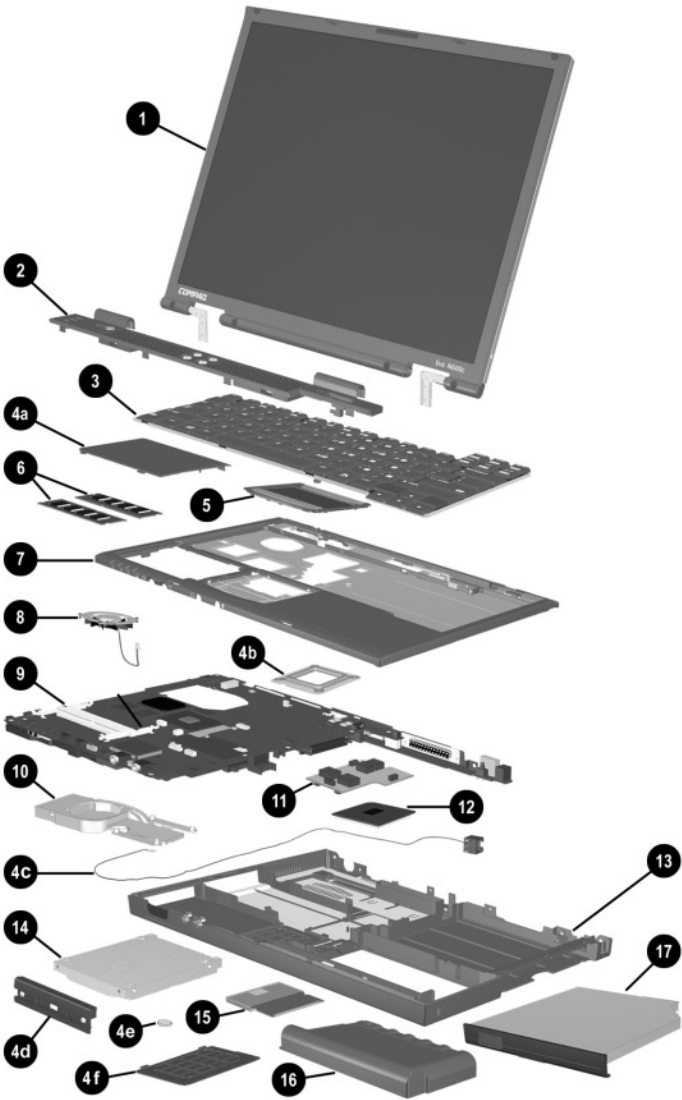
| Item | Description | Spare Part Number |
|-------------|---|---------------------------|
| 3 | Keyboard without pointing stick (for use with TouchPad models) | |
| | Bosnia- 241428-B41 | Israel 241428-BB1 |
| | Herzegovina/ | Italy 241428-061 |
| | Croatia/ | Japan 241428-291 |
| | Slovenia/ | Korea 241428-AD1 |
| | Yugoslavia | Latin America 241428-161 |
| | Brazil 241428-201 | Norway 241428-091 |
| | Czech 241428-221 | Portugal 241428-131 |
| | Republic | Russia 241428-251 |
| | Denmark 241248-081 | Saudi Arabia 241428-171 |
| | Europe 241428-021 | Slovakia 241428-231 |
| | France 241428-051 | Spain 241428-071 |
| | French 241428-121 | Sweden/Finland 241428-101 |
| | Canada | Switzerland 241428-111 |
| | Germany 241428-041 | Taiwan 241428-AB1 |
| | Greece 241428-151 | Turkey 241428-141 |
| | Hungary 241428-211 | United Kingdom 241428-031 |
| | International 241428-002 | United States 241428-001 |



Notebook System Major Components (continued)

Table 3-1
Spare Parts: Notebook System Major Components (Continued)

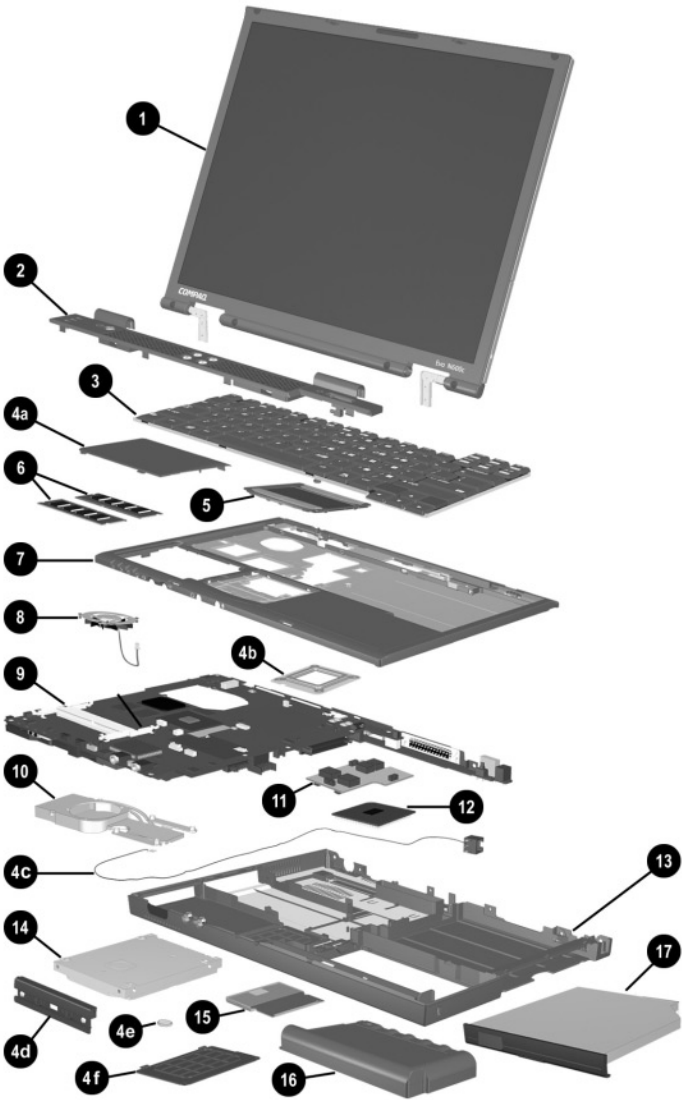
| Item | Description | Spare Part Number |
|-------------|---|--------------------------|
| | Miscellaneous Plastics Kit | 241439-001 |
| 4a | Memory expansion compartment cover (on Evo Notebook N620c, N610c, and N610v models) | |
| | Mini PCI compartment cover (on Evo Notebook N600c models) | |
| 4b | Processor bracket | |
| 4c | Modem cable | |
| 4d | Hard drive bezel | |
| 4e | Disk cell RTC battery | |
| 4f | Mini PCI compartment cover (on Evo Notebook N620c, N610c, and N610v models) | |
| | Memory expansion compartment cover (on Evo Notebook N600c models) | |
| | Not illustrated: | |
| | MultiPort module cover | |
| | Notebook feet | |
| | PC Card slot space savers | |
| | RJ-11 cover | |
| 5 | TouchPad components | |
| | For use with Evo Notebook N620c models only: | |
| | TouchButton with pointing stick buttons (for use with Dual Stick models) | 319772-001 |
| | For use with Evo Notebook N610c and N610v models only: | |
| | TouchPad (for use with TouchPad models) | 253658-001 |
| | TouchButton with pointing stick buttons (for use with Dual Stick models) | 252434-001 |
| | For use with Evo Notebook N600c models only: | |
| | TouchPad (for use with TouchPad models) | 135227-001 |
| | TouchButton with pointing stick buttons (for use with Dual Stick models) | 159530-001 |



Notebook System Major Components (continued)

Table 3-1
Spare Parts: Notebook System Major Components (Continued)

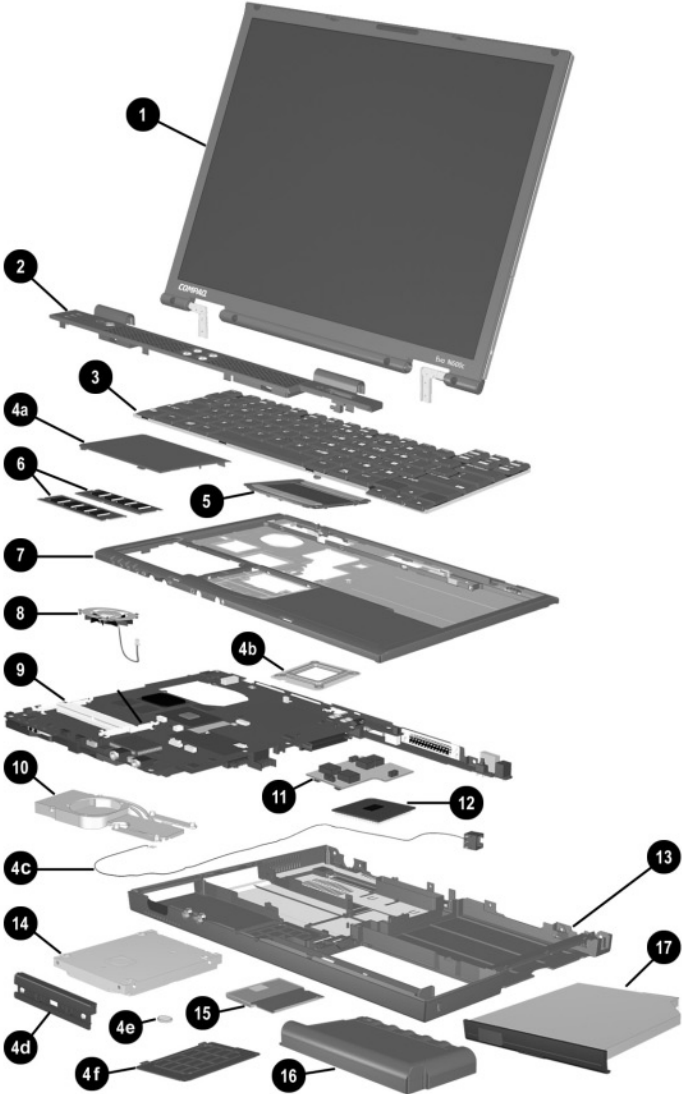
| Item | Description | Spare Part Number |
|-------------|--|---------------------------------|
| 6 | Memory expansion boards | |
| | 266 MHz, 2DM (for Evo Notebook N620c models only) | |
| | 1024 MB | 316391-001 and 301576-001 |
| | 768 MB | 301575-001 |
| | 512 MB | 301574-001 |
| | 384 MB | 301572-001 |
| | 256 MB | 301571-001 |
| | 133 MHz (for Evo Notebook N610c and N610v models only) | |
| | 512 MB | 238879-001 |
| | 256 MB | 212683-001 |
| | 128 MB | 212682-001 |
| | 64 MB | 212681-001 |
| | 100 MHz (for Evo Notebook N600c models only) | |
| | 512 MB | 280875-001 |
| | 256 MB | 280874-001 |
| | 128 MB | 280873-001 |
| 7 | Top covers | |
| | For use with Evo Notebook N620c, N610c, and N610v models only | 291264-001 241436-001 |
| | For use with Evo Notebook N600c models only | |
| 8 | Fans | |
| | For use with Evo Notebook N620c, N610c, and N610v models only | 291266-001 |
| | For use with Evo Notebook N600c models only | 255528-001 |



Notebook System Major Components (continued)

Table 3-1
Spare Parts: Notebook System Major Components (Continued)

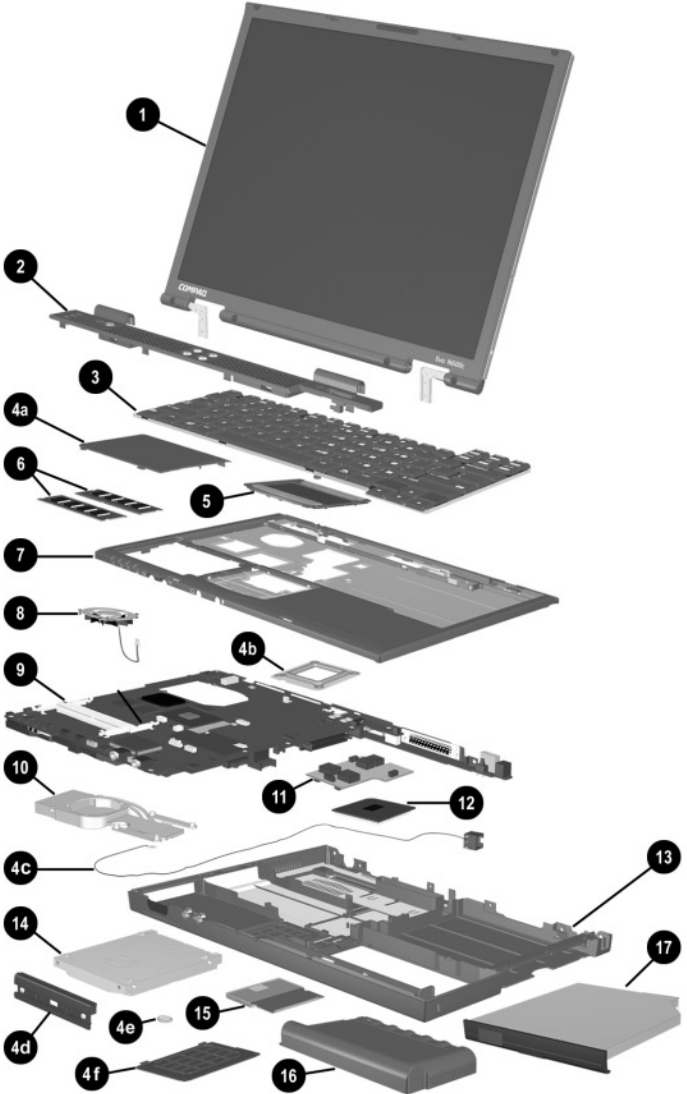
| Item | Description | Spare Part Number |
|-------------|---|--------------------------|
| 9 | System boards | |
| | For use with Evo Notebook N620c models only | 319778-001 |
| | For use with Evo Notebook N610c and N610v models only | 291581-001 |
| | For use with Evo Notebook N600c models only: | |
| | Mobile Intel Pentium III processor 1.066 GHz-M | 241430-001 |
| | Mobile Intel Pentium III processor 866 MHz-M | 241432-001 |
| 10 | Heat sink | 303103-001 |
| 11 | DC-DC converter boards | |
| | For use with Evo Notebook N620c models only | 319635-001 |
| | For use with Evo Notebook N610c and N610v models only | 291263-001 |
| | For use with Evo Notebook N600c models only | 241435-001 |
| 12 | Processors | |
| | For use only with Evo Notebook N620c models | |
| | Intel Pentium-M 1.6 GHz | 319777-001 |
| | Intel Pentium-M 1.5 GHz | 319776-001 |
| | Intel Pentium-M 1.4 GHz | 319775-001 |
| | Intel Pentium-M 1.3 GHz | 319774-001 |
| | For use only with Evo Notebook N610c models | |
| | Mobile Intel Pentium 4 2.0 GHz | 303282-001 |
| | Mobile Intel Pentium 4 1.8 GHz | 291269-001 |
| | Mobile Intel Pentium 4 1.7 GHz | 291268-001 |
| | Mobile Intel Pentium 4 1.6 GHz | 291267-001 |
| | For use only with Evo Notebook N610v models | |
| | Intel Pentium 4 2.4 GHz | 321431-001 |
| | Intel Pentium 4 2.2 GHz | 324130-001 |
| | Intel Pentium 4 2.0 GHz | 321429-001 |
| | Intel Celeron 1.5 GHz | 309240-001 |



Notebook System Major Components (continued)

Table 3-1
Spare Parts: Notebook System Major Components (Continued)

| Item | Description | Spare Part Number |
|-------------|--|---------------------------------|
| 13 | Base enclosures | |
| | For use with Evo Notebook N620c models only | 310547-001 |
| | For use with Evo Notebook N610c and N610v models only | 291265-001 |
| | For use with Evo Notebook N600c models only | 241437-001 |
| 14 | Hard drives | |
| | For use with Evo Notebook N620c models only: | |
| | 60 GB, 5400 RPM | 309475-001 |
| | 60 GB, 4200 RPM | 309474-001 |
| | 40 GB, 5400 RPM | 309473-001 |
| | 40 GB, 4200 RPM | 309472-001 |
| | For use with Evo Notebook N610c and N610v models only: | |
| | 40 GB | 265495-001 |
| | 30 GB | 257660-001 |
| | 20 GB | 235540-101 |
| | For use with Evo Notebook N600c models only: | |
| | 30 GB | 217096-001 |
| | 20 GB | 235421-001 |
| | 15 GB | 241429-001 |
| | 10 GB | 217094-001 |
| 15 | Mini PCI communications boards | |
| | Type III mini PCI combination 56-Kbps modem/NIC | 230338-001 |
| | Type III mini PCI combination 56-Kbps modem/ 3DES NIC | 230339-001 |
| | Type III mini PCI 56-Kbps modem | 230337-001 |
| 16 | Battery packs (6-cell, Li ion) | |
| | | 232633-001 and 301952-001 |



Notebook System Major Components (continued)

Table 3-1
Spare Parts: Notebook System Major Components (Continued)

| Item | Description | Spare Part Number |
|-------------|--|--------------------------|
| 17 | Media Bay devices | |
| | For use with all Evo Notebook N620c, N610c, N610v, and N600c models: | |
| | Diskette drive | 135233-001 |
| | 24X Max CD-ROM drive | 228746-001 |
| | | and |
| | | 228746-001 |
| | 8X Max CD-RW drive | 153992-001 |
| | 8X Max DVD-ROM drive | 173949-001 |
| | DVD/CD-RW combination drive | 238878-001 |
| | 2X Max SuperDisk LS120 drive | 201274-001 |
| | Imega 250-MB Zip drive | 218683-001 |
| | MultiBay battery pack, 6 cell | 100680-001 |
| | MultiBay battery pack, 3.2 ah | 280876-001 |
| | For use with Evo Notebook N620c, N610c, and N610v models only: | |
| | 16X Max CD-RW drive | 274419-001 |
| | 24X Max DVD/CD-RW combination drive | 274420-001 |

3.3 Miscellaneous Plastics Kit Components

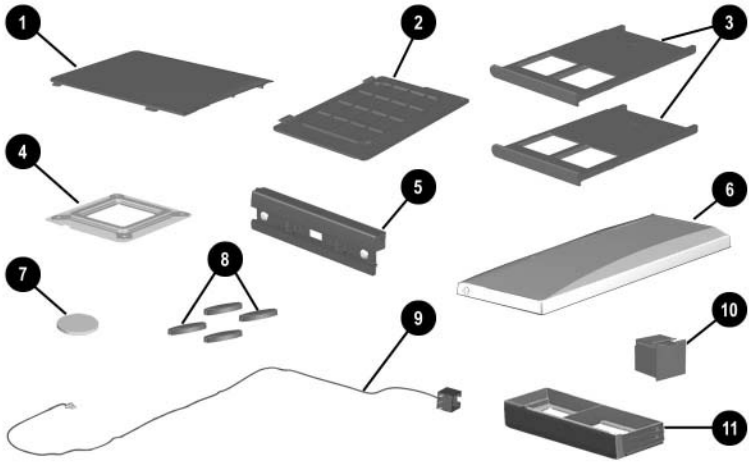


Figure 3-3 Miscellaneous Plastics Kit Components

Table 3-2
Miscellaneous Plastics Kit Components
Spare Part Number 241439-001

| Item | Description |
|-------------|--|
| 1 | Memory expansion compartment cover (Evo Notebook N620c, N610c, and N610v models) Mini PCI compartment cover (Evo Notebook N600c models) |
| 2 | Mini PCI compartment cover (Evo Notebook N620c, N610c, and N610v models) Memory expansion compartment cover (Evo Notebook N600c models) |
| 3 | PC Card slot space savers |
| 4 | Processor bracket |
| 5 | Hard drive bezel |
| 6 | MultiPort module cover |
| 7 | Disk cell RTC battery |
| 8 | Notebook feet |
| 9 | Modem cable |
| 10 | RJ-11 connector cover |
| 11 | Media Bay space saver |

3.4 Mass Storage Devices

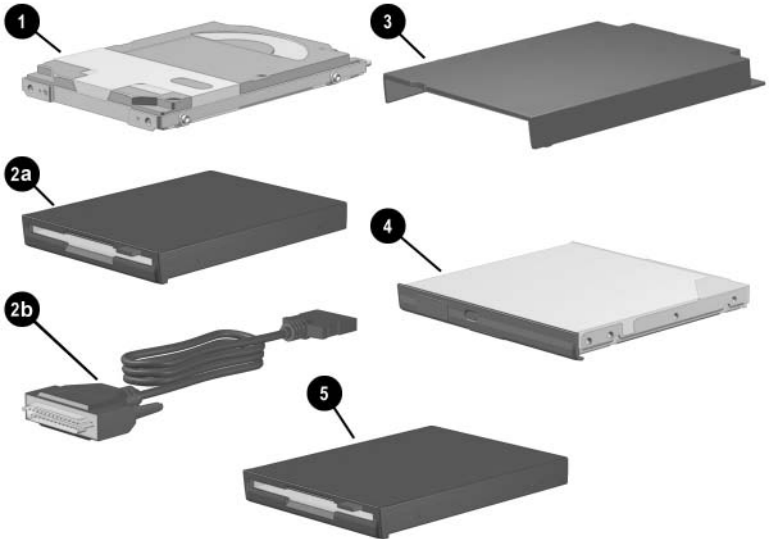
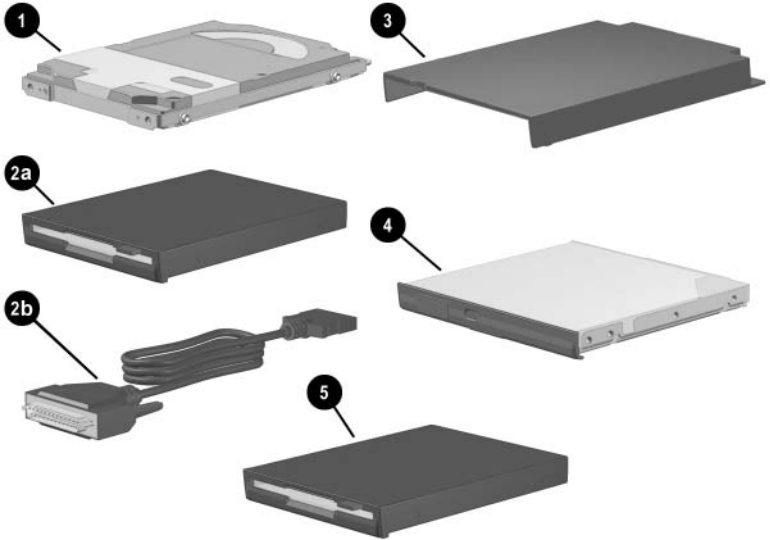


Figure 3-4. Mass Storage Devices

**Table 3-3
Mass Storage Devices**

| Item | Description | Spare Part Number |
|-------------|--|--------------------------|
| 1 | Hard drives | |
| | For use with Evo Notebook N620c models only: | |
| | 60 GB, 5400 RPM | 309475-001 |
| | 40 GB, 5400 RPM | 309473-001 |
| | 40 GB, 4200 RPM | 309472-001 |
| | For use with Evo Notebook N610c and N610v models only: | |
| | 40 GB | 265495-001 |
| | 30 GB | 257660-001 |
| | 20 GB | 235540-101 |
| | For use with Evo Notebook N600c models only: | |
| | 30 GB | 217096-001 |
| | 20 GB | 235421-001 |
| | 15 GB | 241429-001 |
| | 10 GB | 217094-001 |
| 2a | Diskette drive | 135233-001 |
| 2b | External diskette drive cable | 135232-001 |
| 3 | External Media Bay cradle | 218685-001 |
| | External Media Bay USB cradle | 280879-001 |
| | External Media Bay USB cradle cable | 287693-001 |
| | External Media Bay cradle AC adaptor | 287694-001 |
| | External Media Bay cradle plugs | 287695-001 |



Mass Storage Devices (continued)

**Table 3-3
Mass Storage Devices (Continued)**

| Item | Description | Spare Part Number |
|-------------|--|--------------------------|
| 4 | Optical drives | |
| | For use with all Evo Notebook N620c, N610c, N610v, and N600c models: | |
| | Diskette drive | 135233-001 |
| | 24X Max CD-ROM drive | 228746-001 |
| | | and |
| | | 228746-001 |
| | 8X Max CD-RW drive | 153992-001 |
| | 8X Max DVD-ROM drive | 173949-001 |
| | DVD/CD-RW combination drive | 238878-001 |
| | 2X Max SuperDisk LS120 drive | 201274-001 |
| | lomega 250-MB Zip drive | 218683-001 |
| | MultiBay battery pack, 6 cell | 100680-001 |
| | MultiBay battery pack, 3.2 ah | 280876-001 |
| | For use with Evo Notebook N620c, N610c, and N610v models only: | |
| | 16X Max CD-RW drive | 274419-001 |
| | 24X Max DVD/CD-RW combination drive | 274420-001 |
| 5 | lomega 250-MB Zip drive | 218683-001 |
| | 2X Max SuperDisk LS120 drive | 201274-001 |

3.5 Miscellaneous

Table 3-4
Spare Parts: Miscellaneous (not illustrated)

| Description | Spare Part Number |
|--|-------------------|
| AC adaptors | |
| 90-Watt AC adapter power supply | 239705-001 |
| 65-Watt AC adapter power supply | 239704-001 |
| 50-Watt AC adapter power supply | 120765-001 |
| Bluetooth wireless communication MultiPort module | 230336-001 |
| Logo kit | 304204-001 |
| Modems | |
| Type III mini PCI combination 56-Kbps modem/NIC | 230338-001 |
| Type III mini PCI combination 56-Kbps modem/3DES NIC | 230339-001 |
| Type III mini PCI 56-Kbps modem | 230337-001 |
| Modem adapters | |
| Czech | 234963-221 |
| German | 236432-041 |
| Hungarian | 234963-211 |
| Norwegian | 234963-091 |
| Swiss | 198294-111 |
| Modem cable | 234962-001 |
| Modem cable adapters | |
| Australian | 304398-011 |
| Belgian | 304398-181 |
| French | 304398-051 |

Table 3-4
Spare Parts: Miscellaneous (not illustrated) (Continued)

| Description | Spare Part Number |
|---|--|
| Power cord, black, 6 feet | |
| Australian | 246959-011 |
| Danish | 246959-081 |
| European/Middle Eastern/African | 246959-021 |
| Italian | 246959-061 |
| Japanese | 246959-291 |
| Korean | 246959-AD1 |
| Swiss | 246959-AG1 |
| U.K. English | 246959-031 |
| U.S. English | 246959-001 |
| RJ-11 P55 adapters | |
| Danish | 316904-081 |
| Finnish | 316904-351 |
| Italian | 316904-061 |
| Swedish | 316904-101 |
| RJ-11 PTT adapter (used in the United Kingdom) | 158593-031 |
| RJ-45 network cable | 239049-001 |
| Screw Kit (includes the following screws and bushing guides; refer to Appendix C, "Screw Listing," for more information on screw specifications and usage) | 241440-001 |
| <ul style="list-style-type: none"> ■ Torx T8 M2 × 7 ■ Torx T8 M2 × 5 ■ 7.0-mm bushing guide | <ul style="list-style-type: none"> ■ Phillips M1 × 6 ■ Phillips M2 × 6.5 |

Removal and Replacement Preliminaries

This chapter provides essential information for proper and safe removal and replacement service.

4.1 Tools Required

You will need the following tools to complete the removal and replacement procedures:

- Magnetic screwdriver
- Phillips P0 screwdriver
- 7.0-mm socket wrench (for Evo Notebook N600c models)
- Tool kit (includes connector removal tool, loopback plugs, and case utility tool)

4.2 Service Considerations

The following sections include some of the considerations that you should keep in mind during disassembly and assembly procedures.



As you remove each subassembly from the computer, place the subassembly (and all accompanying screws) away from the work area to prevent damage.

Plastic Parts

Using excessive force during disassembly and reassembly can damage plastic parts. Use care when handling the plastic parts. Apply pressure only at the points designated in the maintenance instructions.

Cables and Connectors

Cables must be handled with extreme care to avoid damage. Apply only the tension required to unseat or seat the cables during removal and insertion. Handle cables by the connector whenever possible. In all cases, avoid bending, twisting, or tearing cables. Ensure that cables are routed in such a way that they cannot be caught or snagged by parts being removed or replaced. Handle flex cables with extreme care; these cables tear easily.



CAUTION: When servicing the computer, ensure that cables are placed in their proper locations during the reassembly process. Improper cable placement can damage the computer.

4.3 Preventing Damage to Removable Drives

Removable drives are fragile components that must be handled with care. To prevent damage to the computer, damage to a removable drive, or loss of information, observe the following precautions:

- Before removing or inserting a hard drive, shut down the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, then shut it down.
- Before removing a diskette drive or optical drive, ensure that a diskette or disc is not in the drive. Ensure that the optical drive tray is closed.
- Before handling a drive, ensure that you are discharged of static electricity. While handling a drive, avoid touching the connector.
- Handle drives on surfaces that have at least one inch of shock-proof foam.
- Avoid dropping drives from any height onto any surface.
- After removing a hard drive, CD-ROM drive, or a diskette drive, place it in a static-proof bag.
- Avoid exposing a hard drive to products that have magnetic fields, such as monitors or speakers.
- Avoid exposing a drive to temperature extremes or to liquids.
- If a drive must be mailed, place the drive in a bubble pack mailer or other suitable form of protective packaging and label the package “Fragile: Handle With Care.”

4.4 Preventing Electrostatic Damage

Many electronic components are sensitive to electrostatic discharge (ESD). Circuitry design and structure determine the degree of sensitivity. Networks built into many integrated circuits provide some protection, but in many cases the discharge contains enough power to alter device parameters or melt silicon junctions.

A sudden discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Often the spark is neither felt nor heard, but damage occurs.

An electronic device exposed to electrostatic discharge may not be affected at all and can work perfectly throughout a normal cycle. Or the device may function normally for a while, then degrade in the internal layers, reducing its life expectancy.

4.5 Packaging and Transporting Precautions

Use the following grounding precautions when packaging and transporting equipment:

- To avoid hand contact, transport products in static-safe containers, such as tubes, bags, or boxes.
- Protect all electrostatic-sensitive parts and assemblies with conductive or approved containers or packaging.
- Keep electrostatic-sensitive parts in their containers until the parts arrive at static-free workstations.
- Place items on a grounded surface before removing items from their containers.
- Always be properly grounded when touching a sensitive component or assembly.

- Store reusable electrostatic-sensitive parts from assemblies in protective packaging or nonconductive foam.
- Use transporters and conveyers made of antistatic belts and roller bushings. Ensure that mechanized equipment used for moving materials is wired to ground and that proper materials are selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

4.6 Workstation Precautions

Use the following grounding precautions at workstations:

- Cover the workstation with approved static-dissipative material (refer to Table 4-2).
- Use a wrist strap connected to a properly grounded work surface and use properly grounded tools and equipment.
- Use conductive field service tools, such as cutters, screwdrivers, and vacuums.
- When using fixtures that must directly contact dissipative surfaces, only use fixtures made of static-safe materials.
- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and Styrofoam.
- Handle electrostatic-sensitive components, parts, and assemblies by the case or PCM laminate. Handle these items only at static-free workstations.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting or removing connectors or test equipment.

4.7 Grounding Equipment and Methods

Grounding equipment must include either a wrist strap or a foot strap at a grounded workstation.

- When seated, wear a wrist strap connected to a grounded system. Wrist straps are flexible straps with a minimum of one megohm $\pm 10\%$ resistance in the ground cords. To provide proper ground, wear a strap snugly against the skin at all times. On grounded mats with banana-plug connectors, connect a wrist strap with alligator clips.
- When standing, use foot straps and a grounded floor mat. Foot straps (heel, toe, or boot straps) can be used at standing workstations and are compatible with most types of shoes or boots. On conductive floors or dissipative floor mats, use foot straps on both feet with a minimum of one-megohm resistance between the operator and ground. To be effective, the conductive strips must be worn in contact with the skin.

Other grounding equipment recommended for use in preventing electrostatic damage includes:

- Antistatic tape
- Antistatic smocks, aprons, and sleeve protectors
- Conductive bins and other assembly or soldering aids
- Nonconductive foam
- Conductive tabletop workstations with ground cords of one-megohm resistance
- Static-dissipative tables or floor mats with hard ties to the ground
- Field service kits
- Static awareness labels
- Material-handling packages
- Nonconductive plastic bags, tubes, or boxes
- Metal tote boxes
- Electrostatic voltage levels and protective materials

Table 4-1 shows how humidity affects the electrostatic voltage levels generated by different activities.

Table 4-1
Typical Electrostatic Voltage Levels

| Event | Relative Humidity | | |
|---------------------------------|-------------------|----------|---------|
| | 10% | 40% | 55% |
| Walking across carpet | 35,000 V | 15,000 V | 7,500 V |
| Walking across vinyl floor | 12,000 V | 5,000 V | 3,000 V |
| Motions of bench worker | 6,000 V | 800 V | 400 V |
| Removing DIPS from plastic tube | 2,000 V | 700 V | 400 V |
| Removing DIPS from vinyl tray | 11,500 V | 4,000 V | 2,000 V |
| Removing DIPS from Styrofoam | 14,500 V | 5,000 V | 3,500 V |
| Removing bubble pack from PCB | 26,500 V | 20,000 V | 7,000 V |
| Packing PCBs in foam-lined box | 21,000 V | 11,000 V | 5,000 V |



A product can be degraded by as little as 700 V.

Table 4-2 lists the shielding protection provided by antistatic bags and floor mats.

Table 4-2
Static-Shielding Materials

| Material | Use | Voltage Protection Level |
|-----------------------|------------|--------------------------|
| Antistatic plastic | Bags | 1,500 V |
| Carbon-loaded plastic | Floor mats | 7,500 V |
| Metallized laminate | Floor mats | 5,000 V |

5

Removal and Replacement Procedures

This chapter provides removal and replacement procedures.

Both Phillips P0 and Torx T8 screws are removed during disassembly. There are 38 screws and screwlocks, in seven different sizes, that must be removed and replaced when servicing the notebook. Make special note of each screw size and location during removal and replacement.

Refer to Appendix C, “Screw Listing,” for detailed information on screw sizes, locations, and usage.

5.1 Serial Number

Report the notebook serial number to Compaq when requesting information or ordering spare parts. The serial number is located on the bottom of the notebook (Figure 5-1).

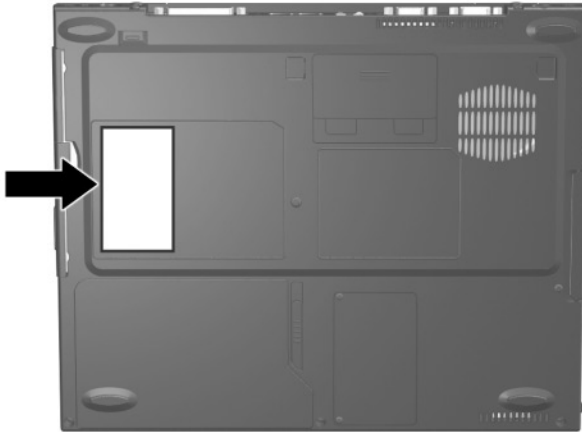


Figure 5-1. Serial Number Location

5.2 Disassembly Sequence Chart

Use the chart below to determine the section number to be referenced when removing notebook components.

Disassembly Sequence Chart

| Section | Description | # of Screws Removed |
|---------|--|---------------------|
| 5.3 | Preparing the Notebook for Disassembly | |
| | Battery Pack | 0 |

Disassembly Sequence Chart (Continued)

| Section | Description | # of Screws Removed |
|----------------|--|--|
| 5.3 | Preparing the Notebook for Disassembly (<i>Continued</i>) | |
| | Media Bay Device | 0 |
| | Hard Drive | 1 to remove hard drive 2 to remove hard drive bezel |
| 5.4 | Computer Feet | 0 |
| 5.5 | Mini PCI Communications Board | 2 |
| 5.6 | Disk Cell Real Time Clock (RTC) Battery | 0 |
| 5.7 | Keyboard | 1 |
| 5.8 | Memory Expansion | 0 |
| 5.9 | TouchPad | 0 |
| 5.10 | Switch Cover | 2 |
| 5.11 | Display | 3 |
| 5.12 | Top Cover | 13 |
| 5.13 | System Board | 5 |
| 5.14 | Fan | 3 |
| 5.15 | Heat Sink (Evo Notebook N620c, N610c, and N610v models only) | 6 |
| 5.16 | Processor (Evo Notebook N620c, N610c, and N610v models only) | 0 |
| 5.17 | DC-DC Converter Board | 0 |
| 5.18 | Modem Cable | 0 |

5.3 Preparing the Notebook for Disassembly

Perform the following steps before disassembling the notebook:

1. Turn off the notebook.
2. Disconnect the AC adapter and all external devices.

Battery Pack, 6-cell, Li ion Spare Part Number Information

| | |
|-------------------------------|---------------------------------|
| Battery packs, 6-cell, Li ion | 232633-001 and 301952-001 |
|-------------------------------|---------------------------------|

3. Remove the battery pack by following these steps:
 - a. Turn the notebook bottom side up with the front facing forward.

- b. Slide the battery release latch ❶ toward the back of the notebook (Figure 5-2).
- c. Swing the right side of the battery pack up and to the left ❷.
- d. Remove the battery pack ❸.

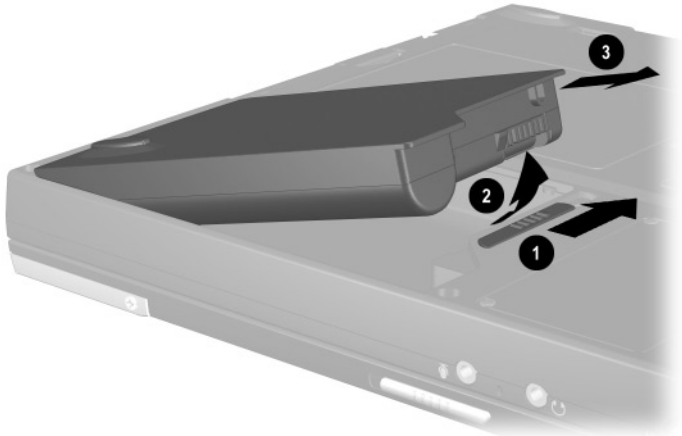


Figure 5-2. Removing the Battery Pack

Reverse the preceding procedure to install the battery pack.

**Media Bay Devices
Spare Part Number Information**

For use with all Evo Notebook N620c, N610c, N610v, and N600c models:

| | |
|------------------------------|------------|
| Diskette drive | 135233-001 |
| 24X Max CD-ROM drive | 228746-001 |
| | and |
| | 228746-001 |
| 8X Max CD-RW drive | 153992-001 |
| 8X Max DVD-ROM drive | 173949-001 |
| DVD/CD-RW combination drive | 238878-001 |
| 2X Max SuperDisk LS120 drive | 201274-001 |
| Imomega 250-MB Zip drive | 218683-001 |
| 6-cell battery pack | 100680-001 |
| | and |
| | 280876-001 |

For use with Evo Notebook N620c, N610c, and N610v models only:

| | |
|-------------------------------------|------------|
| 16X Max CD-RW drive | 274419-001 |
| 24X Max DVD/CD-RW combination drive | 274420-001 |

4. Remove a Media Bay device by following these steps:
 - a. Turn the notebook bottom side up with the left side facing forward.
 - b. Slide and hold the Media Bay release latch toward the back of the notebook ❶ (Figure 5-3).
 - c. Use the notch in the Media Bay device to slide the device out of the Media Bay ❷.

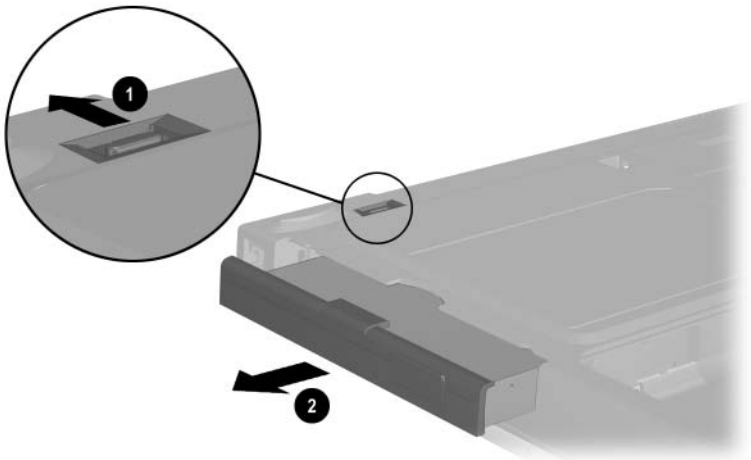


Figure 5-3. Removing a Media Bay Device

Reverse the preceding procedure to install the Media Bay device.

**Hard Drive
Spare Part Number Information**

For use with Evo Notebook N620c models only:

| | |
|-----------------|------------|
| 60 GB, 5400 RPM | 309475-001 |
| 60 GB, 4200 RPM | 309474-001 |
| 40 GB, 5400 RPM | 309473-001 |
| 40 GB, 4200 RPM | 309472-001 |

For use with Evo Notebook N610c and N610v models only:

| | |
|-------|------------|
| 40 GB | 265495-001 |
| 30 GB | 257660-001 |
| 20 GB | 235540-101 |

For use with Evo Notebook N600c models only:

| | |
|-------|------------|
| 30 GB | 217096-001 |
| 20 GB | 235421-001 |
| 15 GB | 241429-001 |
| 10 GB | 217094-001 |

5. Remove the hard drive by following these steps:
 - a. Turn the notebook bottom side up with the right side facing forward.

- b. Remove the PM2.5 × 2.5 hard drive retention screw ❶ (Figure 5-4).
- c. Separate the hard drive bezel ❷.
- d. Use the bezel to slide the hard drive forward ❸ to unseat the hard drive connector from the system board.
- e. Remove the hard drive.

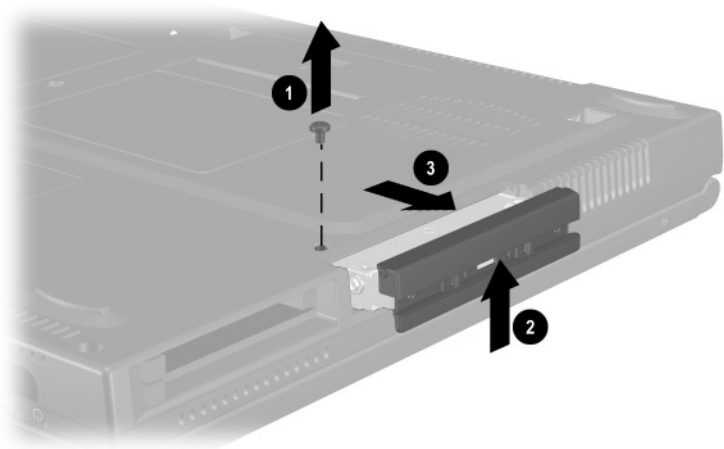


Figure 5-4. Removing the Hard Drive

Reverse the preceding procedure to install the hard drive.

6. Loosen the two PM1.5 × 3.5 screws ❶ that secure the hard drive bezel to the hard drive (Figure 5-5).
7. Remove the hard drive bezel from the hard drive ❷.

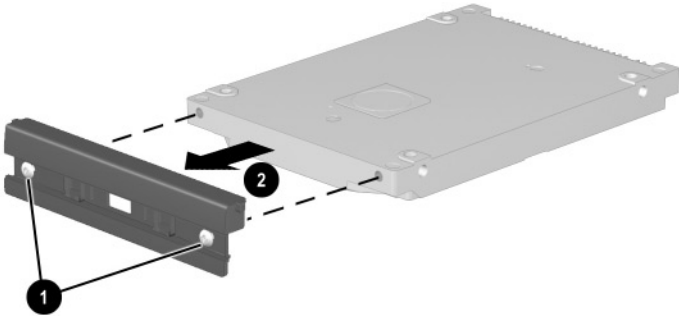


Figure 5-5. Removing the Hard Drive Bezel



The hard drive bezel is included in the Miscellaneous Plastics Kit, spare part number 241439-001.

Reverse the preceding procedure to install the hard drive bezel.

5.4 Notebook Feet

The notebook feet are adhesive-backed rubber pads. The notebook feet are included in the Miscellaneous Plastics Kit (spare part number 241439-001). Refer to Figure 5-6 for notebook feet locations.

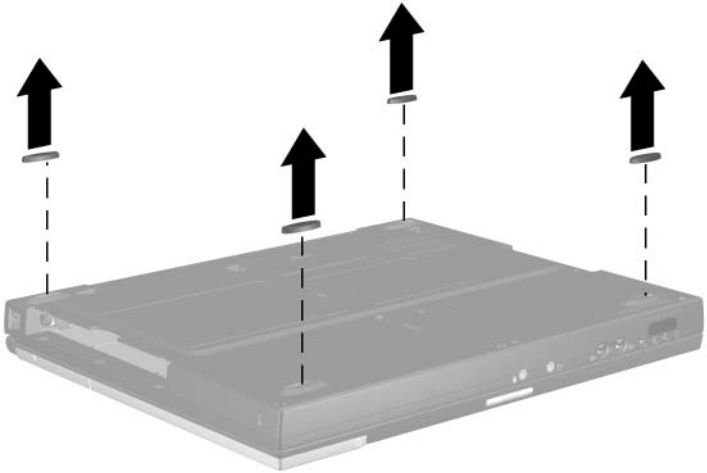


Figure 5-6. Replacing the Notebook Feet

5.5 Mini PCI Communications Board



Compaq Evo Notebook N600c models contain a memory expansion slot in this location. Refer to Section 5.8, steps 5 and 6, for instructions on removing a memory expansion board. The mini PCI compartment cover is included in the Miscellaneous Plastics Kit (spare part number 241439-001).

Mini PCI Communications Board Spare Part Number Information

| | |
|---|------------|
| Type III mini PCI combination 56-Kbps modem/NIC board | 230338-001 |
| Type III mini PCI combination 56-Kbps/NIC/3DES board | 230339-001 |
| Type III mini PCI 56-Kbps modem board | 230337-001 |

1. Prepare the notebook for disassembly (Section 5.3).
2. Turn the notebook bottom side up with the front facing forward.

3. Remove the two PM2.5 × 5.0 screws ❶ that secure the mini PCI compartment cover to the base enclosure (Figure 5-7).
4. Lift the left edge of the cover and swing it up and to the right ❷.
5. Remove the cover.



The mini PCI compartment cover is included in the Miscellaneous Plastics Kit (spare part number 241439-001).

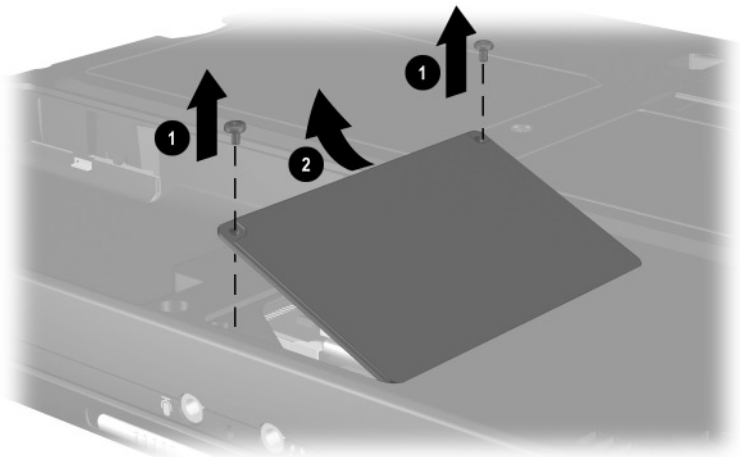


Figure 5-7. Removing the Mini PCI Compartment Cover

6. Disconnect the modem cable from the mini PCI communications board ❶ (Figure 5-8).
7. Spread the retaining tabs ❷ to release the mini PCI communications board. The board tilts up at a 45-degree angle.
8. Remove the board by pulling it away from the connector at a 45-degree angle ❸.

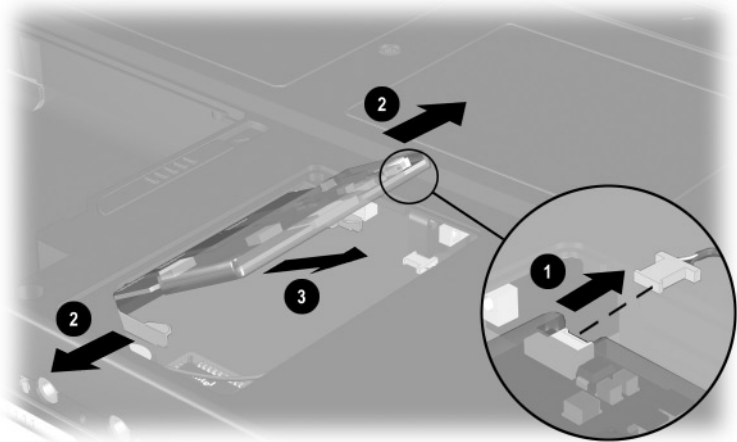


Figure 5-8. Removing the Mini PCI Communications Board

Reverse the preceding procedure to install the mini PCI communications board and mini PCI compartment cover.

5.6 Disk Cell RTC Battery



The disk cell RTC battery on the Compaq Evo Notebook N600c model is located under the memory expansion slot compartment cover. Refer to Section 5.8 for instructions on removing the memory expansion slot cover. The procedures used to remove an RTC battery are the same for the Evo Notebook N620c, N610c, N610v, and N600c. The disk cell RTC battery is included in the Miscellaneous Plastics Kit (spare part number 241439-001).

1. Prepare the notebook for disassembly (Section 5.3).
2. Remove the mini PCI compartment cover (Section 5.5).

3. Use a flat blade tool to remove the battery ❶ from the socket on the system board (Figure 5-9).



The system ROM ❷ is also accessible when the mini PCI compartment cover is removed.

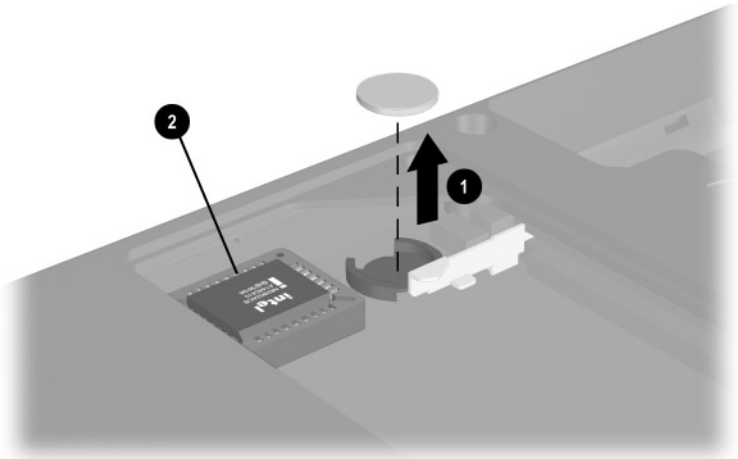


Figure 5-9. Removing the Disk Cell RTC Battery



The notebook uses a CR1220 lithium disk cell battery. When replacing the RTC battery, insert the battery with the “+” sign facing up.

5.7 Keyboard

Keyboard Spare Part Number Information

Keyboard with Pointstick

| | | | |
|-------------------------|------------|----------------|------------|
| Bosnia- Herzegovina/ | 241427-B41 | Italy | 241427-061 |
| Croatia/ | | Japan | 241427-291 |
| Slovenia/ | | Korea | 241427-AD1 |
| Yugoslavia | | Latin America | 241427-161 |
| Brazil | 241427-201 | Norway | 241427-091 |
| Czech Republic | 241427-221 | Portugal | 241427-131 |
| Denmark | 241427-081 | Russia | 241427-251 |
| Europe | 241427-021 | Saudi Arabia | 241427-171 |
| France | 241427-051 | Slovakia | 241427-231 |
| French Canada | 241427-121 | Spain | 241427-071 |
| Germany | 241427-041 | Sweden/Finland | 241427-101 |
| Greece | 241427-151 | Switzerland | 241427-111 |
| Hungary | 241427-211 | Taiwan | 241427-AB1 |
| International | 241427-002 | Turkey | 241427-141 |
| Israel | 241427-BB1 | United Kingdom | 241427-031 |
| | | United States | 241427-001 |

Keyboard
Spare Part Number Information (*Continued*)

Keyboard without Pointstick (for use with TouchPad models)

| | | | |
|-------------------------|------------|----------------|------------|
| Bosnia- Herzegovina/ | 241428-B41 | Italy | 241428-061 |
| Croatia/ | | Japan | 241428-291 |
| Slovenia/ | | Korea | 241428-AD1 |
| Yugoslavia | | Latin America | 241428-161 |
| Brazil | 241428-201 | Norway | 241428-091 |
| Czech Republic | 241428-221 | Portugal | 241428-131 |
| Demark | 241428-081 | Russia | 241428-251 |
| Europe | 241428-021 | Saudi Arabia | 241428-171 |
| France | 241428-051 | Slovakia | 241428-231 |
| French Canada | 241428-121 | Spain | 241428-071 |
| Germany | 241428-041 | Sweden/Finland | 241428-101 |
| Greece | 241428-151 | Switzerland | 241428-111 |
| Hungarian | 241428-211 | Taiwan | 241428-AB1 |
| International | 241428-002 | Turkey | 241428-141 |
| Israel | 241428-BB1 | United Kingdom | 241428-031 |
| | | United States | 241428-001 |

1. Prepare the notebook for disassembly (Section 5.3).
2. Turn the notebook bottom side up with the front facing you.
3. Remove the TM2.5 × 7.0 screw that secures the keyboard to the base enclosure (Figure 5-10).

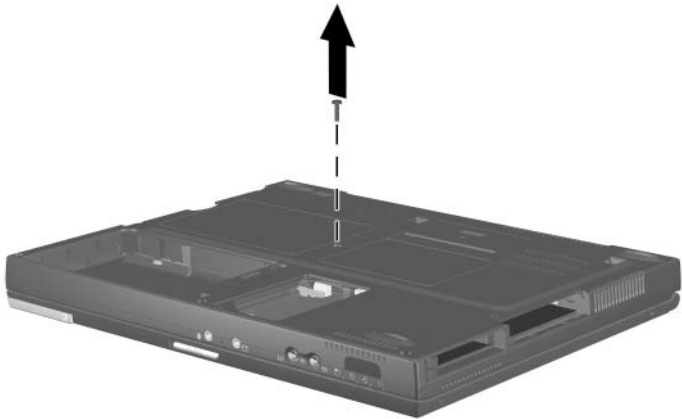


Figure 5-10. Removing the Keyboard Screw

4. Turn the notebook top side up with the front facing you.
5. Open the notebook.

6. Slide the four tabs on the top of the keyboard forward (Figure 5-11).

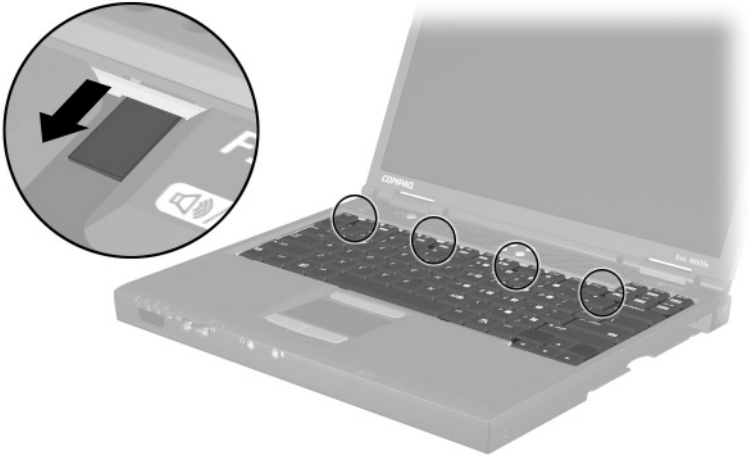


Figure 5-11. Releasing the Keyboard

7. Lift the top edge of the keyboard and swing it up and forward until it rests on the top cover ❶ (Figure 5-12).
8. Disengage the keyboard cable from the retaining clips in the top cover.
9. Release the ZIF connector to which the pointing device cable is attached ❷ and disconnect the pointing device cable ❸.
10. Release the ZIF connector to which the keyboard cable is attached ❹ and disconnect the keyboard cable ❺.

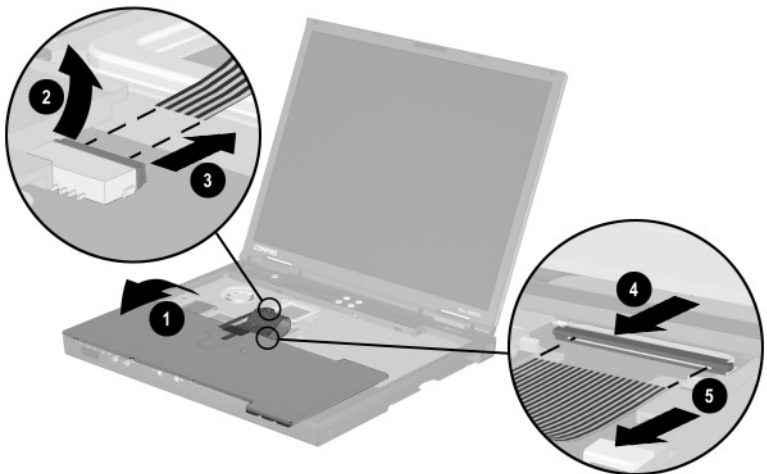


Figure 5-12. Disconnecting the Pointing Device and Keyboard Cables

11. Remove the keyboard.

Reverse the preceding procedure to replace the keyboard.

5.8 Memory Expansion



Compaq Evo Notebook N600c models contain the mini PCI communications board slot in this location. Refer to Section 5.5, steps 6 through 8, for instructions on removing a mini PCI communications board. The memory expansion compartment cover is included in the Miscellaneous Plastics Kit (spare part number 241439-001).

Memory Expansion Board Spare Part Number Information

266 MHz, 2DM (for Evo Notebook N620c models only):

| | |
|---------|------------|
| 1024 MB | 301576-001 |
| 768 MB | 301575-001 |
| 512 MB | 301574-001 |
| 384 MB | 301572-001 |
| 256 MB | 301571-001 |

133 MHz (for Evo Notebook N610c and N610v models only):

| | |
|--------|------------|
| 512 MB | 238879-001 |
| 256 MB | 212683-001 |
| 128 MB | 212682-001 |
| 64 MB | 212681-001 |

100 MHz (for Evo Notebook N600c models only):

| | |
|--------|------------|
| 512 MB | 280875-001 |
| 256 MB | 280874-001 |
| 128 MB | 280873-001 |

1. Prepare the notebook for disassembly (Section 5.3).
2. Remove the keyboard (Section 5.7).
3. Lift the left side of the memory expansion compartment cover ❶ and swing the cover forward ❷ (Figure 5-13).
4. Remove the memory expansion compartment cover.

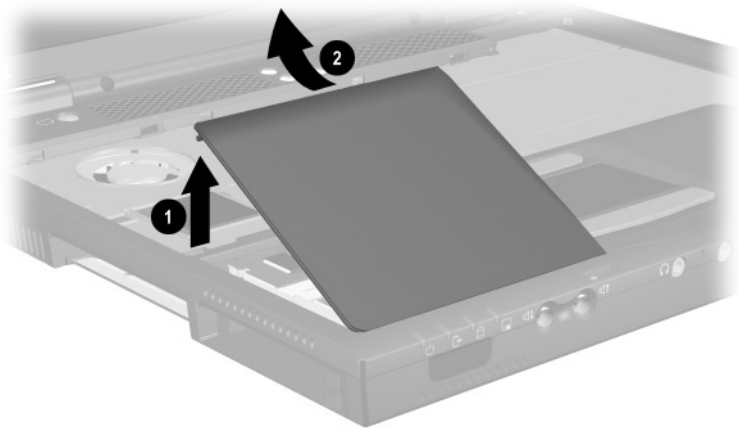


Figure 5-13. Removing the Memory Expansion Compartment Cover

5. Spread the retaining tabs ❶ that secure the memory expansion board to the socket. The board rises up at a 45-degree angle (Figure 5-14).
6. Pull the board away from the socket at a 45-degree angle ❷.

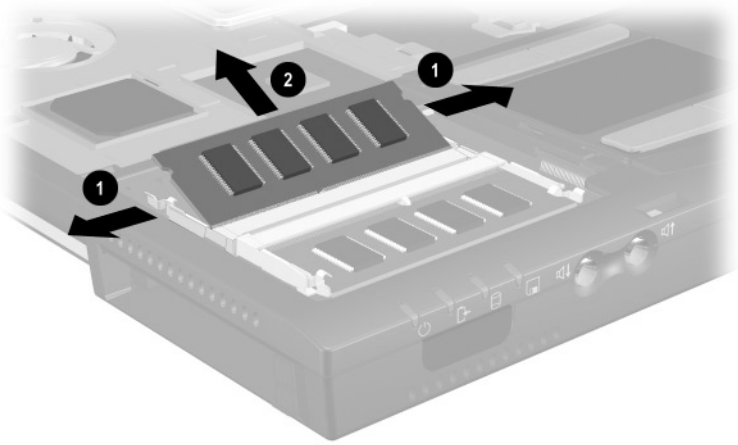


Figure 5-14. Removing a Memory Expansion Board

Reverse the preceding procedure to replace a memory expansion board.

5.9 TouchPad

TouchPad Components Spare Part Number Information

| | |
|---|------------|
| For use with Evo Notebook N620c models only: | |
| TouchButton with pointing stick buttons (for use with Dual Stick models) | 319772-001 |
| For use with Evo Notebook N610c and N610v models only: | |
| TouchPad (for use with TouchPad models) | 253658-001 |
| TouchButton with pointing stick buttons (for use with Dual Stick models) | 252434-001 |
| For use with Evo Notebook N600c models only: | |
| TouchPad (for use with TouchPad models) | 135227-001 |
| TouchButton with pointing stick buttons (for use with Dual Stick models) | 159530-001 |

1. Prepare the notebook for disassembly (Section 5.3).
2. Remove the keyboard (Section 5.7).
3. Remove the memory expansion compartment cover (Section 5.8).

4. Lift up on the left side of the TouchPad ❶ until it disengages from the top cover (Figure 5-15).
5. Swing the TouchPad up and back ❷ and rest it on the top cover.
6. Disconnect the TouchPad cables ❸ and ❹ from the system board.

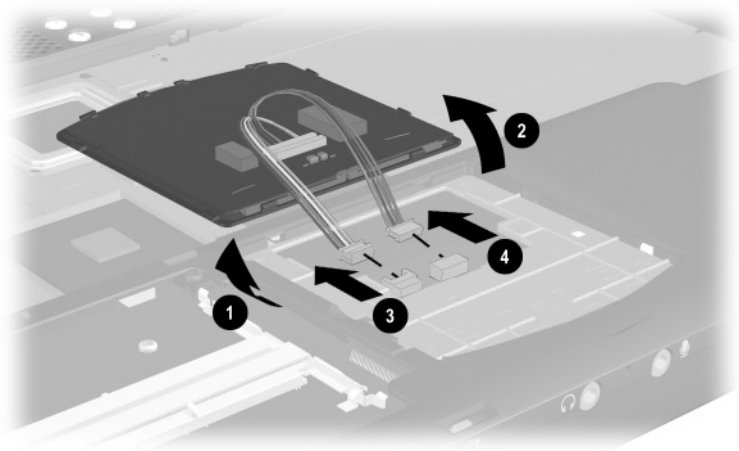


Figure 5-15. Removing the TouchPad

7. Remove the TouchPad.

Reverse the preceding procedure to replace the TouchPad.

5.10 Switch Cover

Switch Cover Spare Part Number Information

Switch cover

241438-001

1. Prepare the notebook for disassembly (Section 5.3).
2. Remove the keyboard (Section 5.7).
3. Position the notebook so the rear panel faces you.
4. Remove the two black TM2.5 × 7.0 screws that secure the switch cover to the base enclosure (Figure 5-16).

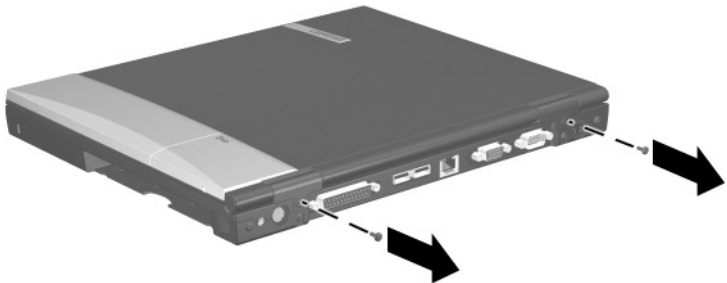


Figure 5-16. Removing the Switch Cover Screws

5. Position the notebook so the front faces you.
6. Open the notebook as far as it will open.
7. Lift the switch cover up ❶, slide it forward ❷, and rest it on the top cover (Figure 5-17).
8. Disconnect the left ❸ and right speaker cables ❹ from the system board.

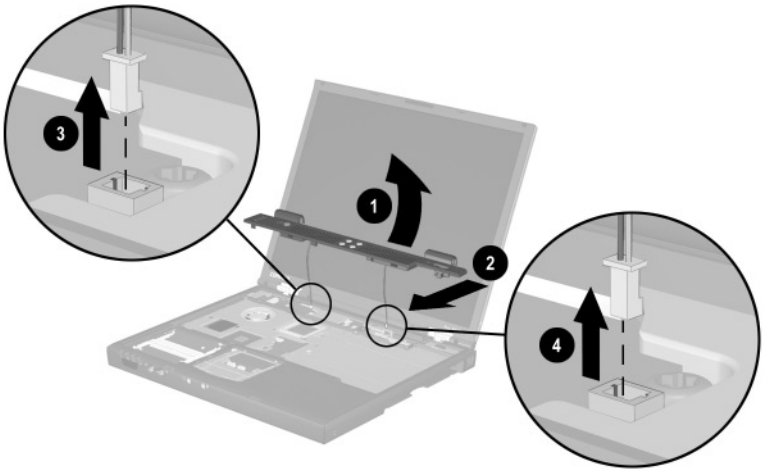


Figure 5-17. Removing the Switch Cover

9. Remove the switch cover.

Reverse the preceding procedure to replace the switch cover.

5.11 Display

Display Spare Part Number Information

For use with Evo Notebook N620c models only:

| | |
|------------------------|------------|
| 14.1-inch, SXGA+, CTFT | 319733-001 |
|------------------------|------------|

For use with Evo Notebook N610c and N610v models only:

| | |
|------------------------|------------|
| 14.1-inch, SXGA+, CTFT | 291261-001 |
|------------------------|------------|

| | |
|----------------------|------------|
| 14.1-inch, XGA, CTFT | 291262-001 |
|----------------------|------------|

For use with Evo Notebook N600c models only:

| | |
|------------------------|------------|
| 14.1-inch, SXGA+, CTFT | 241433-001 |
|------------------------|------------|

| | |
|----------------------|------------|
| 14.1-inch, XGA, CTFT | 241434-001 |
|----------------------|------------|

1. Prepare the notebook for disassembly (Section 5.3).
2. Remove the keyboard (Section 5.7).
3. Remove the switch cover (Section 5.10).
4. Position the display so that it is vertical.

5. Remove the TM2.5 × 7.0 screw that secures the display ground cable to the top cover ❶ (Figure 5-18).
6. Disconnect the display video ❷ and inverter cables ❸ from the system board.



Figure 5-18. Disconnecting the Display Cables

7. Partially close the notebook.
8. Position the notebook so the rear panel faces you.

9. Remove the two TM2.5 × 7.0 screws ❶ that secure the display to the base enclosure (Figure 5-19).
10. Lift the display straight up and remove it from the base enclosure ❷.

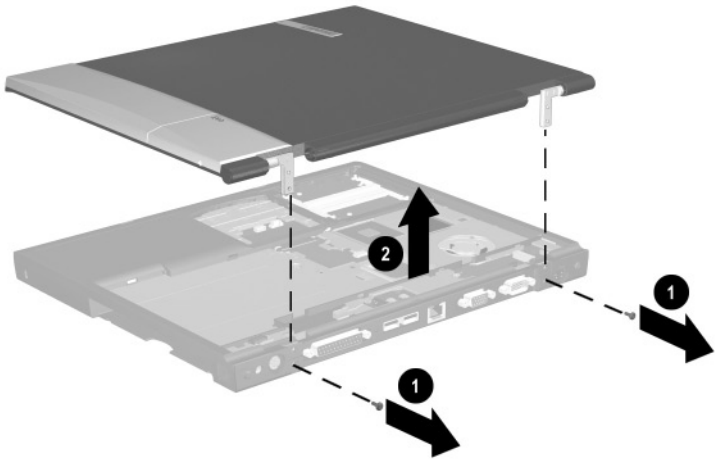


Figure 5-19. Removing the Display

Reverse the preceding procedure to replace the display.

5.12 Top Cover

Top Cover Spare Part Number Information

| | |
|---|------------|
| For use with Evo Notebook N620c, N610c, and N610v models only | 291264-001 |
| For use with Evo Notebook N600c models only | 241436-001 |

1. Prepare the notebook for disassembly (Section 5.3) and remove the following components:
 - a. Keyboard (Section 5.7)
 - b. Memory expansion compartment cover (Section 5.8)
 - c. Switch cover (Section 5.10)
 - d. Display (Section 5.11)
2. Turn the notebook bottom side up with the rear panel facing you.

3. Remove the following screws:

- ❑ Three TM2.5 × 7.0 screws from the front edge of the base enclosure ❶ (Figure 5-20)
- ❑ Two TM2.5 × 5.0 screws from the hard drive bay ❷



The Evo Notebook N620c contains two TM2.5 × 7.0 screws in the hard drive bay.

- ❑ Two TM2.5 × 5.0 screws from the Media Bay ❸
- ❑ **Evo Notebook N620c and N600c models**—Two TM2.5 × 5.0 screws from the rear panel ❹, or
- ❑ **Evo Notebook N610c and N610v models**—Two TM2.5 × 7.0 screws from the rear panel ❹

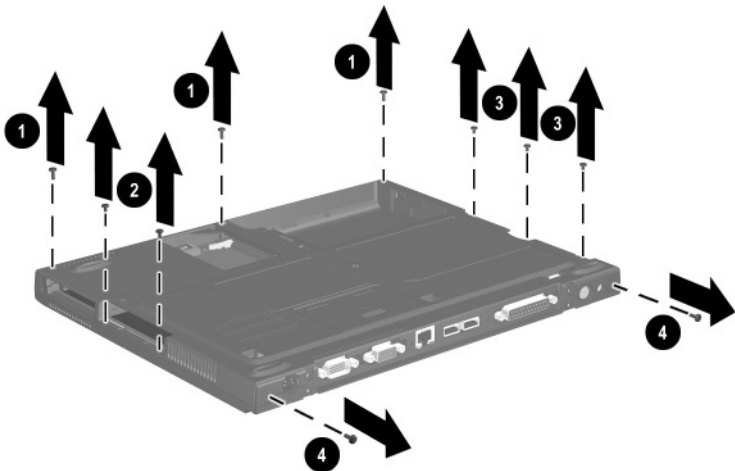


Figure 5-20. Removing the Top Cover Screws

4. Turn the notebook top side up with the front facing you.
5. **For Evo Notebook N620c, N610c, N610v models only**—Remove the two TM2.0 × 4.0 ❶ screws that secure the top cover to the base enclosure (Figure 5-21).
6. **For all notebook models**—Remove the TM2.5 × 7.0 ❷ screw that secures the top cover to the base enclosure.
7. Insert a flat blade screwdriver into the slot ❸ on the rear edge of the top cover to disengage the cover from the I/O bracket.
8. Lift the top cover straight up and remove it from the base enclosure ❹.

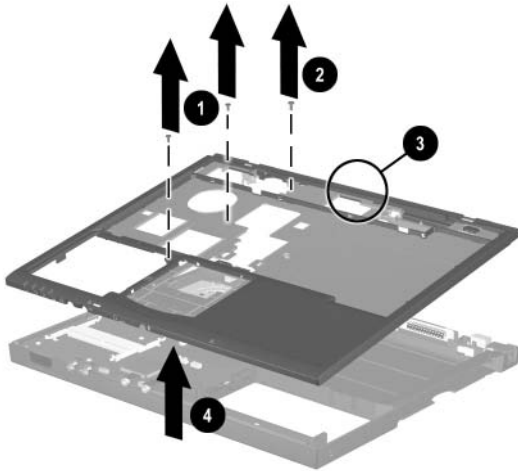


Figure 5-21. Removing the Top Cover

Reverse the preceding procedure to replace the top cover.

5.13 System Board

System Board Spare Part Number Information

| | |
|---|------------|
| For use with Evo Notebook N620c models only | 319778-001 |
| For use with Evo Notebook N610c and N610v models only | 291581-001 |
| For use with Evo Notebook N600c models only: | |
| Mobile Intel Pentium III processor 1.066 GHz-M | 241430-001 |
| Mobile Intel Pentium III processor 866 MHz-M | 241432-001 |



Make sure the PC Card eject buttons are fully depressed and there are no PC Card devices or space savers inserted into the PC Card slots before removing the system board.

1. Prepare the notebook for disassembly (Section 5.3) and remove the following components:
 - a. RTC battery (Section 5.6)
 - b. Keyboard (Section 5.7)
 - c. Memory expansion compartment cover (Section 5.8)
 - d. TouchPad (Section 5.9)
 - e. Switch cover (Section 5.10)
 - f. Display (Section 5.11)
 - g. Top cover (Section 5.12)
2. Position the notebook so the rear panel faces you.



Steps 3 through 5 apply only to Evo Notebook N600c models.

3. Remove the tape that secures the modem cable to the system board ❶ (Figure 5-22).
4. Remove the two 7.0-mm bushing guides ❷ on either side of the docking connector that secure the system board to the base enclosure.
5. Remove the three TM2.5 × 5.0 screws ❸ that secure the system board to the base enclosure.

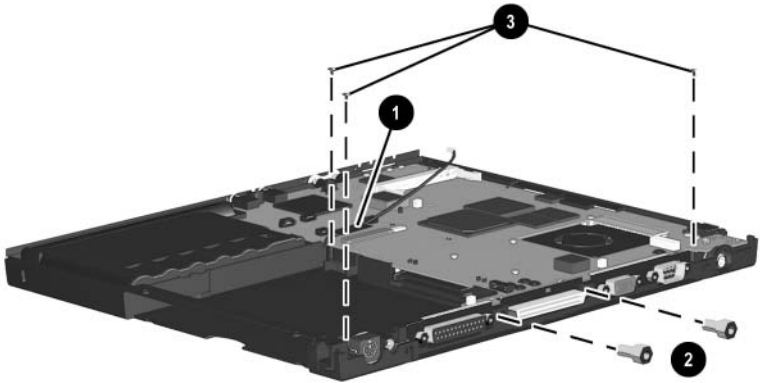


Figure 5-22. Removing the System Board Screws and Bushing Guides on an Evo Notebook N600c



Steps 6 and 7 apply only to Evo Notebook N620c, N610c, and N610v models.

6. Remove the two TM2.5 × 5.0 screws ❶ that secure the system board to the base enclosure through the rear panel (Figure 5-23).
7. Remove the three TM2.5 × 5.0 screws ❷ that secure the top cover to the base enclosure.

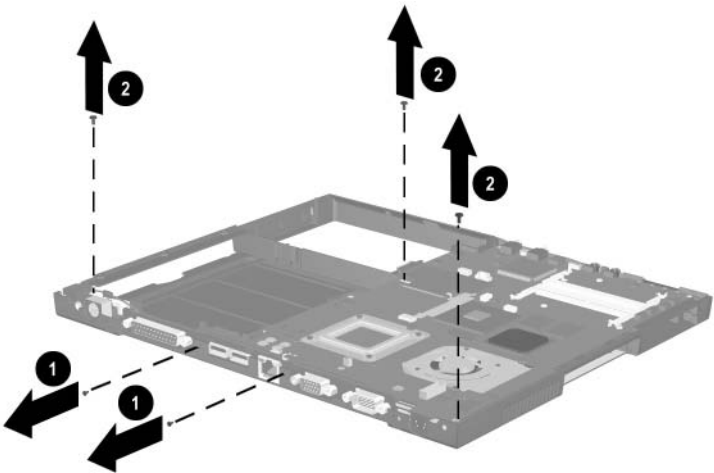


Figure 5-23. Removing the System Board Screws on Evo Notebook N620c, N610c, and N610v Models



When removing the system board, do **not** remove the following screws (Figure 5-24):

- Four screws ① that secure the processor bracket to the system board
- Two screws ② that secure the heat sink to the system board
- Two screws ③ that secure the hard drive connector the system board
- Four screws ④ that secure the PC Card assembly to the system board

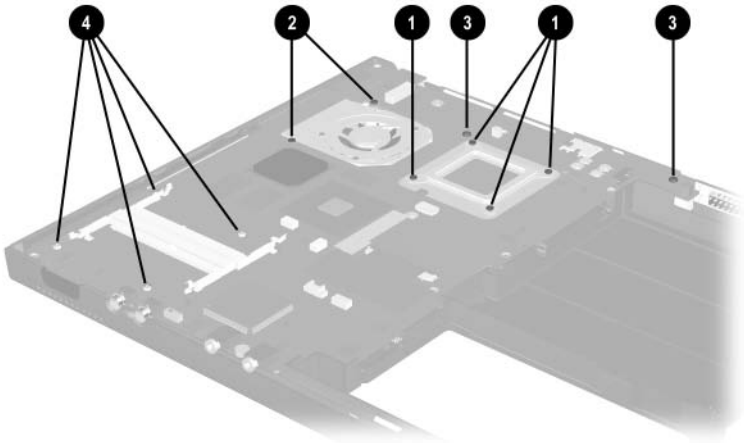


Figure 5-24. Do Not Remove These Screws

8. Use the Media Bay connector ❶ to lift the right side of the system board ❷ until it rests at a 45-degree angle (Figure 5-25).
9. Slide the system board out of the base enclosure at a 45-degree angle ❸.

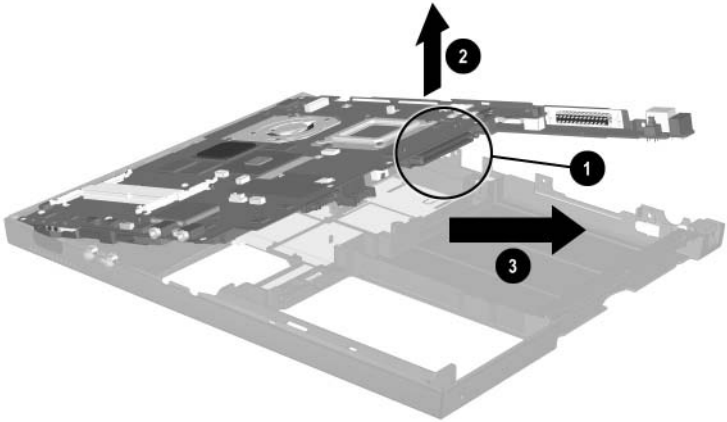


Figure 5-25. Removing the System Board



Figure 5-26 applies only to Evo Notebook N600c models. When handling the system board, be careful not to put stress on the I/O interface board ❶. The narrow profile of this board makes it susceptible to being damaged when mishandled. Do not remove the screw ❷ that secures the I/O interface board to the system board or attempt to remove the I/O interface board. The system board should only be removed and handled using the Media Bay connector, as illustrated in Figure 5-26.

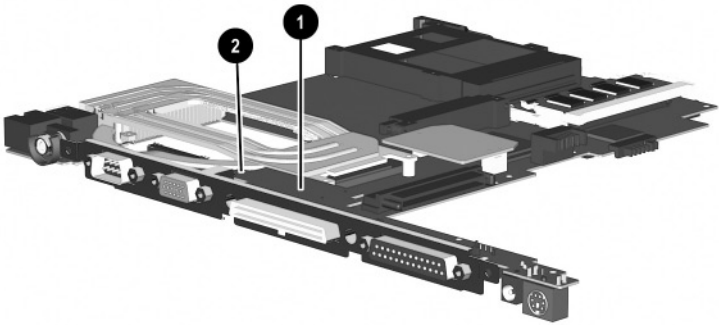


Figure 5-26. Proper Handling of the I/O Interface Board on an Evo Notebook N600c



Figure 5-27 applies only to Evo Notebook N620c, N610c, and N610v models. When handling the system board, be careful not to put stress on the I/O interface board ❶. The narrow profile of this board makes it susceptible to being damaged when mishandled. The system board should only be removed and handled using the Media Bay connector ❷. After the system board is installed in the base enclosure, apply gentle downward pressure on the I/O interface board directly above the two connectors ❸ and ❹ that connect the I/O interface board to the system board.

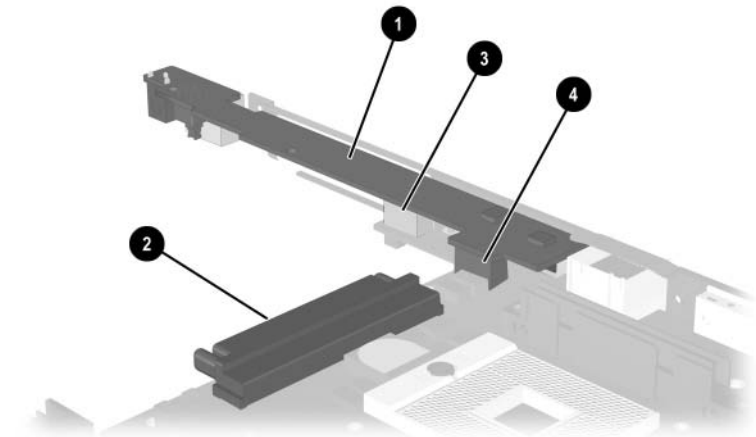


Figure 5-27. Proper Handling of the I/O Interface Board on Evo Notebook N620c, N610c, and N610v Models

Reverse the preceding procedure to replace the system board.

5.14 Fan

Fan Spare Part Number Information

| | |
|---|------------|
| For use with Evo Notebook N620c, N610c, and N610v models only | 291266-001 |
| For use with Evo Notebook N600c models only | 255528-001 |

1. Prepare the notebook for disassembly (Section 5.3) and remove the following components:
 - a. RTC battery (Section 5.6)
 - b. Keyboard (Section 5.7)
 - c. Memory expansion compartment cover (Section 5.8)
 - d. TouchPad (Section 5.9)
 - e. Switch cover (Section 5.10)
 - f. Display (Section 5.11)
 - g. Top cover (Section 5.12)
 - h. System board (Section 5.13)
2. Turn the system board bottom side up with the rear panel facing you.

3. Disconnect the fan cable from the system board (Figure 5-28).

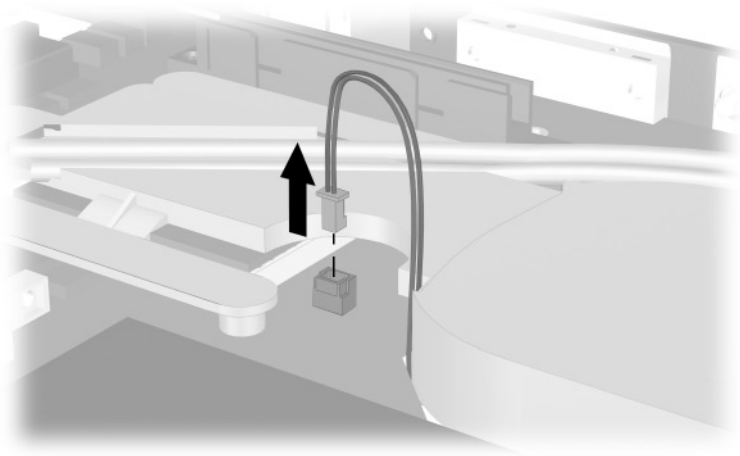


Figure 5-28. Disconnecting the Fan Cable

4. Turn the system board top side up with the rear panel facing you.



Steps 5 through 7 apply only to Evo Notebook N600c models.

5. Remove the PM2.0 × 4.0 screw ❶ and PM2.5 × 5.0 screw ❷ that secure the fan to the system board (Figure 5-29).
6. While holding the system board above the work surface, push the left side of the fan up ❸ from the bottom of the system board.
7. When the left edge of the fan has cleared the system board, slide the fan to the left ❹ and out of the heat sink.

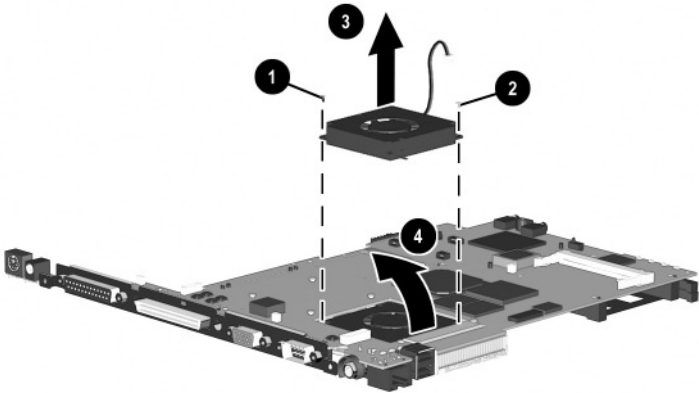


Figure 5-29. Removing the Fan on an Evo Notebook N600c



Steps 8 and 9 apply only to Evo Notebook N620c, N610c, and N610v models.

8. Remove the three PM2.0 × 4.0 screws ❶ that secure the fan to the heat sink (Figure 5-30).
9. Lift the fan out of the heat sink ❷.

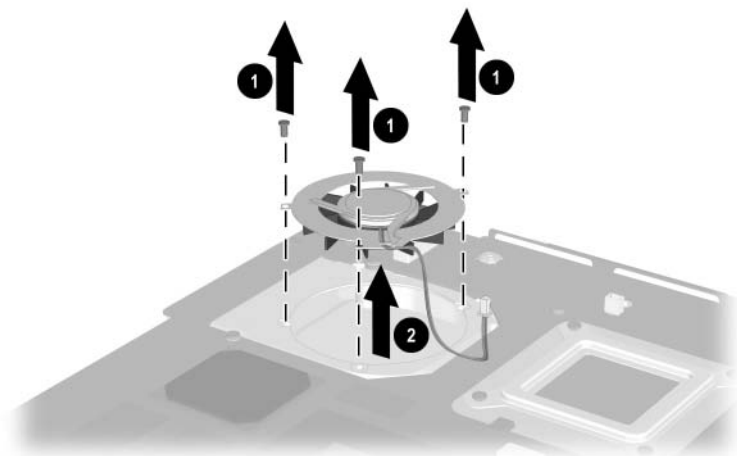


Figure 5-30. Removing the Fan on Evo Notebook N620c, N610c, and N610v Models

10. Remove the fan.

Reverse the preceding procedure to replace the fan.

5.15 Heat Sink



This section applies only to Evo Notebook N620c, N610c, and N610v models.

Heat Sink Spare Part Number Information

| | |
|------------------|------------|
| Heat sink | 303103-001 |
|------------------|------------|

1. Prepare the notebook for disassembly (Section 5.3) and remove the following components:
 - a. RTC battery (Section 5.6)
 - b. Keyboard (Section 5.7)
 - c. Memory expansion compartment cover (Section 5.8)
 - d. TouchPad (Section 5.9)
 - e. Switch cover (Section 5.10)
 - f. Display (Section 5.11)
 - g. Top cover (Section 5.12)
 - h. System board (Section 5.13)

2. Turn the system board bottom side up with the rear panel facing you.
3. Disconnect the fan cable from the system board (Figure 5-31).

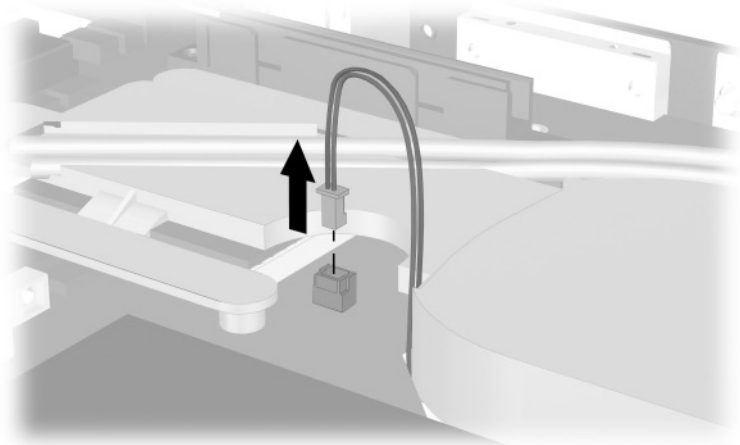


Figure 5-31. Disconnecting the Fan Cable

4. Turn the system board top side up with the rear panel facing you.
5. Remove the six PM2.0 × 4.0 screws ❶ that secure the processor mounting bracket and heat sink to the system board (Figure 5-32).
6. Remove the processor mounting bracket ❷.

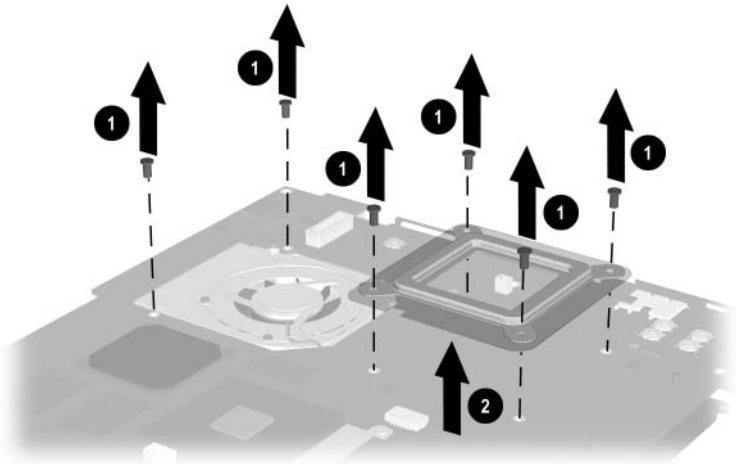


Figure 5-32. Removing the Heat Sink Screws

7. Lift the system board straight up ❶. The heat sink ❷ will remain resting on the work surface (Figure 5-33).

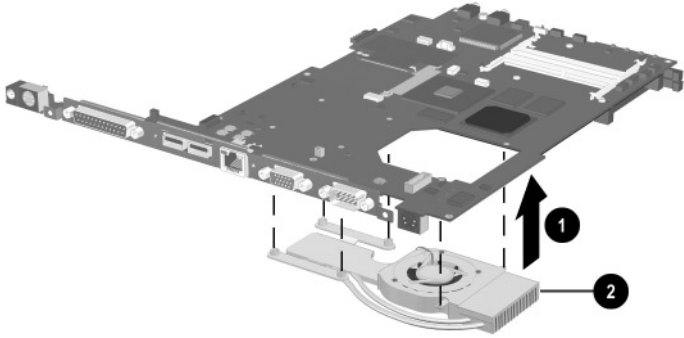


Figure 5-33. Removing the Heat Sink

Reverse the preceding procedure to replace the heat sink.

5.16 Processor



This section applies only to Evo Notebook N620c, N610c, and N610v models.

Processor Spare Part Number Information

For use only with Evo Notebook N620c models:

| | |
|-------------------------|------------|
| Intel Pentium-M 1.6 GHz | 319777-001 |
| Intel Pentium-M 1.5 GHz | 319776-001 |
| Intel Pentium-M 1.4 GHz | 319775-001 |
| Intel Pentium-M 1.3 GHz | 319774-001 |

For use only with Evo Notebook N610c models:

| | |
|--------------------------------|------------|
| Mobile Intel Pentium 4 2.0 GHz | 303282-001 |
| Mobile Intel Pentium 4 1.8 GHz | 291269-001 |
| Mobile Intel Pentium 4 1.7 GHz | 291268-001 |
| Mobile Intel Pentium 4 1.6 GHz | 291267-001 |

For use only with Evo Notebook N610v models:

| | |
|-------------------------|------------|
| Intel Pentium 4 2.4 GHz | 321431-001 |
| Intel Pentium 4 2.2 GHz | 324130-001 |
| Intel Pentium 4 2.0 GHz | 321429-001 |
| Intel Celeron 1.5 GHz | 309420-001 |

1. Prepare the notebook for disassembly (Section 5.3) and remove the following components:
 - a. RTC battery (Section 5.6)
 - b. Keyboard (Section 5.7)
 - c. Memory expansion compartment cover (Section 5.8)
 - d. TouchPad (Section 5.9)
 - e. Switch cover (Section 5.10)
 - f. Display (Section 5.11)

- g. Top cover (Section 5.12)
 - h. System board (Section 5.13)
 - i. Heat sink (Section 5.15)
2. Turn the system board bottom side up with the rear panel facing you.
 3. Insert the tip of a flat-blade screwdriver into the slot on the processor locking screw.
 4. Turn the screwdriver counterclockwise ① to release the processor (Figure 5-34).
 5. Remove the processor from the socket on the system board ②.



When installing the processor, make sure the gold triangle ③ is in the lower right corner.

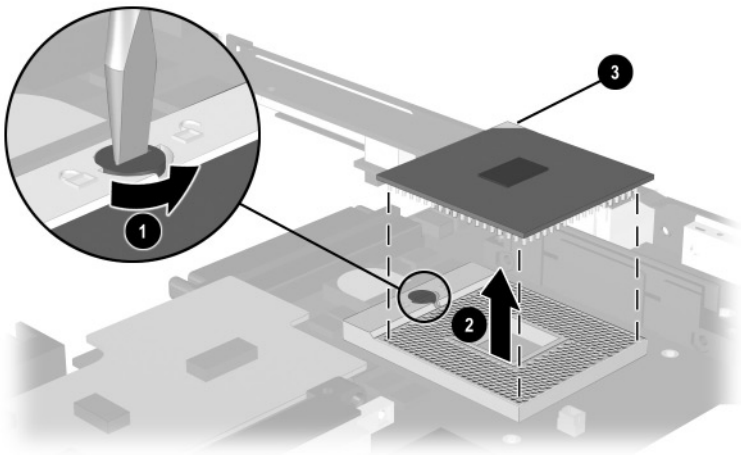


Figure 5-34. Removing the Processor

Reverse the preceding procedure to replace the processor.

5.17 DC-DC Converter Board

DC-DC Converter Board Spare Part Number Information

| | |
|---|------------|
| For use with Evo Notebook N620c models only | 319635-001 |
| For use with Evo Notebook N610c and N610v models only | 291263-001 |
| For use with Evo Notebook N600c models only | 241435-001 |

1. Prepare the notebook for disassembly (Section 5.3) and remove the following components:
 - a. RTC battery (Section 5.6)
 - b. Keyboard (Section 5.7)
 - c. Memory expansion compartment cover (Section 5.8)
 - d. TouchPad (Section 5.9)
 - e. Switch cover (Section 5.10)
 - f. Display (Section 5.11)
 - g. Top cover (Section 5.12)
 - h. System board (Section 5.13)
2. Turn the system board bottom side up with the rear panel facing you.

3. Lift the left and right edges of the DC-DC converter board to disconnect the board from the system board (Figure 5-35).

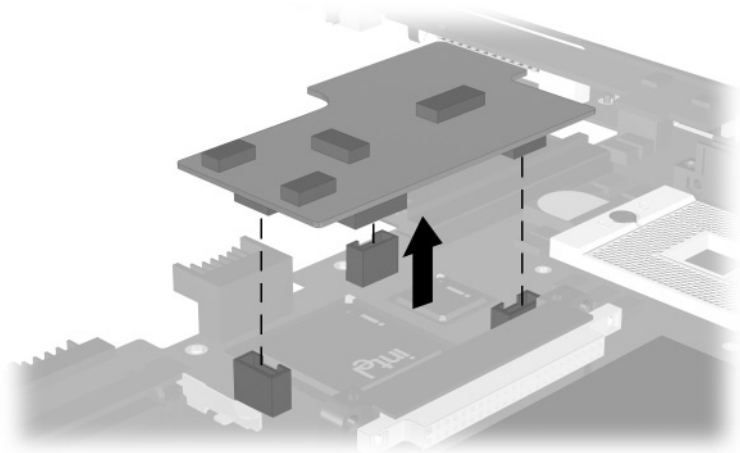


Figure 5-35. Removing the DC-DC Converter Board

4. Remove the DC-DC converter board.

Reverse the preceding procedure to replace the DC-DC converter board.

5.18 Modem Cable



The modem cable is spared with the base enclosure. Modem cables are also included in the Miscellaneous Plastics Kit (spare part number 241439-001).

1. Prepare the notebook for disassembly (Section 5.3) and remove the following components:
 - a. RTC battery (Section 5.6)
 - b. Keyboard (Section 5.7)
 - c. Memory expansion compartment cover (Section 5.8)
 - d. TouchPad (Section 5.9)
 - e. Switch cover (Section 5.10)
 - f. Display (Section 5.11)
 - g. Top cover (Section 5.12)
 - h. System board (Section 5.13)
2. Position the base enclosure with the rear panel facing forward.

3. Lift the modem connector out of the base enclosure ❶ and disengage the modem cable ❷ from the alignment clips and tabs in the base enclosure (Figure 5-36).

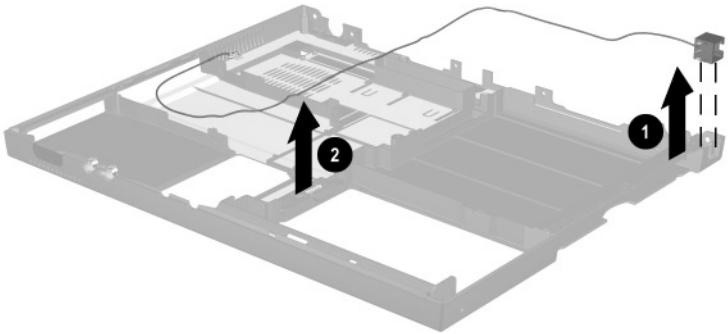


Figure 5-36. Removing the Modem Cable

4. Remove the modem cable.



When installing the modem cable, route the cable along the path indicated in Figure 5-37.

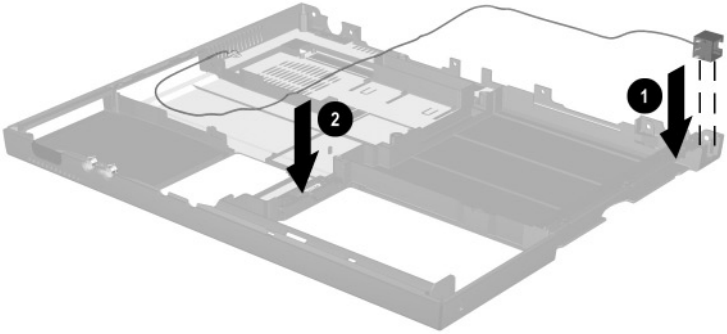


Figure 5-37. Routing the Modem Cable in the Base Enclosure

6

Specifications

This chapter provides physical and performance specifications.

Table 6-1
Notebook

Dimensions

| | | |
|--------|---------|---------|
| Height | 3.1 cm | 1.2 in |
| Width | 30.7 cm | 12.1 in |
| Depth | 25.0 cm | 9.8 in |

Weight

| | | |
|---|--------|--------|
| With 8-cell battery pack and optical drive in Media Bay | 2.5 kg | 5.5 lb |
| With 8-cell battery pack and Media Bay weight saver | 2.1 kg | 4.8 lb |

Stand-alone (battery) power requirements

| | |
|------------------------------------|----------|
| Nominal operating voltage (Li ion) | 14.4 V |
| Average operating power | 15.8 W |
| Peak operating power | 38 W |
| Power in Suspend | < 800 mW |
| Power in Hibernation | < 100 mW |

AC adapter power requirements

| | |
|---------------------|--------------------------------|
| Rated input voltage | 90 to 264 VAC (auto switching) |
| Rated input current | < 60 W |
| Rated frequency | 47 to 63 Hz |

Table 6-1
Notebook (Continued)

Temperature

| | | |
|--------------|-----------------|-----------------|
| Operating | 10° C to 35° C | 50° F to 95° F |
| Nonoperating | -20° C to 60° C | -4° F to 140° F |

Relative humidity (noncondensing)

| | |
|--------------|--|
| Operating | 10 to 90% |
| Nonoperating | 5 to 95%, 38.7° C/101.6° F maximum wetbulb |

Altitude (unpressurized)

| | | |
|--------------|--------------|----------------|
| Operating | 0 to 3,048 m | 0 to 10,000 ft |
| Nonoperating | 0 to 9,144 m | 0 to 30,000 ft |

Shock

| | |
|--------------|---------------------------|
| Operating | 10 G for 11 ms, half sine |
| Nonoperating | 60 G for 11 ms, half sine |

Vibration

| | |
|--------------|---|
| Operating | 0.5 G zero-to-peak, 10–500 Hz, 0.25-oct/min sweep rate |
| Nonoperating | 1.0 G zero-to-peak, 10–500 Hz, 0.25-oct/min sweep rate |



Applicable product safety standards specify thermal limits for plastic surfaces. The notebook operates well within this range of temperatures.

Table 6-2
14.1-inch XGA, TFT Display

| | | |
|--------------------------------|---------------------|----------|
| Dimensions | | |
| Height | 21.40 cm | 8.46 in |
| Depth | 28.50 cm | 11.22 in |
| Width | 35.81 cm | 14.10 in |
| Number of colors | Up to 16.8 million | |
| Contrast ratio | 150:1 | |
| Brightness | 120 nits typical | |
| Pixel resolution | | |
| Pitch | 0.264 × 0.264 mm | |
| Format | 1024 × 768 | |
| Configuration | RGB vertical stripe | |
| Backlight | Edge lit | |
| Character display | 80 × 25 | |
| Refresh | 60 Hz | |
| Total power consumption | 4.2 W | |

**Table 6-3
Hard Drives**

| | 40.0 GB | 30.0 GB | 20.0 GB | 15.0 GB |
|---|----------------|----------------|----------------|----------------|
| User capacity per drive¹ | 40.0 | 30.0 GB | 20.0 GB | 15.0 GB |
| Drive height | 9.5 mm | 9.5 mm | 9.5 mm | 9.5 mm |
| Drive width | 70.0 mm | 70.0 mm | 70.0 mm | 70.0 mm |
| Interface type | ATA-5 | ATA-5 | ATA-5 | ATA-4 |
| Seek times (typical read, including setting) | | | | |
| Single track | 2.5 ms | 2.5 ms | 2.5 ms | 2.5 ms |
| Average | 12.0 ms | 12.0 ms | 12.0 ms | 13.0 ms |
| Full stroke | 23.0 ms | 23.0 ms | 23.0 ms | 24.0 ms |
| User addressable sectors³ | 78,140,160 | 58,605,120 | 39,070,080 | 23,579,136 |
| Logical configuration | | | | |
| Cylinders | 16,383 | 16,383 | 16,383 | 16,683 |
| Heads | 16 | 16 | 16 | 16 |
| Sectors per track | 63 | 63 | 63 | 63 |

¹1 GB = 1,000,000,000 bytes.

³Actual drive specifications may differ slightly.

Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details.

**Table 6-3
Hard Drives (Continued)**

| | 40.0 GB | 30.0 GB | 20.0 GB | 15.0 GB |
|-----------------------------------|----------------|----------------|----------------|----------------|
| Physical configuration | | | | |
| Cylinders ³ | 22,784 | 25,800 | 22,784 | 25,800 |
| Heads | 4 | 2 | 4 | 2 |
| Sectors per track ³ | 293 to 560 | 398 to 731 | 293 to 560 | 398 to 731 |
| Bytes per sector | 512 | 512 | 512 | 512 |
| Buffer size³ | 2 MB | 512 KB | 512 KB | 512 KB |
| Disk rotational speed | 4200 rpm | 4200 rpm | 4200 rpm | 4200 rpm |
| Transfer rate | | | | |
| Interface max (MB/s) ² | 66.6 | 100 | 66.6 | 100 |
| Media (Mb/s) ³ | 109 to 203 | 109 to 203 | 109 to 203 | 109 to 203 |

²System capability may differ.

³Actual drive specifications may differ slightly.

Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details.

**Table 6-4
Diskette Drive**

| | | |
|---------------------------|--------------|-------------|
| Diskette size | | 3.5 in |
| Light | On system | |
| Height | 12.7 mm | 0.5 in |
| Bytes per sector | 512 | |
| Sectors per track | | |
| High density | 18 (1.44 MB) | 15 (1.2 MB) |
| Low density | 9 | |
| Tracks per side | | |
| High density | 80 | |
| Low density | 80 | |
| Read/write heads | 2 | |
| Average seek times | | |
| Track-to-track (high/low) | 3 to 6 ms | |
| Average (high/low) | 94 to 174 ms | |
| Settling time | 15 ms | |
| Latency average | 100 ms | |

Table 6-5
CD-ROM Drive

| | | |
|----------------------------------|--|---------|
| Applicable disc | CD-ROM (Mode 1, 2, and 3) CD-XA ready (Mode 2, Form 1 and 2) CD-I ready (Mode 2, Form 1 and 2) CD-R (read only) CD Plus Photo CD (single/multisession) CD-Extra Video CD CD-WO (fixed packets only) CD-Bridge | |
| Center hole diameter | 1.5 cm | 0.59 in |
| Disc diameter | 12 cm, 8 cm | |
| Disc thickness | 1.2 mm | |
| Track pitch | 1.6 μ m | |
| Access time | | |
| Random | < 150 ms | |
| Full stroke | < 300 ms | |
| Cache buffer | 128 KB | |
| Data transfer rate | | |
| Sustained, 16X | 150 KB/s at 1X | |
| Variable | 1500 to 3600 KB/s (10X to 24X) | |
| Normal PIO Mode 4 (single burst) | 16.66 KB/s | |
| Startup time | < 8 seconds | |
| Stop time | < 4 seconds | |

Table 6-6
DVD-ROM Drive

| | | |
|---------------------------------|--|---------|
| Applicable disc | DVD-5, DVD-9, DVD-10 CD-ROM (Mode 1 and 2) CD Digital Audio CD-XA ready (Mode 2, Form 1 and 2) CD-I ready (Mode 2, Form 1 and 2) CD-R (read only) CD Plus Photo CD (single/multisession) CD-Bridge | |
| Center hole diameter | 1.5 cm | 0.59 in |
| Disc diameter | 12 cm, 8 cm | |
| Disc thickness | 1.2 mm | |
| Track pitch | 0.74 μ m | |
| Access time | | |
| Random | < 150 ms | |
| Full stroke | < 225 ms | |
| Audio output level | Line-out, 0.7 Vrms | |
| Cache buffer | 512 KB/sec | |
| Data transfer rate | | |
| Max 24X CD | 3600 KB/s (150 KB/s at 1X CD rate) | |
| Max 8X DVD | 10,800 KB/s (1352 KB/s at 1X DVD rate) | |
| Normal IO Mode 4 (single burst) | 16.6 MB/s | |
| Startup time | < 12 seconds | |
| Stop time | < 3 seconds | |

**Table 6-7
CD-RW Drive**

| | | |
|----------------------------------|--------------------|---------|
| Center hole diameter | 0.39 cm | 0.59 in |
| Disk diameter | 12 cm, 8 cm | |
| Disk thickness | 0.12 cm | 0.47 in |
| Track pitch | 0.74 μ m | |
| Access time | | |
| Random | < 150 ms | |
| Full stroke | < 225 ms | |
| Audio output level | Line-out, 0.7 Vrms | |
| Cache buffer | 128 KB/s minimum | |
| Data transfer rate | | |
| Sustained, 16X | 150 KB/s | |
| Sustained, 4X CD-RW | 5,520 KB/s | |
| Normal PIO Mode 4 (single burst) | 16.6 MB/s | |
| Startup time | < 15 seconds | |
| Stop time | < 6 seconds | |

Table 6-8
AC Adapter

Dimensions

| | | |
|--------|---------|---------|
| Height | 2.79 cm | 1.10 in |
| Depth | 3.61 cm | 1.42 in |
| Width | 9.40 cm | 3.70 in |

| | | |
|---------------|---------|---------|
| Weight | 0.18 kg | 0.39 lb |
|---------------|---------|---------|

Power supply (input)

| | | |
|---------------------------|---------------------------|--|
| Operating voltage | 90 to 260 VAC RMS nominal | |
| Operating current | 1.3 A RMS | |
| Operating frequency range | 47 to 63 Hz nominal | |
| Maximum transient | 4/50 kV | |

Table 6-9
8-cell, Li ion Battery Pack

Dimensions

| | | |
|--------|-----------|---------|
| Length | 125.80 cm | 4.95 in |
| Width | 88.00 cm | 3.46 in |
| Depth | 20.40 cm | 0.80 in |
| Weight | 0.43 kg | 0.96 lb |

Energy

| | | |
|--------------------|----------------------------------|--|
| Voltage | 14.8 V | |
| Amp-hour capacity | Minimum 3.7 Ah, typical 3.9 Ah | |
| Watt-hour capacity | Minimum 53.2 Ah, typical 56.1 Ah | |

Temperature

| | | |
|--------------|------------|--------------|
| Operating | 0 to 42° C | 32 to 108° F |
| Nonoperating | 0 to 60° C | 32 to 140° F |

Table 6-10
System DMA

| Hardware DMA | System Function |
|---------------------|--|
| DMA0 | Available for audio |
| DMA1 | Entertainment audio (default; alternate = DMA0, DMA3, none) |
| DMA2 | Diskette drive |
| DMA3 | ECP parallel port LPT1 (default; alternate = DMA0, none) |
| DMA4 | DMA controller cascading (not available) |
| DMA5 | Available for PC Card |
| DMA6 | Not assigned |
| DMA7 | Not assigned |



 PC Card controller can use DMA 1, 2, or 5.

Table 6-11
System Interrupts

| Hardware IRQ | System Function |
|---------------------|---|
| IRQ0 | System timer |
| IRQ1 | Keyboard controller |
| IRQ2 | Cascaded |
| IRQ3 | COM2 |
| IRQ4 | COM1 |
| IRQ5 | Audio (default)* |
| IRQ6 | Diskette drive |
| IRQ7 | Parallel port |
| IRQ8 | Real time clock (RTC) |
| IRQ9 | Infrared |
| IRQ10 | System use |
| IRQ11 | System use |
| IRQ12 | Internal point stick or external mouse |
| IRQ13 | Coprocessor (not available to any peripheral) |
| IRQ14 | IDE interface (hard drive and optical drive) |
| IRQ15 | System use |

 PC Cards may assert IRQ3, IRQ4, IRQ5, IRQ7, IRQ9, IRQ10, IRQ11, or IRQ15. Either the infrared or the serial port may assert IRQ3 or IRQ4.

*Default configuration; audio possible configurations are IRQ5, IRQ7, IRQ9, IRQ10, or none.

Table 6-12
System I/O Addresses

| I/O Address (hex) | System Function (shipping configuration) |
|--------------------------|---|
| 000–00F | DMA controller no. 1 |
| 010–01F | Unused |
| 020–021 | Interrupt controller no. 1 |
| 022– 024 | Opti chipset configuration registers |
| 025–03F | Unused |
| 02E–02F | 87334 “Super IO” configuration for CPU |
| 040–05F | Counter/timer registers |
| 044–05F | Unused |
| 060 | Keyboard controller |
| 061 | Port B |
| 062–063 | Unused |
| 064 | Keyboard controller |
| 065–06F | Unused |
| 070–071 | NMI enable/real time clock |
| 072–07F | Unused |
| 080–08F | DMA page registers |
| 090–091 | Unused |
| 092 | Port A |
| 093–09F | Unused |
| 0A0–0A1 | Interrupt controller no. 2 |

Table 6-12
System I/O Addresses (*Continued*)

| I/O Address (hex) | System Function (shipping configuration) |
|--------------------------|---|
| 0A2–0BF | Unused |
| 0C0–0DF | DMA controller no. 2 |
| 0E0–0EF | Unused |
| 0F0–0F1 | Coprocessor busy clear/reset |
| 0F2–0FF | Unused |
| 100–16F | Unused |
| 170–177 | Secondary fixed disk controller |
| 178–1EF | Unused |
| 1F0–1F7 | Primary fixed disk controller |
| 1F8–200 | Unused |
| 201 | Joystick (decoded in ESS1688) |
| 202–21F | Unused |
| 220–22F | Entertainment audio |
| 230–26D | Unused |
| 26E–26 | Unused |
| 278–27F | Unused |
| 280–2AB | Unused |
| 2A0–2A7 | Unused |
| 2A8–2E7 | Unused |
| 2E8–2EF | Reserved serial port |

Table 6-12
System I/O Addresses (*Continued*)

| I/O Address (hex) | System Function (shipping configuration) |
|--------------------------|---|
| 2F0–2F7 | Unused |
| 2F8–2FF | Infrared port |
| 300–31F | Unused |
| 320–36F | Unused |
| 370–377 | Secondary diskette drive controller |
| 378–37F | Parallel port (LPT1/default) |
| 380–387 | Unused |
| 388–38B | FM synthesizer—OPL3 |
| 38C–3AF | Unused |
| 3B0–3BB | VGA |
| 3BC–3BF | Reserved (parallel port/no EPP support) |
| 3C0–3DF | VGA |
| 3E0–3E1 | PC Card controller in CPU |
| 3E2–3E3 | Unused |
| 3E8–3EF | Internal modem |
| 3F0–3F7 | “A” diskette controller |
| 3F8–3FF | Serial port (COM1/default) |
| CF8–CFB | PCI configuration index register (PCIDIVO-1) |
| CFC–CFF | PCI configuration data register (PCIDIVO-1) |

Table 6-13
System Memory Map

| Size | Memory Address | System Function |
|-------------|-----------------------|------------------------------|
| 640 KB | 00000000 - 0009FFFF | Base memory |
| 128 KB | 000A0000 - 000BFFFF | Video memory |
| 48 KB | 000C0000 - 000CBFFF | Video BIOS |
| 160 KB | 000C8000 - 000E7FFF | Unused |
| 64 KB | 000E8000 - 000FFFFF | System BIOS |
| 15 MB | 00100000 - 00FFFFFF | Extended memory |
| 58 MB | 01000000 - 047FFFFF | Super extended memory |
| 58 MB | 04800000 - 07FFFFFF | Unused |
| 2 MB | 08000000 - 080FFFFF | Video memory (direct access) |
| 4 GB | 08200000 - FFFFFFFFFF | Unused |
| 64 KB | FFFF0000 - FFFFFFFF | System BIOS |

A

Connector Pin Assignments

Table A-1
Stereo Speaker/Headphone



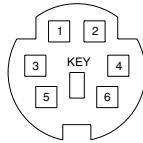
| Pin | Signal | Pin | Signal |
|------------|---------------|------------|---------------|
| 1 | Audio out | 2 | Ground |

Table A-2
Microphone



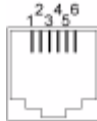
| Pin | Signal | Pin | Signal |
|------------|---------------|------------|---------------|
| 1 | Audio in | 2 | Ground |

Table A-3
Keyboard/Mouse



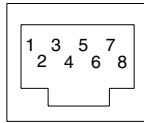
| Pin | Signal | Pin | Signal |
|-----|----------------------|-----|-----------------------|
| 1 | Keyboard/mouse data1 | 4 | +5 VDC |
| 2 | Keyboard/mouse data2 | 5 | Keyboard/mouse clock1 |
| 3 | Ground | 6 | Keyboard/mouse clock2 |

Table A-4
RJ-11 Modem



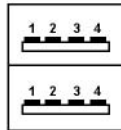
| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1 | Unused | 4 | Unused |
| 2 | Tip | 5 | Unused |
| 3 | Ring | 6 | Unused |

**Table A-5
RJ-45 Network Interface**



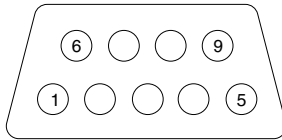
| Pin | Signal | Pin | Signal |
|-----|------------|-----|-----------|
| 1 | Transmit + | 5 | Unused |
| 2 | Transmit - | 6 | Receive - |
| 3 | Receive + | 7 | Unused |
| 4 | Unused | 8 | Unused |

**Table A-6
Universal Serial Bus**



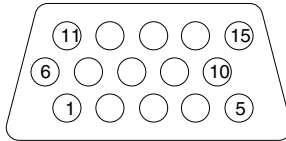
| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1 | +5 VDC | 3 | Data + |
| 2 | Data - | 4 | Ground |

Table A-7
Serial



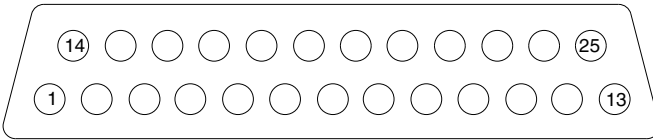
| Pin | Signal | Pin | Signal |
|------------|---------------------|------------|----------------|
| 1 | Carrier detect | 6 | Data set ready |
| 2 | Receive data | 7 | Ready to send |
| 3 | Transmit data | 8 | Clear to send |
| 4 | Data terminal ready | 9 | Ring indicator |
| 5 | Signal ground | | |

Table A-8
External Monitor



| Pin | Signal | Pin | Signal |
|-----|---------------|-----|-----------------|
| 1 | Red analog | 9 | +5 VDC |
| 2 | Green analog | 10 | Ground |
| 3 | Blue analog | 11 | Monitor detect |
| 4 | Not connected | 12 | DDC 2B data |
| 5 | Ground | 13 | Horizontal sync |
| 6 | Ground analog | 14 | Vertical sync |
| 7 | Ground analog | 15 | DDC2B clock |
| 8 | Ground analog | | |

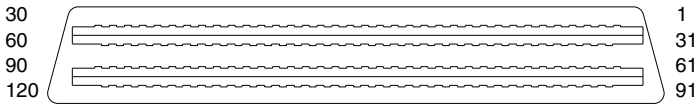
Table A-9
Parallel



| Pin | Signal | Pin | Signal |
|-----|------------|-------|---------------------|
| 1 | Strobe* | 10 | Acknowledge* |
| 2 | Data bit 0 | 11 | Busy |
| 3 | Data bit 1 | 12 | Paper out |
| 4 | Data bit 2 | 13 | Select |
| 5 | Data bit 3 | 14 | Auto line feed* |
| 6 | Data bit 4 | 15 | Error* |
| 7 | Data bit 5 | 16 | Initialize printer* |
| 8 | Data bit 6 | 17 | Select in* |
| 9 | Data bit 7 | 18–25 | Signal ground |

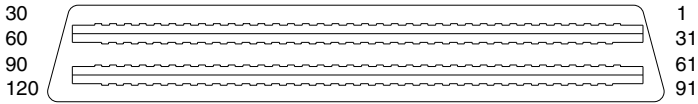
*Signal is active low.

Table A-10
Docking



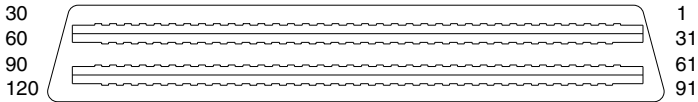
| Pin | Signal | Pin | Signal |
|-----|---------|-----|-------------|
| 1 | EBOXL | 16 | RDATA |
| 2 | AGND | 17 | TRK0 |
| 3 | EBOXS1 | 18 | WDATA |
| 4 | RED | 19 | WGATE |
| 5 | AGND | 20 | STEP |
| 6 | GREEN | 21 | DIR |
| 7 | AGRD | 22 | POWER ON |
| 8 | BLUE | 23 | SYS RESET |
| 9 | AGND | 24 | GND |
| 10 | VSYNC | 25 | DSKCHG |
| 11 | HSYNC | 26 | +5 V (VDD) |
| 12 | DDC DAT | 27 | AUGND |
| 13 | DDC CLK | 28 | XA2/L IN |
| 14 | GND | 29 | XA3/R IN |
| 15 | INDEX | 30 | MID0/MIC IN |

Table A-10
Docking (Continued)



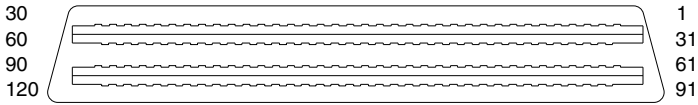
| Pin | Signal | Pin | Signal |
|-----|----------------|-----|------------|
| 31 | AUGND | 46 | SRDY |
| 32 | XA0/L OUT | 47 | EBOXS1/GND |
| 33 | XSD/MIC SN | 48 | RI1 EX |
| 34 | XA1/R OUT | 49 | GND |
| 35 | GND | 50 | SLCT LD0 |
| 36 | GND | 51 | PE LD1 |
| 37 | EXPCLK2 | 52 | ACK LD2 |
| 38 | +3.3 V | 53 | BUSY LD3 |
| 39 | EXPCLK0 | 54 | GND |
| 40 | +5 V (8051VCC) | 55 | STRB LD4 |
| 41 | EXPLCK | 56 | ALF LD5 |
| 42 | EBOXS2 | 57 | INIT LD6 |
| 43 | GND | 58 | SLCTIN LD7 |
| 44 | EBOXL | 59 | GND |
| 45 | EBOXL/GND | 60 | PDATA0 LD8 |

Table A-10
Docking (Continued)



| Pin | Signal | Pin | Signal |
|-----|---------------|-----|---------------|
| 61 | PDATA1 LD9 | 76 | DRT1 LIIC DAT |
| 62 | PDATA2 LD10 | 77 | DSR1 EX |
| 63 | PDATA3 LD11 | 78 | DCD1 EX |
| 64 | GND | 79 | 12C DATA |
| 65 | PDATA4 LD12 | 80 | GND |
| 66 | PDATA5 LD13 | 81 | 12C CLK |
| 67 | PDATA6 LD14 | 82 | GND |
| 68 | PDATA7 LD 15 | 83 | HDSEL |
| 69 | GND | 84 | GND |
| 70 | ERROR LCLK | 85 | WPROT |
| 71 | RXD1 LVREQ | 86 | EBOXS2/GND |
| 72 | TXD1 LCREQ | 87 | ERDY |
| 73 | RTS1 LEN | 88 | EBOXL/GND |
| 74 | GND | 89 | FLUSHREQ |
| 75 | CTS1 LIIC CLK | 90 | MEMACK |

**Table A-10
Docking (Continued)**



| Pin | Signal | Pin | Signal |
|-----|---------|-----|--------|
| 91 | PS2 VCC | 106 | GND |
| 92 | SERIRQ | 107 | AD[15] |
| 93 | PS2 CLK | 108 | AD[13] |
| 94 | EXPREQ | 109 | AD[11] |
| 95 | AD[29] | 110 | AD[09] |
| 96 | AD[31] | 111 | GND |
| 97 | AD[30] | 112 | AD[06] |
| 98 | AD[28] | 113 | AD[04] |
| 99 | AD[26] | 114 | AD[02] |
| 100 | GND | 115 | AD[00] |
| 101 | AD[24] | 116 | GND |
| 102 | AD[22] | 117 | FRAME |
| 103 | AD[20] | 118 | TRDY |
| 104 | AD[18] | 119 | STOP |
| 105 | AD[16] | 120 | PAR |

Power Cord Set Requirements

3-Conductor Power Cord Set

The wide range input feature of the notebook permits it to operate from any line voltage from 100 to 120 or 220 to 240 volts AC.

The power cord set received with the notebook meets the requirements for use in the country where the equipment is purchased.

Power cord sets for use in other countries must meet the requirements of the country where the notebook is used. For more information on power cord set requirements, contact a Compaq authorized reseller or service provider.

General Requirements

The requirements listed below are applicable to all countries:

- The length of the power cord set must be at least 1.5 m (5.00 feet) and a maximum of 2.0 m (6.50 feet).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord set must have a minimum current capacity of 10 amperes and a nominal voltage rating of 125 or 250 volts AC, as required by each country's power system.
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C13 connector, for mating with the appliance inlet on the back of the notebook.

Country-Specific Requirements

3-Conductor Power Cord Set Requirements

| Country | Accredited Agency | Applicable Note Number |
|-----------------|--------------------------|-------------------------------|
| Australia | EANSW | 1 |
| Austria | OVE | 1 |
| Belgium | CEBC | 1 |
| Canada | CSA | 2 |
| Denmark | DEMKO | 1 |
| Finland | FIMKO | 1 |
| France | UTE | 1 |
| Germany | VDE | 1 |
| Italy | IMQ | 1 |
| Japan | METI | 3 |
| The Netherlands | KEMA | 1 |
| Norway | NEMKO | 1 |
| Sweden | SEMKO | 1 |
| Switzerland | SEV | 1 |

3-Conductor Power Cord Set Requirements

| Country | Accredited Agency | Applicable Note Number |
|----------------|-------------------|------------------------|
| United Kingdom | BSI | 1 |
| United States | UL | 2 |

Notes


1. The flexible cord must be <HAR> Type HO5VV-F, 3-conductor, 1.0 mm² conductor size. The power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country where it will be used.
 2. The flexible cord must be Type SPT-3 or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15 A, 125 V) or NEMA 6-15P (15 A, 250 V) configuration.
 3. The appliance coupler, flexible cord, and wall plug must bear a “T” mark and registration number in accordance with the Japanese Dentori Law. The flexible cord must be Type VCT or VCTF, 3-conductor, 1.00-mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V) configuration.
-

C

Screw Listing

This appendix provides specification and reference information for the screws used in the notebook. All screws listed in this appendix are available in the Miscellaneous Screw Kit, spare part number 241440-001.

Table C-1
Phillips Metric 2.5 × 2.5 Screw

|  mm  | Color | Qty | Length | Thread | Head Width |
|---|-------|-----|--------|--------|------------|
| | Black | 1 | 4.0 mm | 2.5 mm | 5.0 mm |

Where used:

One screw that secures the hard drive to the base enclosure
(documented in Section 5.3)

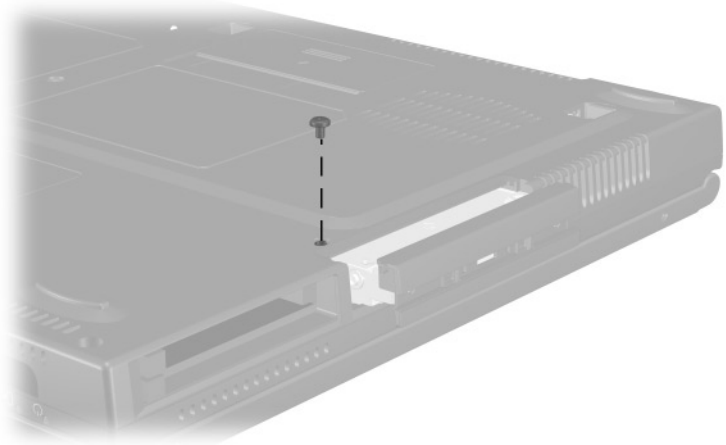
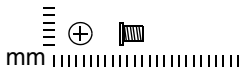


Figure C-1. PM2.5 × 2.5 Screw Location

Table C-2
Phillips Metric 1.5 × 3.5 Screw

|  | Color | Qty | Length | Thread | Head Width |
|--|-------|-----|--------|--------|------------|
| | Black | 2 | 3.0 mm | 2.0 mm | 3.0 mm |

Where used:

Two screws that secure the hard drive bezel to the hard drive (documented in Section 5.3)

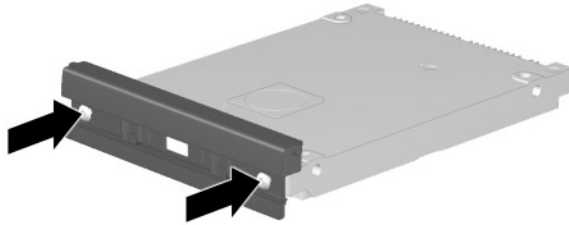
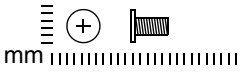


Figure C-2. PM1.5 × 3.5 Screw Location

Table C-3
Phillips Metric 2.5 × 5.0 Screw

|  | Color | Qty | Length | Thread | Head Width |
|--|-------|-----|--------|--------|------------|
| | Black | 3 | 5.0 mm | 2.5 mm | 4.5 mm |

Where used:

Evo Notebook N600c models—Two screws that secure the memory expansion compartment cover to the base enclosure

Evo Notebook N620c, N610c, and N610v models—Two screws that secure the mini PCI compartment cover to the base enclosure (documented in Section 5.5)

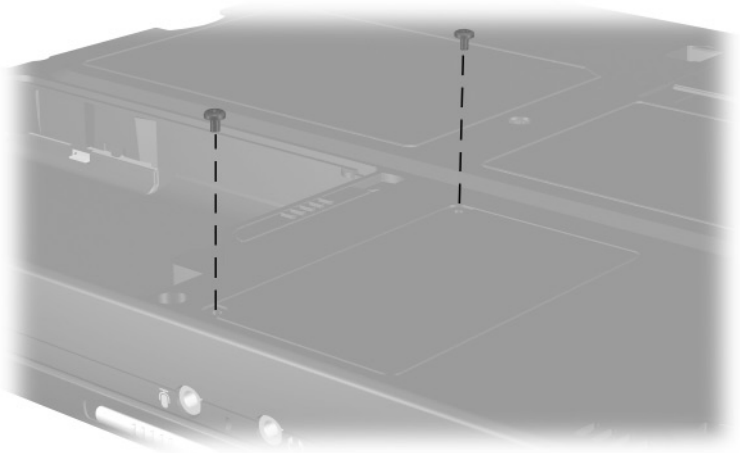




Figure C-3. PM2.5 × 5.0 Screw Location

Table C-3
Phillips Metric 2.5 × 5.0 Screw (Continued)

|  mm  | Color | Qty | Length | Thread | Head Width |
|---|-------|-----|--------|--------|------------|
| | Black | 3 | 5.0 mm | 2.5 mm | 4.5 mm |

Where used:

Evo Notebook N620c, N610c, and N610v models—One screw that secures the fan to the heat sink (documented in Section 5.14)

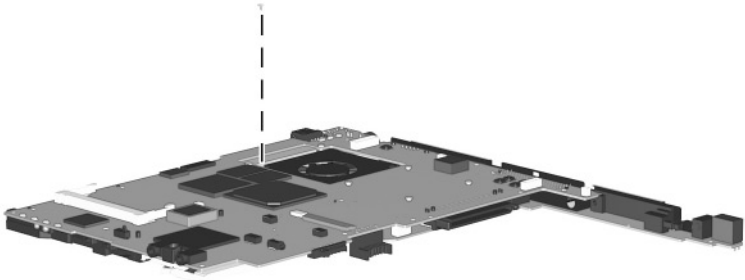
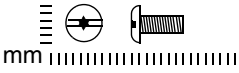


Figure C-4. PM2.5 × 5.0 Screw Location

Table C-4
Torx T8 Metric 2.5 × 7.0 Screw

|  | Color | Qty | Length | Thread | Head Width |
|--|-------|-----|--------|--------|------------|
| | Black | 12 | 7.0 mm | 2.5 mm | 5.0 mm |

Where used:

- ❶ One screw that secures the keyboard to the base enclosure (documented in Section 5.7)
- ❷ Three screws that secure the top cover to the base enclosure (documented in Section 5.12)
- ❸ **Evo Notebook N620c models**—Two screws that secure the top cover to the base enclosure in the hard drive bay (documented in Section 5.12)

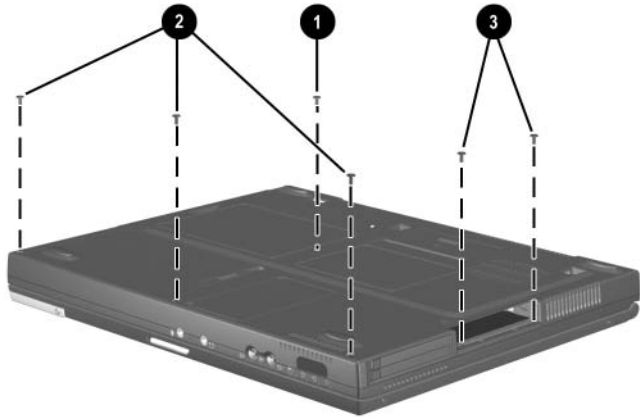
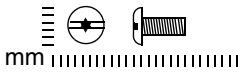


Figure C-5. T2.5 × 7.0 Screw Locations

Table C-4
Torx T8 Metric 2.5 × 7.0 Screw (Continued)

|  | Color | Qty | Length | Thread | Head Width |
|--|-------|-----|--------|--------|------------|
| | Black | 12 | 7.0 mm | 2.5 mm | 5.0 mm |

Where used:

- ❶ Two screws that secure the switch cover to the base enclosure (documented in Section 5.10)
- ❷ Two screws that secure the display to the base enclosure (documented in Section 5.11)
- ❸ **Evo Notebook N620c, N610c, and N610v models**—Two screws that secure the top cover to the base enclosure (documented in Section 5.12)

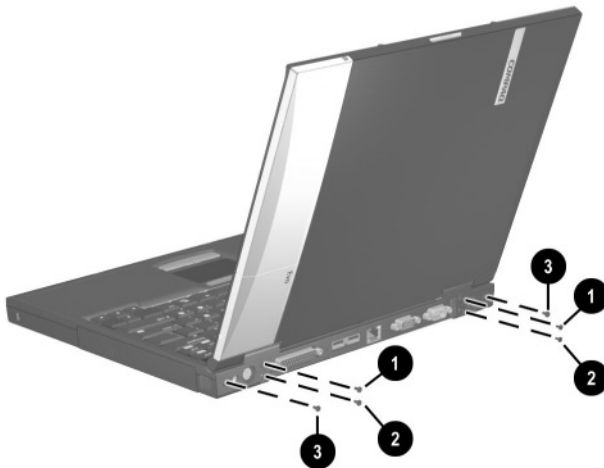
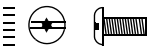



Figure C-6. TM2.5 × 7.0 Screw Locations

Table C-4
Torx T8 Metric 2.5 × 7.0 Screw (Continued)

|  mm  | Color | Qty | Length | Thread | Head Width |
|---|-------|-----|--------|--------|------------|
| | Black | 12 | 7.0 mm | 2.5 mm | 5.0 mm |

Where used:

- ❶ One screw that secures the display ground cable to the base enclosure (documented in Section 5.11)
- ❷ **Evo Notebook N620c, N610c, and N610v models**—One screw that secures the top cover to the base enclosure (documented in Section 5.12)

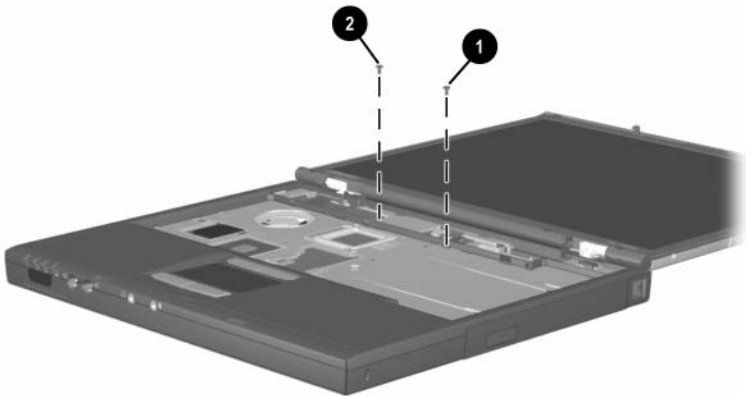
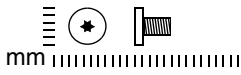


Figure C-7. TM2.5 × 7.0 Screw Locations

Table C-5
Torx T8 Metric 2.5 × 5.0 Screw

|  | Color | Qty | Length | Thread | Head Width |
|--|-------|-----|--------|--------|------------|
| | Black | 12 | 5.0 mm | 2.5 mm | 4.0 mm |

Where used:

- ❶ **Evo Notebook N600c models**—Two screws that secure the top cover to the base enclosure in the hard drive bay (documented in Section 5.12)
- ❷ Three screws that secure the top cover to the base enclosure in the Media Bay (documented in Section 5.12)
- ❸ **Evo Notebook N600c models**—Two screws that secure the top cover to the base enclosure (documented in Section 5.12)

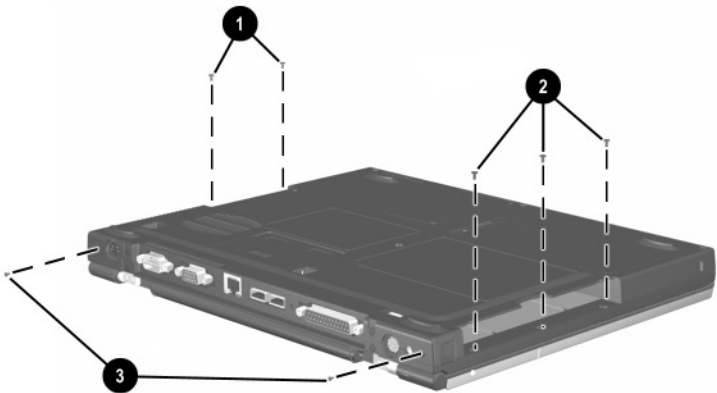




Figure C-8. TM2.5 × 5.0 Screw Locations

Table C-5
Torx T8 M2.5 × 5.0 Screw (Continued)

|  mm  | Color | Qty | Length | Thread | Head Width |
|---|-------|-----|--------|--------|------------|
| | Black | 12 | 5.0 mm | 2.5 mm | 4.0 mm |

Where used:

- ❶ Three screws that secure the system board to the base enclosure (documented in Section 5.13)
- ❷ **Evo Notebook N620c, N610c, and N610v models only**—Two screws that secure the system board to the base enclosure through the rear panel (documented in Section 5.13)

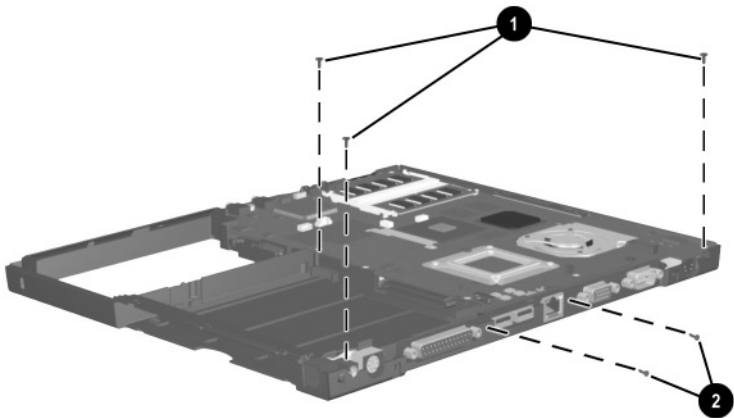
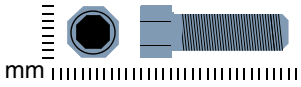


Figure C-9. M2.5 × 5.0 Screw Locations

Table C-6
7.0 mm × 20.0 mm Bushing Guide

|  | Color | Qty | Length | Thread | Head Width |
|--|--------|-----|--------|--------|------------|
| | Silver | 2 | 20 mm | n/a | 7.0 mm |

Where used:

Evo Notebook N600c models only—Two bushing guides that secure the system board to the base enclosure (documented in Section 5.13)

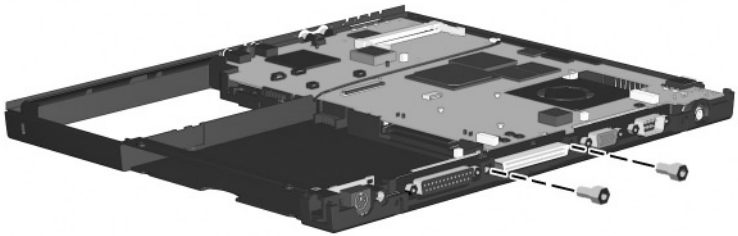
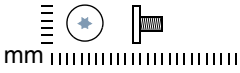


Figure C-10. 7.0 × 20.0 Bushing Guide Location

Table C-7
Torx Metric 2.0 x 3.0 Screw

|  | Color | Qty | Length | Thread | Head Width |
|--|--------|-----|--------|--------|------------|
| | Silver | 2 | 3.0 mm | 2.0 mm | 5.0 mm |

Where used:

Evo Notebook N620c, N610c, and N610v models—Two screws that secures the top cover to the system board (documented in Section 5.12)

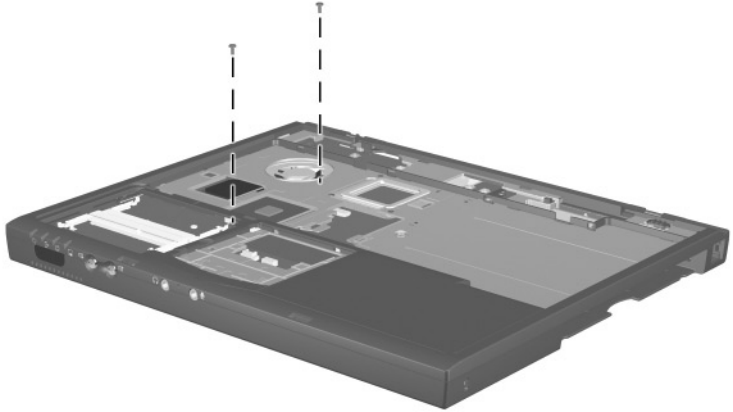




Figure C-11. TM2.0 x 3.0 Screw Location

Table C-8
Phillips Metric 2.0 × 4.0 Screw

|  mm  | Color | Qty | Length | Thread | Head Width |
|---|-------|-----|--------|--------|------------|
| | Black | 11 | 4.0 mm | 2.0 mm | 3.5 mm |

Where used:

Evo Notebook N600c models only—One screw that secures the fan to the system board (documented in Section 5.14)

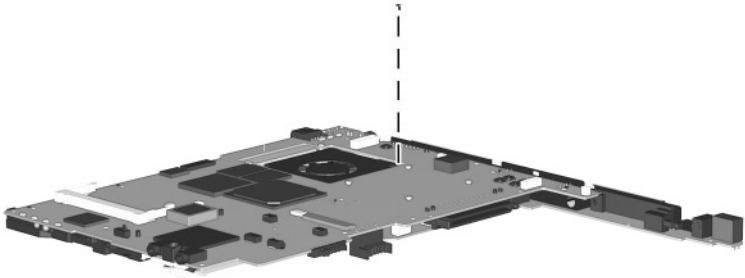
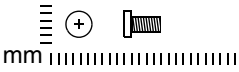


Figure C-12. PM2.0 × 4.0 Screw Location

Table C-8
Phillips M2.0 × 4.0 Screw (Continued)

|  | Color | Qty | Length | Thread | Head Width |
|--|-------|-----|--------|--------|------------|
| | Black | 11 | 4.0 mm | 2.0 mm | 3.5 mm |

Where used:

Evo Notebook N620c, N610c, and N610v models only—Three screws that secure the fan to the system board (documented in Section 5.14)

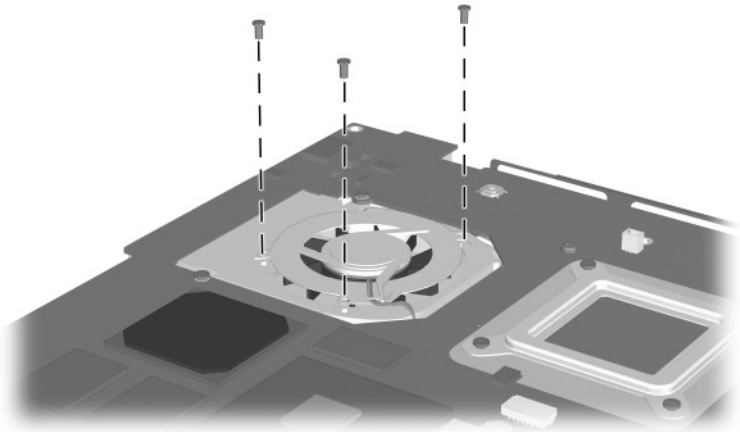





Figure C-13. PM2.0 × 4.0 Screw Location (Continued)

Table C-8
Phillips M2.0 × 4.0 Screw (Continued)

| mm    | Color | Qty | Length | Thread | Head Width |
|--|-------|-----|--------|--------|------------|
| | Black | 11 | 4.0 mm | 2.0 mm | 3.5 mm |

Where used:

Evo Notebook N620c, N610c, and N610v models only—Six screws that secure the heat sink and processor mounting bracket to the system board (documented in Section 5.15)

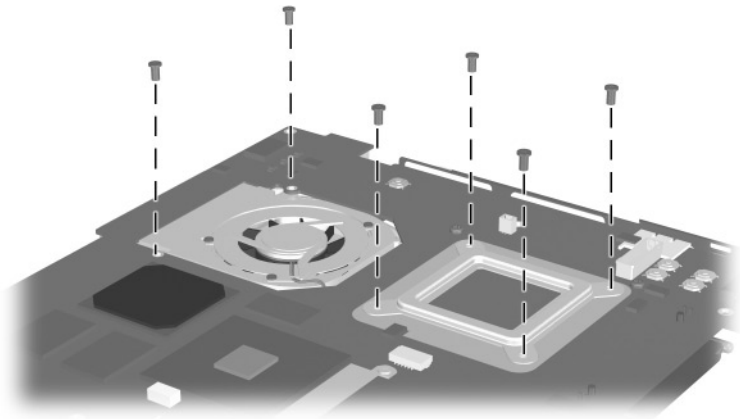


Figure C-14. PM2.0 × 4.0 Screw Location (Continued)

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