S08K-9440-00

ThinkPad 240 (2609)

**Hardware Maintenance
Manual Supplement**

August 1999

**Use this supplement with the
IBM Mobile Systems
Hardware Maintenance Manual**

The information in this supplement is intended for use in conjunction with the ThinkPad 240 Hardware Maintenance Manual.

Before using this information and the product it supports, be sure to read the general information under "Read This First" on page 1 of the ThinkPad 240 Hardware Maintenance Manual.

ThinkPad 240 Hardware Maintenance Manual Supplement

About This Supplement

This supplement contains service and reference information for the IBM ThinkPad 240 product. The headings used in these revised sections are the same as those used in the original corresponding sections of the ThinkPad 240. Additional headings are shown here for orientation. Refer to the appropriate heading in the Table of Contents of the ThinkPad 240 Hardware Maintenance Manual for additional information.

In the following procedures, comments to the servicer are conveyed in parenthesis after each heading.

Important Notice

The are two models of LCD panel used with the ThinkPad 240: LCD Type A and LCD Type B. Check the last five letters of the unit's serial number you are servicing to determine the model.

LCD Type A:

All ThinkPad 240 computers which have the last five alphanumeric characters: "00001" to "YZZZZ" are fitted with Type A panels.

Note: The number range is from 00001 to 99999, and the letter range is from AAAAA to YZZZZ.

LCD Type B:

All ThinkPad 240 computers which have the last five letters: "ZAAAA" to "ZZZZZ" are fitted with Type B panels.

The servicer need only check the fifth letter from the end. If the fifth letter from the end is "0 — Y" (inclusive), then the LCD panel is Type A. If the fifth letter from the end is "Z", then the LCD panel is Type B.

FRU Removals and Replacements

FRU Service Procedures

LCD FRU Replacement Notice: The TFT LCD for the notebook computer contains over 2,359,296 thin-film transistors (TFTs). A small number of missing, discolored, or lighted dots (on all the time) is characteristic of TFT LCD technology, but excessive pixel problems can cause viewing concerns. The LCD should be replaced if the number of missing, discolored, or lighted dots in any background is 8 or more.

1030 Keyboard

(Step 3, in the following table: the screw color is silver—not black, as stated in the ThinkPad 240.)

Step	Size (Quantity)	Head & Color	Torque
1	M2.0 x 9L (3)	Flat head, black	2.5 kgf-cm
3	M2.5 x 6L (1)	Flat head, silver	2.5 kgf-cm
Note: Make sure you use the correct screw for replacement.			

1060 LCD Unit ASM

(Step 5, in the following table: the screw color is silver—not black, as stated in the ThinkPad 240.)

Note: Refer to "ThinkPad 240 Hardware Maintenance Manual Supplement" on page 1 for information on LCD Type A and LCD Type B panel designations.

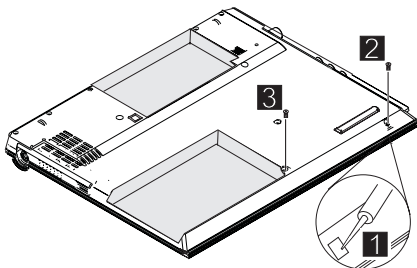| Step	Size (Quantity)	Head & Color	Torque
1	M2.0 x 4L (2)	Flat head, black	2.5 kgf–cm
5	M2.5 x 6 L (4)	Flat head, silver	3.5 kgf-cm
Note: Make sure you use the correct screw for replacement.			

1070 Upper Cover ASM

(A new step has been added in this FRU removal proce-
dure. Rather than the servicer switch between the
ThinkPad 240 and this supplement, the entire procedure is
shown.)

- 1010 Battery ASM
- 1020 Hard Disk Drive
- 1030 Keyboard
- 1060 LCD Unit ASM

To remove the upper cover ASM:

1. Remove the screw cover.
2. Remove the screw.
3. Remove the other screw as shown.

Step	Size (Quan-tity)	Head & Color	Torque
2	M2.0 x 4L (1)	Flat head, black	2.5 kgf-cm
3	M2.5 x 7L (1)	Flat head, black	2.5 kgf-cm
4	M2.0 x 4L	Flat head, black	2.0 kgf-cm
Note: Make sure you use the correct screw for replacement.			

4. Turn the notebook over; then remove the two screws.
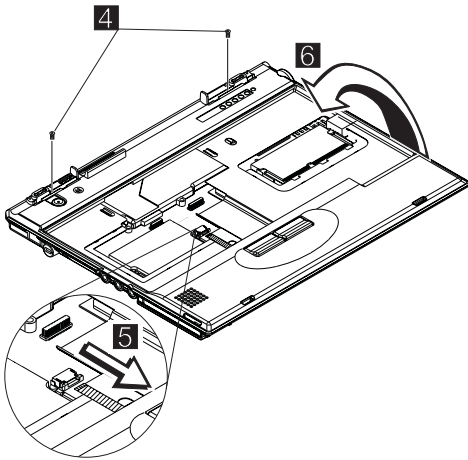
5. Disconnect the Touchbutton cable from the system board.

6. Carefully lift the upper cover to expose the speaker connector as shown.

7. Disconnect the speaker cable from the main unit. Now you can remove the upper cover ASM from the base cover ASM.
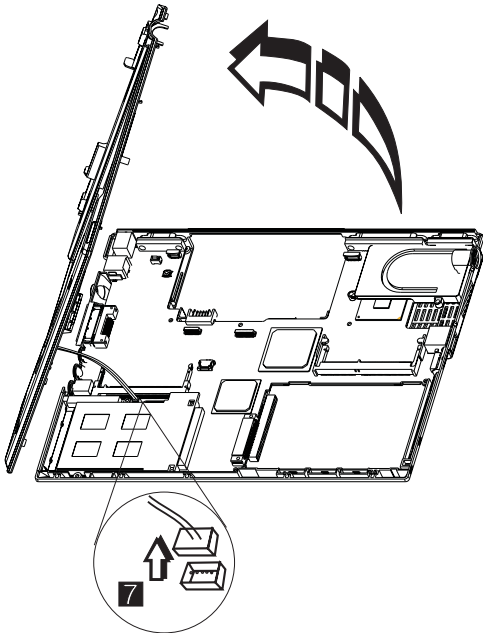
1175 LCD Panel ASM (LCD Type B)

(Apart from the screw information, the following FRU removal procedure is identical to "1170 LCD Panel ASM" in the ThinkPad 240.)

Note: Refer to "ThinkPad 240 Hardware Maintenance Manual Supplement" on page 1 for information on LCD Type A and LCD Type B panel designations.

Step	Size (Quantity)	Head & Color	Torque
3	M2.0 x 4L (4)	Flat head, silver	3.0 kgf–cm
Note: Make sure you use the correct screw for replacement.			

1185 LCD FPC ASM (LCD Type B)

Note: Refer to "ThinkPad 240 Hardware Maintenance Manual Supplement" on page 1 for information on LCD Type A and LCD Type B panel designations.

(This FRU removal/replacement procedure is not in the ThinkPad 240.)

- 1010 Battery ASM
- 1030 Keyboard
- 1150 LCD Bezel ASM
- 1160 LCD Inverter ASM
- 1170 LCD Panel ASM
- 1175 LCD Panel ASM (LCD Type B)

1. Remove the tape from the FPC cable.
2. Open the fasteners on the FPC cable holder.
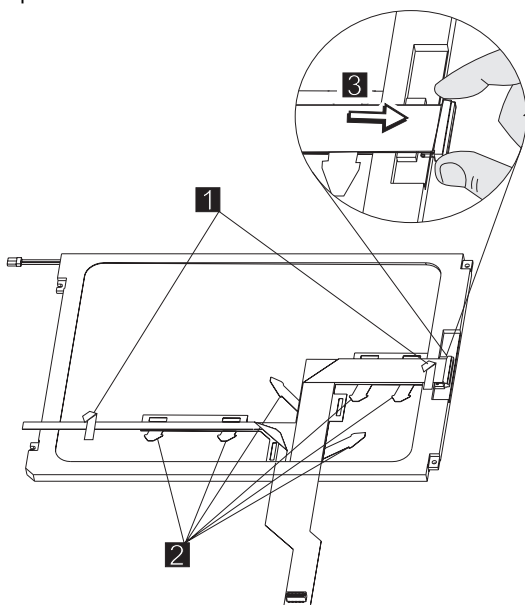
3. Disconnect the FPC connector from the LCD panel.

System Unit Parts Listing
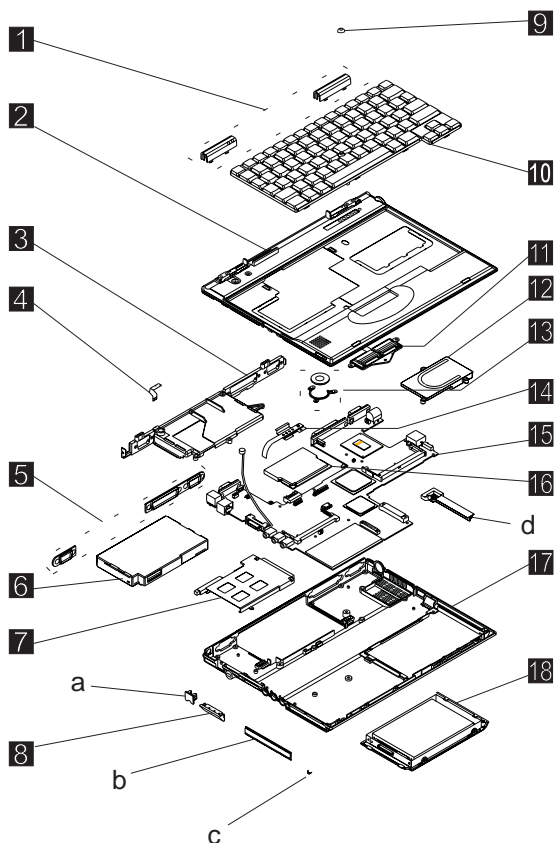
Index	Description	FRU Number
a - d	See MISC PARTS list	10L1955
1	HINGE CAP L/R	10L1954
2	UPPER COVER ASM	10L1944
3	REAR BRACKET	10L1952
4	LED CARD ASM (L)	10L1303
5	SERIAL/VGA CAP	10L1951
6	STD BATTERY PACK	02K6606
7	PCMCIA SLOT	10L1945
8	FDD CONNECTOR LID	10L1953
9	TRACKPOINT CAP	84G6536
10	See Keyboard list	
11	SELECT BUTTON ASM	10L1958
12	FAN ASM	10L1957

Index	Description	FRU Number
13	SPEAKER ASM	02K6307
14	LED CARD ASM (R)	10L1304
15	System BOARD ASM 32 MB (Model 1)	10L1302
	System BOARD ASM 64 MB (Model 2)	10L1312
16	MODEM CARD ASM	10L1305
17	BASE COVER ASM	10L1946
	BASE COVER ASM PRC	10L1948
18	HDD ASM 3.2 GB (Model 1)	05K9117
	HDD ASM 6.4 GB (Model 2)	05K9119
	HDD DOOR	10L1950

Description	FRU Number
AC ADAPTER	
AC Adapter 56W (2 PIN)	02K6554
AC Adapter 56W (2 PIN)	02K6548
AC Adapter 56W (3 PIN)	02K6555
AC Adapter 56W (3 PIN)	02K6550
KEYBOARD	
KBD ASM US English	02K6302
KBD ASM Japanese	02K6303
KBD ASM Traditional Chinese	02K6304
KBD ASM Canadian French	02K6306
KBD ASM UK English	02K4938
KBD ASM German	02K4939
KBD ASM French	02K4940
Miscellaneous	
Screw Kit	10L1956
MODEM CABLE ASM INTERNAL	05K2860
TELEPHONE CABLE US	27L0478
TELEPHONE CABLE Australia	27L0479
TELEPHONE CABLE UK	27L0480
TELEPHONE CABLE Germany	27L0481
TELEPHONE CABLE France	27L0482
32 MB DIMM	42H2819
64 MB DIMM	10L1313
128 MB DIMM	01K1153
EXTERNAL FDD CABLE	12J1711

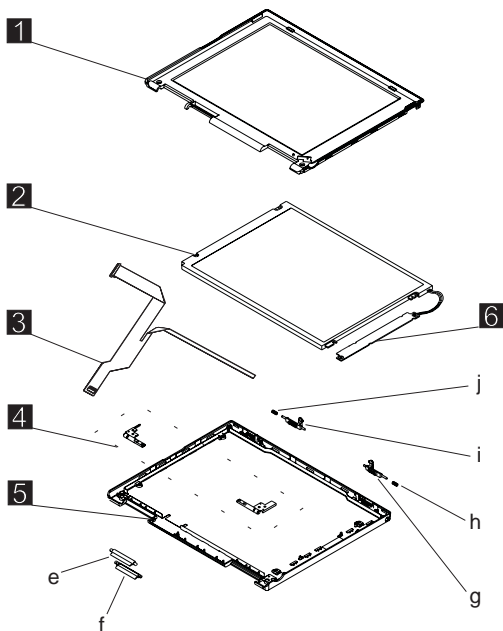| Description	FRU Number
EXTERNAL FDD ASM	05K8989 05K8990
LARGE BATTERY	02K6607
MISC PARTS	10L1955
(a) MODEM DOOR	
(b) SHUTTER (PCMCIA)	
(c) SPRING SHUTTER	
(d) WATER CHANNEL	
(e) FPC HOLDER (upper)	
(f) FPC HOLDER (lower)	
(g) HOOK KNOB - R	
(h) SPRING HOOK - R	
(i) HOOK KNOB - L	
(j) SPRING HOOK - L	
Others	
Power cord (Japan 2 PIN)	13H5273
Power cord (Argentina, Australia, Papua New Guinea, New Zealand, Paraguay, Uruguay)	76H3514
Power cord (Bahamas, Barbados, Bermuda, Bolivia, Canada, Cayman Islands, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras,Jamaica, Korea (South), Mexico, Netherlands, Antilles, Nicaragua, Panama, Peru, Philippines, Saudi Arabia, Suriname, Taiwan, Trinidad (West Indies), U.S.A., Venezuela)	76H3516
Power cord (Austria, Belgium, Bulgaria, Czech Republic, Egypt, Finland, France, Germany, Greece, Hungary, Iceland, Indonesia, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Turkey, former Yugoslavia)	76H3518
Power cord (Denmark)	76H3520
Power cord (Bangladesh, Pakistan, South Africa, Sri Lanka)	76H3522
Power cord (Abu Dhabi, Albania, Antigua, Bahrain, Brunei, Dubai, Fiji, Hong Kong, India, Ireland, Kenya, Kuwait, Macao, Malaysia, Nigeria, Oman, People's Republic of China, Qatar, Singapore, United Kingdom)	76H3524
Power cord (Switzerland)	76H3528
Power cord (Israel)	76H3532
Power cord (Chile, Italy)	76H3530
Power cord (Korea)	76H3535
Power cord (PRC)	02K0539

LCD Unit Parts Listing (LCD Type A)
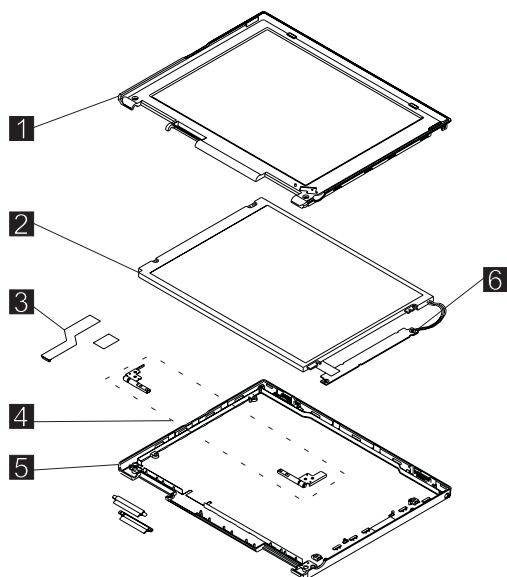
Note: Refer to "ThinkPad 240 Hardware Maintenance
Manual Supplement" on page 1 for information on
LCD Type A and LCD Type B panel designations.

Index	Description	FRU Number
e - j	See MISC PARTS	10L1955
1	LCD BEZEL ASM	10L1941
2	LCD UNIT-TFT 10.4-inch (LCD Type A)	05K9523
3	LCD CABLE ASM (LCD Type A)	05K2859
4	HINGE ASM L/R	10L1943
5	LCD REAR COVER ASM (LCD Type A)	10L1939
	LCD REAR COVER ASM Korea	10L1940
6	INVERTER CARD ASM (LCD Type A)	10L1306

LCD Unit Parts Listing (LCD Type B)

Note: Refer to "ThinkPad 240 Hardware Maintenance Manual Supplement" on page 1 for information on LCD Type A and LCD Type B panel designations.

Index	Description	FRU Number
e - j	See MISC PARTS	10L1955
1	LCD BEZEL ASM	10L1941
2	LCD UNIT-TFT 10.4-inch (LCD Type B)	05K9589
3	LCD CABLE ASM (LCD Type B)	27L0489
4	HINGE ASM L/R	10L1943
5	LCD REAR COVER ASM (LCD Type B)	08K5820
6	INVERTER CARD ASM (LCD Type B)	10L1431

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