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## Model L40 SX (8543)

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## General Checkout

001

### DOES THE POWER SOURCE APPEAR TO BE OK?

Yes No

002

Go to "Power Systems Checkout" on page 27.

003

- Power-off the computer and all external devices.
- Insert the backup copy of the Advanced Diagnostics diskette into the diskette drive.
- Power-on the computer and check for the following responses:
  1. All icons on the system-status display appear once for about 1 second.  
**Note:** Some icons remain on after 1 second.
  2. Memory counts.
  3. One or two short beeps
  4. The Speaker icon starts blinking and continues blinking until any key is pressed.
  5. The IBM Logo is displayed on the screen.

### DID YOU RECEIVE THE CORRECT RESPONSES?

Yes No

004

Go to "Symptom-to-FRU Index" on page 32.

005

- Advance to the Main Menu.
- Press **Ctrl+A**, then type **0** to run the tests.

### DID YOU RECEIVE AN ERROR MESSAGE OR ERROR CODE?

Yes No

006

The diagnostic tests have completed without detecting an error.

007

Go to "Symptom-to-FRU Index" on page 32.

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## Memory Checkout

### Notes:

1. Power-off the computer before removing or replacing any parts.
2. Run AUTOMATIC CONFIGURATION after removing or replacing memory modules. (If you have to run configuration with your own diskette, be sure the customer has all the correct option diskettes available.)
3. Disregard 164 Memory-Size Errors.  
(Model L40 does not work with the combination of two 4MB memory modules installed.)

**001**

- Remove the memory module kits in connectors 1 and 2 if installed. Note which memory module kit is in connector 1.
- Run the memory tests.  
Use the RUN TESTS ONE TIME option.

**DID THE MEMORY TESTS END WITHOUT AN ERROR?**

**Yes No**

**002**

Replace the system board.

**003**

**DID YOU REMOVE THE MEMORY MODULE KIT IN CONNECTOR 1?**

**Yes No**

**004**

Go to Step 007.

**005**

- Reinstall the memory module in connector 1.
- Run the memory test.  
Use the RUN TESTS ONE TIME option.

**DID THE MEMORY TESTS END WITHOUT AN ERROR?**

**Yes No**

**006**

Replace the memory module in connector 1.  
If that does not correct the problem, replace the system board.

**007**

(Step **007** continues)

(CONTINUED)

**007** (continued)

**DID YOU REMOVE THE MEMORY MODULE KIT IN CONNECTOR 2?**

**Yes No**

**008**

Go to Step 011.

**009**

- Reinstall the memory module in connector 2.
- Run the memory test.  
Use the RUN TESTS ONE TIME option.

**DID THE MEMORY TESTS END WITHOUT AN ERROR?**

**Yes No**

**010**

Replace the memory module in connector 2.  
If that does not correct the problem, replace the system board.

**011**

Check if the actual memory size of the memory module is different from the displayed memory size on the screen. If the problem occurs intermittently, run the memory tests multiple times to have an error log.

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## Power Systems Checkout

### Note

One or all of the batteries can discharge if there is a short circuit in the computer.

1. Replace the failing FRU if the power supply problem is caused by a short circuit.
2. Determine if one (or all) of the batteries have become discharged. Replace a discharged battery with a known-good spare (or recharge the main or standby battery.)

The test procedures for each power supply are found on the following pages.

- “Testing the AC Adapter” on page 29.
- “Testing the Rechargeable Battery” on page 29.
- “Testing the Backup Battery” on page 30.
- “Testing the Standby Battery” on page 30.
- “Testing the Quick Charger” on page 31.

None of the above? Follow the steps below.

**001**

### DID THE PROBLEM OCCUR ONLY WHEN USING THE AC ADAPTER?

Yes No

**002**

Go to Step 004.

**003**

Go to “Testing the AC Adapter” on page 29. If that does not correct the problem, replace the system board.

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**004**

### DID THE PROBLEM OCCUR ONLY WHEN USING THE BATTERY?

Yes No

**005**

Go to Step 011 on page 28.

**006**

### DOES A FULLY-CHARGED BATTERY DISCHARGE QUICKLY?

Yes No

**007**

Go to Step 010 on page 28.

(CONTINUED)

**008**

- Run advanced diagnostics for all devices using the AC adapter. Use the 'RUN TEST ONE TIME' option.

**DID ALL THE TESTS END WITHOUT AN ERROR?**

**Yes No**

**009**

Follow the instructions on the screen.  
If the instructions do not appear or do not correct the problem, replace the system board.

**010**

Go to "Testing the Rechargeable Battery" on page 29. If that does not correct the problem, replace the system board.

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**011**

- Remove the following if installed:
  - Rechargeable battery
  - Standby battery
  - Backup battery
  - Memory module kits in connectors 1 and 2
  - Internal Data/Fax Modem adapter
  - Serial adapter
  - Numeric keypad
  - TrackPoint
  - Mouse
  - External keyboard
  - External CRT display
  - Cables to the hard disk drive
  - Cables to the diskette drive
  - Power cable to the LCD
  - Signal cables to the LCD

- Connect the AC adapter and power-on the computer.

**DID YOU HEAR ONE LONG OR TWO SHORT BEEPS?**

**Yes No**

**012**

Replace the system-status display to verify the fix. If the problem still remains, put back the original system-status display, then replace the system board.

**013**

- Suspect one of the options or devices. Reinstall each of the options or devices to the computer one at a time, and power-on the computer to see if the original problem occurs.

(Step **013** continues)

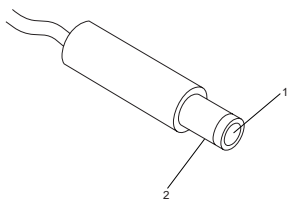
### 013 (continued)

- Replace the last installed option or device when the problem occurs.

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## Testing the AC Adapter

1. If a noise can be heard from the AC adapter when it is plugged into line voltage, replace the AC adapter.  
If a noise still comes from the AC adapter, suspect the computer.  
If not, the AC adapter has a problem. Replace the AC adapter with the original one, then go to the next step.
2. Measure the output voltage at the plug of the AC adapter cable.

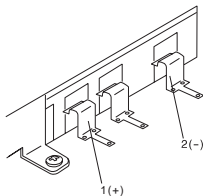


Pin	Voltage (V dc)
1	+14.3 to +15.8
2	Ground

If the voltage is not correct, replace the AC adapter.

## Testing the Rechargeable Battery

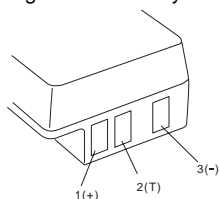
1. Remove the keyboard.
2. Set the rechargeable battery in place without connecting any external power devices.
3. Measure the voltage between terminals 1 (+) and 2 (-) and note the voltage.



4. Using the AC adapter, apply external power to the computer. Make sure that a charge arrow appears in the system-status display.
5. Measure the voltage again between terminals 1 (+) and 2 (-).

If the voltage is not greater than the one measured in Step 3, replace the AC adapter. If the voltage is greater than the one measured in Step 3, go to the next step.

- Remove the rechargeable battery from the computer.
- Measure the voltage at the battery terminals.



Pin	Voltage (V dc)
1	+8.5 to +12.6
3	Ground

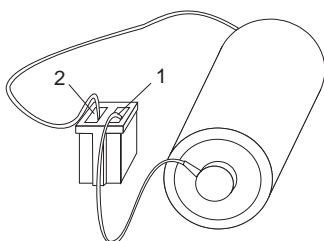
If the voltage is not correct, the rechargeable battery is discharged or defective. If the voltage is correct, go to the next step.

- Using a low-power ohm meter, measure the resistance at the battery terminals between 2 (T) and 3 (-). The resistance must be 4 kilohms to 30 kilohms.

If the resistance is out of range, replace the rechargeable battery.

## Testing the Backup Battery

- Remove the keyboard and the top cover.
- Measure the voltage at the connectors of the backup battery.



Pin	Voltage (V dc)
1	+2.8 to +3.2
2	Ground

If the voltage is not correct, the backup battery is discharged by a short circuit or is defective.

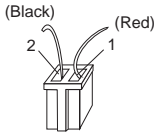
## Testing the Standby Battery

**Note:** The charging time required is 48 hours.

- Remove the keyboard and the top cover.
- Connect the AC adapter to the computer.



3. Disconnect the standby battery connector from the system board and measure the voltage at the connector of the standby battery as shown.



Pin	Voltage (V dc)
1	+3.0 to +4.5
2	Ground

If the voltage is correct, perform the failing operation with a fully-charged standby battery to isolate the problem.

If the voltage is not correct, continue.

4. Measure the output voltage at the connector on the system board.



(Top View)

If the voltage is higher than measured in Step 3, the standby battery is discharged or is defective.

If the voltage is the same as measured in Step 3 or less than +3.0 V dc, replace the standby battery. If the problem remains, replace the system board.

**Testing the Quick Charger:** If a noise can be heard from the operating quick charger, replace it.

1. Perform steps 6 through 8 on page 30 of the "Testing the Rechargeable Battery" to verify the rechargeable battery for correct operation.
2. Plug the quick charger into an electrical outlet.  
If the amber power indicator does not turn on, replace the quick charger.
3. Install the rechargeable battery.  
If the green charging indicator is not blinking, replace the quick charger.

## Symptom-to-FRU Index

The Symptom-to-FRU Index lists symptoms and errors and the possible causes. The most likely cause is listed first.

If the computer displays an error message, first replace FRUs listed in the error message. An *X* in an error message can be any number.

**Note:** If you have an IBM device with its own service manual or a device not supported by the advanced diagnostics tests, refer to the manual for that device.

Symptom/Error	FRU/Action
One or more keys do not work. (See "External Keyboard/Auxiliary Input Device Checkout" on page 465 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>Keyboard</b></li> <li>2. System Board</li> </ol>
No beep and a blank or unreadable display during POST. (See "Power Systems Checkout" on page 27 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Any options or devices</li> <li>3. Power source when failing</li> <li>4. Speaker</li> </ol>
No beep with a normal display during POST.	<ol style="list-style-type: none"> <li>1. <b>Speaker</b></li> <li>2. System Board</li> </ol>
Continuous beep	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Any options or devices</li> </ol>
Repeating short beeps. (See "External Keyboard/Auxiliary Input Device Checkout" on page 465 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Keyboard</li> </ol>
Dew Point or Temperature icon appears with one long and one short beep.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Power source when failing</li> </ol>
One long and one short beep.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Power source when failing</li> </ol>
One long and two short beeps.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Power source when failing</li> </ol>
One short beep and a blank, unreadable, or flashing display with no external display attached.	<ol style="list-style-type: none"> <li>1. <b>Display (LCD)</b></li> <li>2. System Board</li> <li>3. Power source when failing</li> </ol>
One short beep and Diskette Prompt or a program load from the hard disk drive or unable to read diskette(s).	<ol style="list-style-type: none"> <li>1. <b>Diskette Drive</b></li> <li>2. System Board</li> <li>3. Diskette Drive Cable</li> </ol>

<b>Symptom/Error</b>	<b>FRU/Action</b>
Two short beeps and a blank display.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Any options or devices</li> </ol>
External display problems. (See "External Display Self-Test" on page 464 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>External Display</b></li> <li>2. System Board</li> </ol>
Incorrect memory size during POST. (See "Memory Checkout" on page 25 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Memory Module Kits</li> </ol>
Computer hang-up or intermittent hang-up.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Hard Disk Drive</li> <li>3. Math Coprocessor</li> <li>4. Replace the last device being tested</li> </ol> <p>(See "Undetermined Problem" on page 36.)</p>
Computer does not suspend or resume. (Check the Suspend icon to make sure of the failure.)	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. System-Status Display Assembly</li> <li>3. Any options or devices</li> </ol>
Computer does not power off.	<ol style="list-style-type: none"> <li>1. <b>System-Status Display Assembly</b></li> <li>2. System Board</li> </ol>
Real-time clock inaccurate.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> </ol>
Printer problems.	<ol style="list-style-type: none"> <li>1. <b>See "Printer Checkout" on page 468.</b></li> </ol>
Serial or parallel port device problems.	<ol style="list-style-type: none"> <li>1. <b>Device</b></li> <li>2. Cable</li> <li>3. System Board</li> </ol>
ICON is incorrectly blinking or stays on.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Related Device</li> </ol>
ICON incorrectly remains off, but diagnostics runs without an error.	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Related Device</li> <li>3. System-Status Display Assembly</li> </ol>
Internal Data/Fax Modem does not communicate with a remote modem or a fax. (See "Fax/Modem Checkout" on page 466 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>Internal Data/Fax Modem</b></li> </ol> <p>(Make sure <i>Data/Fax Modem power</i> option is set to on in the Set Features program.)</p>
<b>101, 103, 107, 111</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Hard Disk Drive</li> <li>3. Diskette Drive</li> <li>4. Any attached devices</li> </ol>
<b>109, 110, 121</b> (See "Memory Checkout" on page 25 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>Memory Module Kits</b></li> <li>2. System Board</li> </ol>

<b>Symptom/Error</b>	<b>FRU/Action</b>
<b>122, 124</b>	<ol style="list-style-type: none"> <li><b>System Board</b></li> <li>Auxiliary Input Device</li> <li>Keyboard</li> </ol>
<b>123</b>	<ol style="list-style-type: none"> <li><b>Hard Disk Drive</b></li> <li>System Board</li> <li>Hard Disk Drive Cable</li> </ol>
<b>141</b>	<ol style="list-style-type: none"> <li><b>System-Status Display Assembly</b></li> <li>System Board</li> </ol>
<b>149</b>	<ol style="list-style-type: none"> <li><b>System Board</b></li> <li>Hard Disk Drive</li> <li>Hard Disk Drive Cable</li> </ol>
<b>161</b>	<ol style="list-style-type: none"> <li><b>Run Automatic Configuration</b></li> <li>Backup Battery</li> <li>System Board</li> </ol>
<b>162</b>	<ol style="list-style-type: none"> <li><b>Run Automatic Configuration, then check the installed devices using the View configuration utility.</b></li> <li>System Board</li> <li>Diskette Drive</li> <li>Hard Disk Drive</li> <li>Math Coprocessor</li> <li>Diskette Drive Cable</li> <li>Hard Disk Drive Cable</li> </ol>
<b>163</b>	<ol style="list-style-type: none"> <li><b>Time and Date Set?</b></li> <li>System Board</li> </ol>
<b>164</b> (See "Memory Checkout" on page 25 before replacing any FRUs.)	<ol style="list-style-type: none"> <li><b>Run Automatic Configuration</b></li> <li>Memory Module Kits</li> <li>System Board</li> </ol>
<b>199</b>	<ol style="list-style-type: none"> <li><b>See "Checking Installed Devices" on page 37.</b></li> </ol>
<b>1XX</b> (not listed above)	<ol style="list-style-type: none"> <li><b>System Board</b></li> </ol>
<b>211</b> (on POST)	<ol style="list-style-type: none"> <li><b>System Board</b></li> <li>Memory Module Kits</li> </ol>
<b>221</b> (on POST)	<ol style="list-style-type: none"> <li><b>System Board</b></li> </ol>
<b>204, 214, 224, 240</b>	<ol style="list-style-type: none"> <li><b>System Board</b></li> <li>Memory Module Kits</li> </ol>
<b>25X</b>	<ol style="list-style-type: none"> <li><b>System Board</b></li> </ol>
<b>2XX</b> (not listed above) (See "Memory Checkout" on page 25 before replacing any FRUs.)	<ol style="list-style-type: none"> <li><b>Memory Module Kits</b></li> <li>System Board</li> </ol>

<b>Symptom/Error</b>	<b>FRU/Action</b>
<b>301, 302</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Keyboard</li> </ol>
<b>303</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Numeric Keypad</li> <li>3. Keyboard</li> </ol>
<b>304, 305</b> (See "External Keyboard/Auxiliary Input Device Checkout" on page 465 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>Keyboard</b></li> <li>2. System Board</li> <li>3. Numeric Keypad</li> </ol>
<b>306, 310</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> </ol>
<b>308</b>	<ol style="list-style-type: none"> <li>1. <b>Numeric Keypad</b></li> </ol>
<b>3XX</b> (not listed above) (See "External Keyboard/Auxiliary Input Device Checkout" on page 465 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Auxiliary input device</li> <li>3. Keyboard</li> </ol>
<b>602, 653, 654</b>	<ol style="list-style-type: none"> <li>1. <b>Defective diskette</b></li> <li>2. Diskette Drive</li> <li>3. System Board</li> </ol>
<b>655, 660, 661</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> </ol>
<b>6XX</b> (not listed above)	<ol style="list-style-type: none"> <li>1. <b>Diskette Drive</b></li> <li>2. System Board</li> <li>3. Diskette Drive Cable</li> </ol>
<b>7XX</b>	<ol style="list-style-type: none"> <li>1. <b>Math Coprocessor</b></li> <li>2. System Board (IBM does not supply a math coprocessor)</li> </ol>
<b>9XX</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Any parallel Device</li> <li>3. Communication Cable</li> </ol>
<b>1107</b>	<ol style="list-style-type: none"> <li>1. <b>Communication Cable</b></li> </ol>
<b>11XX</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Any serial adapter</li> <li>3. Communication Cable</li> </ol>
<b>1207</b>	<ol style="list-style-type: none"> <li>1. <b>Communication Cable</b></li> </ol>
<b>12XX</b>	<ol style="list-style-type: none"> <li>1. <b>Any serial adapter</b></li> <li>2. System Board</li> <li>3. Any serial device</li> <li>4. Communication Cable</li> </ol>
<b>1705 to 1707, 1709, 1711, 1718 to 1720, 1730, 1732</b>	<ol style="list-style-type: none"> <li>1. <b>Hard Disk Drive</b> (Reformatting the hard disk can recover from the problem.)</li> </ol>

<b>Symptom/Error</b>	<b>FRU/Action</b>
<b>17XX</b> (not listed above)	<ol style="list-style-type: none"> <li>1. <b>Hard Disk Drive</b></li> <li>2. System Board</li> <li>3. Hard Disk Drive Cable</li> </ol>
<b>24XX</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> </ol>
<b>5001 to 5016</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> </ol>
<b>5017 to 502X</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. LCD Display Assembly</li> </ol>
<b>503X</b>	<ol style="list-style-type: none"> <li>1. <b>External CRT Display</b></li> <li>2. System Board</li> </ol>
<b>8601, 8602</b>	<ol style="list-style-type: none"> <li>1. <b>Pointing Device</b></li> <li>2. System Board</li> <li>3. Numeric Keypad</li> </ol>
<b>8604</b>	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> </ol>
<b>86XX</b> (not listed above)	<ol style="list-style-type: none"> <li>1. <b>System Board</b></li> <li>2. Pointing Device</li> <li>3. Numeric Keypad</li> </ol>
<b>101XX</b> (See "Fax/Modem Checkout" on page 466 before replacing any FRUs.)	<ol style="list-style-type: none"> <li>1. <b>Internal Data/Fax Modem</b></li> <li>2. System Board</li> <li>3. Any serial device</li> </ol>
<b>102XX</b>	<ol style="list-style-type: none"> <li>1. <b>System-Status Display Assembly</b></li> <li>2. System Board</li> <li>3. Related device</li> </ol>

## Undetermined Problem

You are here because the diagnostics tests did not identify the failing FRU.

Check the power supply in use (see "Power Systems Checkout" on page 27). If the power systems are operating correctly, return here and continue with the following procedure.

1. Power-off the computer and remove the battery packs from the computer.
2. Remove or disconnect one of the following devices or adapter (do not isolate FRUs that are known to be good).
  - a. Non-IBM devices
  - b. Modem, printer, mouse, or other external device
  - c. IC DRAM card
  - d. Hard disk drive (fixed disk drive) or diskette drive
  - e. Any adapter and device.
3. Power-on the computer and start the system program.
4. If the symptom remains, repeat steps 2 and 3 until you find the failing FRU or until all FRUs have been removed.
5. If all of the FRUs listed have been removed and the problem remains, replace the system board.

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## Related Service Procedures

### Checking Installed Devices

The Installed Devices List shows the presence of devices in the computer. If an adapter or device is missing from the list, you might have one of the following conditions.

- An adapter or device is defective.
- The device missing from the list is an unrecognizable drive or adapter.
- The device missing from the list requires an additional diskette. (See the device service manual.)
- A power supply voltage is incorrect (see "Power Systems Checkout" on page 27).

If the adapter is on the list, run the adapter diagnostics tests. If the list contains an adapter or device that is not installed, go to "Undetermined Problem" on page 36.

### Power-on Password

#### Important

This information is not available in this HMM online format. See your IBM Servicer or IBM Authorized Dealer for this procedure.

### How to Run Advanced Diagnostics

1. Power-off the computer.
2. Insert the backup copy of the Reference Diskette into the diskette drive.
3. Power-on the computer.
4. Advance to the Main Menu.
5. Press **Ctrl+A** to run the System Checkout.

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## Product Overview

The following table provides a brief overview of the computer features.

Feature	Description
Processor (MHz)	386SX 20-Mhz
Bus Architecture	AT Bus
Memory (Standard)	2MB
Memory (Maximum)	18MB
Video	VGA
Diskette Drive	3.5-inch
Hard Drive	60MB



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## FRU Removals and Replacements

Follow the numerical sequence in the FRU removal sequence list and the exploded view to remove or disconnect parts in the correct order. The letters in parentheses in the list indicate screw types. See the "Screw Size Chart" on page 19 to match the letters to the correct screw type and size before replacing each screw.

### Safety Notice 8: Translation on page 13

Before removing any FRU, power-off the computer, unplug all power cords from electrical outlets, remove the battery pack, then disconnect any interconnecting cables.

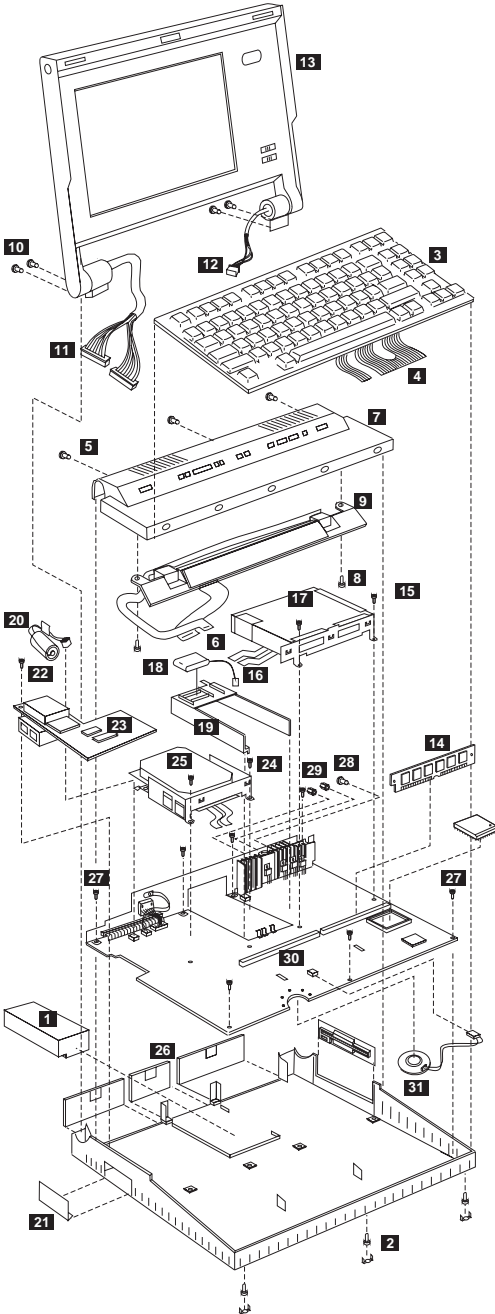
### Safety Notice 1: Translation on page 7

Before the computer is powered-on after FRU replacement, make sure all screws, springs, or other small parts are in place and are not left loose inside the computer. Verify this by shaking the computer and listening for rattling sounds. Metallic parts or metal flakes can cause electrical shorts.

- 1 Battery Pack**
- 2 Three Screw Covers and Three Screws (C)**
- 3 Loosen Keyboard Assembly**  
(Raise front until it clears case.)
- 4 Two Ribbon Cables and Keyboard**  
(Slide keyboard forward and flip it over in front of computer.)
- 5 Three Top Cover Screws (C)**  
(Inside right and left rear access doors along top edge)
- 6 Two Status Display Ribbon Cables**
- 7 Top Cover**  
(Use small screwdriver to release latch on left side, if necessary.)
- 8 Two Status Display Screws (F)**  
(One on each end)
- 9 Status Display Assembly**  
(contains on/off and power saver switches)
- 10 Four Hinge Screws (C)**  
(Two on each end, inside two rear access doors)
- 11 Left Hinge Cables**
- 12 Right Hinge Cables**
- 13 LCD Assembly**
- 14 Memory Modules**  
(Do not install two 4MB memory module kits. Install a 2MB memory module kit in connector 1 and a 4MB or 8MB memory module kit in connector 2.)
- 15 Two Screws (F)**  
(At front edge of diskette drive)

- 16** Two Diskette Drive Ribbon Cables
- 17** Diskette Drive and Drive Mounting Bracket
- 18** Standby Battery
- 19** Battery Shield
- 20** Backup Battery
- 21** Adapter Bezel
- 22** One Screw (F)  
(In corner of serial/modem card)
- 23** Serial/Modem Card
- 24** Two Screws (F)  
(At front edge of hard disk drive)
- 25** Two Ribbon Cables and Hard Disk Drive  
(Have customer backup all information on hard disk drive before removal.)
- 26** External Adapter and Battery Doors
- 27** Eight System Board Screws (F)
- 28** One Screw (C)  
(Inside right-rear access door)
- 29** Two Threaded Hex Spacers  
(Inside right-rear access door)
- Remaining System Board Cables**
- 30** System Board  
(When replacing system board, install old memory module kits and math coprocessor on new system board. Run Automatic Configuration using customer's backup Reference Diskette.)
- 31** Speaker

**Model L40 Exploded View**

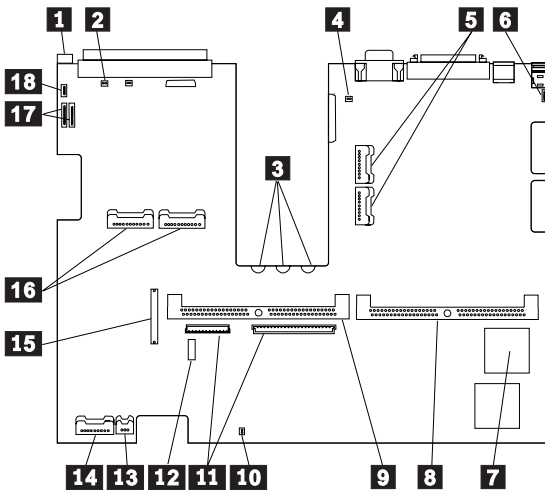


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## Locations

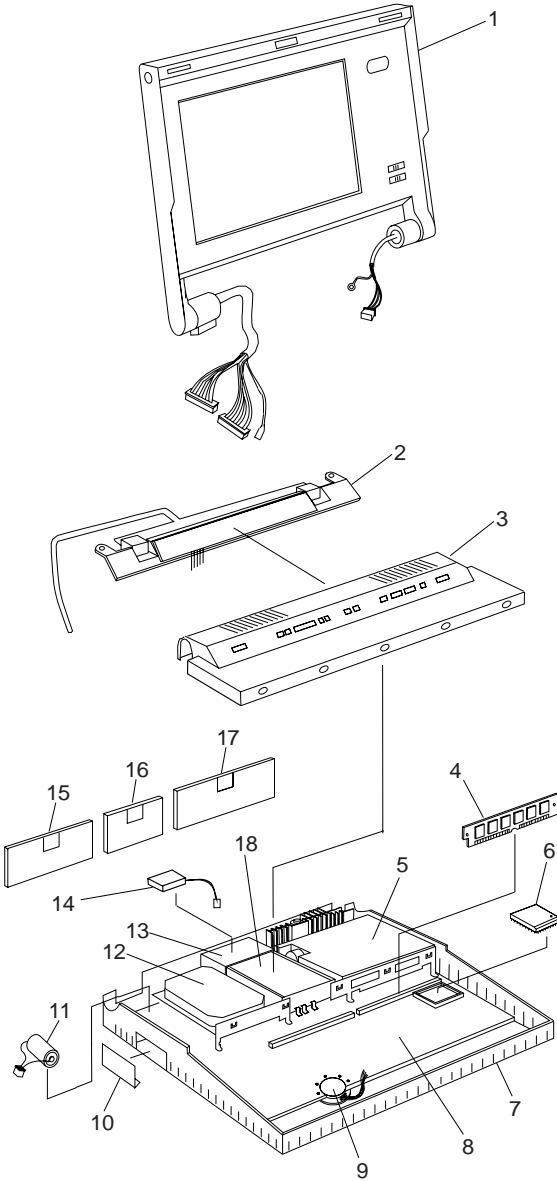
### System Board

- 1** Suspend/Resume Switch
- 2** Backup Battery Connector
- 3** Battery Contacts
- 4** Standby-Battery Connector
- 5** Diskette-Drive Connectors
- 6** Display Power Connector
- 7** Math Coprocessor Connector
- 8** Memory-Module Connector 1
- 9** Memory-Module Connector 2
- 10** Speaker Connector
- 11** Keyboard Connectors
- 12** Password-Override Connector
- 13** Switch-Assembly Connector
- 14** System-Status Display Connector
- 15** Option Connector
- 16** Hard-Disk Drive Connectors
- 17** Display Signal Connectors
- 18** Suspend/Resume Switch Connector



(Top View)

# Parts Listing



## System Unit

### Index

1	Display Assembly (LCD)	95F4878
2	System-Status Display Assembly	79F0991
3	Top Cover	79F3893
4	2MB Memory Module Kit	79F1002
4	4MB Memory Module Kit	79F1003
4	8MB Memory Module Kit	79F1004
6	80387SX** Math Coprocessor	79F1006
7	Bottom Cover	79F3884
8	System Board	95F4879
	System Board (with attached speaker)	8123176
9	Speaker	79F0989
	Speaker (for p/n 8123176)	79F0989
10	Bezel, Blank	79F3888
10	Bezel, Modem	79F3889
10	Bezel, Serial Adapter	79F3868
11	Backup Battery, Lithium	79F0986
13	Shield, Battery	79F3891
14	Standby Battery	79F0992
15	Door, Bus Connector	79F3886
16	Door, Battery	79F3887
17	Door, I/O Connector	79F3885
18	Rechargeable Battery	79F0994
18	Rechargeable Battery (Switzerland only)	79F3881
	System Board Fuse Card	95F6731
	Miscellaneous Kit (screws, rubber bumpers, and bottom cover caps)	79F3894

## DASD

### Index

5	Diskette Drive	79F0983
	Cable, Diskette Drive	79F0987
	Bezel, Diskette Drive	79F3892
12	60MB Hard Disk Drive	79F1009
	80MB Hard Disk Drive	95F4714
	Cable, Hard Disk Drive	79F0988

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\*\* 80387SX is a trademark of the Intel Corporation.

## Options and Adapters

2MB Memory Module (80ns)	79F1002
4MB Memory Module (80ns)	79F1003
5.25-inch Drive Adapter/A (360KB/1.2MB)	15F7996
6154 Real-Time Coprocessor (128KB)	60X8192
6166 Real-Time Coprocessor (512KB)	76X1013
8MB Memory Module (80ns)	79F1004
8MB Memory Module Kit (80ns)	64F3607
80386 Memory Expansion Adapter	72X6671
AC Adapter	79F0993
ActionMedia II Display Adapter	69F9731
ActionMedia II Capture Option	69F9735
ActionMedia II Video Cable	69F9737
ActionMedia II Audio/Video Capture Cable	69F9736
ActionMedia II Display CD-ROM Cable	69F9747
Carrying Case	79F3869
Communication Cable (for 79F0996)	94X1540
Data/Fax Modem (U.S., Canada only)	79F0996
Diskette Drive Bus Adapter	72X8524
Enhanced 5250 Emulation Adapter	64G3956
External Diskette Drive Adapter	72X6757
Game Control Adapter	8529151
PC Network Adapter	8286171
PC Network Adapter II	72X8105
PC Network Baseband Adapter	72X8101
PhoneCommunicator Adapter	33F4846
PhoneCommunicator Cable (Black-L)	57F1261
PhoneCommunicator Cable (Black-S)	57F1262
PhoneCommunicator Cable (Beige-L)	57F1263
PhoneCommunicator Cable (Beige-S)	57F1264
Printer Cable	8529214
Quick Charger	79F0995
Realtime Interface Coprocessor 6-Port V.35	72F0164
Screen Reader Adapter	33F4842
Screen Reader Keypad	1393515
Screen Reader Keypad Cable	72X8537
SCSI Adapter/A (with Cache)	85F0063
SCSI Adapter/A (without Cache)	85F0002
SCSI Cable (internal)	64F4127
SDLC Adapter	8286099
Serial Adapter	79F0998
Serial Adapter Cable	8286170
Serial Adapter Connector	8286194
Serial/Parallel Adapter	8286147
SpeechViewer Adapter	15F8511
Strap	07G1449
Token-Ring 16/4 Adapter	93F0334
Token-Ring Adapter	16F0463
Token-Ring Adapter (with RPL Module)	83X7839

## Keyboard

Arabic	1396825
Belgian	1396812
Canadian French	1396810
Danish	1396813
Dutch	1396817
French	1396814
German	1396815
Greek	1396826
Hebrew	1396827
Icelandic	1396828
Italian	1396816
Norwegian	1396818
Portuguese	1396819
Spanish	1396820
Spanish Speaking	1396811
Swedish/Finish	1396821
Swiss/French	1396822
Swiss/German	1396823
Turkish	1396829
U.K. English	1396824
U.S. English	1396181

## Numeric Keypad and Mouse

U.S.	1396182
Arabic	1396806
Canadian French	1396800
French	1396801
German	1396802
Greek	1396807
Italian	1396803
Spanish	1396804
Swedish/Finland	1396805
Swiss/French	1396809
Swiss/German	1396808
Trackpoint (Model L40 SX)	1397090