

Maintenance Manual

PORTEGE X40-K Series

File Number (960-952)

4.1 Safety Precautions

Please read the following safety instructions before disassembling the computer and always follow the instructions while working on the computer.



1. Always use the genuine battery that is authorized by Dynabook or compatible with the unit. Since other battery packs have different specifications, they may be incompatible with the unit, and may burst or explode.
Never heat or disassemble the battery pack, as that could cause leakage of alkaline solution. Never throw the battery pack into a fire, as that could cause the battery pack to explode.
2. The power supply and other components carry high voltages. If you need to turn on the power of a partially disassembled computer to check its operation, be very careful not to touch connectors or components, in order to avoid the risk of electric shock. Also, do not disassemble individual components in first-level maintenance.



1. Turn off the power and disconnect the AC adaptor from the power source, to avoid exposure to electric shock.
2. Batteries in the computer retain an electrical charge, so there is danger of electrical shock even when the computer is disconnected from an AC power source. Remove any metal jewelry or accessories such as necklaces, bracelets or rings, in order to reduce the risk of electric shock. Never work with wet or damp hands.
3. Be careful of edges and corners as these may cut.



1. When you change a component, be sure the replacement component meets the required specifications. Never use foreign parts, to avoid any risk of damage to the computer.
2. To avoid any risk of short-circuit, fire or other internal damage, never allow any metal objects such as screws or paper clips to fall into the unit. Be sure to replace screws with the same size as those removed. Make sure all screws are securely fastened. Loose screws can cause short circuits, resulting in heat, smoke or fire.
3. Before lifting out an FRU or other component, make sure all cables to the component have been disconnected, in order to reduce the risk of accidental electric shock.
4. If you use AC power, be sure to use the cable that came with the computer or one recommended by Dynabook.
5. Make sure that all replacement components meet the specifications for the computer and that all cables and connectors are securely fastened, in order to avoid the risk of electric shock.
6. Some parts inside the computer, such as the CPU and cooling module, become very hot during operation. Conduct repair work after they have cooled. Be careful around the CPU and cooling module to avoid burns.

4.2 Before You Begin

Take note of the following points before starting work. Always remove the AC adaptor and battery pack before commencing any of the procedures. The procedure for removing the battery pack is described in [4.11 Battery pack](#).

1. Do not disassemble the computer unless it is operating abnormally.
2. Use the recommended tools.
3. Ensure that the environment for working on and storing parts does not contain any of the following.
 - Dust or dirt
 - Static electricity
 - Extremely hot, cold, or humid conditions
4. Perform the diagnostic tests described in Chapter 2 to identify the FRU that has probably caused the system failure.
5. Do not perform any unnecessary work. Always work in accordance with the disassembly and re-assembly procedures in this manual.
6. Keep parts removed from the computer in a safe place away from the computer where they will not be damaged or interfere with your work.
7. Disassembling requires the removal of a large number of screws. Keep removed screws in a safe place such that you can determine which screws belong to which part.
8. When re-assembling, ensure that you use the correct screws and fit parts in the correct position. Screw sizes are noted in the text and figures.

9. As all parts have sharp edges and corners, take care not to cut yourself.
10. After replacing an FRU, check that the computer and replaced part operate correctly.

4.3 Disassembly Procedure

Four main types of cable connector are used.

- Pressure plate connector
- Spring connector
- Back flip connector
- Normal pin connector

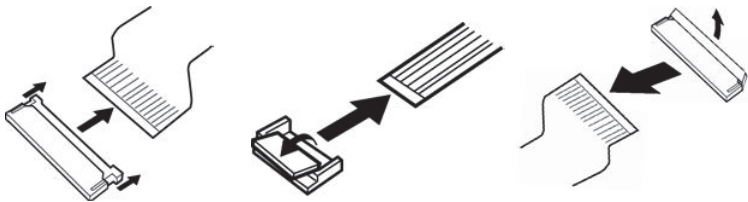
For pressure plate connectors, slide the pressure plate holding tags on both sides of the plastic pressure plate on the connector and pull the cable out from the connector. When reconnecting the cable to the pressure plate connector, slide the pressure plate holding tags on both sides of the plastic pressure plate on the connector and insert the cable into the connector. Push both tags of the pressure plate such that the cable is fixed in the correct position. Pull the cable to ensure that it is securely connected.

For spring connectors, lift up the stopper frees the cable and allow it to be pulled out. To reconnect, hold the stopper in the up position and insert the cable, then lower the stopper to secure the cable. Pull the cable to ensure that it is securely connected.

For back flip connectors, lift up the flip plate frees the cable and allow it to be pulled out. To reconnect, hold the flip plate in the up position and insert the cable, then lower the flip plate to secure the cable. Pull the cable to ensure that it is securely connected.

Normal pin connectors are used for all other cables. Simply pull out or push in these connectors to disconnect or reconnect.

Figure 4-1 Pressure plate connector/Spring connector/Back flip connector



4.4 Assembly Procedures

After the computer has been disassembled and the part that caused the fault has been repaired or replaced, the computer must be reassembled.

Take note of the following general points when assembling the computer.

- Take your time and follow the instructions carefully. Hurrying the assembly work will only introduce new problems.
- Check that all cables and connectors are securely connected.
- Before fastening FRUs or other parts in place, ensure that no cables are caught on screws or the FRU.
- Check that all latches are securely closed.
- Ensure that you have installed all FRUs correctly and do not have any screws left over. Using an incorrect screw may damage the thread or screw head and result in the FRU not being securely fastened in place.

After installing FRUs, check that the computer operates correctly.

4.5 Tools and Equipment

For your safety and the safety of the people around you, it is important that you use Electrostatic Discharge (ESD) equipment. Correctly utilizing of the equipment increases the percentage of successful repairs and saves on the cost of damaged or destroyed parts. The following equipment is required for disassembly and assembly.

- One Philips screwdriver with type 0 bit (for S-THIN HEAD screws)
- One Philips screwdriver with type 1 bit (for screws other than above)
- One flat-blade screwdriver (for removing the CPU)
- Tweezers (for lifting screws)
- ESD mats (lay on work table or floor)
- An ESD wrist strap and heel grounder
- Anti-static carpet or flooring
- Air-ionizers in highly static sensitive areas
- Antenna coaxial cable disconnecter
- Special syringe (for applying grease)

4.6 Screw Tightening Torque

When you fasten screws, be sure to follow the torque list below.



Overtightening can damage components and screws; undertightening can result in electrical shorts or other damage if screws or components come loose.

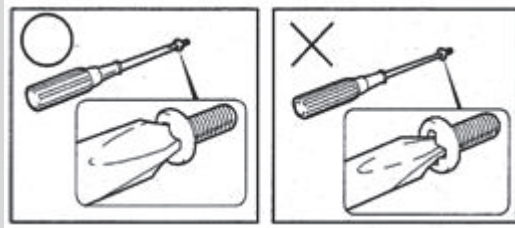


Dynabook recommends that you use an electric screw driver for quick and easy operations.

- M2 (2mm) 0.167 N•m (1.7 kgf cm)
- M2.5 (2.5mm) 0.294 N•m (3.0 kgf cm)



To prevent damage to THIN HEAD screws, use type 0 bit philips screwdriver. Press along the axis of the screwdriver while turning the screw. This is because the contact area between the screw and driver is less than for a pan head screw (standard pan-shaped screw head).



4.7 Grip Color

Some screws have a colored grip area to help you determine the length of the screw.

[Normal grip]

- Normal length screws: Blue
- Special length screws: Green
- Tight grip screw: Yellow

“Special length screw” means screws whose length is indicated in an integral number to the first decimal places such as 2.5 mm, 2.6 mm and so on.



4.8 Screw Notation

To make maintenance of the computer easier, markings of the kinds of the screws including the types and lengths of the screws are indicated on the computer body.

Screw type + Screw length (mm)

Screw shape

B: Bind screw

F: Flat head screw

S: Super thin head screw

T: Tapping screw

U: Other screws (Unique screws: pan head, stud, etc.)

Example: B6 ... 6mm BIND screw

Screw color/material

B: Black/Nickel

C: Silver/Non-Hexavalent Chromate

U: Other screws (Unique screws: such as stud, etc.)

4.9 Memory media



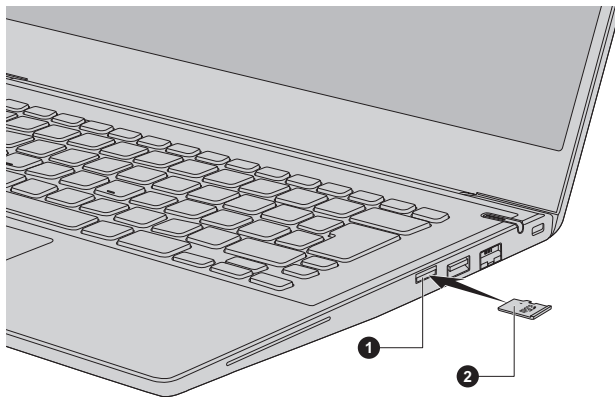
Insert or remove a Memory media in accordance with any instructions in each Memory Media manual or the manuals of the computer system you are using.

4.9.1 Installing the Memory media

To insert memory media, follow the steps as detailed below and refer to [Figure 4-2](#).

1. Turn the memory media so that the contacts (metal areas) face down.
2. Insert the memory media into the memory media slot on your computer.
3. Press the memory media gently until it clicks into place.

Figure 4-2 Inserting memory media



1. Memory media slot

2. Memory media

4.9.2 Removing the Memory media

To remove memory media, follow the steps as detailed below and refer to [Figure 4-2](#).

1. Open the **Safely Remove Hardware and Eject Media** icon on the Windows Taskbar.
2. Select the memory media that you want to remove.
3. Push the memory media until you hear a click to partially release it.

4. Grasp the media and remove it.

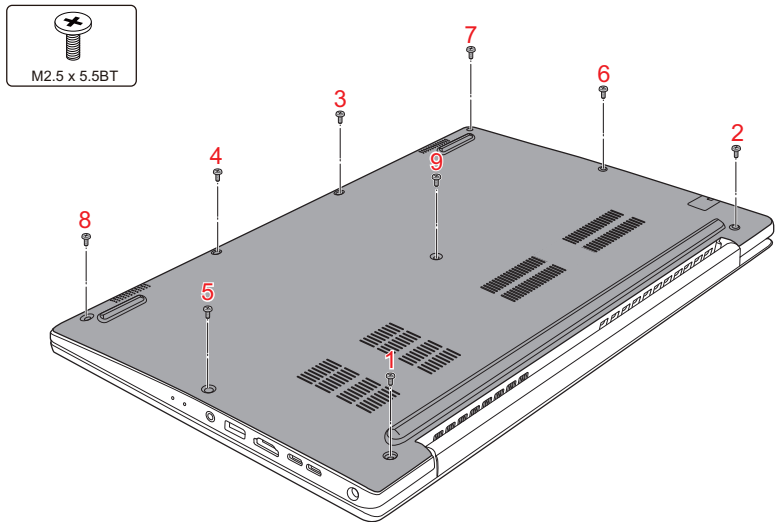
4.10 Cover Assembly and Base Assembly

4.10.1 Removing the Cover Assembly and Base Assembly

To remove the Base Assembly, follow the steps below and refer to [Figure 4-3](#) to [Figure 4-5](#).

1. Close the display panel and turn the computer face down.
2. Remove the following screws securing the Cover Assembly and the Base Assembly.

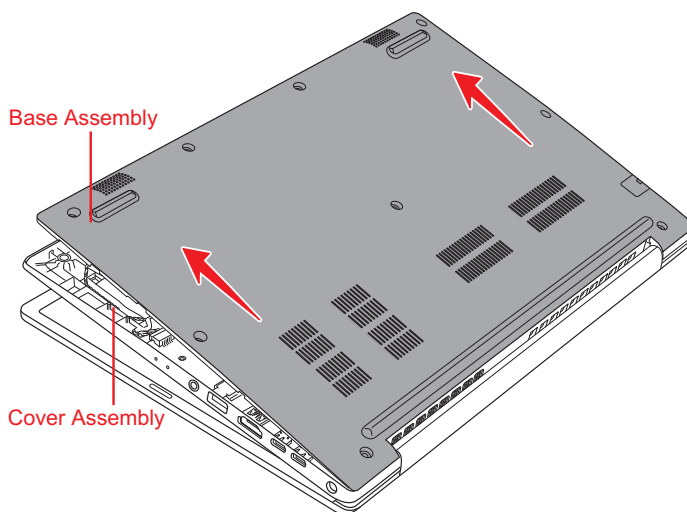
Figure 4-3 Removing the Base Assembly (1)



3. Separate the Base Assembly and Cover Assembly while releasing the latches using the plectrum.

Figure 4-4 Removing the Base Assembly (2)

4. Remove the **Base Assembly**.

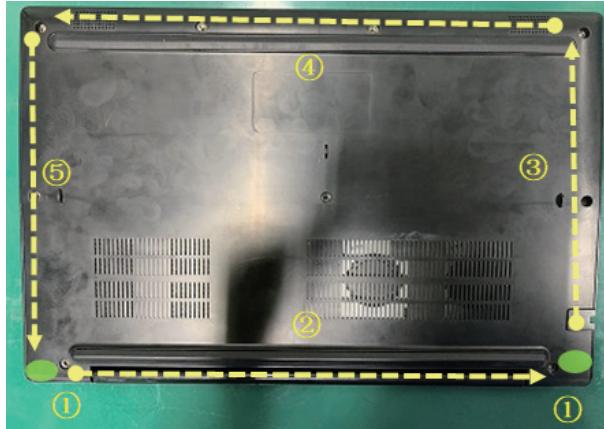
Figure 4-5 Removing the Base Assembly (3)

4.10.2 Installing the Base Assembly

To install the Base Assembly, follow the steps below and refer to [Figure 4-3](#) to [Figure 4-6](#).

1. Set the Cover Assembly on the Base Assembly while securing the latches.

Figure 4-6 Installing the Base Assembly



2. Secure the Cover Assembly and Base Assembly with the screws.



When securing the Base Assembly, be sure to drive the screws in the order of the number on [Figure 4-3](#).

3. Turn the computer, and open the display.

4.11 Battery pack

4.11.1 Removing the Battery pack

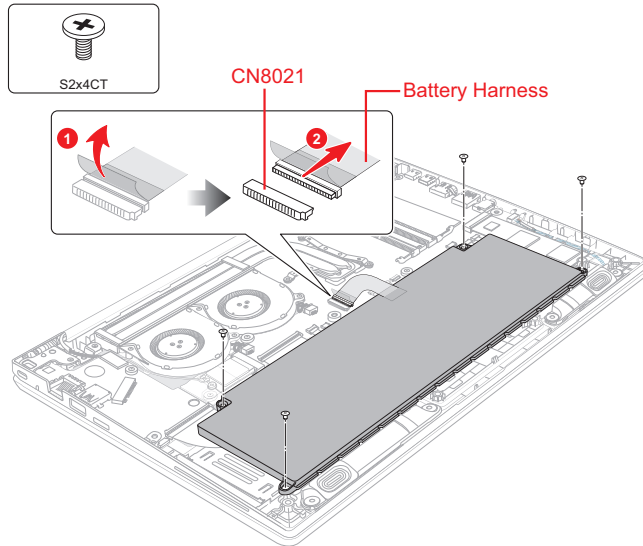
To remove the battery pack, follow the steps below and refer to [Figure 4-7](#) and [Figure 4-8](#).



Take care not to short circuit the terminals when removing the battery pack. Similarly, do not drop, knock, scratch, disassemble, twist, or bend the battery pack.

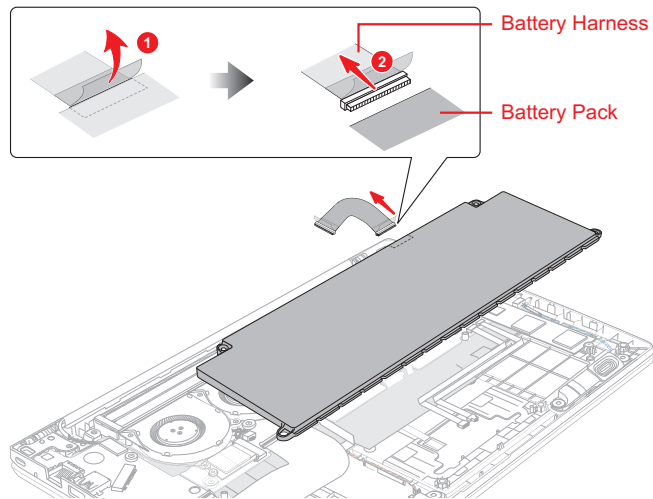
1. Disconnect the **BATTERY HARNESS** from the connector **CN8021** on the SYSTEM board.
2. Remove the following screws and the battery pack.

Figure 4-7 Releasing the battery pack (1)



3. Disconnect the **BATTERY HARNESS** from the connector on the battery pack.

Figure 4-8 Releasing the battery pack (2)



Dispose of the used/removed battery pack in accordance with the laws and ordinances of your local authority.

4.11.2 Installing the Battery pack

To install the battery pack, follow the steps below and refer to [Figure 4-7](#) and [Figure 4-8](#).



The lithium ion battery pack may explode if not fitted, operated, handled, or disposed correctly. Dispose always the used battery pack in accordance with the laws and ordinances of your local authority.

Use only the batteries approved by Dynabook.



Check the battery's terminals visually. If they are dirty, wipe them clean with a dry cloth.

1. Peel off the separator on one side of the battery harness and connect the **BATTERY HARNESS** to the connector on the battery pack.
2. Set the battery pack to the COVER ASSY and secure it with the screws.
3. Peel off the separator on the other side of the battery harness and connect the **BATTERY HARNESS** to the connector CN8021 on the SYSTEM board.

4.12 Memory module

4.12.1 Removing the Memory module

To remove the memory module, follow the steps as detailed below:

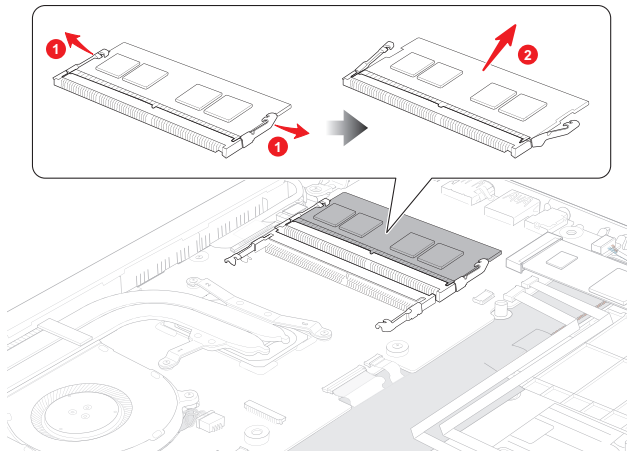


Do not touch the connectors on the memory module or on the computer. Dust or stains on the connectors may cause memory access problems.

Never press hard or bend the memory module.

1. Open the left and right **latches** outside and remove the **memory module(s)**.

Figure 4-9 Removing the memory module(s)



1. Latches

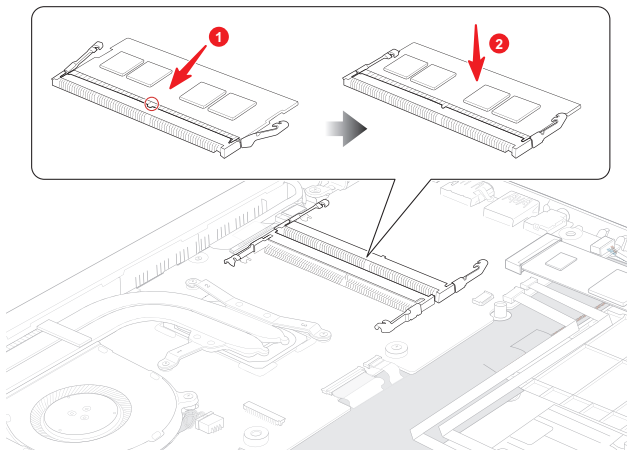
2. Memory module

4.12.2 Installing the Memory module

To install a memory module, follow the steps as detailed below:

1. Align the notch of the memory module with that of the memory slot and gently insert the module into the slot at about a 30 degree angle before holding it down until the latches on either side snap into place.

Figure 4-10 Seating the memory module



After installing the memory module, make sure that the memory module is secured with the left and right latches.

4.13 SSD

4.13.1 Removing the SSD

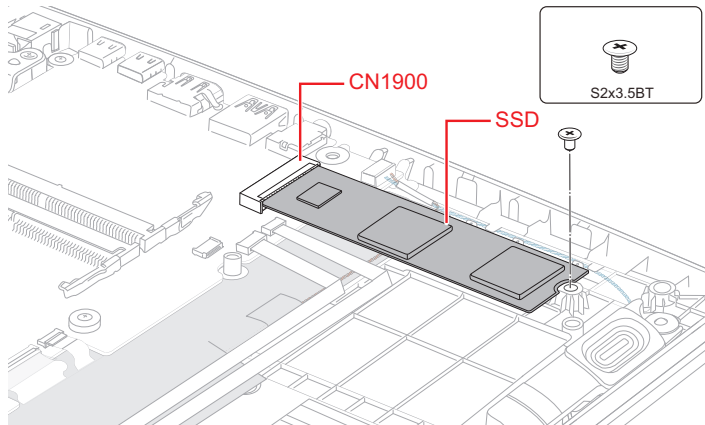
To remove the SSD, follow the steps below and refer to [Figure 4-11](#).



Take care not to press on the top or bottom of a SSD. Pressure may cause the data loss or damage to the device.

1. Remove the the following screw and disconnect the **SSD** from the connector **CN1900** on the **SYSTEM** board.

Figure 4-11 Removing the SSD



4.13.2 Installing the SSD

To install the SSD, follow the steps below and refer to [Figure 4-12](#).

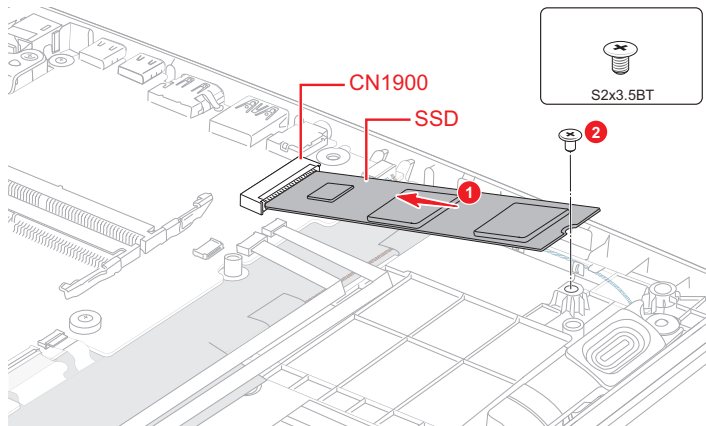


To avoid damage, always hold the SSD only by its sides.

To prevent the SSD from being distorted when installing the SSD pack into the computer, do not press the center of the SSD pack. Always hold the SSD pack by its sides.

1. Insert the **SSD** to the connector **CN1900** on the **System Board (FME2SY*)** slantwise.
2. Push down the **SSD** and secure it with the screw.

Figure 4-12 Installing the SSD



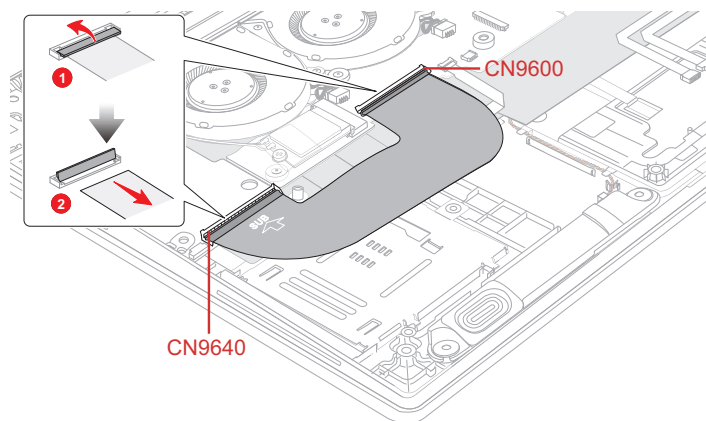
4.14 Smart Card slot

4.14.1 Removing the Smart Card slot

To remove the Smart Card slot unit, follow the steps below and refer to [Figure 4-13](#) to [Figure 4-15](#).

1. Disconnect the FPC/FFC from the connector **CN9600** on the SYSTEM board and **CN9640** on the USB board.

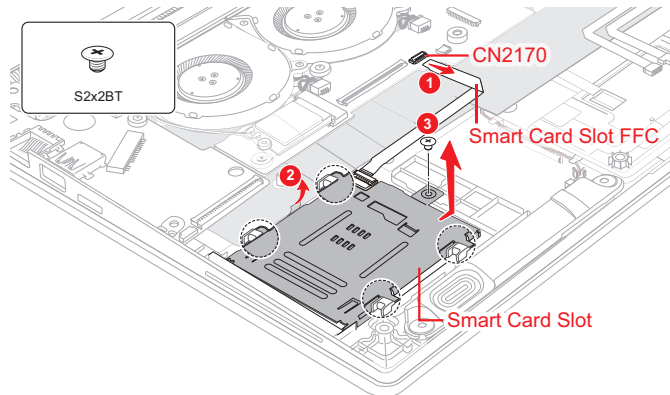
Figure 4-13 Removing the Smart Card slot (1)



2. Peel off the INSU SC from the Smart Card slot.
3. Disconnect the **Smart Card FFC** from the connector **CN2170** on the system board.

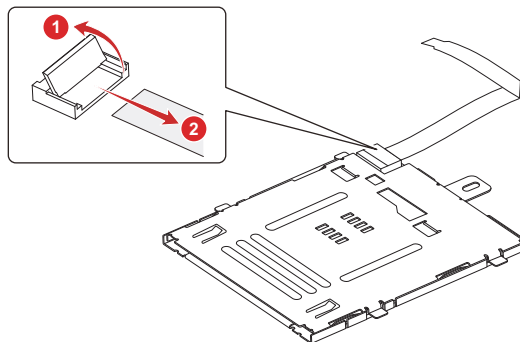
- Remove the following screw and peel off the AL TAPE. Then slide and lift the Smart Card slot unit shown in the following figure to remove the Smart Card slot.

Figure 4-14 Removing the Smart Card slot (2)



- Disconnect the **Smart Card FFC** from the connector on the Smart Card slot.

Figure 4-15 Removing the Smart Card slot (3)

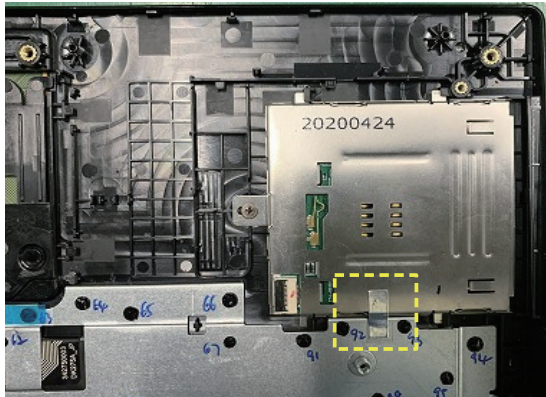


4.14.2 Installing the Smart Card slot

To install the Smart Card slot, follow the steps below and refer to [Figure 4-13](#) to [Figure 4-17](#).

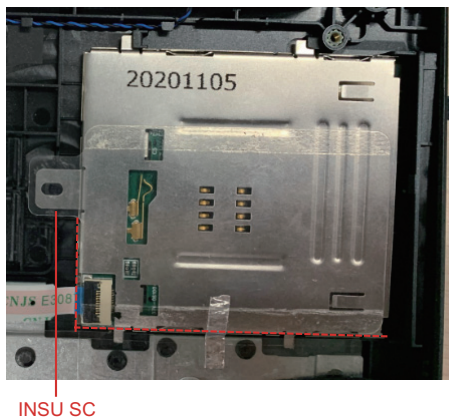
- Connect the **Smart Card FFC** to the connector on the Smart Card slot.
- Set the **Smart Card slot** in place and secure it with the screw.
- Connect the **Smart Card FFC** to the connector **CN2170** on the system board.
- Stick the **AL TAPE** in place.

Figure 4-16 Installing the Smart Card slot (1)



5. Stick the **INSU SC** in place.

Figure 4-17 Installing the Smart Card slot (2)



6. Connect the FPC/FFC to the connector **CN9600** on the SYSTEM board and **CN9640** on the USB board.

4.15 Wireless LAN card

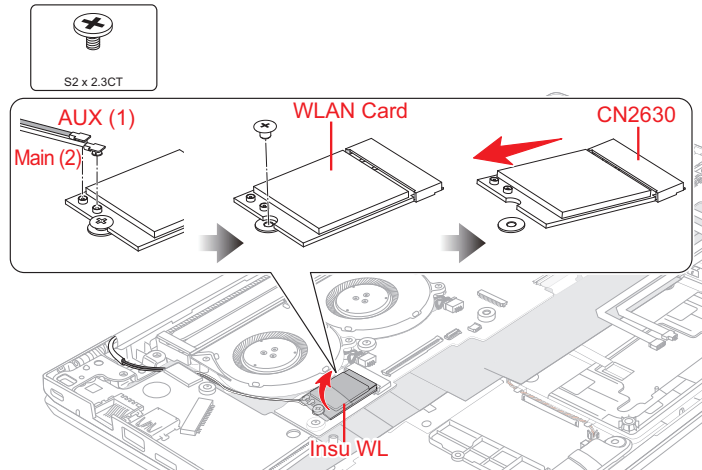
4.15.1 Removing the Wireless LAN card

To remove the Wireless LAN card, follow the steps below and refer to [Figure 4-18](#).

1. Peel off the **INSU WL**.
2. Disconnect the **Wireless LAN antenna cable** from the connector on the Wireless LAN card (black cable from "**AUX**" or "**1**" and white cable from "**Main**" or "**2**").

3. Release the **Wireless LAN antenna cable** from the guides on the Cover Assembly.
4. Remove the screw securing the **Wireless LAN card**.
5. Disconnect the **Wireless LAN card** from the connector **CN2630** on the **System Board (FME2SY*)**.

Figure 4-18 Removing the Wireless LAN card

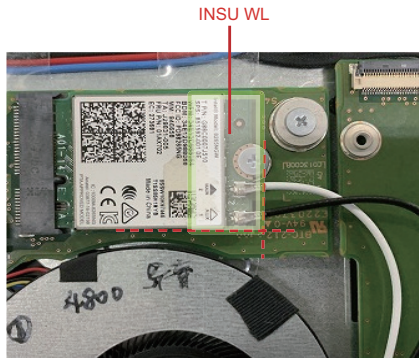


4.15.2 Installing the Wireless LAN card

To install the Wireless LAN card, follow the steps below.

1. Insert the **Wireless LAN card** to the connector **CN2630** on the **System Board (FME2SY*)** slantwise and press it to connect firmly.
2. Push down the **Wireless LAN card** and secure it with the screw.
3. Arrange the **Wireless LAN antenna cables** to the guides.
4. Connect the **Wireless LAN antenna cables** to the connectors (black cable to "**AUX**" or "**1**" and white cable to "**Main**" or "**2**") on the **Wireless LAN card**.
5. Stick a new **INSU WL** in place.

Figure 4-19 Installing the Wireless LAN card



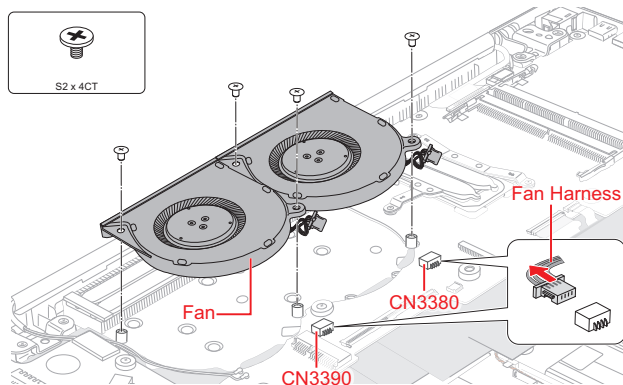
4.16 Fans

4.16.1 Removing the Fans

To remove the Fans, follow the steps below and refer to [Figure 4-20](#).

1. Disconnect the **Fan harness** from the connector **CN3380** and **CN3390** on the **System Board (FME2SY*)**.
2. Remove the following screws and the Fans from the Cover Assembly.

Figure 4-20 Removing the Fans



4.16.2 Installing the Fans

To install the Fans, follow the steps below and refer to [Figure 4-20](#).

1. Set the Fans in place on the Cover Assembly and secure them with the screws.
2. Connect the **Fan harness** to the connector **CN3380** and **CN3390** on the **System Board (FME2SY*)**.

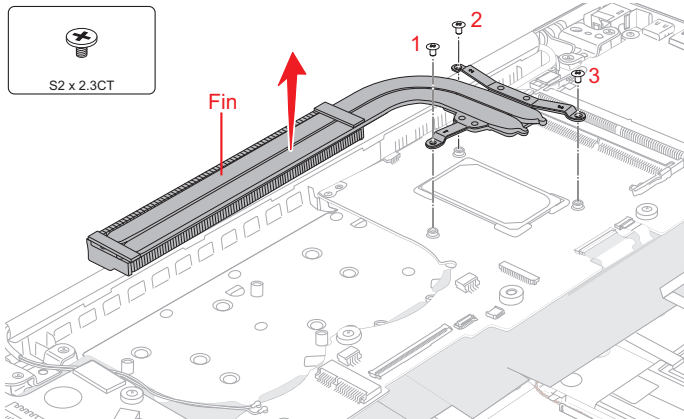
4.17 Fin

4.17.1 Removing the Fin

To remove the Fin, follow the steps below and refer to [Figure 4-21](#).

1. Remove the following screws and then the **Fin**.

Figure 4-21 Removing the Fin



When removing the Fin, be sure to remove the screws in the reverse order of the number marked on the Fin.

4.17.2 Installing the Fin

To install the Fin, follow the steps below and refer to [Figure 4-21](#).

1. Set the **Fin** in place and secure it with the screws.



When installing the Fin, be sure to install the screws in the order of the number marked on the Fin.

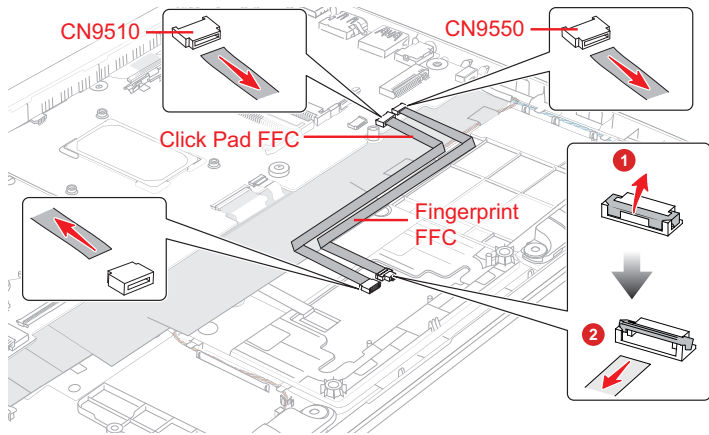
4.18 Click pad

4.18.1 Removing the Click pad

To remove the click pad, follow the steps below and refer to [Figure 4-22](#) to [Figure 4-23](#).

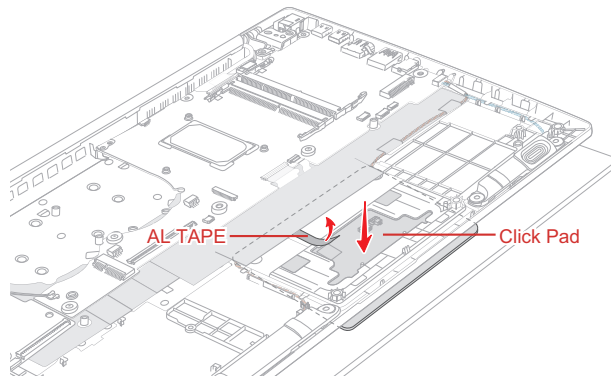
1. Disconnect the **Click Pad FFC** and **Fingerprint FFC** from the connectors on the Click Pad and the connectors **CN9510** and **CN9550** on the **System Board**.

Figure 4-22 Removing the Click pad (1)



2. Peel off the **AL TAPE** from the Click Pad and then peel off the **Click Pad** from the Cover Assembly.

Figure 4-23 Removing the Click pad (2)

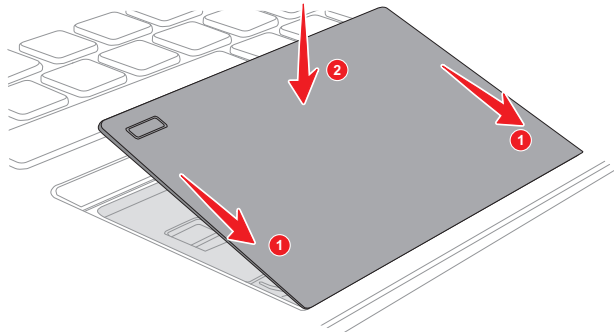


4.18.2 Installing the Click pad

To install the Click pad, follow the steps below and refer to [Figure 4-22](#) to [Figure 4-24](#).

1. Stick the Click Pad Mylar to a new Click Pad and remove the protective film from the Click Pad.
2. Peel off the separator on the Click Pad RIM ASSY and stick the new **Click Pad** to the Cover Assembly.

Figure 4-24 Installing the Click pad



3. Stick the **AL TAPE** to the Click pad and Click Pad RIM ASSY.
4. Connect the **Click Pad FFC** and **Fingerprint FFC** to the connector on the Click Pad and the connector **CN9510** and **CN9550** on the **System Board**.

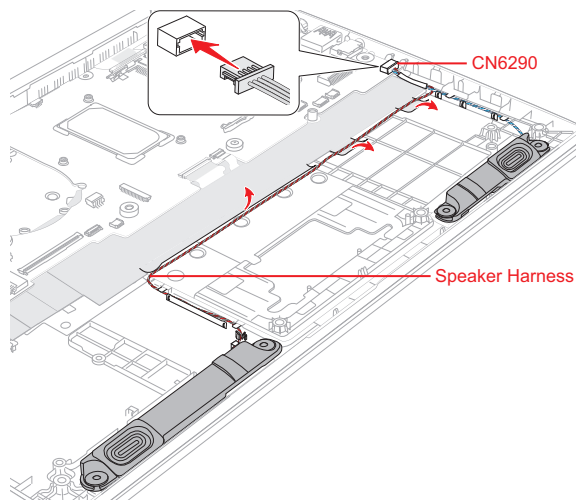
4.19 Speaker

4.19.1 Removing the Speaker

To remove the Speaker, follow the steps below and refer to [Figure 4-25](#) to [Figure 4-26](#).

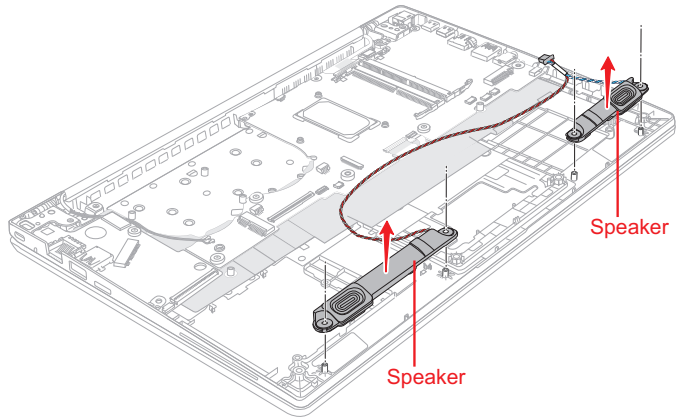
1. Disconnect the **Speaker harness** from the connector **CN6290** on the system board.
2. Open the stick tapes. Release the **Speaker harness** from the guides.

Figure 4-25 Removing the Speaker (1)



3. Remove the Speaker from the Cover Assembly.

Figure 4-26 Removing the Speaker (2)

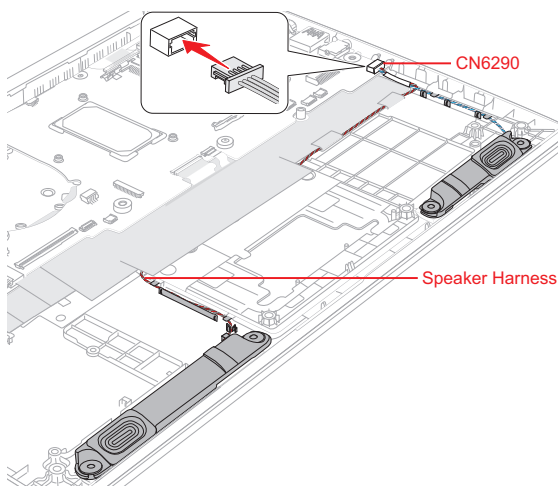


4.19.2 Installing the Speaker

To install the Speaker, follow the steps below.

1. Set the speakers to the Cover Assembly in place.
2. Arrange the **Speaker harness** under the guides as shown below.
3. Connect the **Speaker harness** to the connector **CN6290** on the system board.
4. Arrange the rest of **Speaker harness** as shown below, and fix it with the stick stapes.

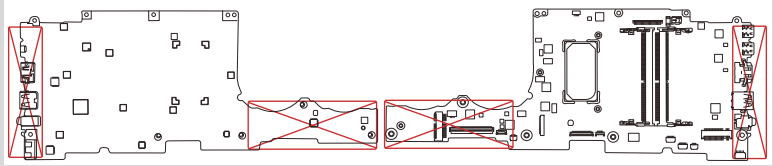
Figure 4-27 Installing the Speaker



4.20 System board



1. If replacing with a new system board, update the DMI information as described in Chapter 3, *Tests and Diagnostics*. Also update with the latest BIOS and EC/KBC as described in Appendix F, *BIOS Rewrite Procedures*, and Appendix G, *EC/KBC Rewrite Procedures*.
2. When replacing the system board with a new one, the ProductKey (MBR-DPK) must be written on the system board.
3. When removing/installing the system board, do not handle with the handling prohibition area.

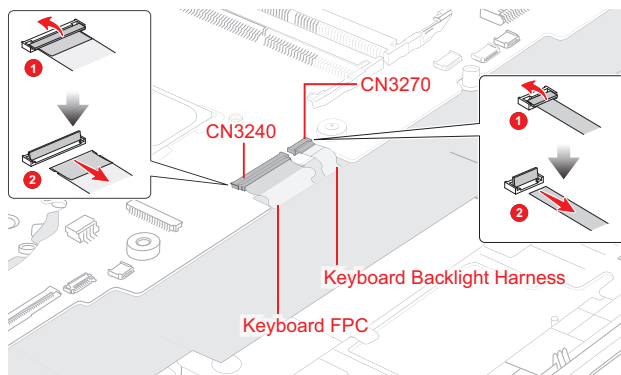


4.20.1 Removing the System board

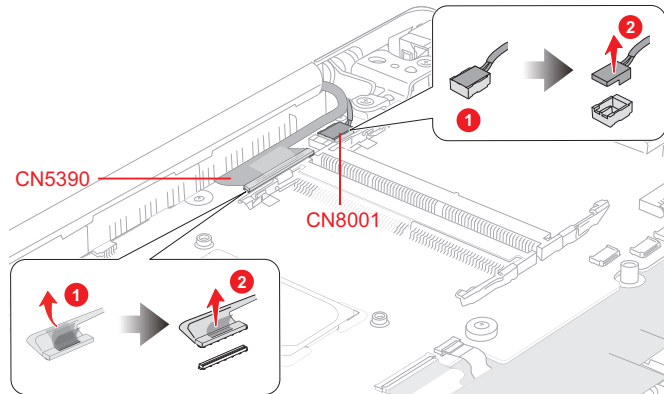
To remove the system board, follow the steps below and refer to [Figure 4-28](#) to [Figure 4-30](#).

1. Disconnect the **Keyboard FPC** from the connector **CN3240** and **Keyboard Backlight harness** from the connector **CN3270** on the **System Board (FME2SY*)**.

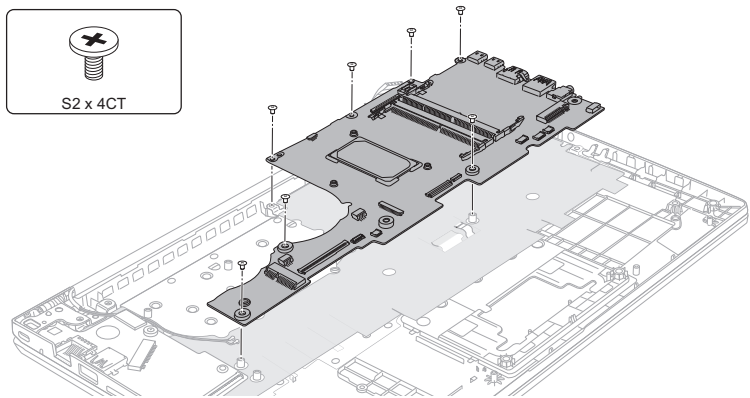
Figure 4-28 Removing the system board (1)



2. Disconnect the **LCD/Webcam harness** from the connector **CN5390** and **DC IN harness** from the connector **CN8001** on the **System Board (FME2SY*)**.

Figure 4-29 Removing the system board (2)

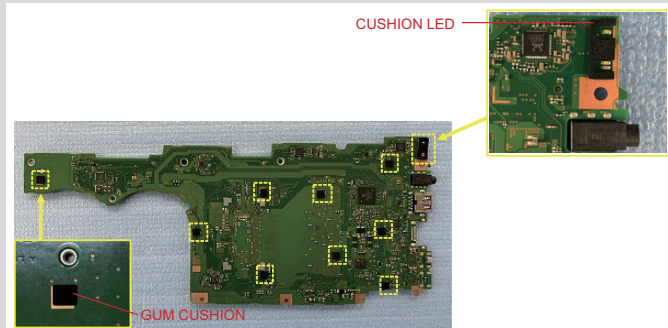
3. Remove the following the screws. Carefully lift up the system board.

Figure 4-30 Removing the system board (3)

4.20.2 Installing the System board



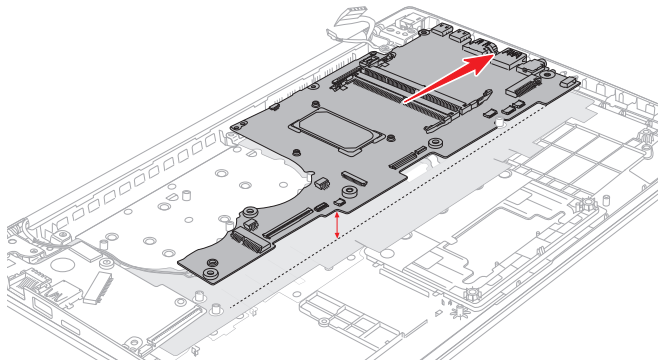
When replacing the system board with a new one, stick nine pieces of new **GUM CUSHION** and one piece of new **CUSHION LED** on one side of the system board in place.



To install the system board, follow the steps below and refer to [Figure 4-28](#) to [Figure 4-31](#).

1. Set the system board in place.

Figure 4-31 Installing the system board



2. Secure the system board with the screws.
3. Connect the LCD/Webcam harness to the connector **CN5390** and DC IN harness to the connector **CN8001** on the System Board (**FME2SY***) and arrange the harness to the guide on the Cover Assembly.
4. Connect the **Keyboard FPC** to the connector **CN3240** and **Keyboard Backlight harness** to the connector **CN3270** on the **System Board (FME2SY*)**.

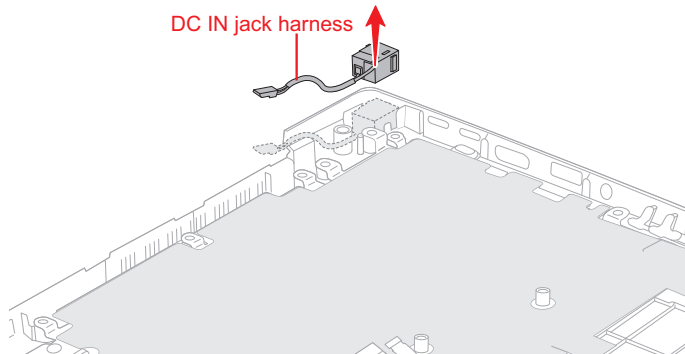
4.21 DC IN jack

4.21.1 Removing the DC IN jack

To remove the DC IN jack, follow the steps below and refer to [Figure 4-32](#).

1. Release two screws securing the right display hinge and rotate the display hinge to upright position.
2. Release the DC IN jack harness from the guide, and remove the DC IN jack from the slot on the Cover Assembly.

Figure 4-32 Removing the DC IN jack



4.21.2 Installing the DC IN jack

To install the DC IN jack, follow the steps below and refer to [Figure 4-32](#).

1. Set the DC IN jack to the slot on the Cover Assembly and arrange the DC IN jack harness to the guide.
2. Rotate the right display hinge to original position and secure it with two screws.

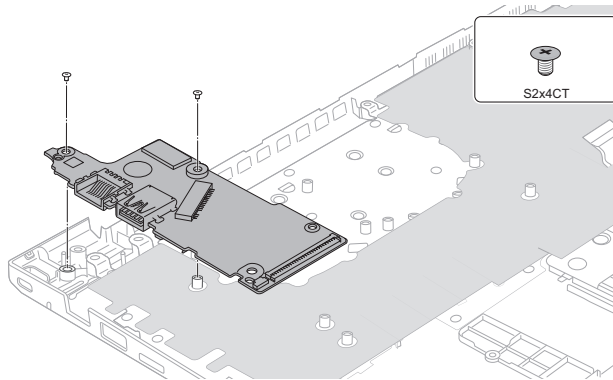
4.22 USB board

4.22.1 Removing the USB board

To remove the USB board, follow the step below and refer to [Figure 4-33](#).

1. Release two screws securing the left display hinge and rotate the display hinge to upright position.
2. Remove the following screws and the USB board from the Cover Assembly.

Figure 4-33 Removing the USB board

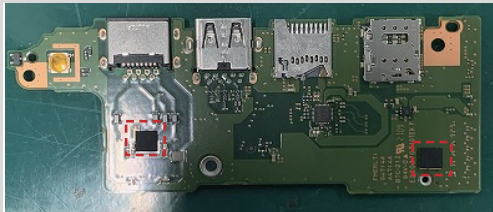


4.22.2 Installing the USB board

To install the USB board (FME2LT*), follow the step below and refer to Figure 4-33.



When replacing the USB board with a new one, stick two pieces of **GUM CUSHION** on the USB board in place.



1. Set the **USB board (FME2LT*)** to the Cover Assembly in place and secure it with the screws.
2. Rotate the left display hinge to original position and secure it with two screws.

4.23 Keyboard/Cover Assembly

The keyboard is assembled to the Cover Assembly by hot melt glue. When either the keyboard or the Cover Assembly needs to be replaced with a new one, please replace them all with a new set of keyboard and Cover Assembly which are already assembled.

4.23.1 Removing the Keyboard/Cover Assembly

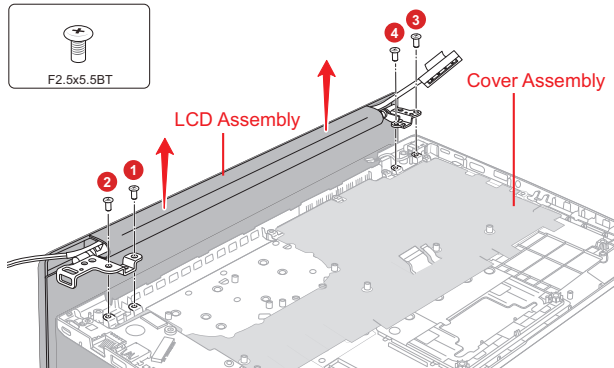
To remove the Keyboard/Cover Assembly, follow the step below and refer to Figure 4-34.



As the keytop may fall out, when handling the keyboard, always hold it by the frame and do not touch the key top.

1. Release the following screws and separate the **LCD Assembly** and **Cover Assembly**.

Figure 4-34 Removing the Keyboard/Cover Assembly



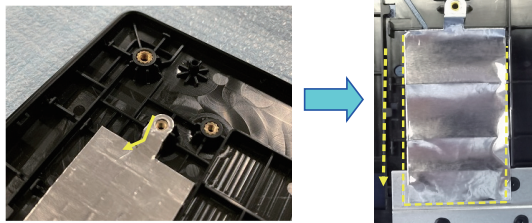
4.23.2 Installing the Keyboard/Cover Assembly

To install the Keyboard/Cover Assembly, follow the step below and refer to [Figure 4-34](#).

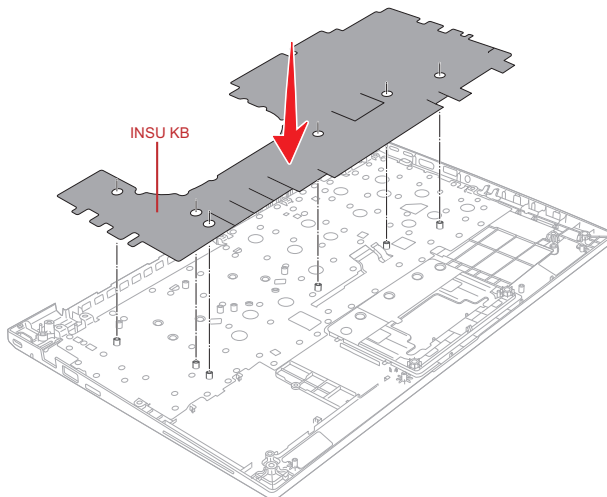
1. Set the LCD Assembly on the Cover Assembly and secure them with the screws.

Note: When replacing the Cover Assembly with a new one

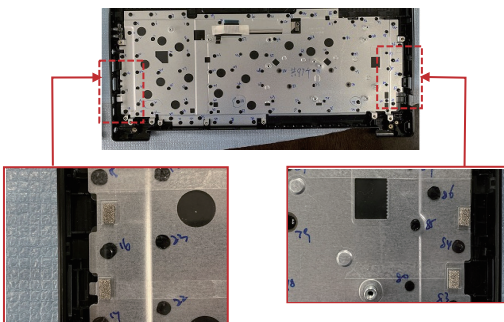
- Stick the **AL TAPE** on the cover assembly in place.



- Stick the **INSU KB** on the cover assembly in place.



- Stick four pieces of **GASKET** on the cover assembly in place.



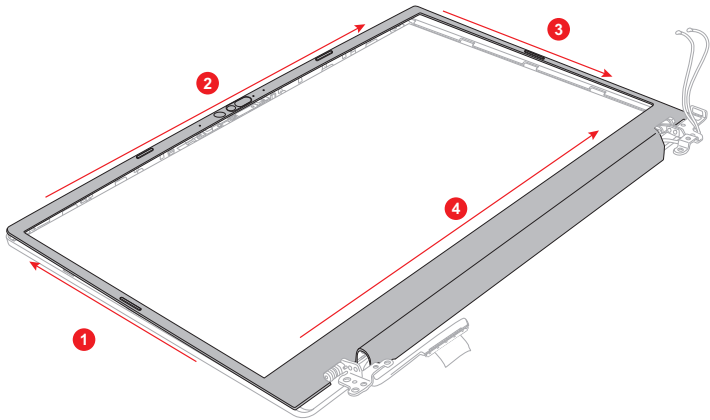
4.24 LCD Assembly

4.24.1 Removing the LCD unit

To remove the LCD unit, follow the steps below and refer to [Figure 4-35](#) to [Figure 4-36](#).

1. Release the latches from each side and detach the LCD mask from the LCD cover.

Figure 4-35 Removing the LCD unit (1)

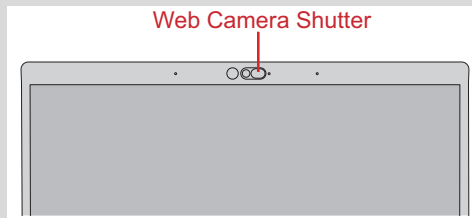


Do not lift the LCD mask too much from the LCD covers when detaching the LCD mask.

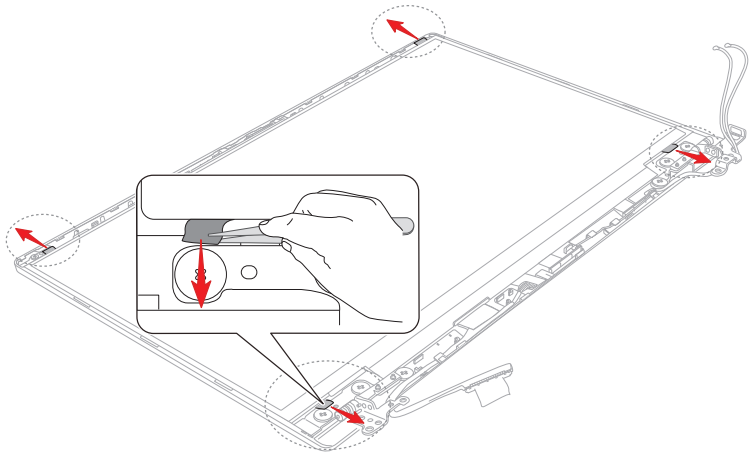
2. Remove the LCD mask.



The Web Camera Shutter is attached to the LCD mask by magnet. Please be care not to lose it during removing the LCD mask.



3. Release the LCD/Webcam harness from the guides on the LCD cover.
4. Grasp the bound & detach tapes and pull out the tapes slowly and parallelly from the LCD cover.

Figure 4-36 Removing the LCD unit (2)

5. Take out the LCD unit.

Be careful that the LCD/Webcam harness is connected to the connector on the back of the LCD unit.

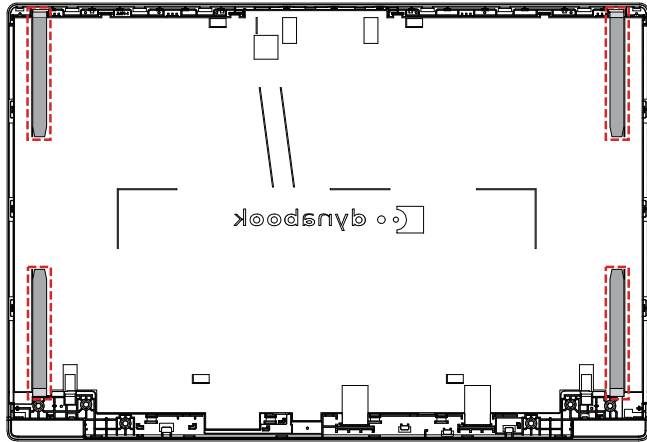
6. Peel the pull tape and disconnect the LCD/Webcam harness from the connector on the LCD unit.

4.24.2 Installing the LCD unit

To install the LCD unit, follow the steps below.

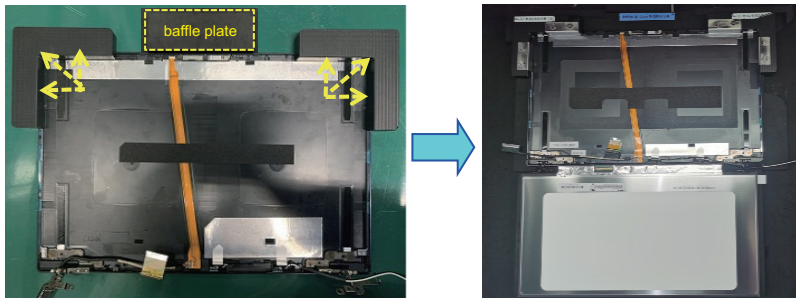
1. Stick four pieces of bound & detach tape on the LCD cover and peel off the separators on the tapes.

Figure 4-37 Installing the LCD unit (1)



2. Align the LCD cover with the baffle plate (additional) and set the LCD unit assembly jig (additional) on the LCD cover. Place the LCD unit as below.

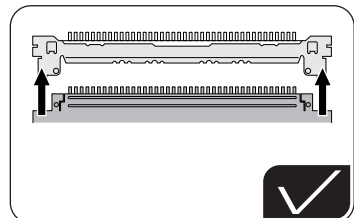
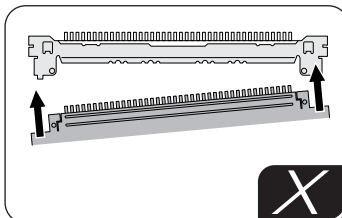
Figure 4-38 Installing the LCD unit (2)



3. Connect the LCD/Webcam harness to the connector on the LCD unit and secure it with the pull tape and glass tape.

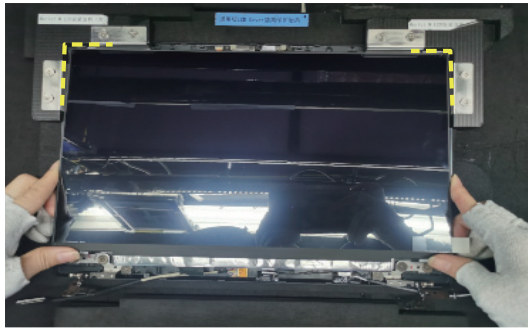


When connect the LCD harness, make sure to connect the right and left side at the same time as shown in the figure below.



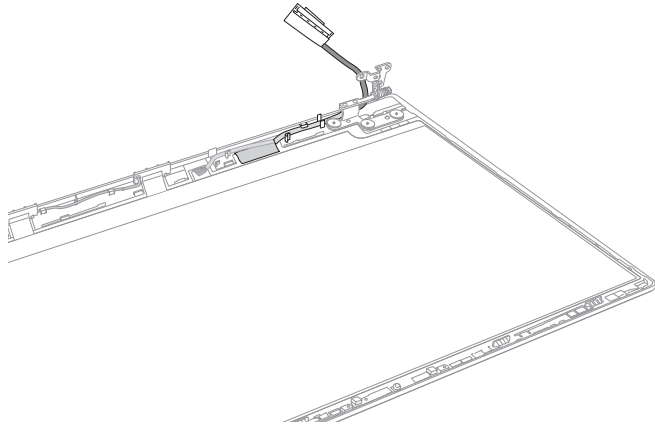
4. Set the LCD unit to the LCD cover in place.

Figure 4-39 Installing the LCD unit (3)



5. Arrange the LCD/Webcam harness under the guides of the LCD cover.

Figure 4-40 Installing the LCD unit (4)

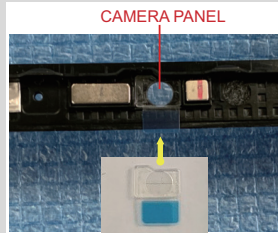


6. Remove the separators on the top and bottom side of the LCD mask.



When replacing the LCD mask with a new one:

- Stick the **CAMERA PANEL** on the LCD mask in place and remove the separator on it.

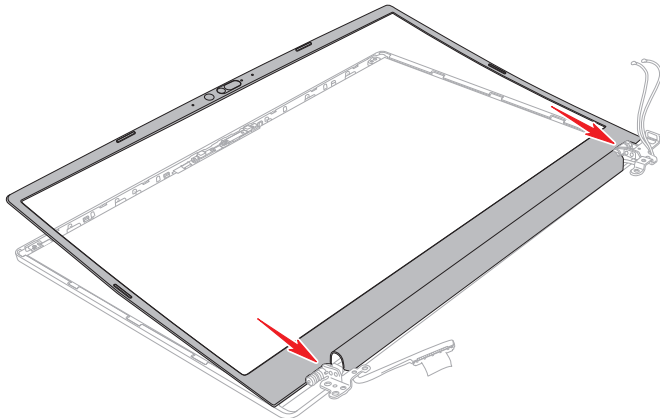


- **(For FA CAM models)** Stick the **CAM SEAL FA** on the LCD mask in place.



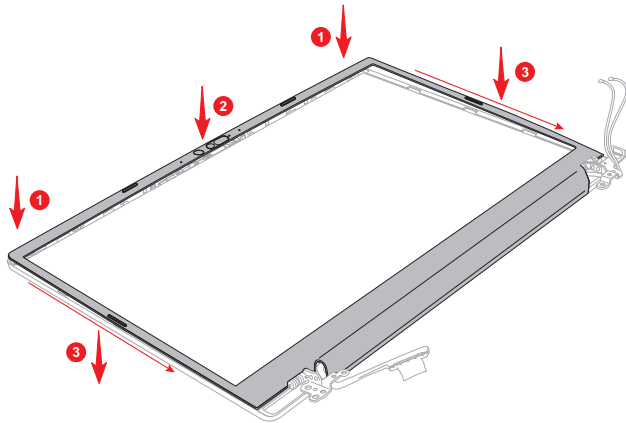
7. Align the LCD mask to the bottom side of the LCD cover first and engage the latches.

Figure 4-41 Installing the LCD unit (5)



8. Remove the separators from the stick tapes on both left and right edge side of the LCD cover.
9. Set the LCD mask on the LCD cover while engaging all the latches.

Figure 4-42 Installing the LCD unit (6)



4.25 Display hinges

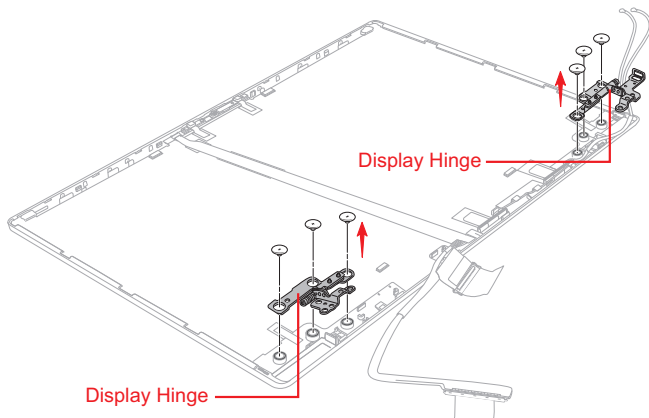
4.25.1 Removing the display hinges

To remove the display hinges, follow the steps below and refer to [Figure 4-43](#).

1. Release the following screws and remove the left & right hinges.

■ SH2.5x2.5BT x6

Figure 4-43 Removing the display hinges



4.25.2 Installing the display hinges

To install the display hinges, follow the steps below and refer to [Figure 4-43](#).

1. Set the left & right hinges and secure them with the screws.

4.26 Wireless LAN antennas

4.26.1 Removing the Wireless LAN antennas

To remove the Wireless LAN antennas, follow the steps below.

1. Release the Wireless LAN antenna cables from the guides on the LCD cover.
2. Peel off the Wireless LAN antennas from the LCD cover.



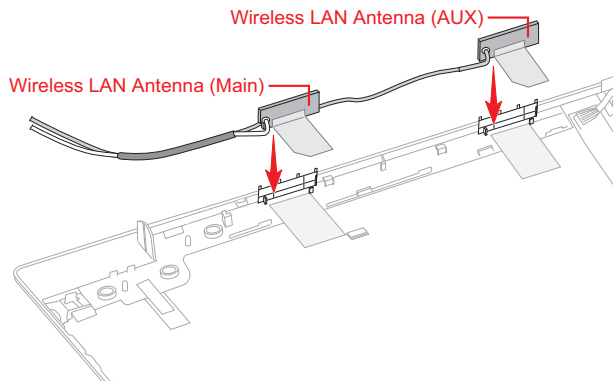
Do not reuse the removed wireless antennas. Be sure to use new wireless antenna.

4.26.2 Installing the Wireless LAN antennas

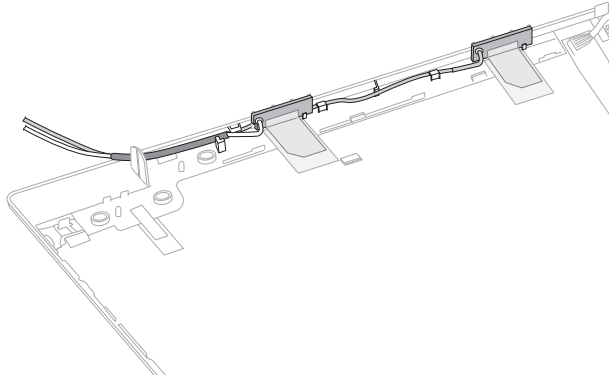
To install the Wireless LAN antennas, follow the steps below.

1. Remove the separators on the new **Wireless LAN antennas (AUX/Main)** and stick them to the LCD cover in place.

Figure 4-44 Sticking the Wireless LAN antennas



2. Arrange the **Wireless LAN antenna cables** in place as shown in below figure.

Figure 4-45 Arranging the Wireless LAN antenna cables

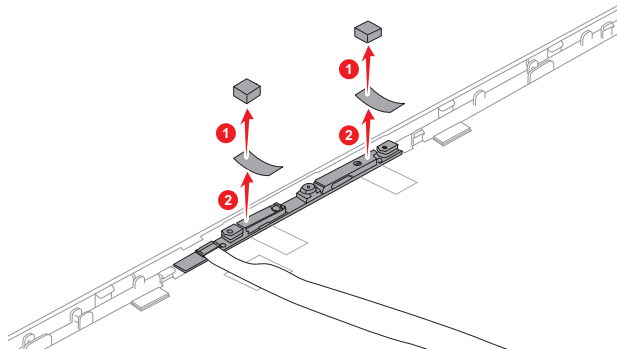
4.27 Camera module

4.27.1 Removing the Camera module

To remove the camera module, follow the steps below and refer to [Figure 4-46](#) to [Figure 4-48](#).

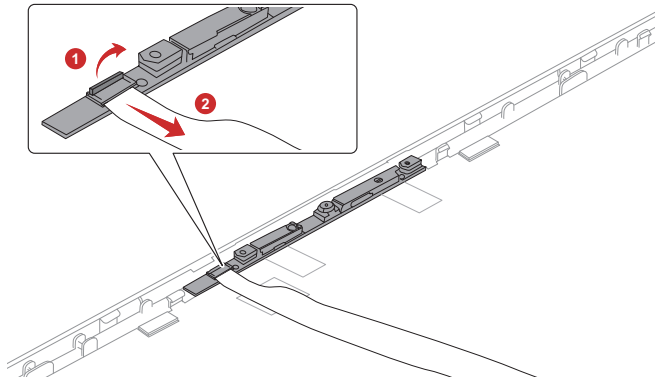
1. Remove two pieces of **GASKET** and **AL TAPE** on the camera module.

Figure 4-46 Removing the camera module (1)



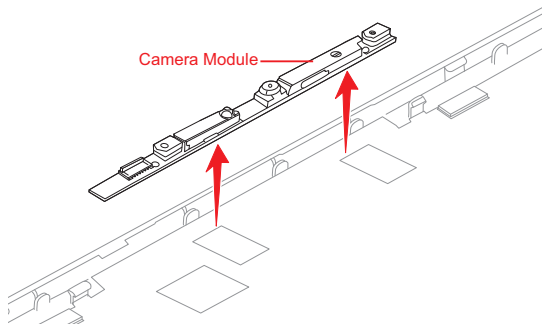
2. Disconnect the camera FPC from the connector on the camera module and peel off the FPC from the LCD cover.

Figure 4-47 Removing the camera module (2)



3. Peel off the **camera module** from the LCD cover.

Figure 4-48 Removing the camera module (3)

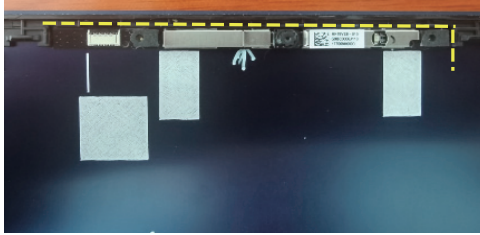


Do not reuse the removed camera module. Be sure to use new camera module.

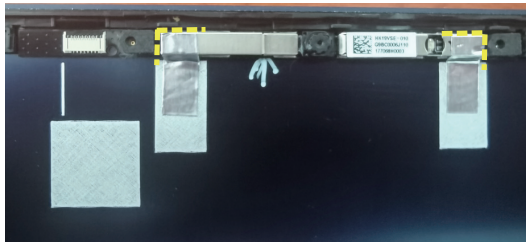
4.27.2 Installing the Camera module

To install the camera module, follow the steps below and refer to [Figure 4-46](#) to [Figure 4-51](#).

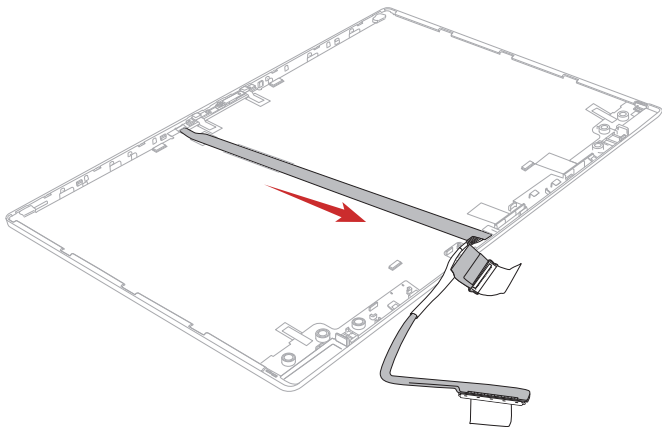
1. Peel off two protection sheets from the LCD cover.
2. Peel off the protection sheet from a new camera module and stick the **new camera module** to the LCD cover.

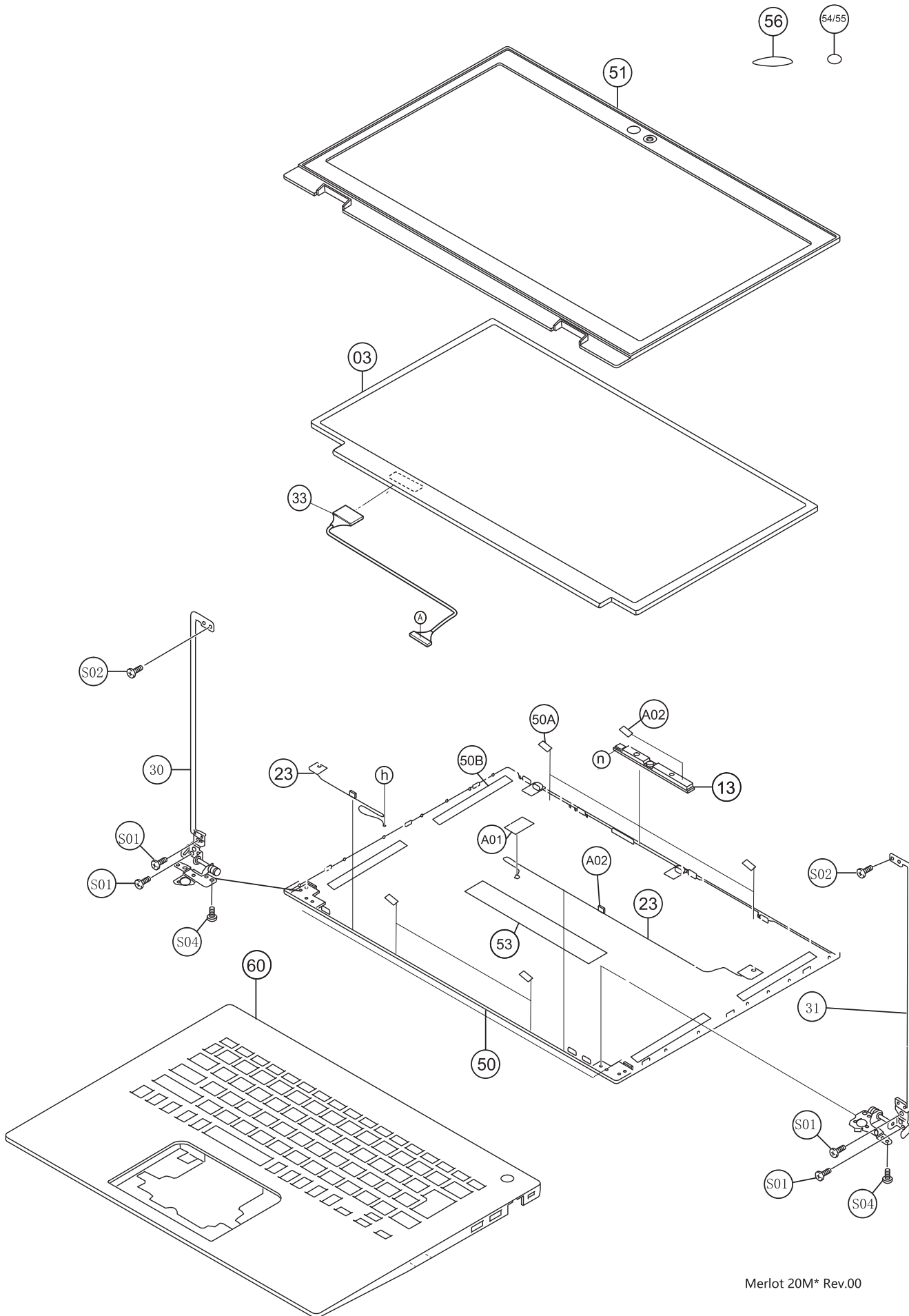
Figure 4-49 Installing the Camera module (1)

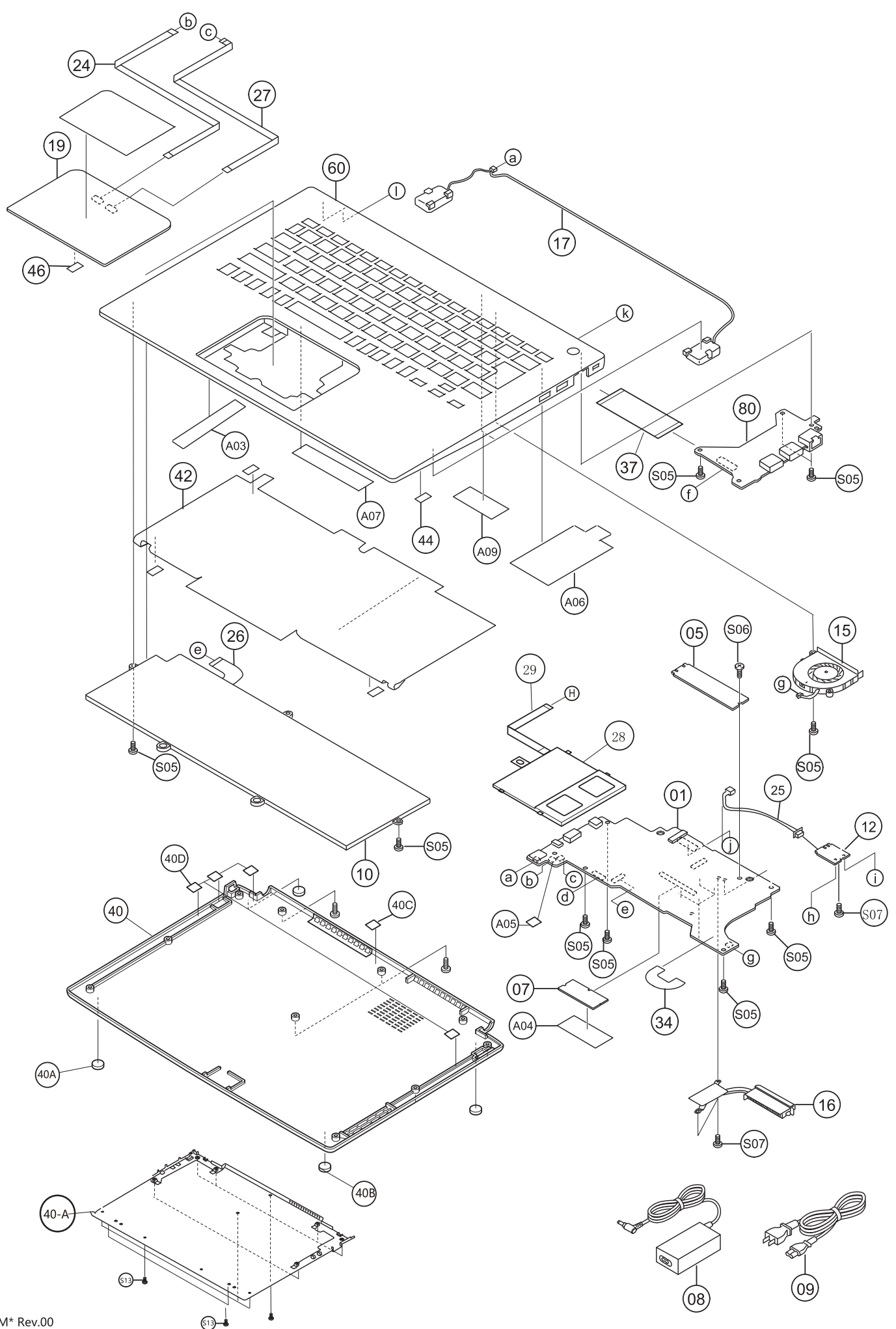
3. Stick two pieces of **AL TAPE** on the new camera module.

Figure 4-50 Installing the Camera module (2)

4. Stick two pieces of **GASKET** on it.
5. Connect the camera FPC to the connector on the camera module.
6. Peel off the separators on the camera FPC and stick the FPC to the LCD cover in place.

Figure 4-51 Installing the Camera module (3)





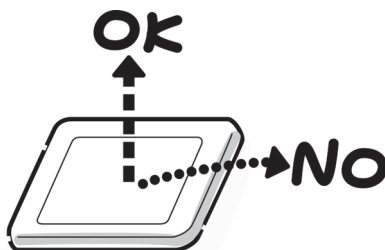
Appendix A

Handling the LCD Module

A.1 Precautions for handling the LCD module

The LCD module can be easily damaged during assembly or disassembly. Observe the following precautions when handling the LCD module:

1. When installing the LCD module in the LCD cover, be sure to seat it so that it is properly aligned and maximum visibility of the display is maintained.



2. Be careful to align the holes at the four corners of the LCD module with the corresponding holes in the LCD cover before securing the module with screws.
Do not force the module into place, because stress can affect its performance.
Also, the panel's polarized surface is easily scarred, so be careful when handling it.



3. If the panel's surface gets dirty, wipe it with cotton or a soft cloth. If it is still dirty, try breathing on the surface to create a light condensate and wipe it again. If the surface is very dirty, we recommend a CRT cleaning agent. Apply the agent to a cloth and then wipe the panel's surface. Do not apply cleanser directly to the panel.



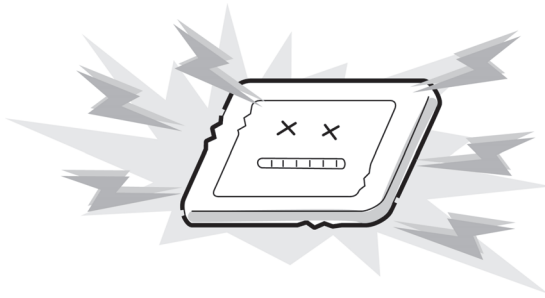
4. If water or other liquid is left on the panel's surface for a long period, it can change the screen's tint or stain it. Be sure to quickly wipe off any liquid.



5. Glass is used in the panel, so be careful not to drop it or let it strike a hard object, which could cause breakage or cracks.



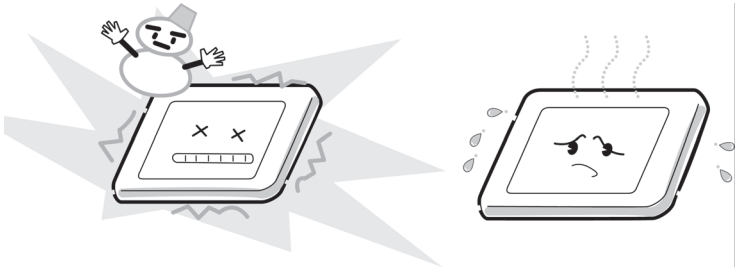
6. CMOS-LSI circuits are used in the module, so guard against damage from electrostatic discharge. Be sure to wear a wrist or ankle ground when handling the module.



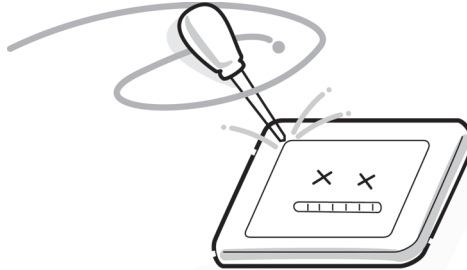
7. Do not expose the module to direct sunlight or strong ultraviolet rays for long periods.



8. Do not store the module at temperatures below specifications. Cold can cause the liquid crystals to freeze, lose their elasticity or otherwise suffer damage.



9. Do not disassemble the LCD module. Disassembly can cause malfunctions.



10. If you transport the module, do not use packing material that contains epoxy resin (amine) or silicon glue (alcohol or oxide). These materials can release gas that can damage the panel's polarization.

