

March 11<sup>th</sup>, 2022

## **Dynabook Laptop Components Classified as Requiring Selective Treatment**

Dynabook would like to communicate the method of identifying and removing components contained in Dynabook notebook products, including but not limited to the **Portege X30-J** model, that requires selective treatment based on the European WEEE Directive, Directive 2012/19/EU of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE).

All of the instructions provided within this letter can be reviewed in greater detail within the **Portege X30-J Series Maintenance Manual**.

### **Tools Required**

In order to remove internal components of the **Portege X30-J** some tools from the list below may be required located in **Chapter 4 Replacement Procedures** of the **Dynabook Maintenance Manual**

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)

### **Table of Contents**

- (Page 2-4) Removing the Lithium Ion Battery (Main Battery, No coin cell battery)
- (Page 5) Removing the SSD
- (Page 6-74) LCD, Printed Circuit / Wiring Boards (PCB/ PWB system board)
- (Page 75-76) AC Adapter and external provide cable

## 1. Removing the Lithium Ion Battery (Main Battery, No coin cell battery)

Please refer to the information below for instructions regarding the identification and removal of the lithium ion battery. Further maintenance instructions can be found in section 4.4 of the **Portege X30W-J Maintenance Manual**. Some tools are required in order to remove this component. Once removed, these components should be recycled as per local requirements.

To remove the battery, the base assembly must be removed first:

### **Removing the BASE ASSY**

To remove the BASE ASSY or BASE LTE ASSY, follow the steps below and refer to Figure 4-3 and 4-4.

1. Click “Start” – “Power” and then click “Shut down” while holding down the SHIFT key to turn off the power of the computer.
2. Disconnect the AC adapter and other external devices from the computer.
3. Turn over the computer.
4. Remove the following **screws** securing the BASE ASSY or BASE LTE ASSY.

< non 5G/LTE model >

- M2.5□4B FLAT HEAD screw □4 (Described as “4” in the Figure 4-3)
- M2.5□6B FLAT HEAD screw □8 (Described as “6” in the Figure 4-3)

< 5G/LTE (JP) model >

- M2.5□4B TORX HEAD screw □2 (Described as “4” in the Figure 4-4)
- M2.5□6B FLAT HEAD screw □8 (Described as “6” in the Figure 4-4)

< 5G/LTE (US, UK) model >

- M2.5□4B FLAT HEAD screw □2 (Described as “4” in the Figure 4-4)
- M2.5□6B FLAT HEAD screw □8 (Described as “6” in the Figure 4-4)

**NOTE:** When the color of the computer is dark blue, fix the BASE ASSY or BASE LTE ASSY with the dark blue electrodeposition coating screws.

When the color of the computer is black, fix the BASE ASSY or BASE LTE ASSY with the black nickel screws.

5. Remove the **BASE ASSY** or BASE LTE ASSY while releasing the latches.

< non 5G/LTE model >

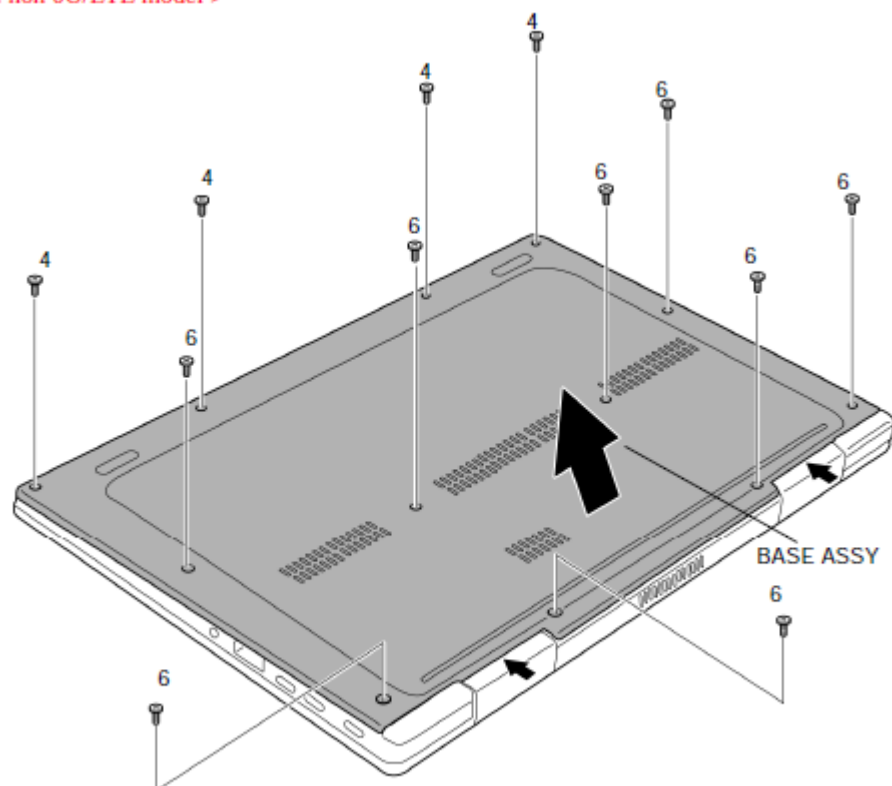


Figure 4-3 Removing the BASE ASSY (1)

< 5G/LTE model >

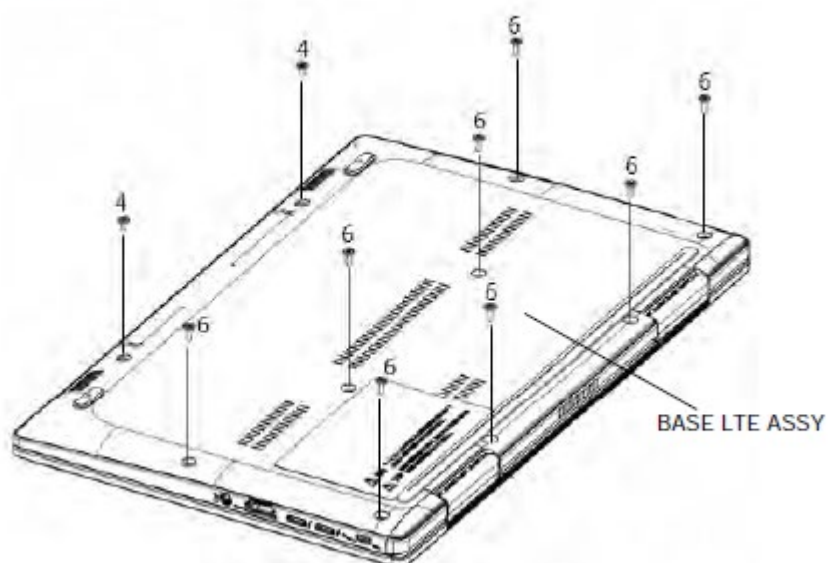


Figure 4-4 Removing the BASE ASSY (2)

## Removing the BATTERY PACK

To remove the BATTERY PACK, follow the steps below and refer to Figure 4-5.

**CAUTION:** When handling the BATTERY PACK, be careful not to short circuit the terminals. Also do not drop, hit, apply impact, scratch, break, twist or bend the BATTERY PACK.

1. Peel off the **INSU SQUARE**.
2. Disconnect the **BATTERY HARNESS** from the connector **CN8021** on the SYSTEM BOARD.
3. Remove the following **screws** and the **BATTERY PACK**.
  - M2□4C S-THIN HEAD screw □2

**CAUTION:** The replaced battery must be disposed according to the laws and ordinances of your local authority.

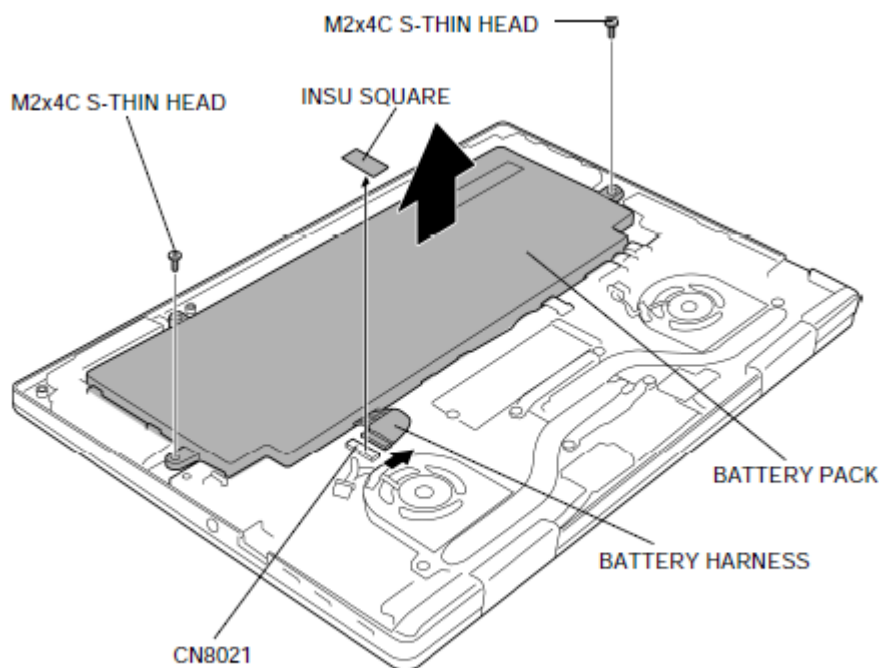


Figure 4-5 Removing the BATTERY PACK

## **2. Removing the SSD**

To remove the SSD the **mainboard** must be removed **first**.

Please refer to the information listed in section **4.12** of the **Portege X30W-J Series Maintenance Manual** to check how the mainboard is removed.

Please refer to the information below for the removal of the SSD.

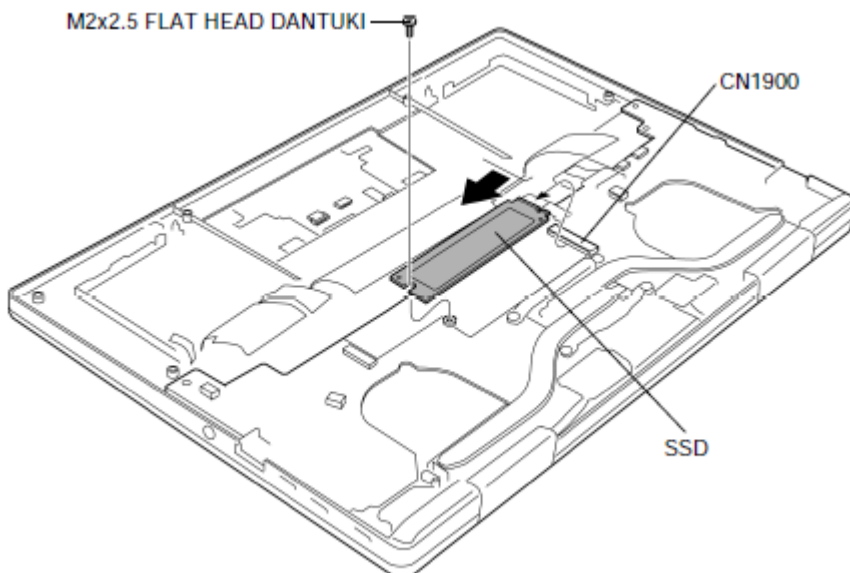
One Philips screwdriver with type 1 bit will be required to remove the screws indicated in the locations below. Once removed, these components should be recycled as per local requirements.

### **Removing the SSD**

To remove the SSD, follow the steps below and refer to Figure 4-14.

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

□ M2□2.5 FLAT HEAD DANTUKI screw □ 1



*Figure 4-14 Removing the SSD*

### **3. Removing the LCD and Printed Circuit / Wiring Boards**

Beside the LCD and the main PCB, there are further **small PCBs and components** which are in the scope of the WEEE Directive. The removal of these components is described in detail in the **chapter 4** of the associated maintenance manual.

## **Replacement Procedures**

Figure 4-3 Removing the BASE ASSY (1) .....	4-16
Figure 4-4 Removing the BASE ASSY (2) .....	4-17
Figure 4-5 Removing the BATTERY PACK .....	4-21
Figure 4-6 Removing the SPEAKER (1) .....	4-23
Figure 4-7 Removing the SPEAKER (2) .....	4-24
Figure 4-8 Removing the SPEAKER (3) .....	4-25
Figure 4-9 Removing the 5G/LTE MODULE .....	4-28
Figure 4-10 Removing the 5G/LTE ANTENNA (1) .....	4-33
Figure 4-11 Removing the 5G/LTE ANTENNA (2) .....	4-34
Figure 4-12 Removing the 5G/LTE ANTENNA (3) .....	4-35
Figure 4-13 Removing the FAN .....	4-40
Figure 4-14 Removing the SSD .....	4-42
Figure 4-15 Removing the HEAT SINK .....	4-44
Figure 4-16 Removing the SYSTEM BOARD (1) .....	4-48
Figure 4-17 Removing the SYSTEM BOARD (2) .....	4-49
Figure 4-18 Removing the CLICK PAD .....	4-54
Figure 4-19 Removing the W-LAN ANTENNA (1) .....	4-57
Figure 4-20 Removing the W-LAN ANTENNA (2) .....	4-58
Figure 4-21 Removing the LID BOARD .....	4-62
Figure 4-22 Removing the REAR CAMERA MODULE .....	4-64
Figure 4-23 Removing the LCD FAT ASSY/COVER ASSY.....	4-66
Figure 4-24 Removing the KEYBOARD (1) .....	4-68
Figure 4-25 Removing the KEYBOARD (2) .....	4-69
Figure 4-26 Removing the LCD (1).....	4-72
Figure 4-27 Removing the LCD (2).....	4-74
Figure 4-28 Removing the LCD (3).....	4-78
Figure 4-29 Removing the LCD (4).....	4-79
Figure 4-30 Removing the CAMERA MODULE (1) .....	4-80
Figure 4-31 Removing the CAMERA MODULE (2) .....	4-81

## 4.4 BASE ASSY

### Removing the BASE ASSY

To remove the BASE ASSY or BASE LTE ASSY, follow the steps below and refer to Figure 4-3 and 4-4.

1. Click “Start” – “Power” and then click “Shut down” while holding down the SHIFT key to turn off the power of the computer.
2. Disconnect the AC adapter and other external devices from the computer.
3. Turn over the computer.
4. Remove the following **screws** securing the BASE ASSY or BASE LTE ASSY.

< non 5G/LTE model >

- M2.5×4B FLAT HEAD screw ×4 (Described as “4” in the Figure 4-3)
- M2.5×6B FLAT HEAD screw ×8 (Described as “6” in the Figure 4-3)

< 5G/LTE (JP) model >

- M2.5×4B TORX HEAD screw ×2 (Described as “4” in the Figure 4-4)
- M2.5×6B FLAT HEAD screw ×8 (Described as “6” in the Figure 4-4)

< 5G/LTE (US, UK) model >

- M2.5×4B FLAT HEAD screw ×2 (Described as “4” in the Figure 4-4)
- M2.5×6B FLAT HEAD screw ×8 (Described as “6” in the Figure 4-4)

**NOTE:** When the color of the computer is dark blue, fix the BASE ASSY or BASE LTE ASSY with the dark blue electrodeposition coating screws.  
When the color of the computer is black, fix the BASE ASSY or BASE LTE ASSY with the black nickel screws.

5. Remove the **BASE ASSY** or **BASE LTE ASSY** while releasing the latches.

< non 5G/LTE model >

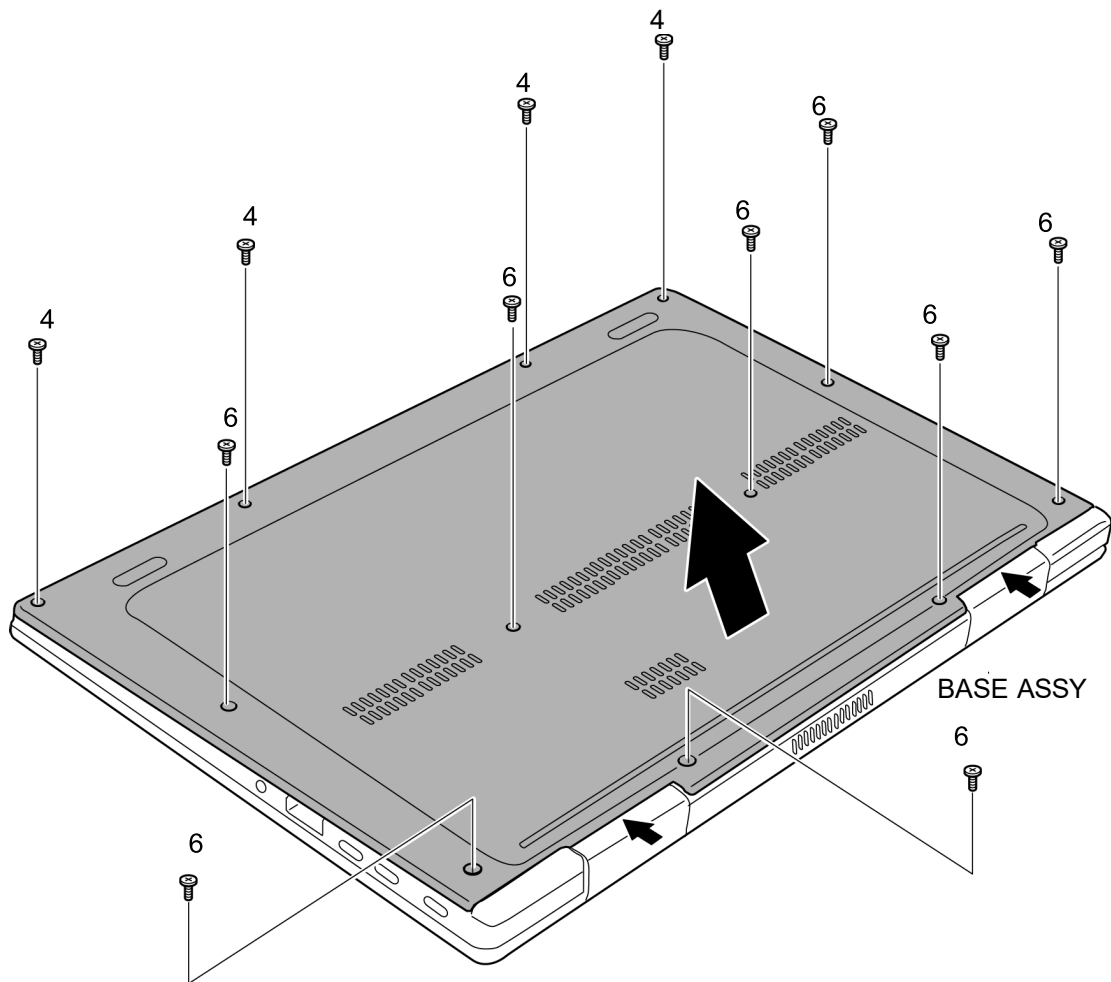


Figure 4-3 Removing the BASE ASSY (1)



< 5G/LTE model >

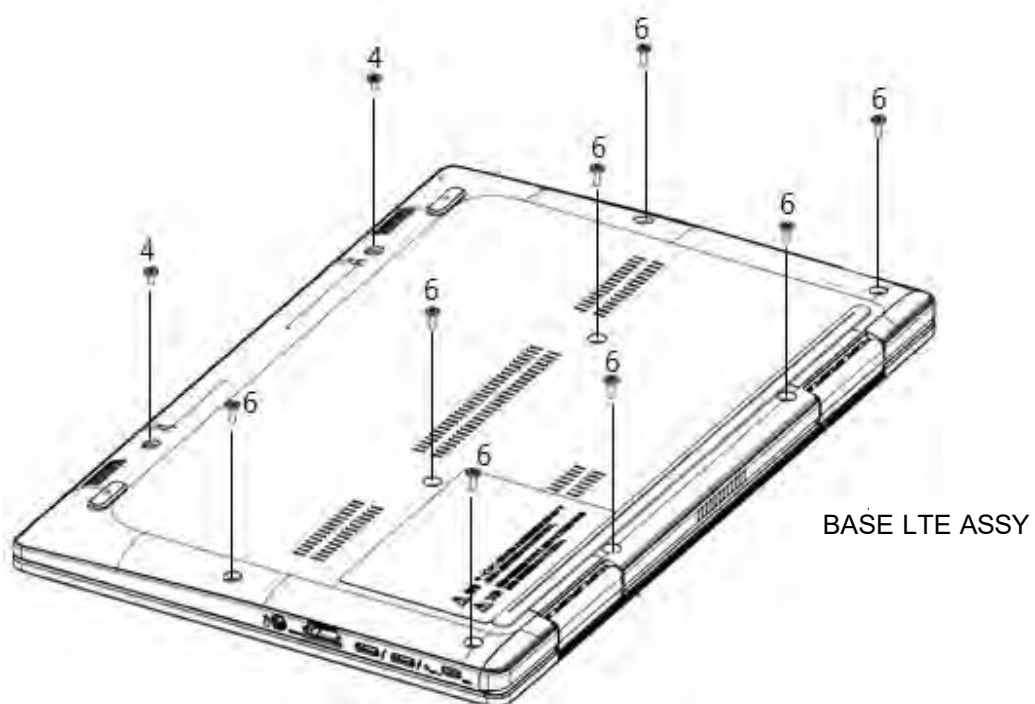
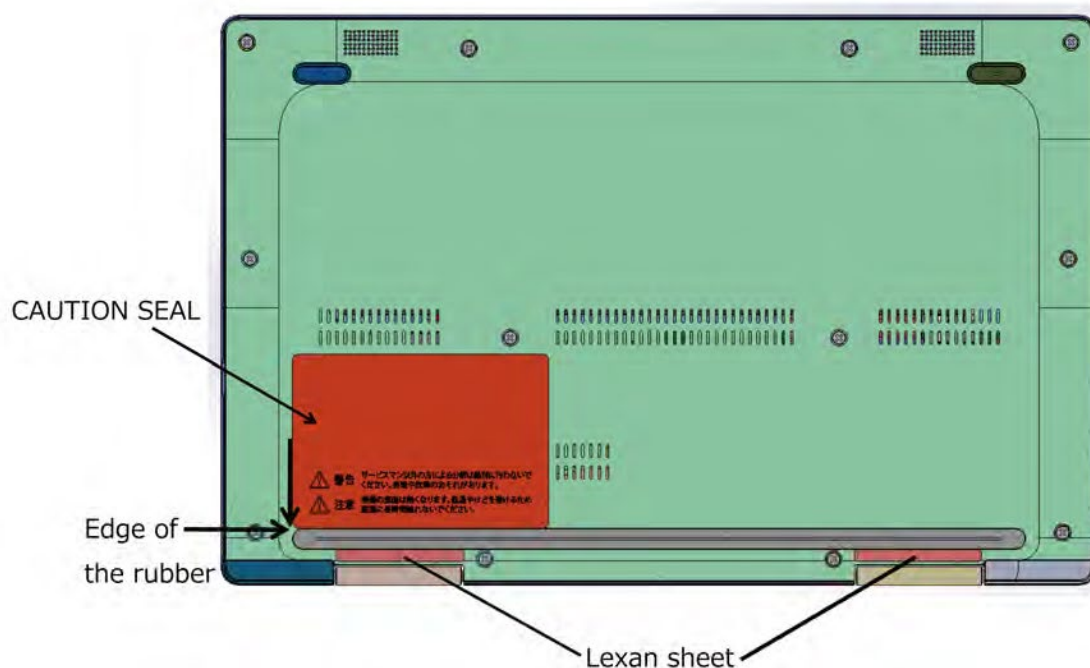
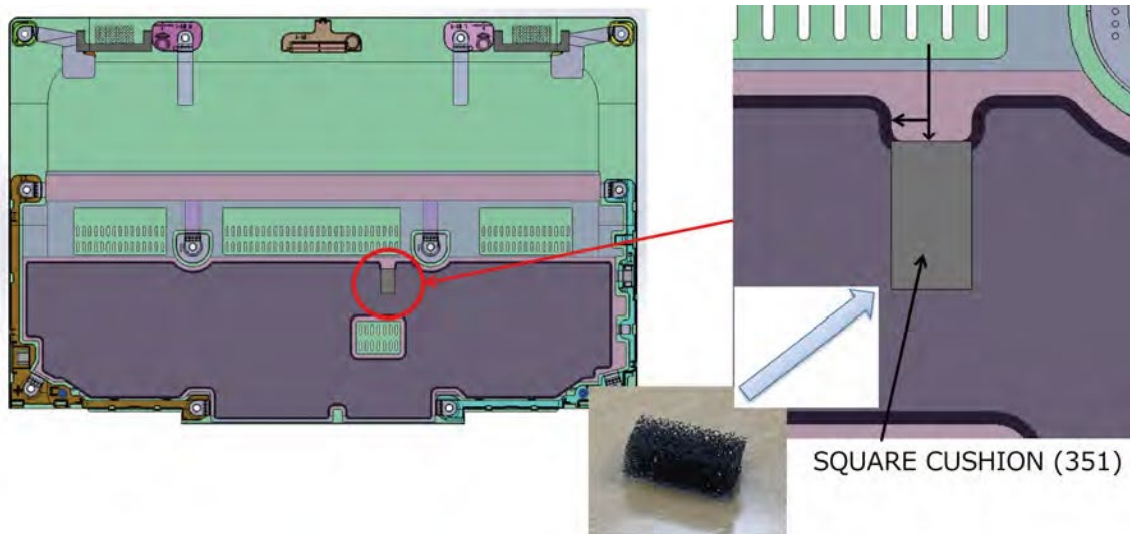


Figure 4-4 Removing the BASE ASSY (2)

## Installing the BASE ASSY

To install the BASE ASSY or BASE LTE ASSY, follow the steps below and refer to Figure 4-3 and 4-4.

**NOTE:** When replacing the BASE ASSY or BASE LTE ASSY with a new one, stick new SQUARE CUSHION (351) and CAUTION SEAL to the BASE ASSY or BASE LTE ASSY in place.



1. Set the **BASE ASSY** or **BASE LTE ASSY** to the COVER ASSY and secure it with the following **screws**.

< non 5G/LTE model >

- M2.5×4B FLAT HEAD screw ×4 (Described as “4” in the Figure 4-3)
- M2.5×6B FLAT HEAD screw ×8 (Described as “6” in the Figure 4-3)

< 5G/LTE (JP) model >

- M2.5×4B TORX HEAD screw ×2 (Described as “4” in the Figure 4-4)
- M2.5×6B FLAT HEAD screw ×8 (Described as “6” in the Figure 4-4)

< 5G/LTE (US, UK) model >

- M2.5×4B FLAT HEAD screw ×2 (Described as “4” in the Figure 4-4)
- M2.5×6B FLAT HEAD screw ×8 (Described as “6” in the Figure 4-4)

Prepare required parts in advance, when replacing the following items.

ITEM	Parts List ITEM No	PART NAME	Quantity		
			Non 5G/LTE	LTE	5G
BASE ASSY	40	BASE ASSY	1	0	0
		BASE LTE ASSY	0	1	1
		SQUARE CUSHION (351)	1	1	1
	90,91	CAUTION SEAL	1	1	1

## 4.5 BATTERY PACK

### Removing the BATTERY PACK

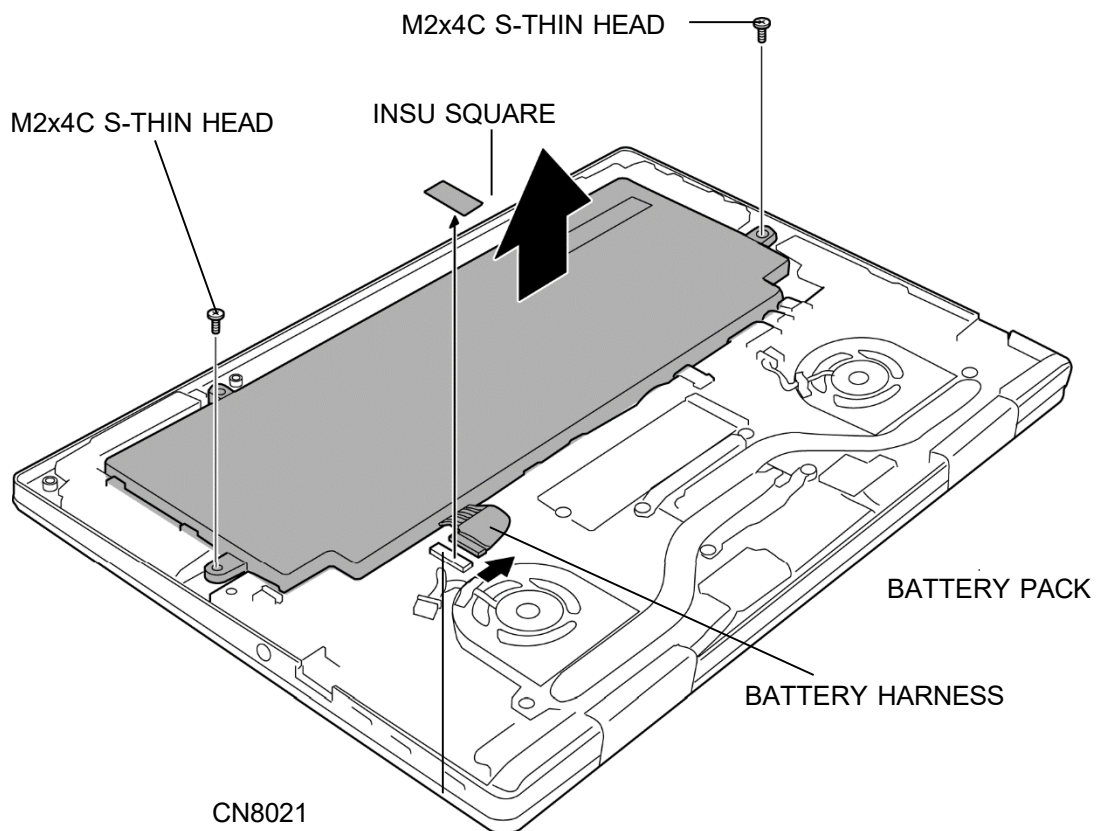
To remove the BATTERY PACK, follow the steps below and refer to Figure 4-5.

**CAUTION:** *When handling the BATTERY PACK, be careful not to short circuit the terminals. Also do not drop, hit, apply impact, scratch, break, twist or bend the BATTERY PACK.*

1. Peel off the **INSU SQUARE**.
2. Disconnect the **BATTERY HARNESS** from the connector **CN8021** on the **SYSTEM BOARD**.
3. Remove the following **screws** and the **BATTERY PACK**.

**CAUTION:** *The replaced battery must be disposed according to the laws and ordinances of your local authority.*

- M2×4C S-THIN HEAD screw



*Figure 4-5 Removing the BATTERY PACK*

### **Installing the BATTERY PACK**

To install the BATTERY PACK, follow the steps below and refer to Figure 4-5.

**CAUTION:** *The BATTERY PACK is a lithium ion battery, which can explode if not properly replaced, used, handled or disposed of. For environmental reasons, collect the spent BATTERY PACKs. Use only batteries recommended by our company for replacements.*

1. Set the **BATTERY PACK** to the COVER ASSY and secure it with the following screws.
  - M2×4C S-THIN HEAD screw ×2
2. Connect the **BATTERY HARNESS** to the connector **CN8021** on the SYSTEM BOARD.
3. Stick the **INSU SQUARE** in place.

## 4.6 SPEAKER

### Removing the SPEAKER

To remove the SPEAKER, follow the steps below and refer to Figure 4-6 to 4-8.

1. Disconnect the **FP FFC** (finger print sensor model) and **CPAD FFC** from the connectors on the CLICK PAD.
2. Disconnect the **FP FFC** (finger print sensor model) and **CPAD FFC** from the connectors **CN9550** and **CN9510** on the SYSTEM BOARD.

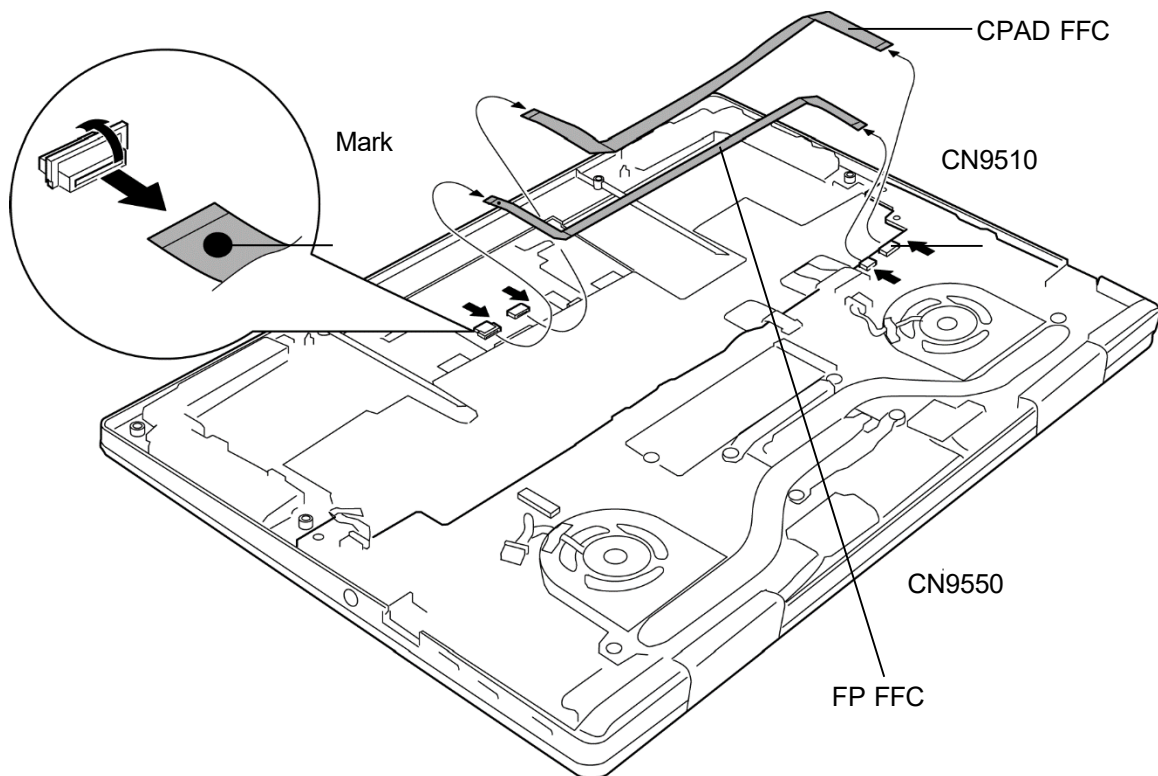


Figure 4-6 Removing the SPEAKER (1)

3. Open the **INSU KB LOW** or **INSU KB LOW 5G**.

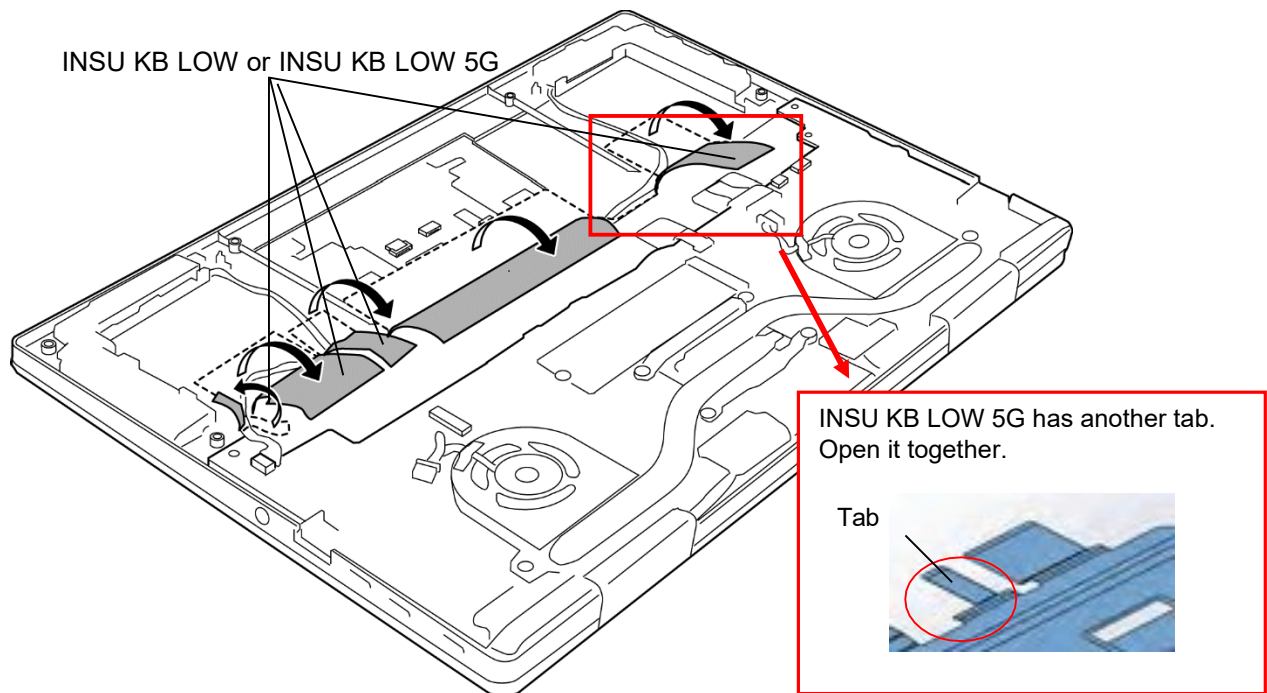


Figure 4-7 Removing the SPEAKER (2)



4. Disconnect the **SPEAKER HARNESS** from the connector **CN6290** on the SYSTEM BOARD.
5. Remove the **SPEAKER** or **SPEAKER 5G** (left and right) from the slots of the COVER ASSY.

SPEAKER or SPEAKER 5G

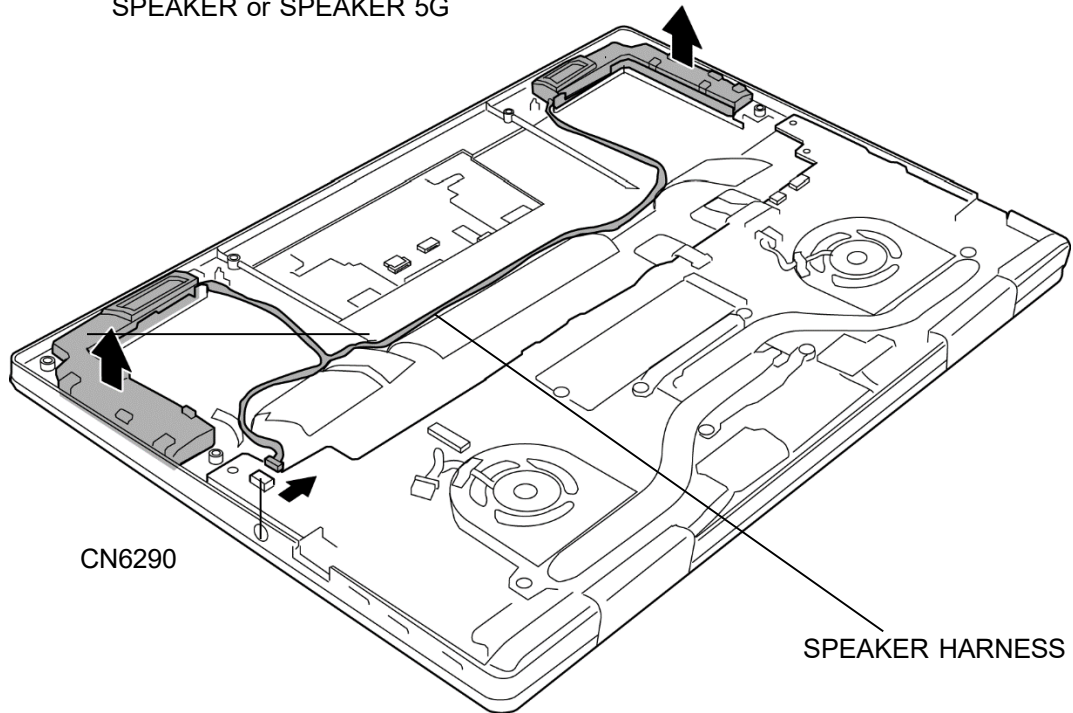
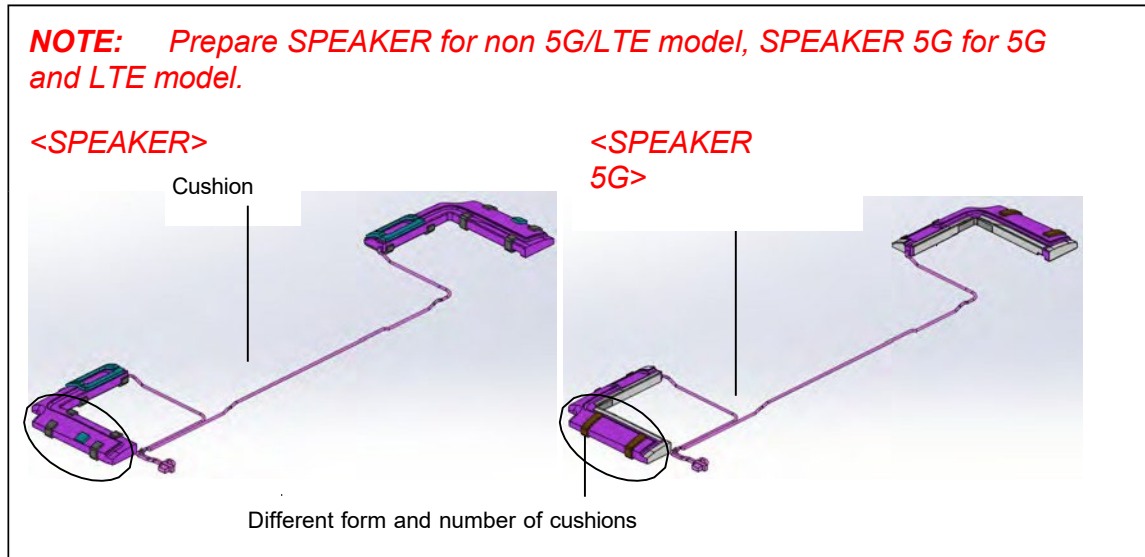


Figure 4-8 Removing the SPEAKER (3)

## Installing the SPEAKER

To install the SPEAKER, follow the steps below and refer to 4-6 to 4-8.



1. Set the **SPEAKER** or **SPEAKER 5G** (left and right) to the slots of the COVER ASSY.
2. Arrange the **SPEAKER HARNESS** in place and fix it with the **INSU KB LOW** or **INSU KB LOW 5G**.
3. Connect the **SPEAKER HARNESS** to the connector **CN6290** on the SYSTEM BOARD.
4. Connect the **FP FFC** (finger print sensor model) and **CPAD FFC** to the connectors **CN9550** and **CN9510** on the SYSTEM BOARD.
5. Connect the marked side of the **FP FFC** (finger print sensor model) and **CPAD FFC** to the connectors on the CLICK PAD.

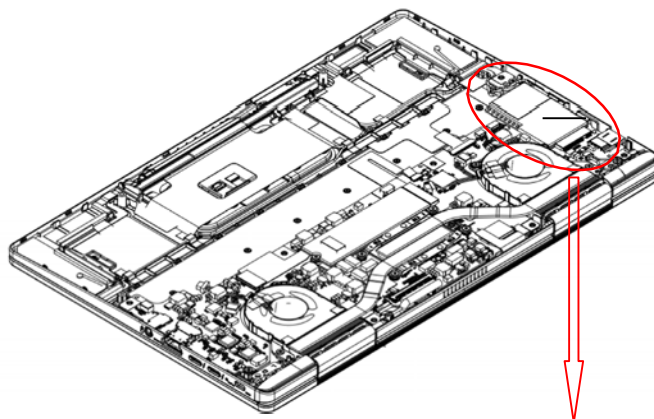
## 4.7 5G/LTE MODULE

### Removing the 5G/LTE MODULE

To remove the 5G/LTE MODULE, follow the steps below and refer to Figure 4-9.

1. Peel off the **INSU SQUARE** on the **5G MODULE** or **LTE MODULE**.
2. Disconnect the **ANTENNA CABLEs** (4 cables for 5G model, 2 cables for LTE model) from the connectors on the **5G MODULE** or **LTE MODULE**.
3. Remove the following **screw** and disconnect **5G MODULE** from the connector **CN2610** or **LTE MODULE** from the connector **CN2600** on the SYSTEM BOARD.
  - M2×2.3C S-THIN HEAD screw      ×1

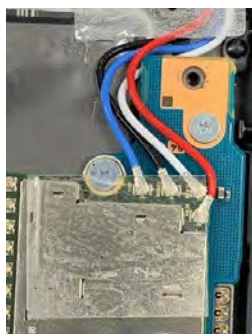
5G MODULE or LTE MODULE



### < 5G MODULE

M2x2.3C S-THIN HEAD

INSU SQUARE (271)



5G AUX ANTENNA Cable (blue)

5G MIMO2 ANTENNA Cable (black)

5G MIMO1 ANTENNA Cable (white)

5G MAIN ANTENNA Cable (red)

### < LTE MODULE >

M2x2.3C S-THIN HEAD

INSU SQUARE (271)



5G AUX ANTENNA Cable (blue)

5G MAIN ANTENNA Cable (red)

*Figure 4-9 Removing the 5G/LTE MODULE*

## Installing the 5G/LTE MODULE

To install the 5G/LTE MODULE, follow the steps below and refer to Figure 4-9.

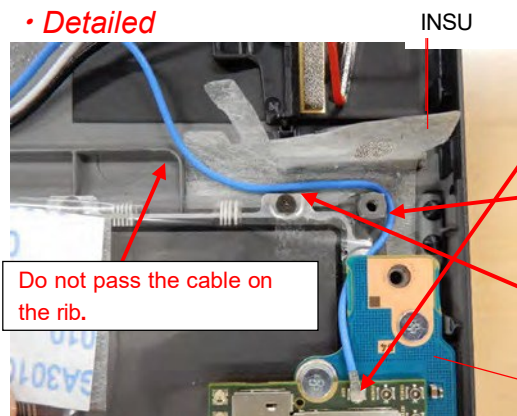
1. Connect the **5G MODULE** to the connector **CN2610** or **LTE MODULE** to the connector **CN2600** on the SYSTEM BOARD and secure it with the following screw.
  - M2×2.3C S-THIN HEAD screw ×1
2. Connect the **ANTENNA CABLEs** (4 cables for 5G model, 2 cables for LTE model) to the connectors on the **5G MODULE** or **LTE MODULE**

**NOTE:** Connect the cables according to the following order and steps;

< 5G model >



• Detailed

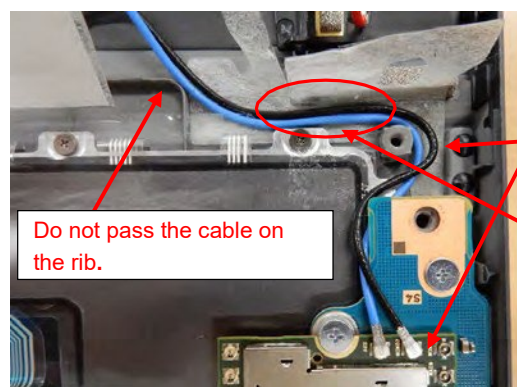


① Connect the AUX cable (blue) to the AUX connector on the 5G module.

② Pass the AUX cable (blue) under the System board corner first. Then hook it to the boss.

③ Stick the AUX cable (blue) to the INSU. To make the space for MIMO1 and MIMO2 cables, stick it to the KB side.

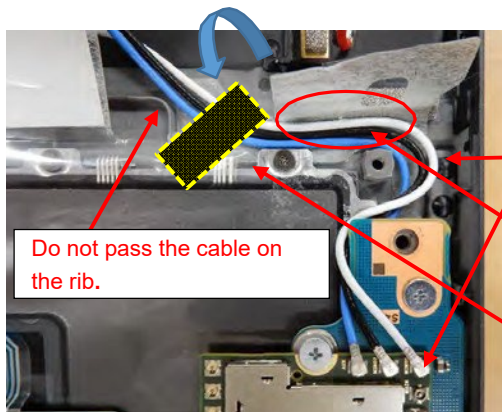
System board



① Connect the MIMO2 cable (black) to the MIMO2 connector on the 5G module.

② Pass the MIMO2 cable (black) along to the AUX cable (blue).

③ Stick the MIMO2 cable (black) to the INSU. To make the space for MIMO1 cable, stick it along to the AUX cable (blue).

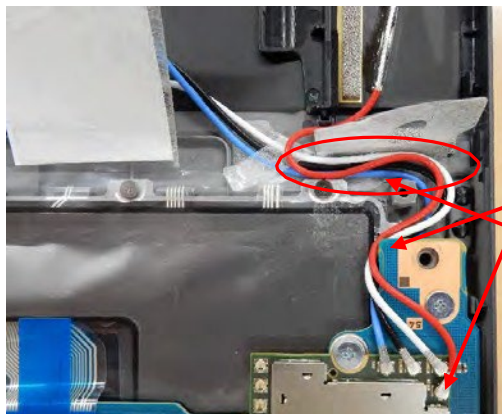


① Connect the MIMO1 cable (white) to the MIMO1 connector on the 5G module.

② Pass the MIMO1 cable (white) along to the MIMO2 cable (black).

③ Stick the MIMO1 cable (white) to the INSU. Make sure that the cables are not overlapped.

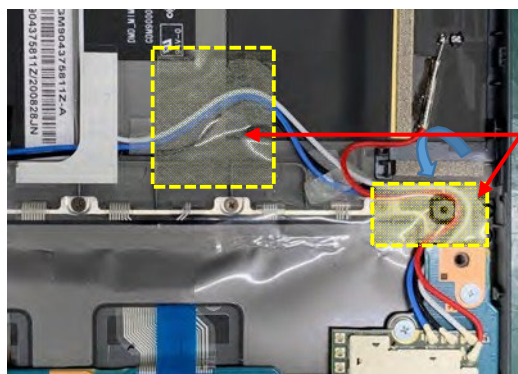
④ Fix the AUX, MIMO1 and MIMO2 cables with the INSU.



① Connect the MAIN cable (red) to the MAIN connector on the 5G module.

② Pass the MAIN cable (red) along to the MIMO1 cable (white) and pass it under the System board corner.

③ Pass the MAIN cable (red) on the AUX, MIMO2 and MIMO1 cables.



① Fix the cables with INSU.

② Fix the cables with INSU KB LOW 5G.

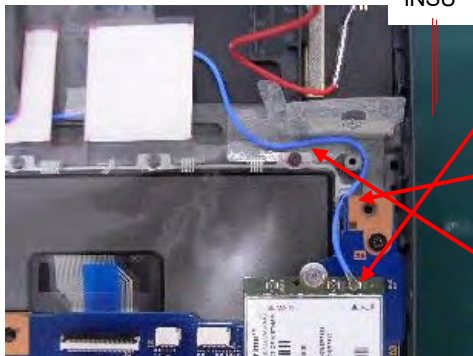


< LTE model

> AUX →



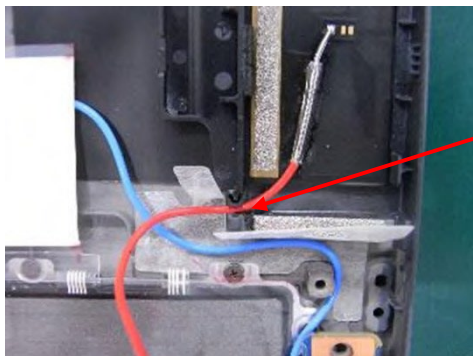
• Detailed



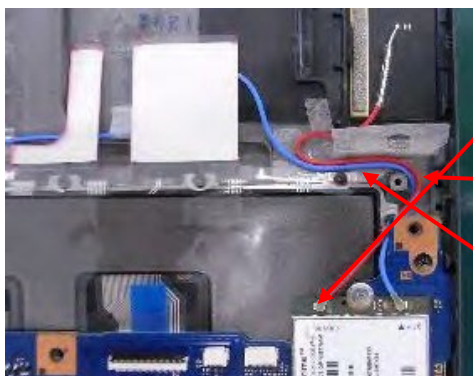
① Connect the AUX cable (blue) to the AUX connector on the LTE module.

② Pass the AUX cable (blue) under the System board corner first. Then hook it to the boss.

③ Stick the AUX cable (blue) to the INSU.



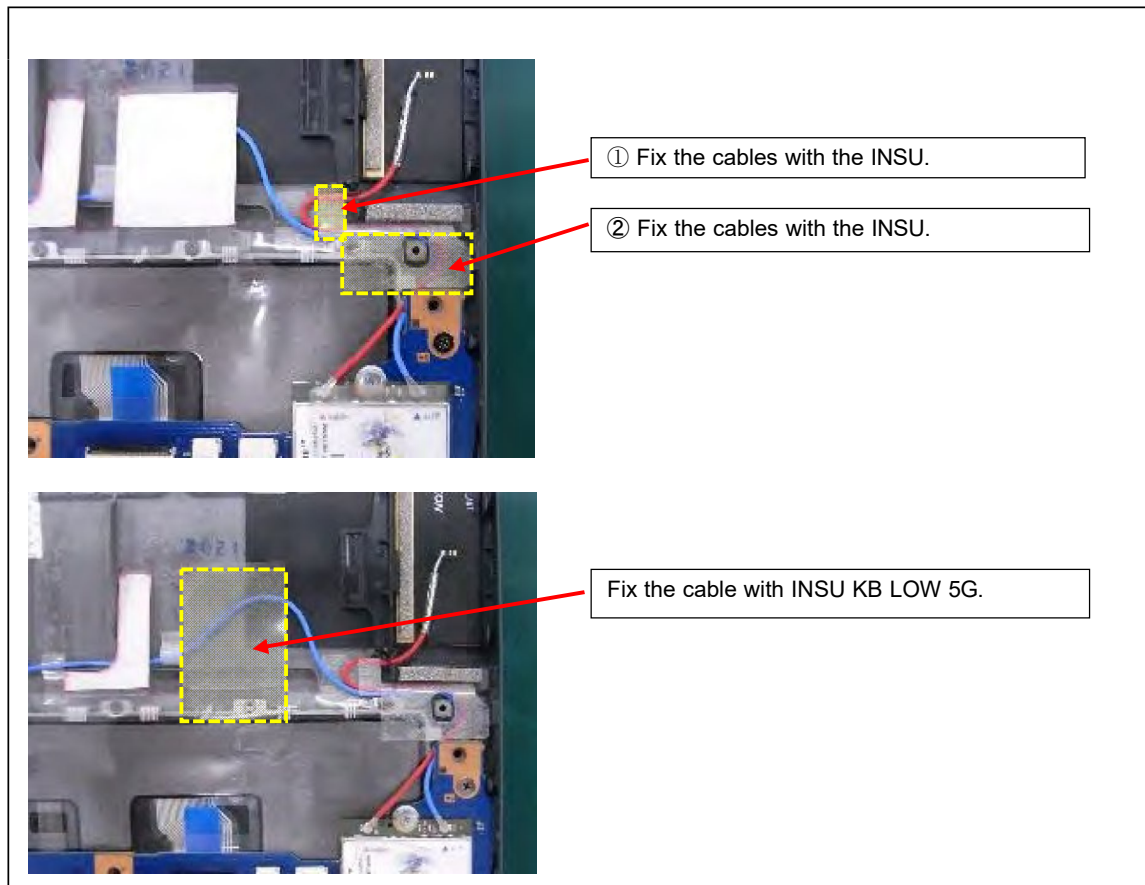
Pass the MAIN cable (red) in the rib.



① Connect the MAIN cable (red) to the MAIN connector on the LTE module.

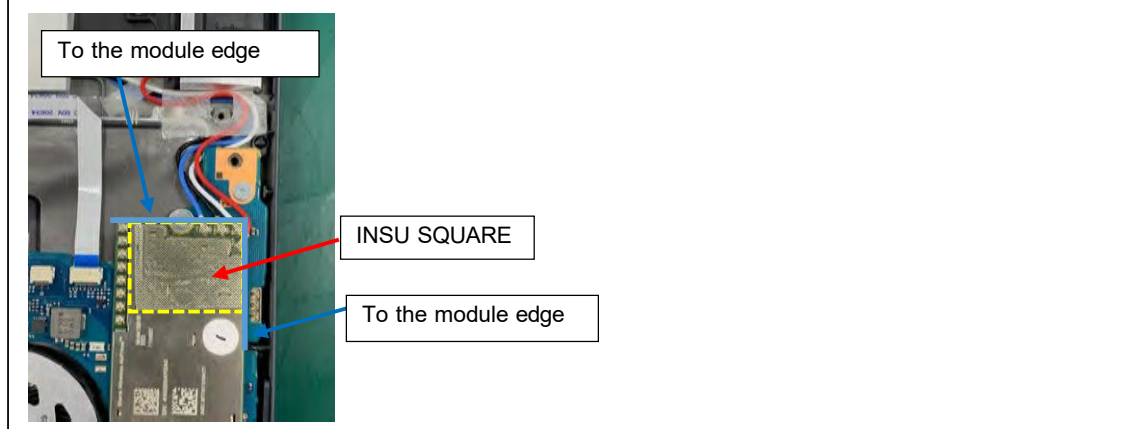
② Pass the MAIN cable (red) under the System board corner first. Then hook it to the boss.

③ Stick the MAIN cable (red) to the INSU.



3. Stick the **INSU SQUARE** to the **5G MODULE** or **LTE MODULE**

**NOTE:** (5G model) Stick the **INSU SQUARE** as shown below;



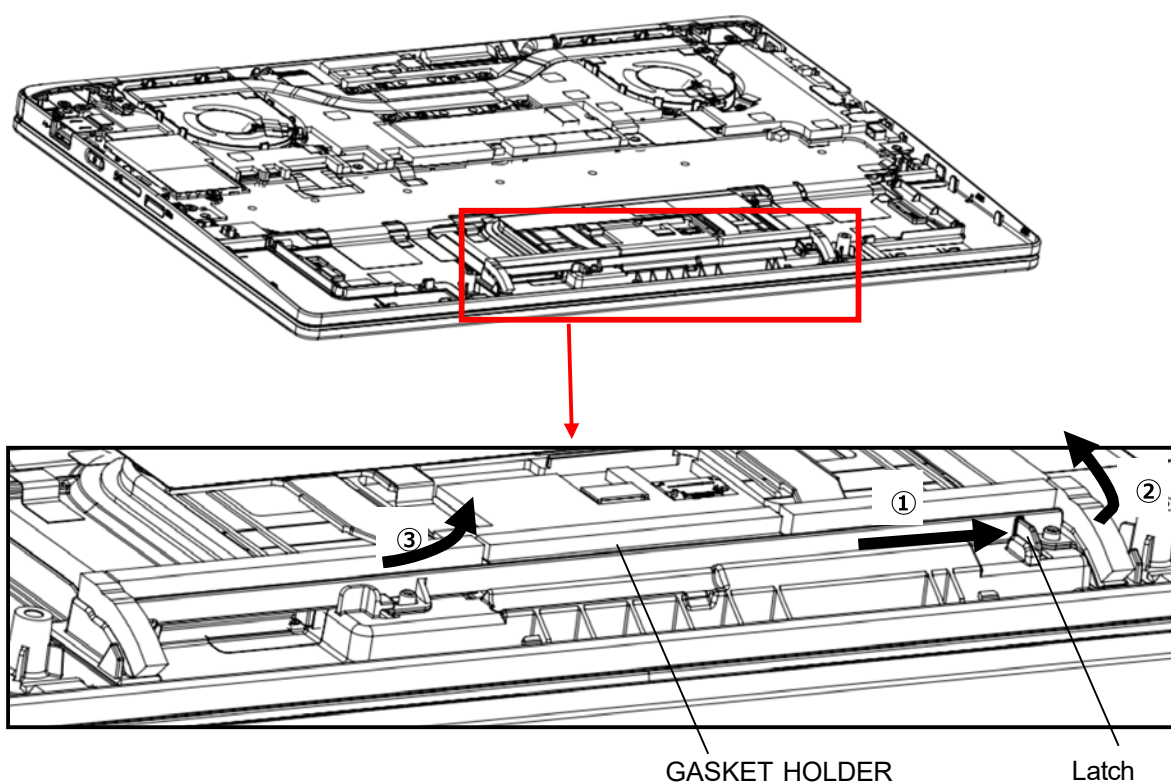


## 4.8 5G/LTE ANTENNA

### Removing the 5G/LTE ANTENNA

To remove the 5G/LTE ANTENNA, follow the steps below and refer to Figure 4-10 to 4-12.

1. Press the latch to the arrow direction to release.
2. Pull up the **GASKET HOLDER**.
3. Release the latch and remove the **GASKET HOLDER**.



*Figure 4-10 Removing the 5G/LTE ANTENNA (1)*

4. Remove the **5G ANTENNA SPACERS** and the **INSU SQUAREs**. Turn up the **INSU ANT HOLD**.

**NOTE:** Do not reuse the removed INSU SQUAREs. Be sure to use new ones.

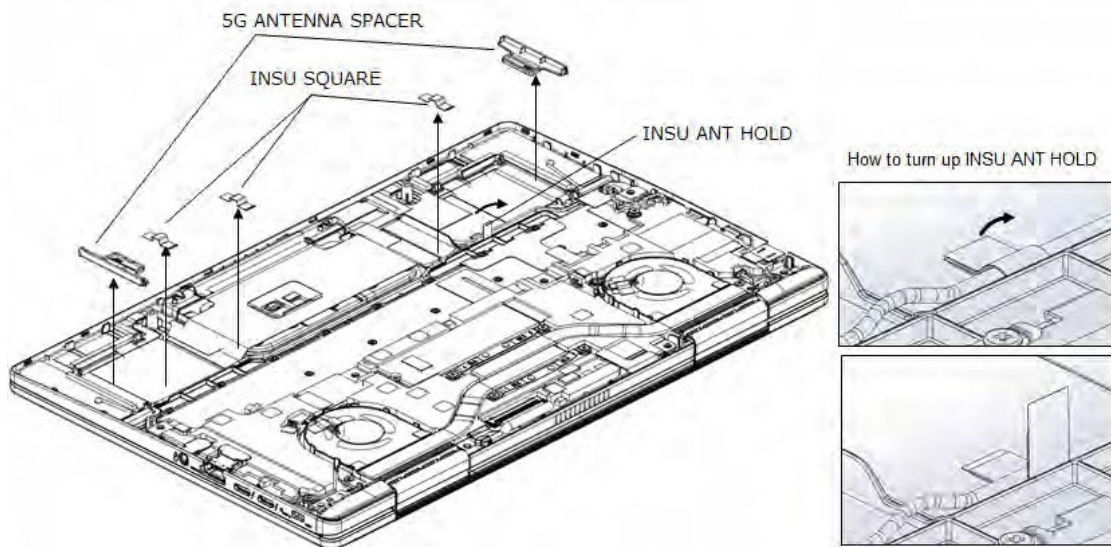
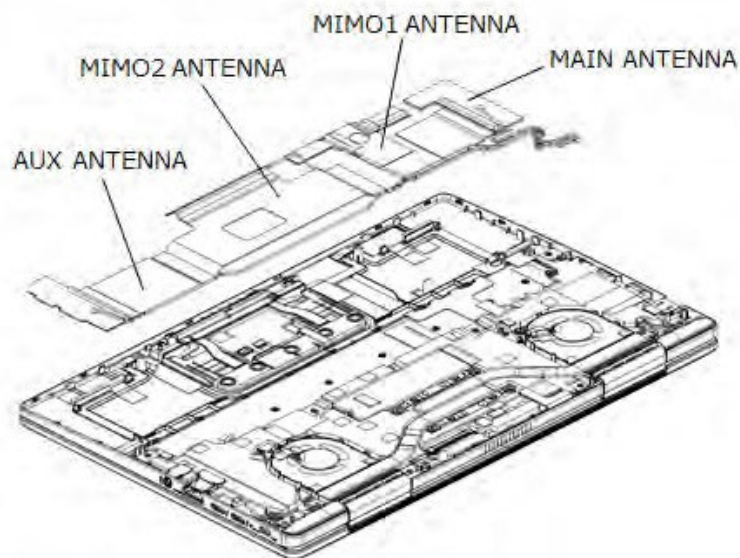


Figure 4-11 Removing the 5G/LTE ANTENNA (2)

5. (5G model) Remove the **MAIN ANTENNA**, **AUX ANTENNA**, **MIMO1 ANTENNA** and **MIMO2 ANTENNA**.  
(LTE model) Remove the **MAIN ANTENNA** and **AUX ANTENNA**.

**NOTE:** Do not reuse the removed ANTENNAS. Be sure to use new ones.

< 5G model >



< LTE model >

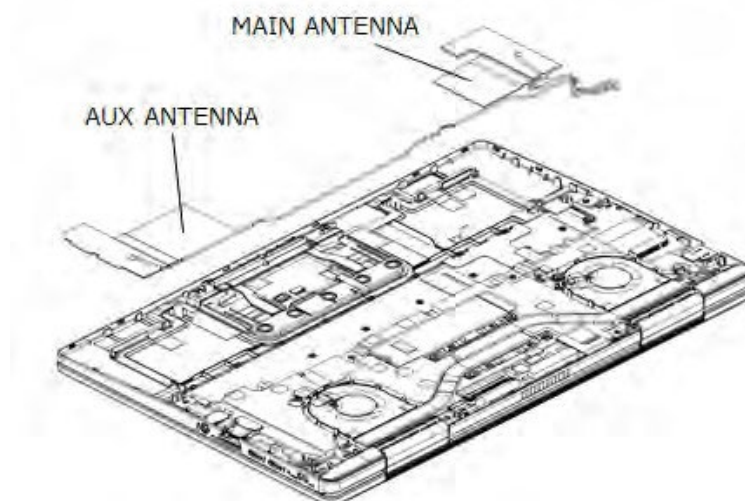


Figure 4-12 Removing the 5G/LTE ANTENNA (3)

**Installing the 5G/LTE MODULE**

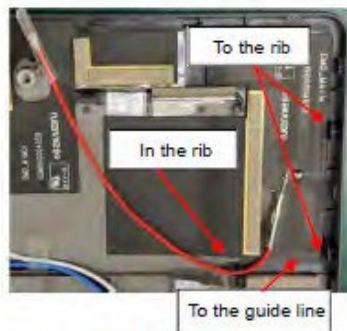
To install the 5G/LTE MODULE, follow the steps below and refer to Figure 4-10 to 4-12.

1. (5G model) Stick the **MAIN ANTENNA**, **AUX ANTENNA**, **MIMO1 ANTENNA** and **MIMO2 ANTENNA** to the **COVER ASSY** and arrange the cables in place.  
  
(LTE model) Stick the **MAIN ANTENNA** and **AUX ANTENNA** to the **COVER ASSY** in place and arrange the cables in place.
2. Stick the **5G ANTENNA SPACERS** and the **INSU SQUAREs** in place. Close the **INSU ANT HOLD.**

**NOTE:** Stick the ANTENNAS and arrange the cables according to the order and the steps below;

< 5G model >

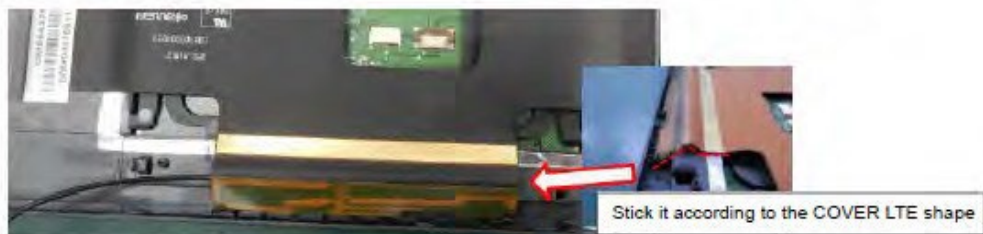
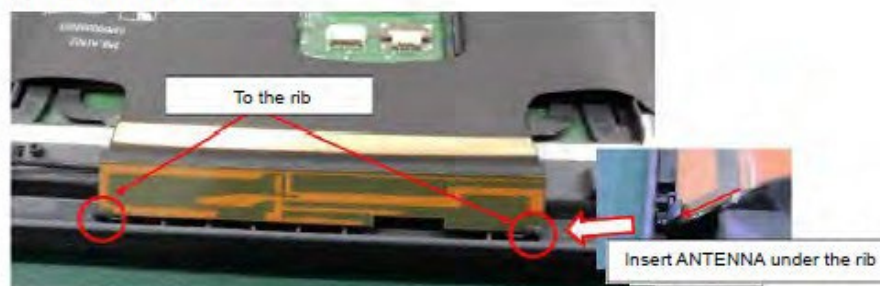
(1) MAIN ANTENNA



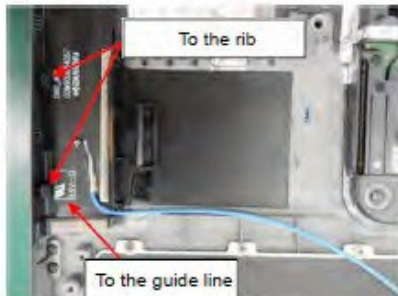
(2) MIMO1 ANTENNA



(3) MIMO2 ANTENNA

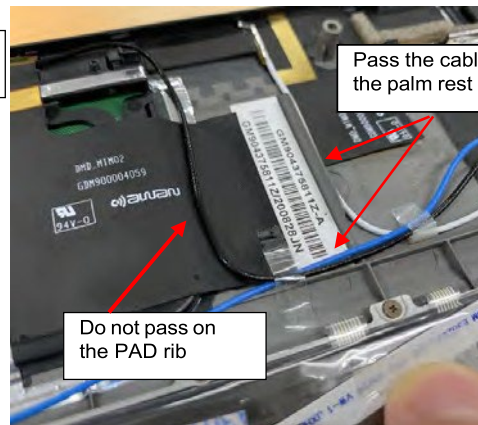
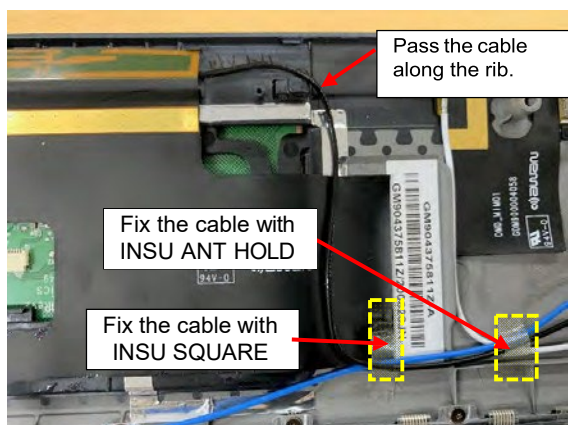
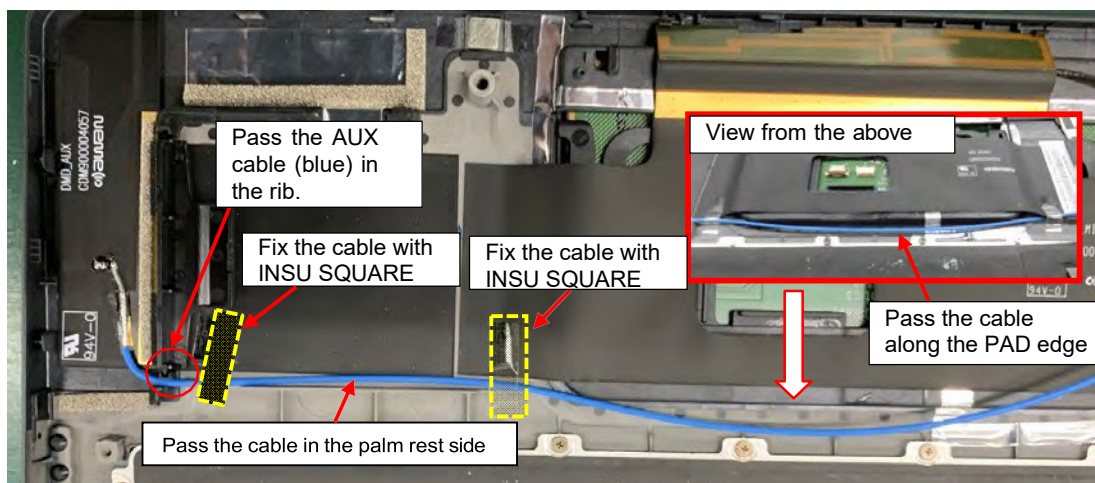


(4) AUX ANTENNA



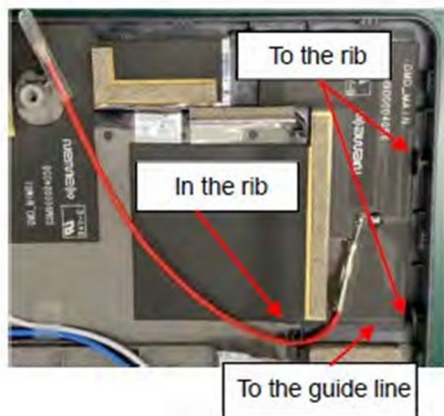


• Arrangement of ANTENNA

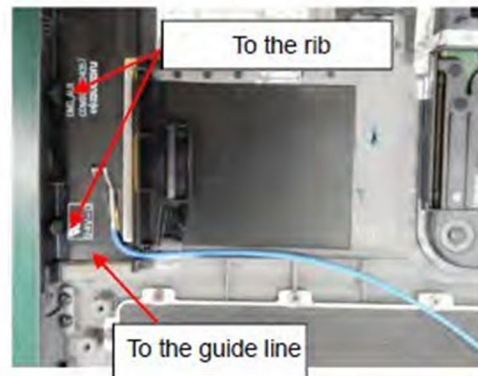


< LTE model >

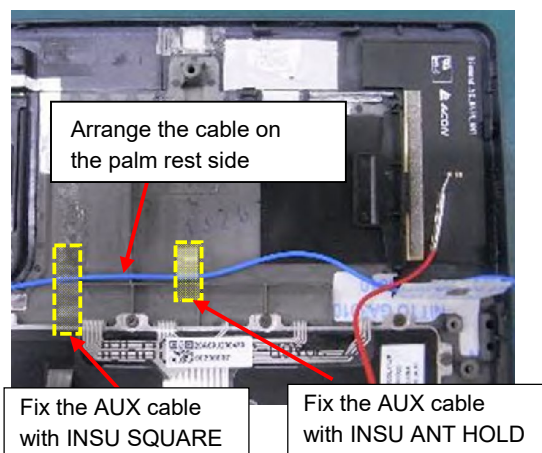
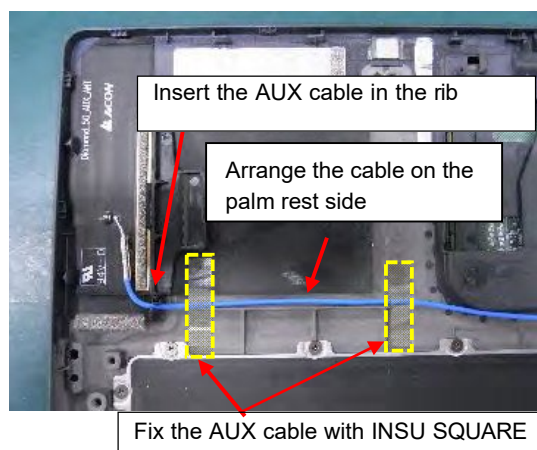
(1) MAIN ANTENNA



(2) AUX ANTENNA



• Arrangement of ANTENNA cables



3. Set the **GASKET HOLDER** in place firmly.

Prepare required parts in advance, when replacing the following items.

ITEM	Parts List ITEM No	PART NAME	Quantity		
			Non 5G/LTE	LTE	5G
5G/LTE ANTENNA		MAIN ANTENNA	0	1	1
		AUX ANTENNA	0	1	1
		MIMO1 ANTENNA	0	0	1
		MIMO2 ANTENNA	0	0	1
		INSU SQUARE(111)	0	3	3

## 4.9 FAN

### **Removing the FAN**

To remove the FAN, follow the steps below and refer to Figure 4-13.

1. Disconnect the **FAN R HARNESS** from the connector **CN3380** on the SYSTEM BOARD.
2. Remove the following **screws** and the **FAN R**.
  - M2x4C S-THIN HEAD screw ×2
3. Disconnect the **FAN L HARNESS** from the connector **CN3390** on the SYSTEM BOARD.
4. Remove the following **screws** and the **FAN L**.
  - M2x4C S-THIN HEAD screw ×2

**NOTE:** Do not touch the center portion of the FANs.

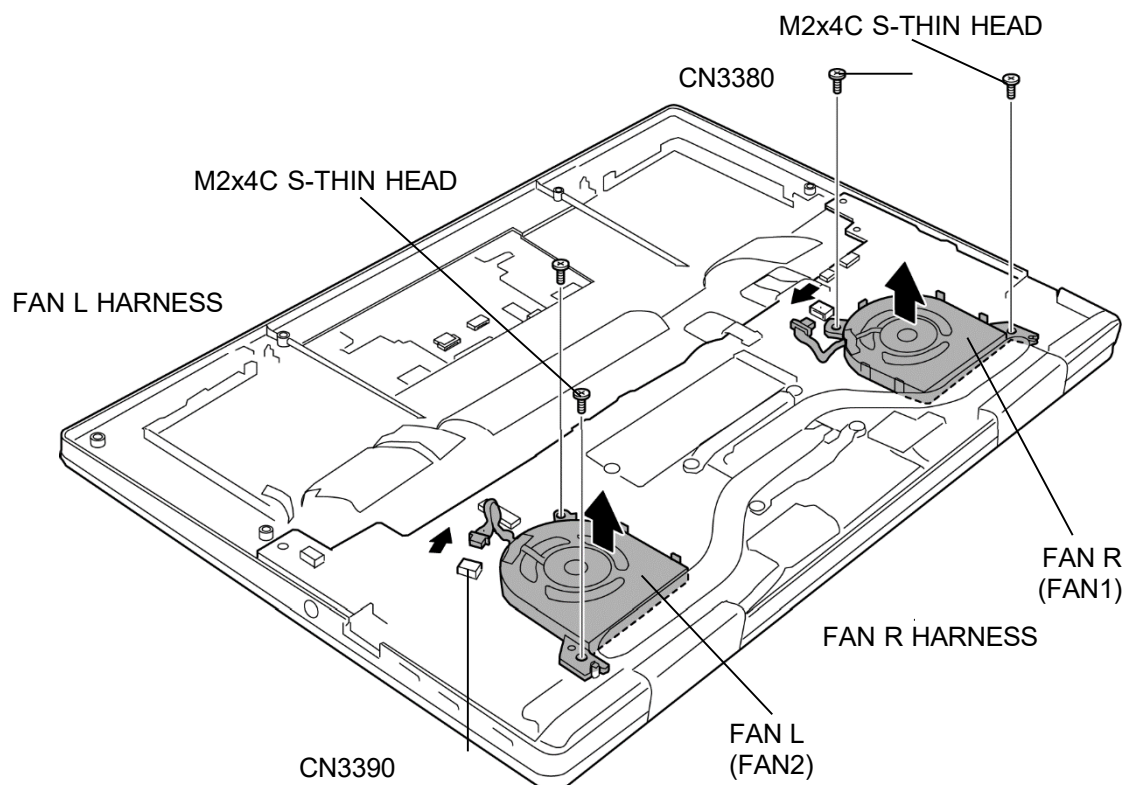


Figure 4-13 Removing the FAN



### **Installing the FAN**

To install the FAN, follow the steps below and refer to Figure 4-13.

4. Set the **FAN R** to the COVER ASSY and secure it with the following **screws**.
  - M2×4C S-THIN HEAD screw ×2
3. Connect the **FAN R HARNESS** to the connector **CN3380** on the SYSTEM BOARD.
4. Set the **FAN L** to the COVER ASSY and secure it with the following **screws**.
  - M2×4C S-THIN HEAD screw ×2
4. Connect the **FAN L HARNESS** to the connector **CN3390** on the SYSTEM BOARD.

#### 4.10 SSD

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

##### Removing the SSD

To remove the SSD, follow the steps below and refer to Figure 4-14.

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

- M2×2.5 FLAT HEAD DANTUKI screw ×1

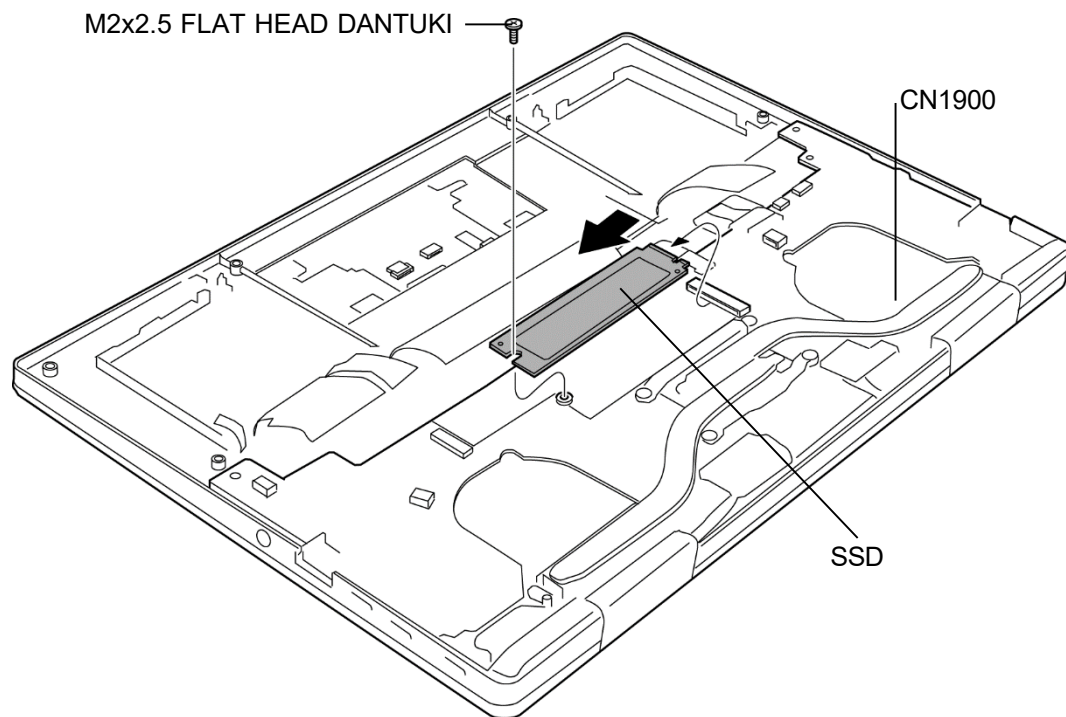


Figure 4-14 Removing the SSD

### **Installing the SSD**

To install the SSD, follow the steps below and refer to Figure 4-14.

1. Insert the **SSD** to the connector **CN1900** on the SYSTEM BOARD.
2. Secure the SSD with the following **screw**.
  - M2×2.5 FLAT HEAD DANTUKI screw ×1

#### 4.11 HEAT SINK

##### **Removing the HEAT SINK**

To remove the HEAT SINK, follow the steps below and refer to Figure 4-15.

1. Remove the following **screws** and the **HEAT SINK**.

- M2×2.3C S-THIN HEAD screw ×4

**NOTE:** When removing the HEAT SINK, be sure to remove the screws in the reverse order of the number marked on the HEAT SINK.

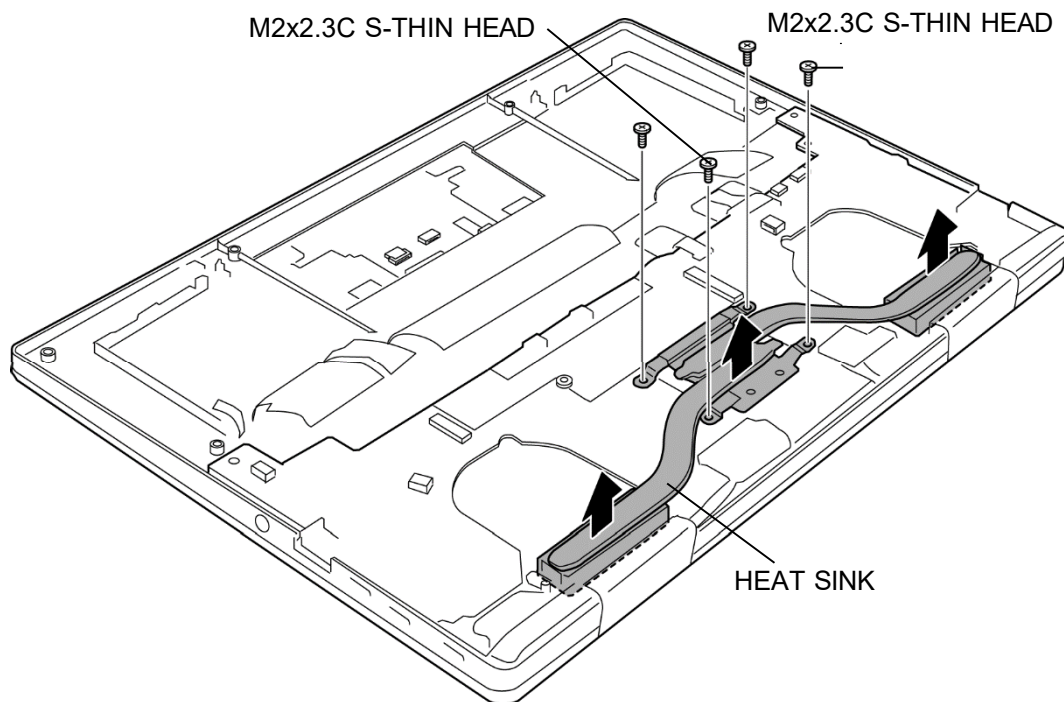


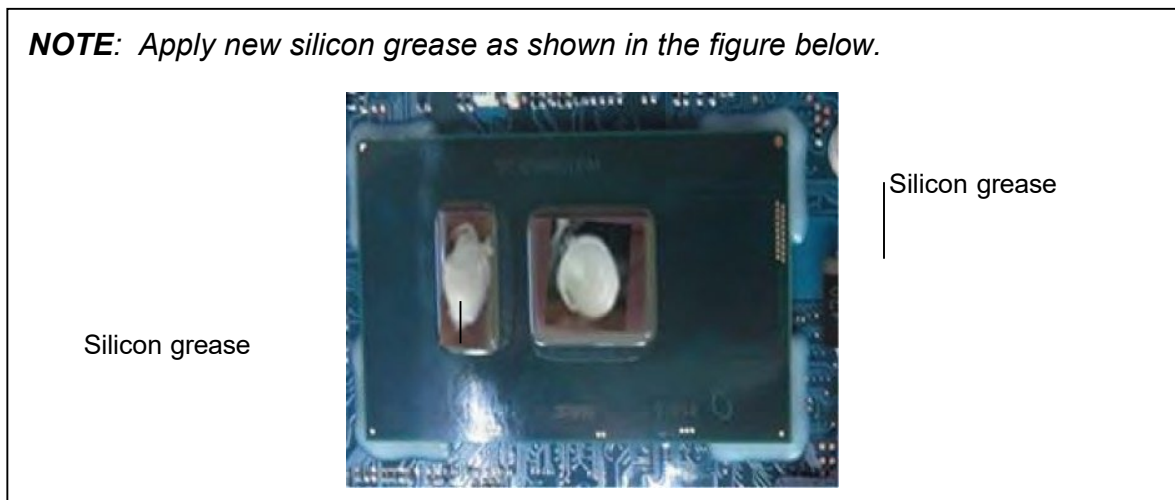
Figure 4-15 Removing the HEAT SINK

### **Installing the HEAT SINK**

To install the HEAT SINK, follow the steps below and refer to Figure 4-15.

1. When silicon grease is already applied to the CPU or HEAT SINK, wipe them off with a cloth in advance.
2. Apply new **silicon grease** (Shin-Etsu Chemical Co. X-23-7921-5) on the CPU using a special syringe.

**NOTE:** Apply new silicon grease as shown in the figure below.



3. Set the **HEAT SINK** in place and secure it with the following **screws**.

- M2×2.3C S-THIN HEAD screw ×4

**NOTE:** When securing the HEAT SINK, be sure to secure the screws in the order of the number marked on the HEAT SINK.

## 4.12 SYSTEM BOARD

**CAUTION:**

1. If replacing with a new SYSTEM BOARD, update the DMI information as described in Chapter 3 “Test Program”. Also update with the latest BIOS and EC/KBC as described in Appendix G and in Appendix H.
2. When replacing the SYSTEM board with a new one, use the sensor calibration tool to adjust the sensors.
3. When replacing the SYSTEM BOARD with a new one, the ProductKey (MBR-DPK) must be written on the SYSTEM
4. When removing/installing the SYSTEM BOARD, handle with both hands and do not handle with the handling prohibition area (refer to the figure below).



Handling prohibition area

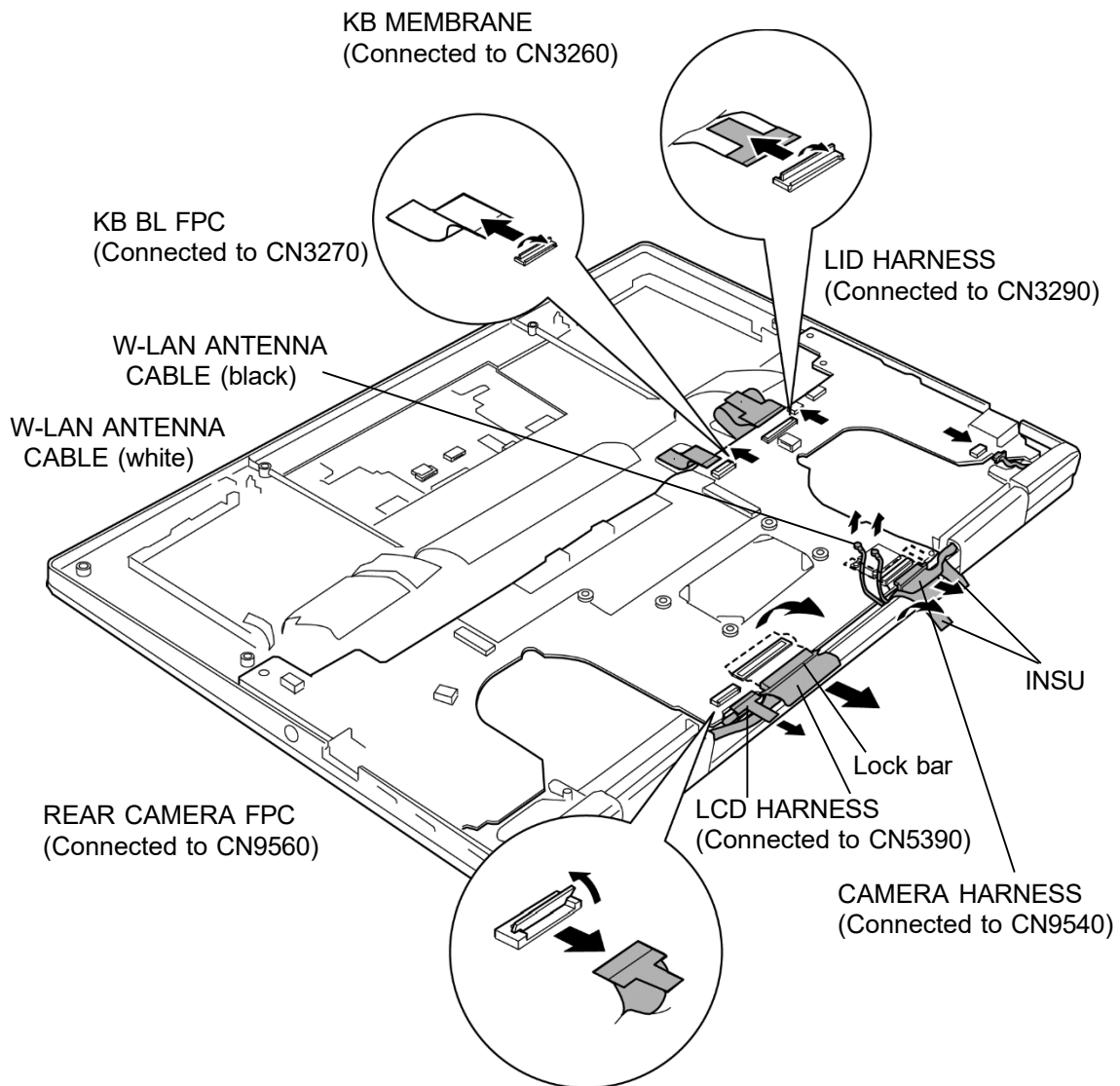
FRONT



### **Removing the SYSTEM BOARD**

To remove the SYSTEM BOARD, follow the steps below and refer to Figure 4-16 and 4-17.

1. Disconnect the **KB BL FPC** (back light KB model), **KB MEMBRANE** and **LID HARNESS** from the connector **CN3270**, **CN3260** and **CN3290** on the SYSTEM BOARD.
2. Turn up the **INSUs** and disconnect the **CAMERA HARNESS** from the connector **CN9540** on the SYSTEM BOARD.
3. Disconnect the **W-LAN ANTENNA CABLEs** from the connectors on the W-LAN MODULE. (white cable from “▲MAIN 2” and black cable from “△AUX 1”)
4. Release the **lock bar** and disconnect the **LCD HARNESS** from the connector **CN5390** on the SYSTEM BOARD.
5. Disconnect the **REAR CAMERA FPC** from the connector **CN9560** on the SYSTEM BOARD.

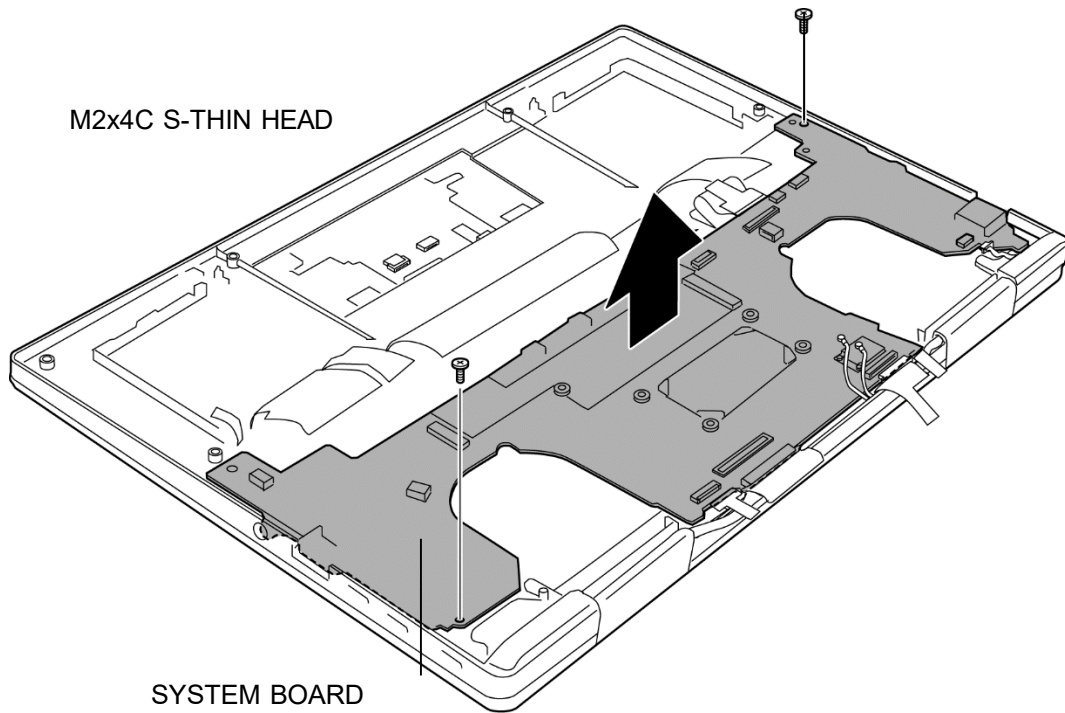


*Figure 4-16 Removing the SYSTEM BOARD (1)*



6. Remove the following **screws** and the **SYSTEM BOARD**.

- M2×4C S-THIN HEAD screw ×2

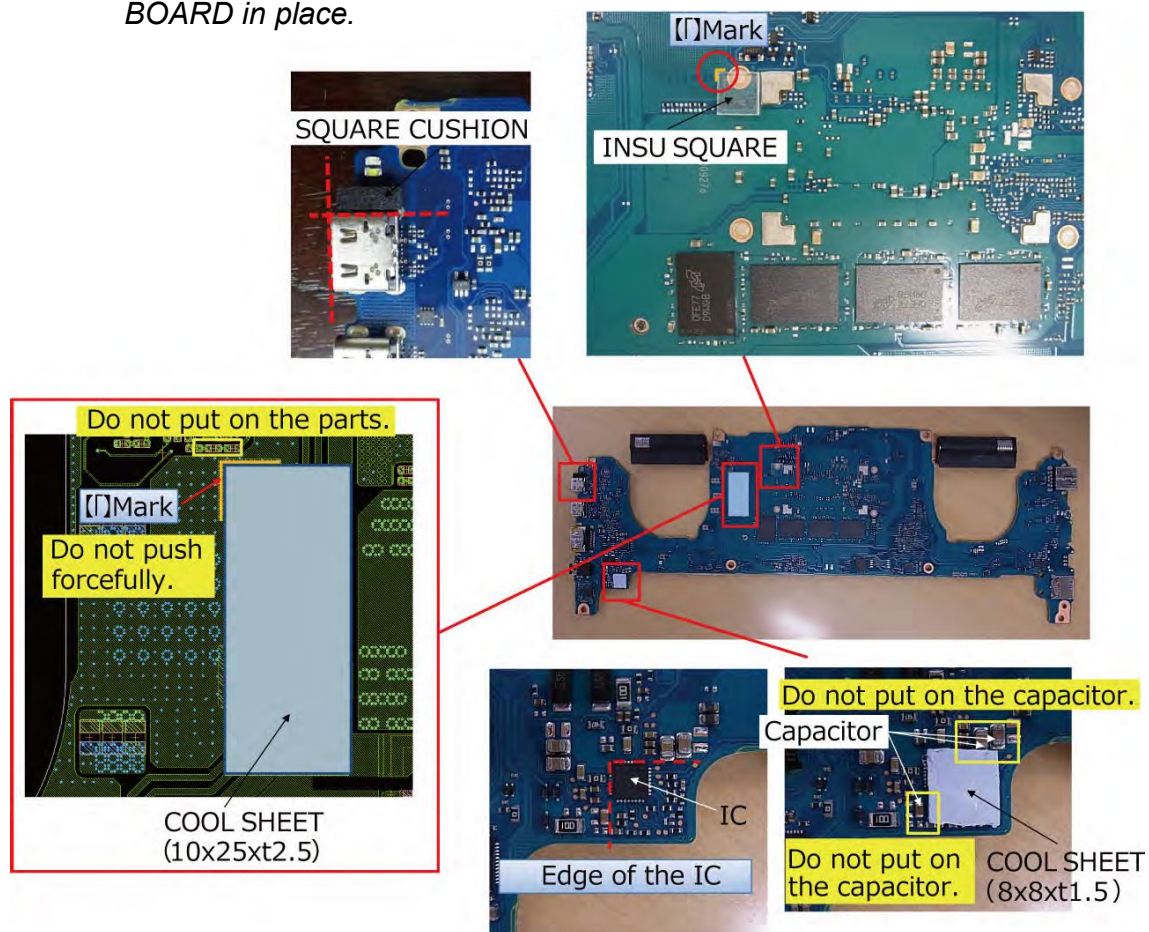


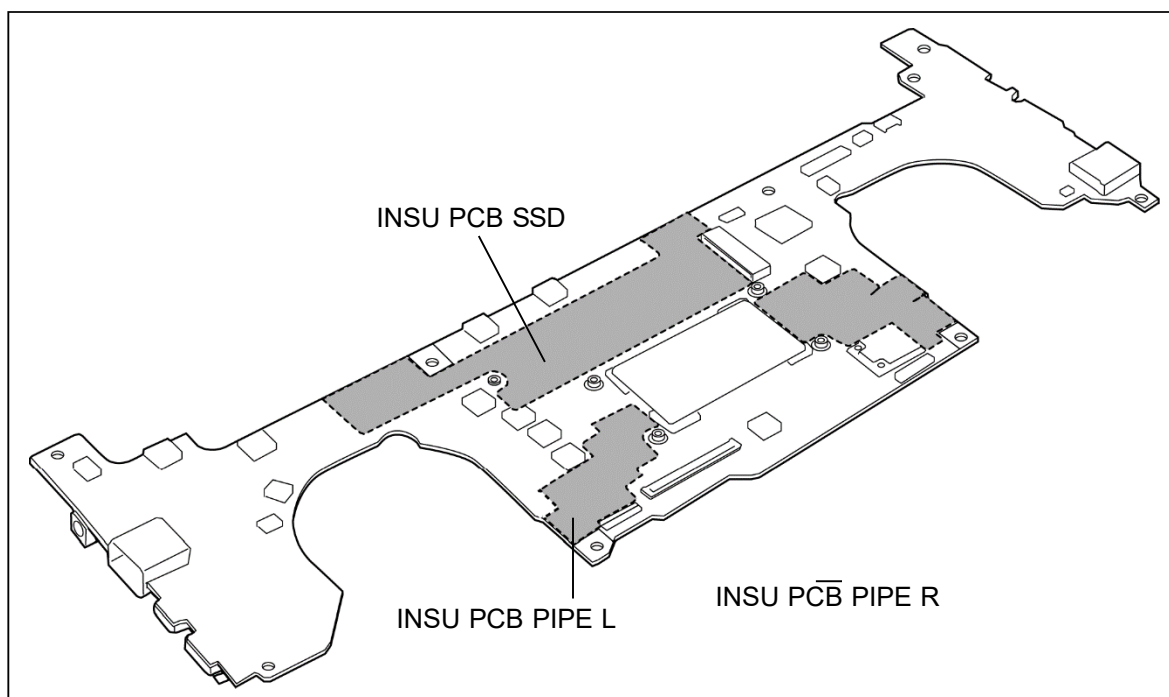
*Figure 4-17 Removing the SYSTEM BOARD (2)*

## Installing the SYSTEM BOARD

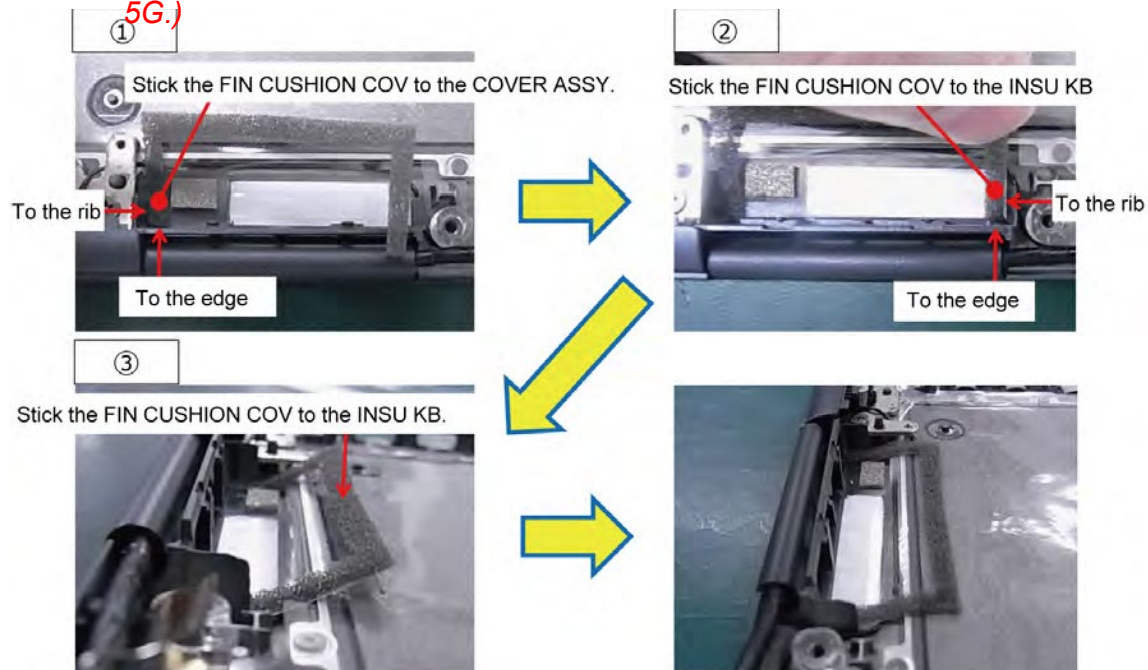
To install the SYSTEM BOARD, follow the steps below and refer to Figure 4-16 and 4-17.

**NOTE:** When replacing the SYSTEM BOARD with a new one, stick the INSU SQUARE (321), COOL SHEET (H10), COOL SHEET (J10), SQUARE CUSHION (161), INSU PCB SSD, INSU PCB PIPE L and INSU PCB PIPE R to the SYSTEM BOARD in place.





**NOTE:** When replacing the **INSU KB LOW** or **INSU KB LOW 5G** with a new one, stick new **FIN CUSHION COVs** to the **INSU KB LOW** or **INSU KB LOW 5G** in place before setting the **SYSTEM BOARD**. (Please note that “**INSU KB**” in the following pictures indicates **INSU KB LOW** or **INSU KB LOW 5G**.)



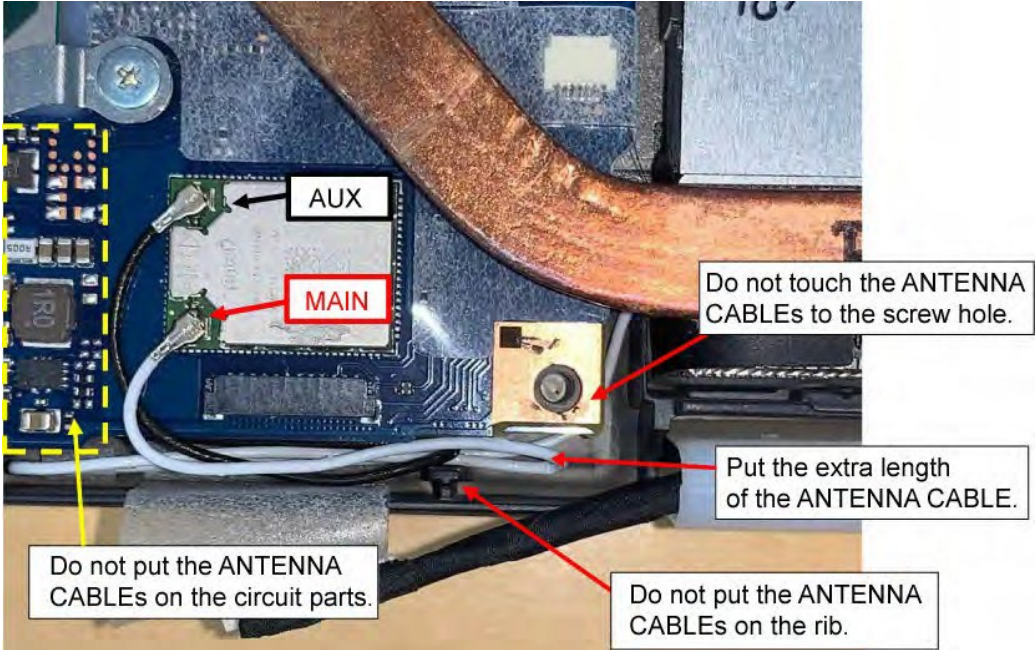
※ Sticking procedures are left-right symmetry.

1. Set the **SYSTEM BOARD** to the **COVER ASSY** in place and secure it with the following **screws**.
  - M2×4C S-THIN HEAD screw ×2
2. Connect the **REAR CAMERA FPC** to the connector **CN9560** on the **SYSTEM BOARD**.
3. Connect the **LCD HARNESS** to the connector **CN5390** on the **SYSTEM BOARD** and fix it with the **lock bar**.



4. Connect the **W-LAN ANTENNA CABLEs** to the connectors on the W-LAN MODULE. (white cable to “▲MAIN 2” and black cable to “△AUX 1”)

**NOTE:** Arrange the W-LAN ANTENNA CABLEs as shown in the figure below.



5. Connect the **CAMERA HARNESS** to the connector **CN9540** on the SYSTEM BOARD.
6. Close the **INSU**.
7. Connect the **KB BL FPC** (back light KB model), **KB MEMBRANE** and **LID HARNESS** to the connector **CN3270**, **CN3260** and **CN3290** on the SYSTEM BOARD.

Prepare required parts in advance, when replacing the following items.

Rev.01

ITEM	Parts List ITEM No	PART NAME	Quantity		
			Non 5G/LTE	LTE	5G
SYSTEM BOARD (MOTHER BOARD ASSY)	01	MOTHER BOARD ASSY	1	1	1
	68	SQUARE CUSHION (161)	1	1	1
	66	COOL SHEET(H10)	1	1	1
	67	COOL SHEET(J10)	1	1	1

#### 4.13 CLICK PAD

##### **Removing the CLICK PAD**

To remove the CLICK PAD, follow the steps below and refer to Figure 4-18.

**NOTE:** (5G model) Remove MIMO2 ANTENNA first before removing the CLICK PAD.

1. Peel off the **AL TAPE**.
2. Peel off the **CLICK PAD** from the COVER ASSY.

**NOTE:** Do not reuse the removed AL TAPE and CLICK PAD. Be sure to use new ones.

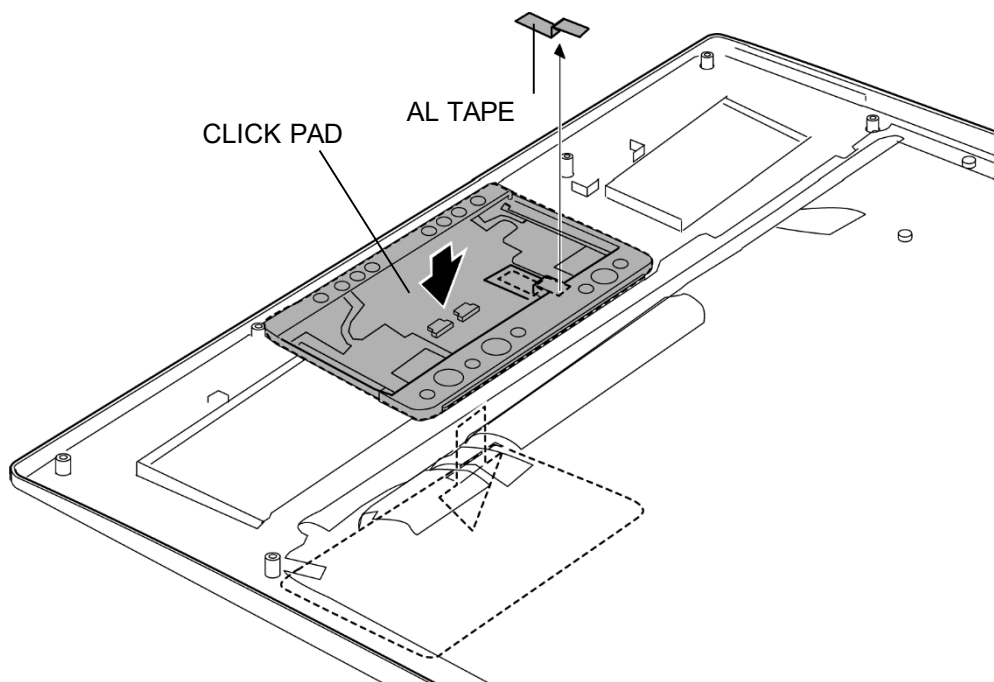


Figure 4-18 Removing the CLICK PAD

### **Installing the CLICK PAD**

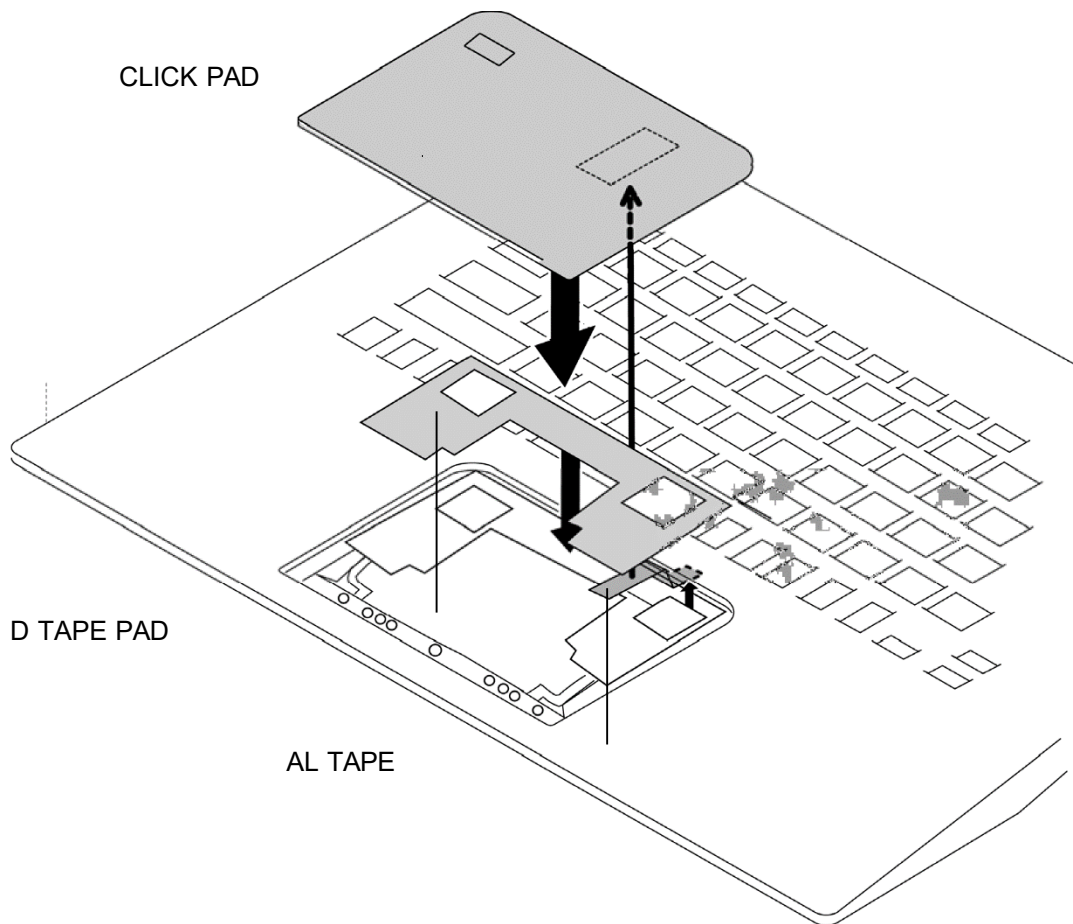
To install the CLICK PAD, follow the steps below and refer to Figure 4-18.

1. Stick a new **CLICK PAD** to the COVER ASSY.
2. Turn over the COVER ASSY and stick a new **AL TAPE** in place.

Rev.01

#### **NOTE:**

1. When replacing the **CLICK PAD** with a new one, replace the **D TAPE PAD** on the COVER ASSY with a new one in place.



2. (5G model) Stick a new MIMO2 ANTENNA in place.

Prepare required parts in advance, when replacing the following items.

ITEM	Parts List ITEM No	PART NAME	Quantity		
			Non 5G/LTE	LTE	5G
CLICK PAD		CLICK PAD	1	1	1
	77	AL TAPE	1	1	1
		D TAPE PAD	1	1	1
		MIMO2 ANTENNA	0	0	1

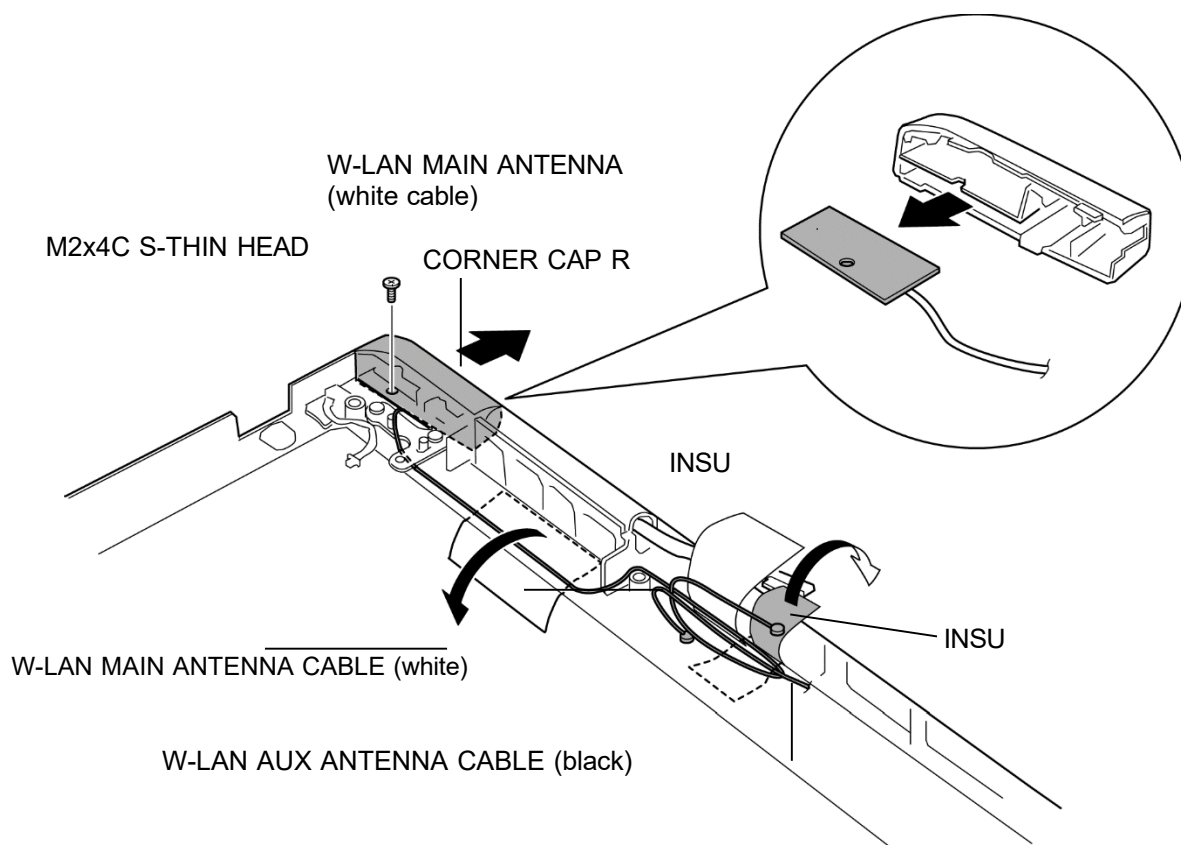


#### 4.14 W-LAN ANTENNA

##### **Removing the W-LAN ANTENNA**

To remove the W-LAN ANTENNA, follow the steps below and refer to Figure 4-19 and 4-20.

1. Open the **INSUs** and release the **W-LAN ANTENNA CABLEs**.
2. Remove the following **screw** to remove the **CORNER CAP R** (W-LAN MAIN ANTENNA (white cable)).
  - M2×4C      S-THIN HEAD screw      ×1
3. Peel off the **W-LAN MAIN ANTENNA** (white cable) from the CORNER CAP R.



*Figure 4-19 Removing the W-LAN ANTENNA (1)*

4. Open the **INSUs** and release the **W-LAN AUX ANTENNA CABLE** (black).
5. Remove the following **screw** to remove the **CORNER CAP L** (W-LAN AUX ANTENNA (black cable)).
  - M2×4C      S-THIN HEAD screw      ×1
6. Peel off the **W-LAN AUX ANTENNA** (black cable) from the **CORNER CAP L**.

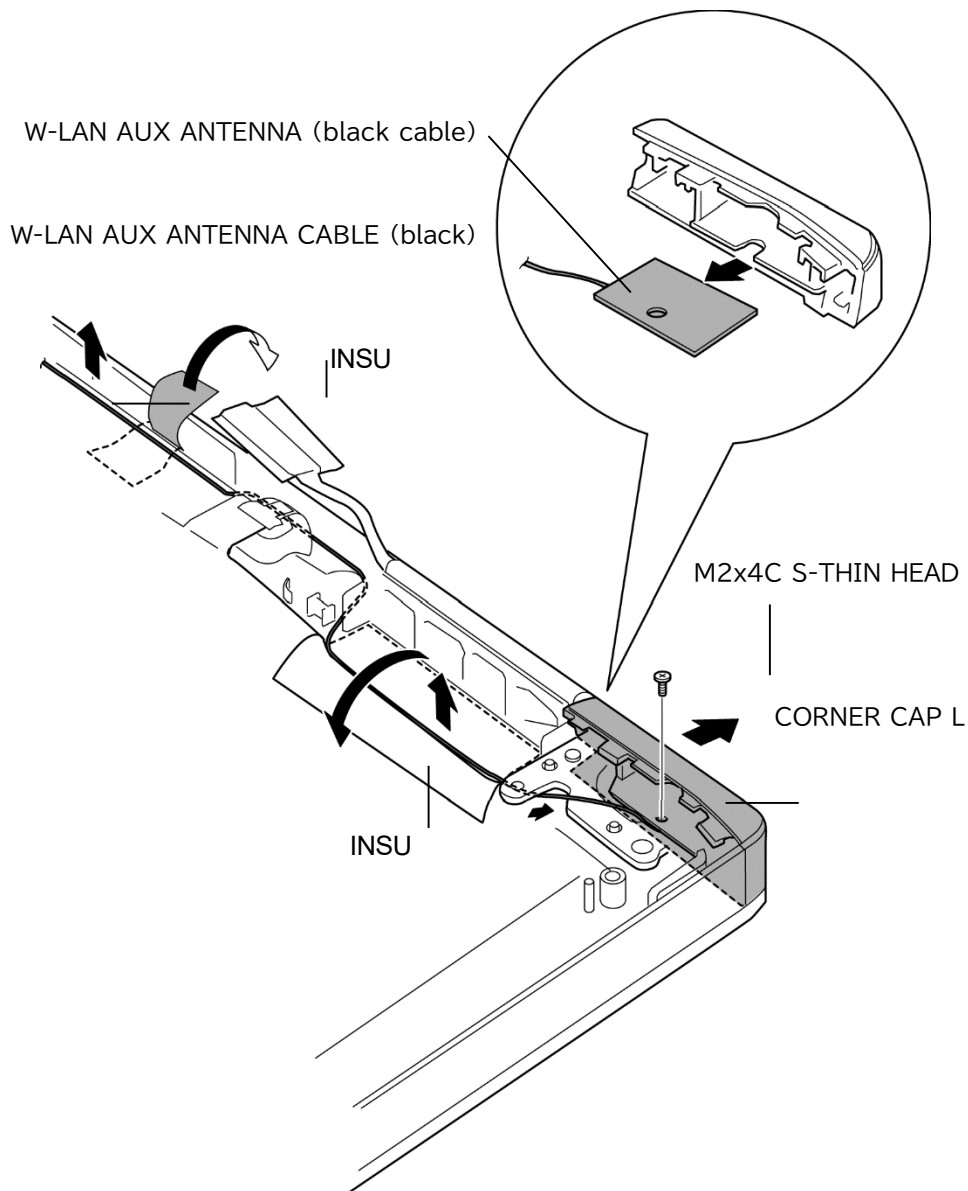


Figure 4-20 Removing the W-LAN ANTENNA (2)

### **Installing the W-LAN ANTENNA**

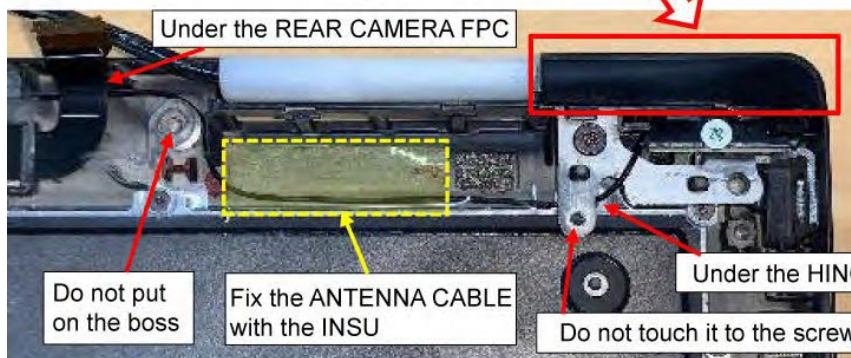
To install the W-LAN ANTENNA, follow the steps below and refer to Figure 4-19 and 4-20.

1. Stick the **W-LAN AUX ANTENNA** (black cable) to the **CORNER CAP L**.
2. Set the **CORNER CAP L** (W-LAN AUX ANTENNA (black cable)) to the COVER ASSY and secure it with the following **screw**.
  - M2×4C      S-THIN HEAD screw      ×1
3. Stick the **W-LAN MAIN ANTENNA** (white cable) to the **CORNER CAP R**.
4. Set the **CORNER CAP R** (W-LAN MAIN ANTENNA (white cable)) to the COVER ASSY and secure it with the following **screw**.
  - M2×4C      S-THIN HEAD screw      ×1
5. Arrange the **W-LAN ANTENNA CABLEs** in place.
6. Close the **INSUs**.

**NOTE:** Arrange the W-LAN ANTENNA CABLEs as shown in the figure below.



Stick the W-LAN AUX ANTENNA to the end of the CORNER CAP L.



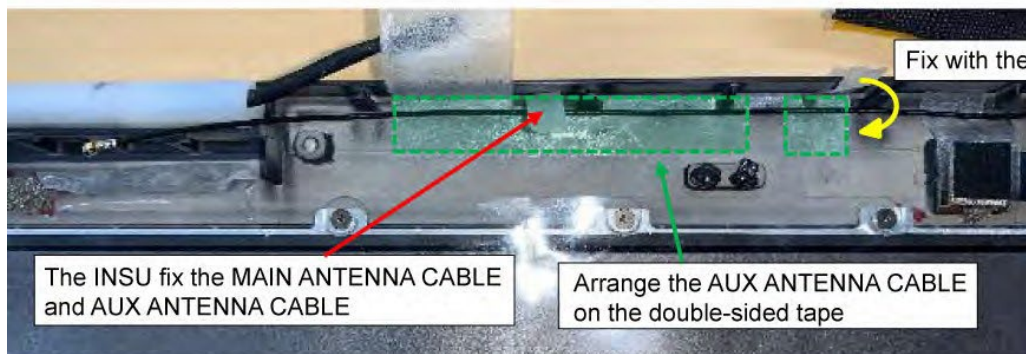
Under the REAR CAMERA FPC

Do not put on the boss

Fix the ANTENNA CABLE with the INSU

Under the HINGE

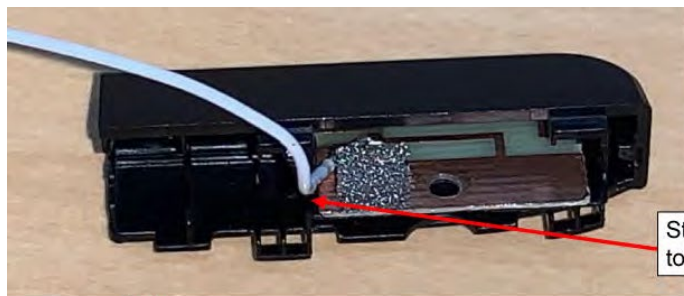
Do not touch it to the screw



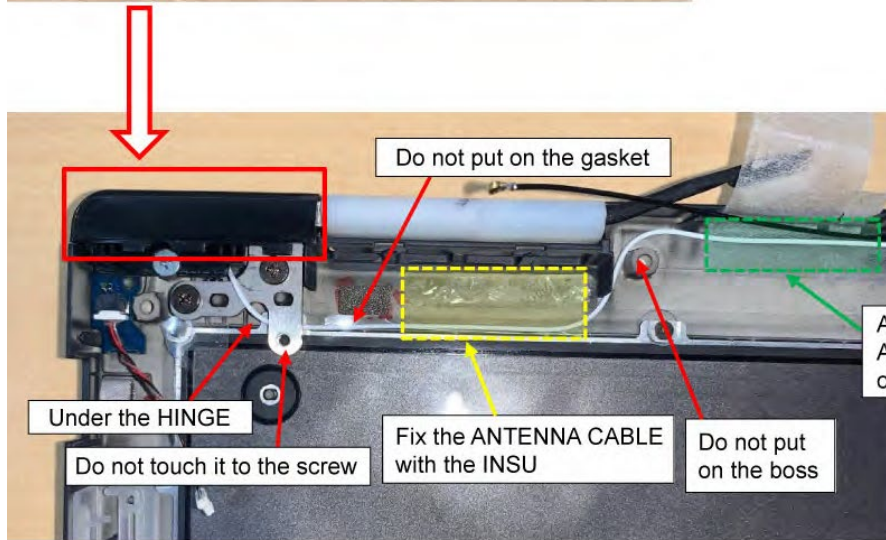
Fix with the INSU

The INSU fix the MAIN ANTENNA CABLE and AUX ANTENNA CABLE

Arrange the AUX ANTENNA CABLE on the double-sided tape



Stick the W-LAN MAIN ANTENNA to the end of the CORNER CAP R.



Do not put on the gasket

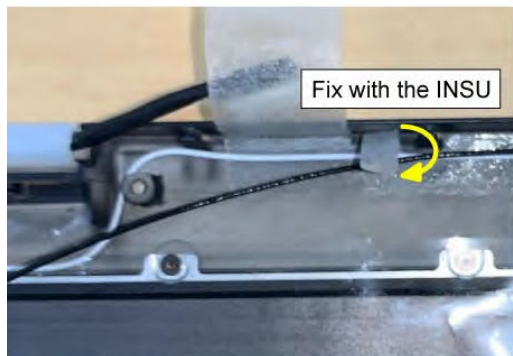
Arrange the MAIN ANTENNA CABLE on the double-sided tape

Under the HINGE

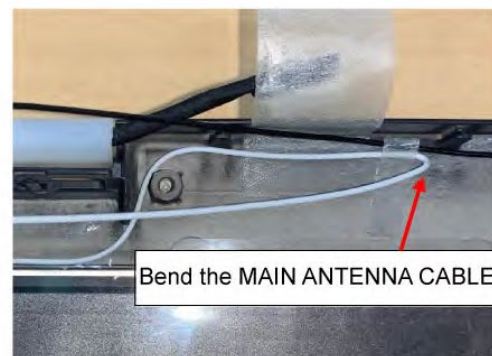
Do not touch it to the screw

Fix the ANTENNA CABLE with the INSU

Do not put on the boss



Fix with the INSU



Bend the MAIN ANTENNA CABLE

#### 4.15 LID BOARD

##### Removing the LID BOARD

To remove the LID BOARD, follow the steps below and refer to Figure 4-21.

1. Peel off the **LID BOARD** from the **guides** of the COVER ASSY.
2. Disconnect the **LID HARNESS** from the connector **CN3291** on the LID BOARD.

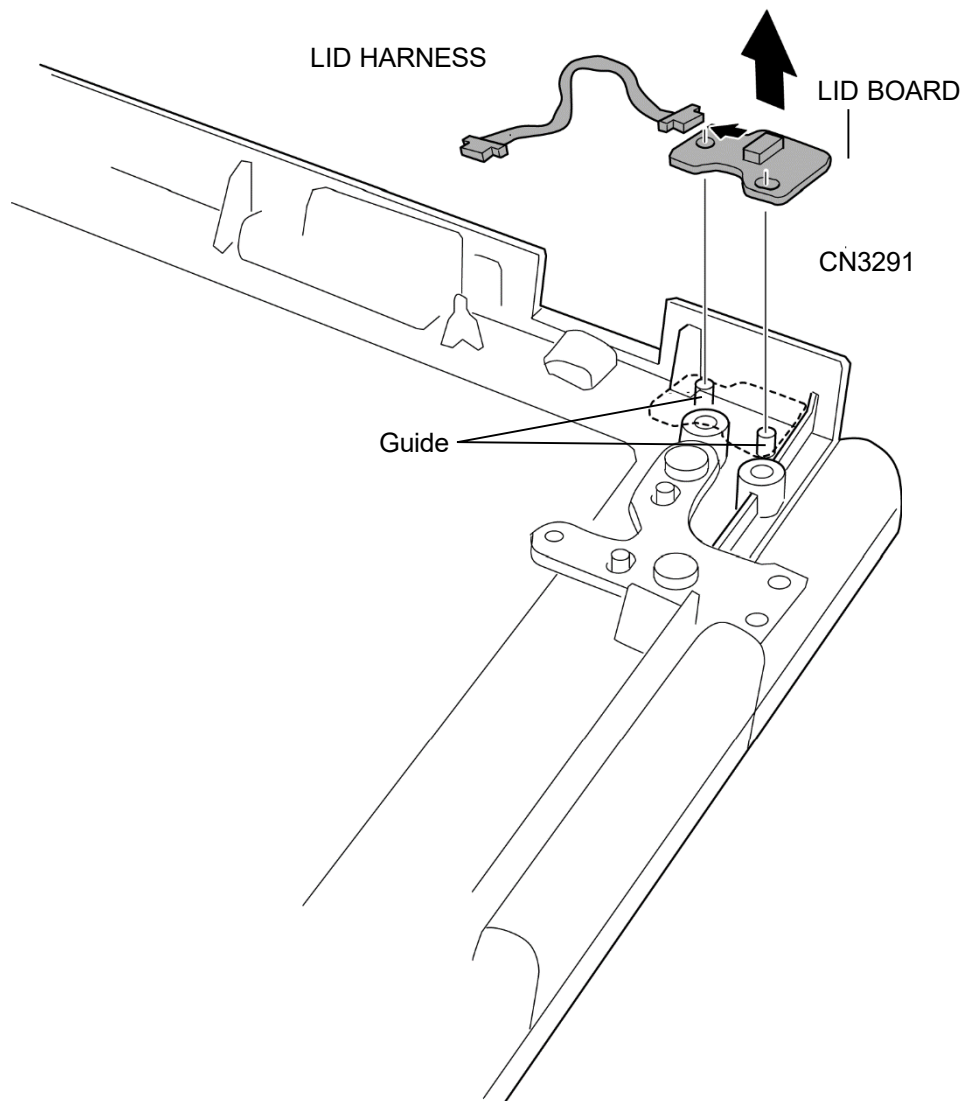


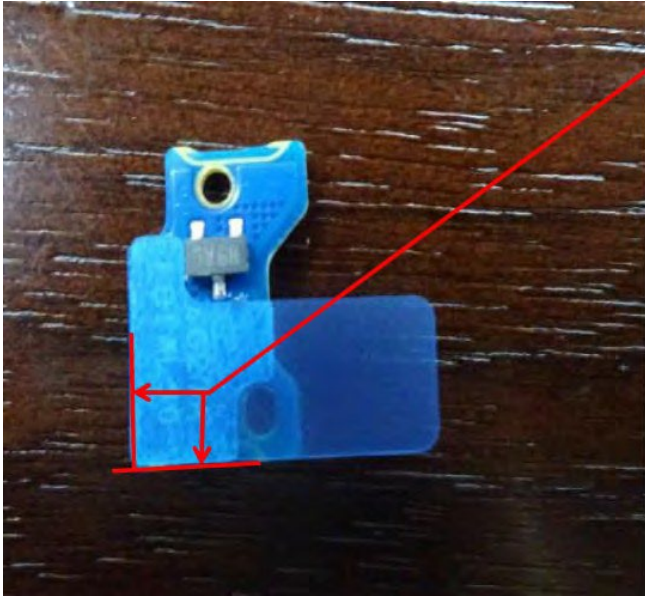
Figure 4-21 Removing the LID BOARD



**Installing the LID BOARD**

To install the LID BOARD, follow the steps below and refer to Figure 4-21.

**NOTE:** When replacing the LID BOARD with a new one, replace the D TAPE PCB LID on the LID BOARD with a new one in place.



D TAPE PCB LID

1.

Connect the **LID HARNESS** to the connector **CN3291** on the LID BOARD.
2.

Set the **LID BOARD** to the **guides** of the COVER ASSY.

Prepare required parts in advance, when replacing the following items.

Rev.01

ITEM	Parts List ITEM No	PART NAME	Quantity		
			Non 5G/LTE	LTE	5G
LID BOARD	82	LID BOARD	1	1	1
	64	D TAPE PCB LID	1	1	1

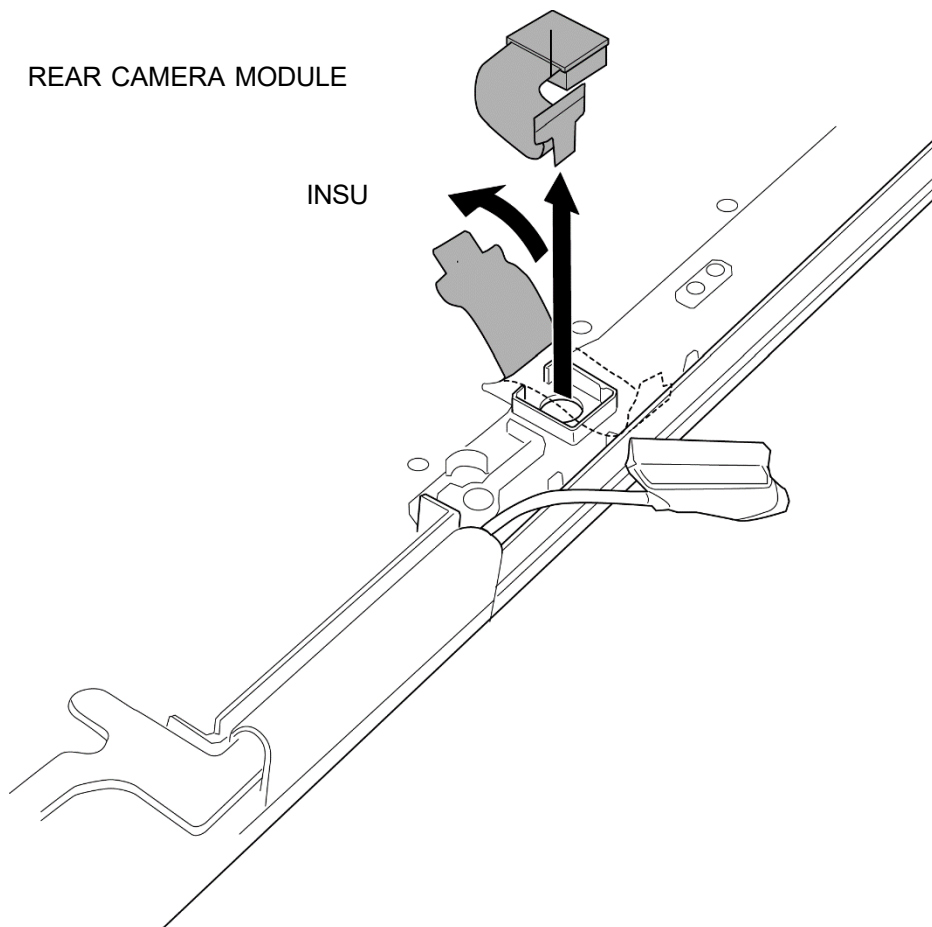


#### 4.16 REAR CAMERA MODULE

##### **Removing the REAR CAMERA MODULE**

To remove the REAR CAMERA MODULE, follow the steps below and refer to Figure 4-22.

1. Open the **INSU**.
2. Remove the **REAR CAMERA MODULE** from the slot of the COVER ASSY.



*Figure 4-22 Removing the REAR CAMERA MODULE*

### **Installing the REAR CAMERA MODULE**

To install the REAR CAMERA MODULE, follow the steps below and refer to Figure 4-22.

1. Set the **REAR CAMERA MODULE** to slot of the COVER ASSY.
2. Close the **INSU**.

#### 4.17 LCD FAT ASSY/COVER ASSY

##### **Removing the LCD FAT ASSY/COVER ASSY**

To remove the LCD FAT ASSY/COVER ASSY, follow the steps below and refer to Figure 4-23.

1. Remove the following **screws** and separate the **LCD FAT ASSY** and **COVER ASSY**.

- M2.5×4B FLAT HEAD screw x3

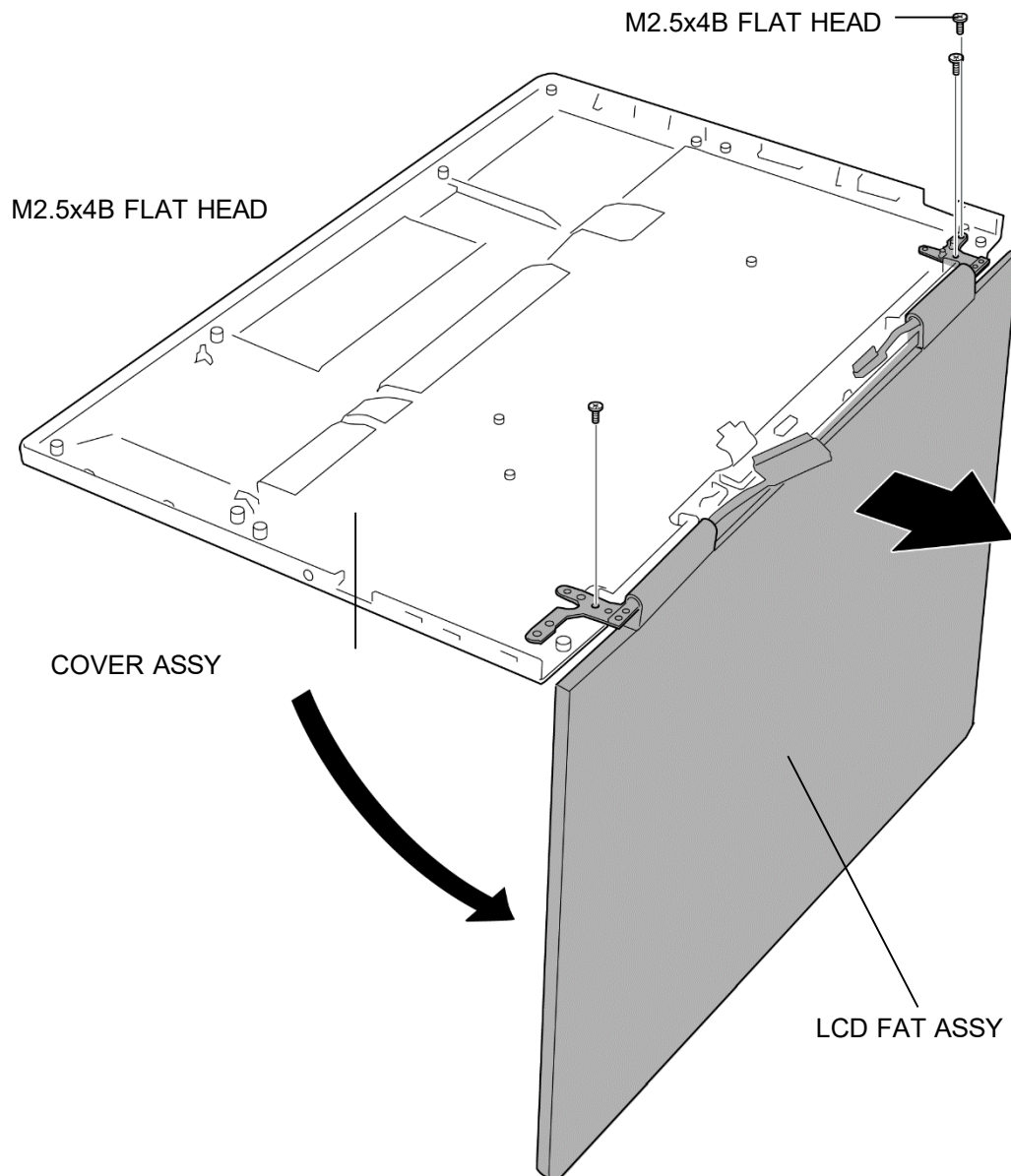
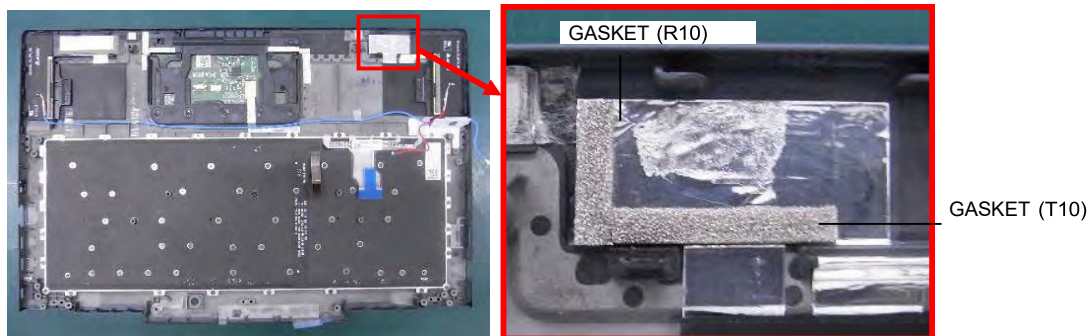


Figure 4-23 Removing the LCD FAT ASSY/COVER ASSY

## Installing the LCD FAT ASSY/COVER ASSY

To install the LCD FAT ASSY/COVER ASSY, follow the steps below and refer to Figure 4- 23.

**NOTE:** (LTE model) Stick the GASKETs in place beforehand.



1. Set the **LCD FAT ASSY** to the **COVER ASSY** and secure it with the following screws.

- M2.5×4B FLAT HEAD screw ×3

Prepare the required parts in advance, when replacing the following items.

ITEM	Parts List ITEM No	PART NAME	Quantity		
			Non 5G/LTE	LTE	5G
COVER ASSY	60	COVER ASSY	1	0	0
		COVER LTE ASSY	0	1	1
	77	AL TAPE	1	1	1
		CLICK PAD	1	1	1
		MAIN ANTENNA	0	1	1
		AUX ANTENNA	0	1	1
		MIMO1 ANTENNA	0	0	1
		MIMO2 ANTENNA	0	0	1
		GASKET(R10)	0	1	0
		GASKET(T10)	0	1	0
	61	INSU KB LOW	1	0	0
		INSU KB LOW 5G	0	1	1
		FIN CUSHION COV	2	2	2
		INSU SQUARE(111)	0	3	3

## 4.18 KEYBOARD

### Removing the KEYBOARD

To remove the KEYBOARD, follow the steps below and refer to Figure 4-24 and 4-25.

1. Peel off the **INSU KB LOW** or **INSU KB LOW 5G**.

**NOTE:** Do not reuse the removed **INSU KB LOW** or **INSU KB LOW 5G**. Be sure to use a new one.

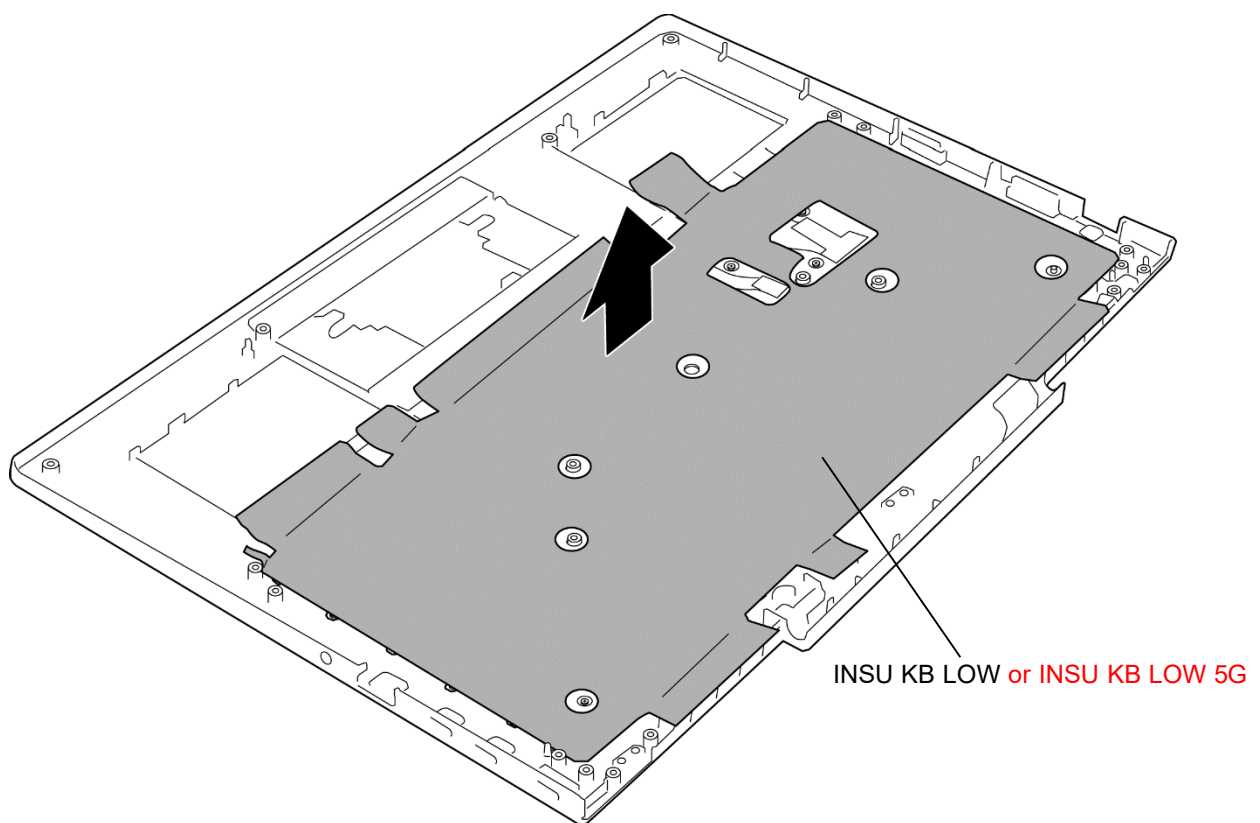


Figure 4-24 Removing the KEYBOARD (1)

2. Remove the following **screw** securing the KEYBOARD.

- M1.2×1.1B S-THIN HEAD screw ×63

3. Remove the **KEYBOARD**.

**NOTE:** The KEYBOARD is very thin, so be careful of handling.

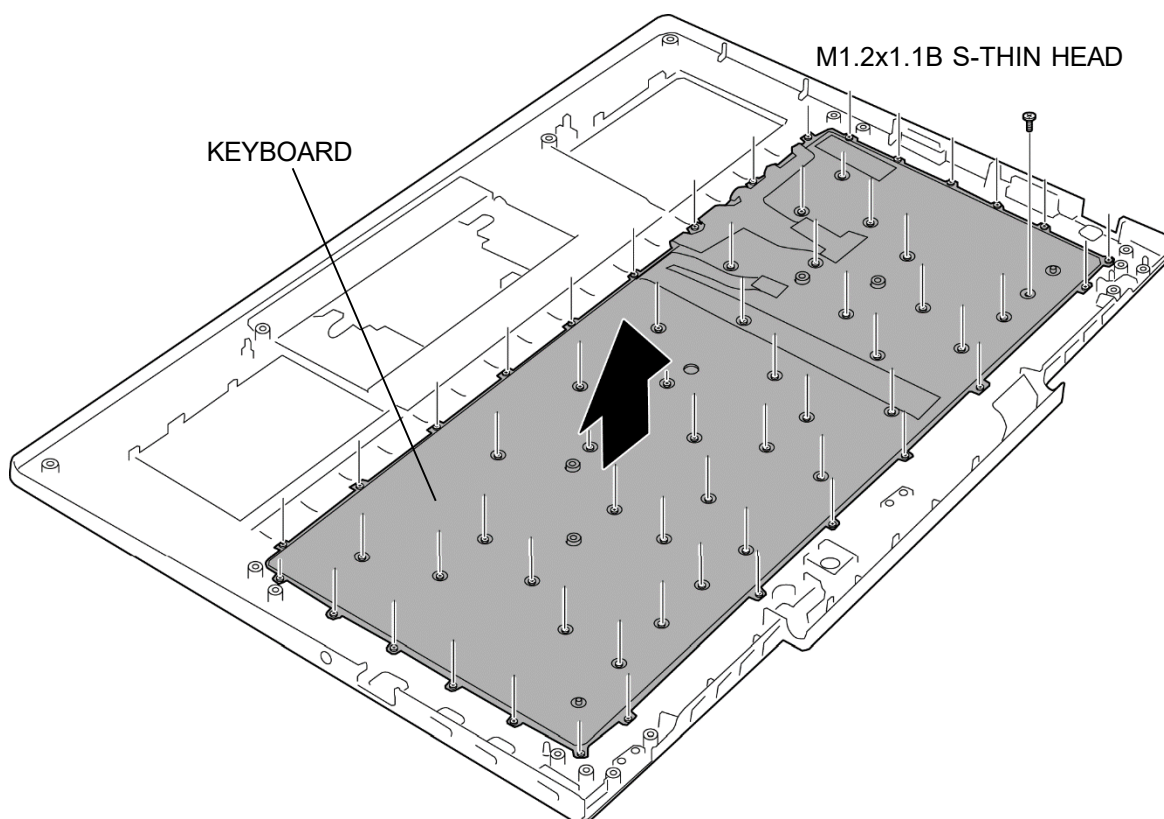
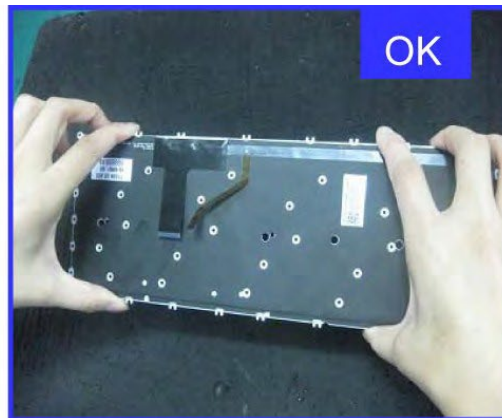
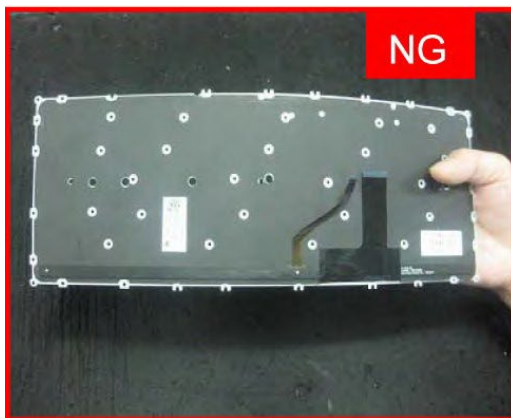


Figure 4-25 Removing the KEYBOARD (2)

**Installing the KEYBOARD**

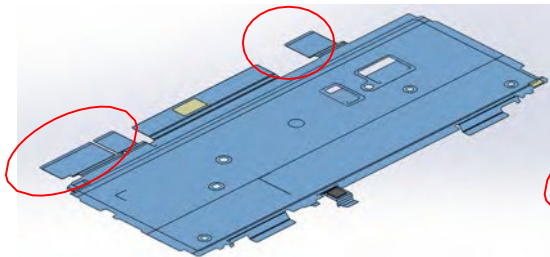
To install the KEYBOARD, follow the steps below and refer to Figure 4-24 and 4-25.

1. Set the **KEYBOARD** to the COVER ASSY in place and secure it with the following screws.
  - M1.2×1.1B S-THIN HEAD screw ×63
2. Stick a new **INSU KB LOW** or **INSU KB LOW 5G** to the COVER ASSY in place.

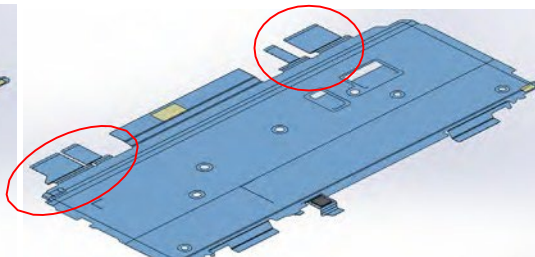
**NOTE:**

1. Prepare **INSU KB LOW** for non 5G/LTE model, **INSU KB LOW 5G** for 5G and LTE model.

< INSU KB LOW >

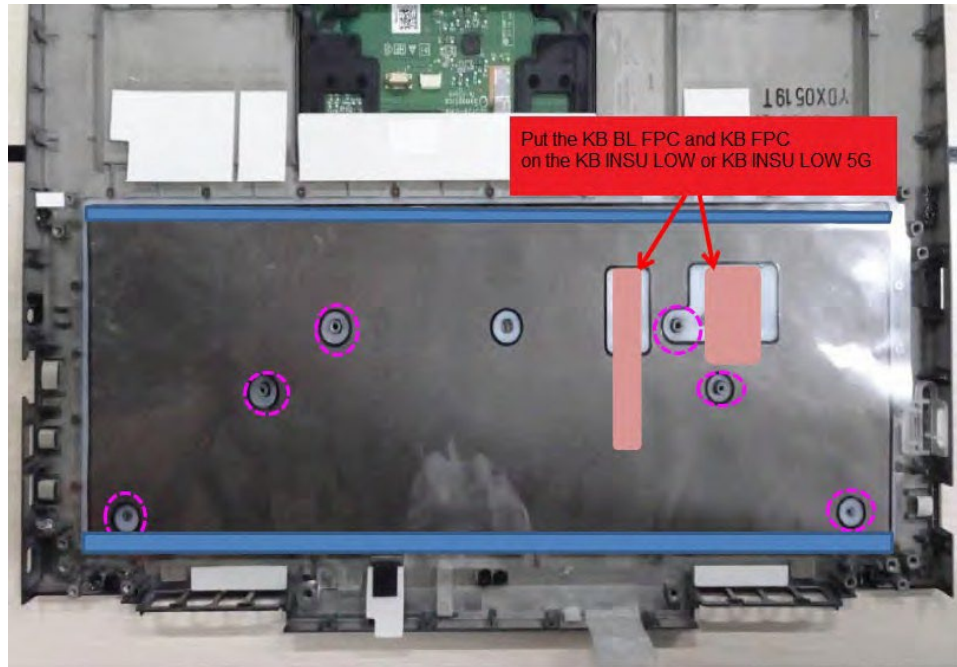


< INSU KB LOW 5G >





2. Stick the **INSU KB LOW** or **INSU KB LOW 5G** to the **COVER ASSY** as shown in the figure below.



Prepare the required parts in advance, when replacing the following items.

ITEM	Parts List ITEM No	PART NAME	Quantity		
			Non 5G/LTE	LTE	5G
KEYBOARD	11	KEYBOARD	1	1	1
	61	INSU KB LOW	1	0	0
		INSU KB LOW 5G	0	1	1
		FIN CUSHION COV	2	2	2

#### 4.19 LCD/CAMERA MODULE

##### **Removing the LCD/CAMERA MODULE**

To remove the LCD/CAMERA MODULE, follow the steps below and refer to Figure 4-26 to 4-31.

**NOTE:** *Handle with care of removing/installing the LCD UNIT.  
Refer to [LCD unit\_remove.mp4] file for the details of removing the LCD UNIT.*

1. Release the **latches** and remove the **LCD LOW CAP ASSY**.
2. Release the **latches** and peel off the **HINGE CAP L ASSY** and **HINGE CAP R ASSY** from the LCD COVER ASSY.

**NOTE:** *Do not reuse the removed HINGE CAP L ASSY and HINGE CAP R ASSY, be sure to use new ones.*

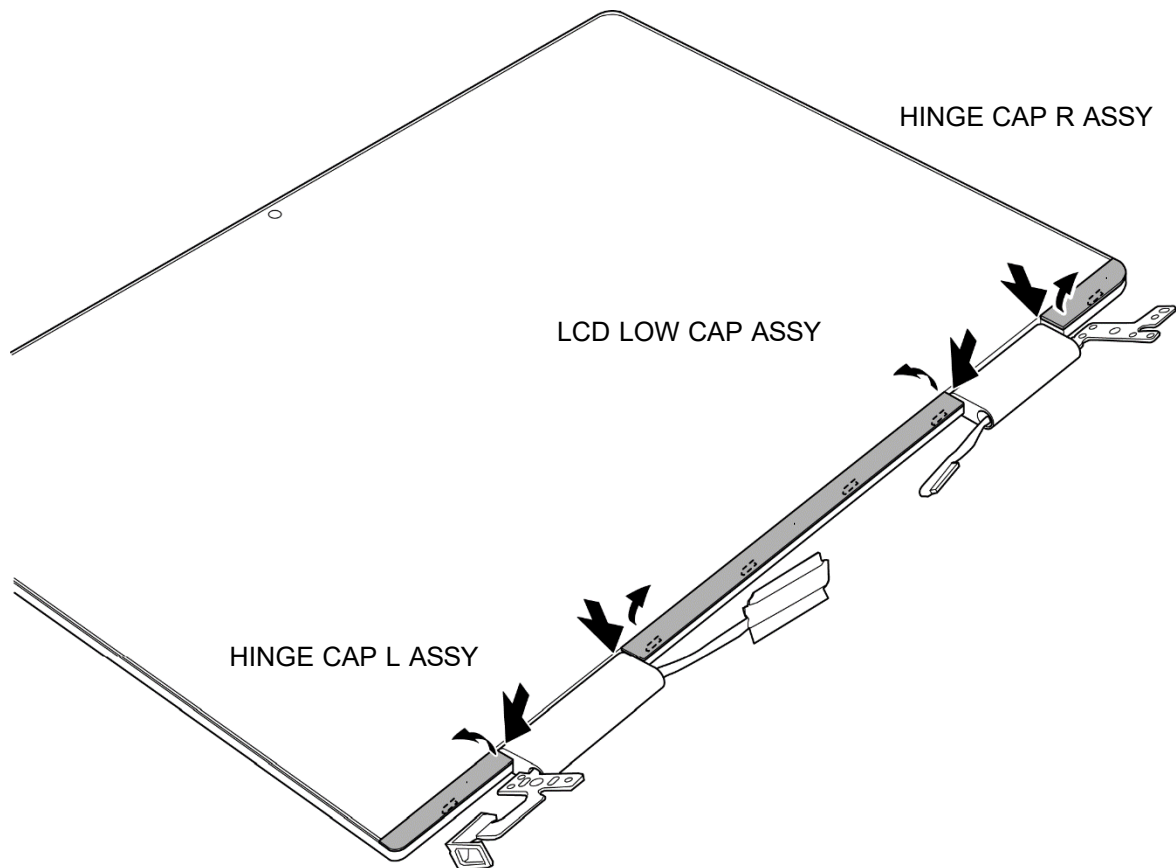
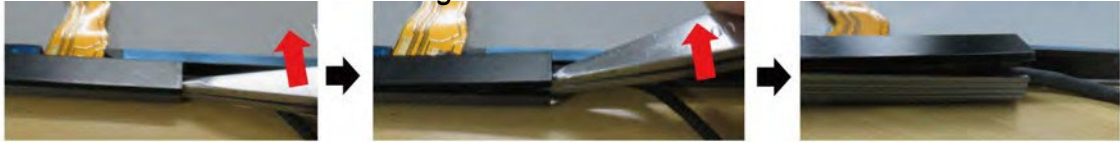


Figure 4-26 Removing the LCD (1)

**NOTE:** Remove the *HINGE CAP L ASSY*, *LCD LOW CAP ASSY* and *HINGE CAP R ASSY* as shown in the figure below.

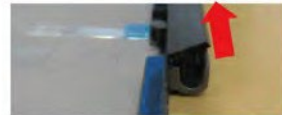


Insert the tweezers and lift it up to release the latches.

LCD LOW CAP ASSY



Slide the pick to release the latches.



Open the HINGE more than 180°



Insert the tweezers between the HINGE CAP and HINGE CASE.

For scratch-prevention



Slide the pick to release the latches.



3. Remove the following **screws** and the **HINGE L/R ASSY** from the LCD COVER ASSY

- M2.5x2.5C S-THIN HEAD screw ×4

4. Release the **LCD HARNESS** and **CAMERA HARNESS** from the HINGE L/R ASSY.

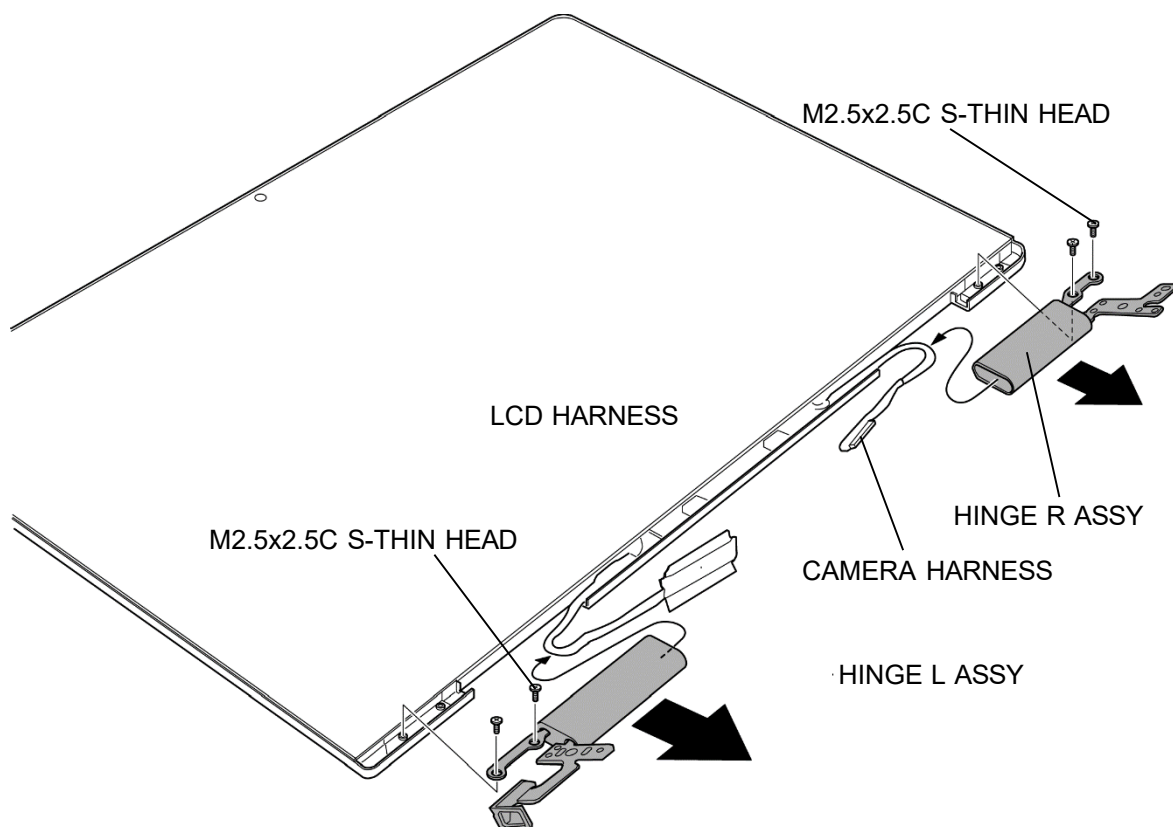
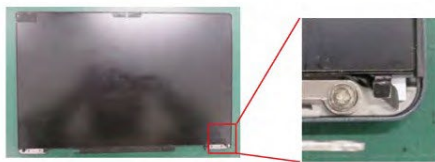


Figure 4-27 Removing the LCD (2)

5. Pull the **D TAPE TP LS R**, **D TAPE TP LOW R** and **D TAPE TP SIDE R** to the arrow pointing.
6. Pull the **D TAPE TP LS L**, **D TAPE TP LOW L** and **D TAPE TP SIDE L** to the arrow pointing.
7. Pull the **D TAPE TP L CE** to the arrow pointing.
8. Peel the **3AXIS SENSOR BOARD**.
9. Close the **SHUTTER SWITCH**.
10. Peel the **LCD UNIT** slowly.

**NOTE:** Remove the LCD UNIT as shown in the figure below.

Peel off the D TAPES



① D TAPE TP LS R  
Pull toward the  
arrow pointing



② D TAPE TP LOW R  
Pull toward the arrow  
pointing



③ D TAPE TP SIDE R  
Pull toward the  
arrow pointing

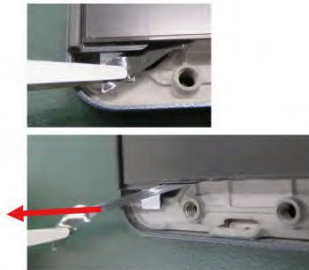




④D TAPE TP LS L  
Pull toward the  
arrow pointing



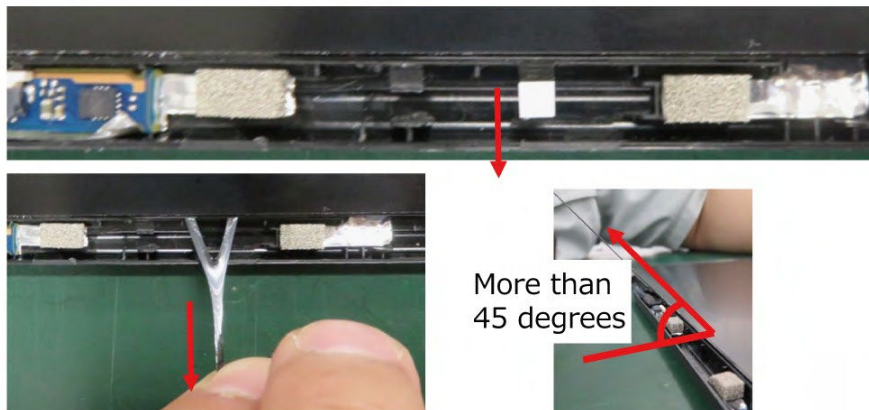
⑤D TAPE TP LOW L  
Pull toward the arrow  
pointing



⑥D TAPE TP SIDE L  
Pull toward the arrow  
pointing



⑦D TAPE TP L CE  
Pull toward the arrow  
pointing





## Peel off the LCD UNIT

- ① Peel the 3AXIS SENSOR BOARD  
(Do not touch the IC portion  
of the 3AXIS SENSOR BOARD.)



- ② Close the SHUTTER SWITCH



- ③ Put your fingers under the  
LCD UNIT until the double-sided  
tapes are peeled.



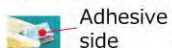
- ④ When the double-sided tapes (D TAPE SEPA)  
start peeling, Peel off the LCD UNIT toward  
the arrow pointing slowly.



- ⑤ Peel off the double-sided tape  
on the back of the LCD UNIT.



- ※1 If the MAGNETs stick to the double-sided tape,  
peel off the MAGNET and set it to the LCD COV ASSY.  
(Stick the D-STICK TAPE side of the MAGNET  
to the LCD COV ASSY)



- ※2 If the SHUTTER SWITCH is removed,  
remove the CAMERA COVER and set the  
SHUTTER SWITCH to the CAMERA COVER.



CAMERA COVER

CAMERA COVER



CAMERA COV ASSY



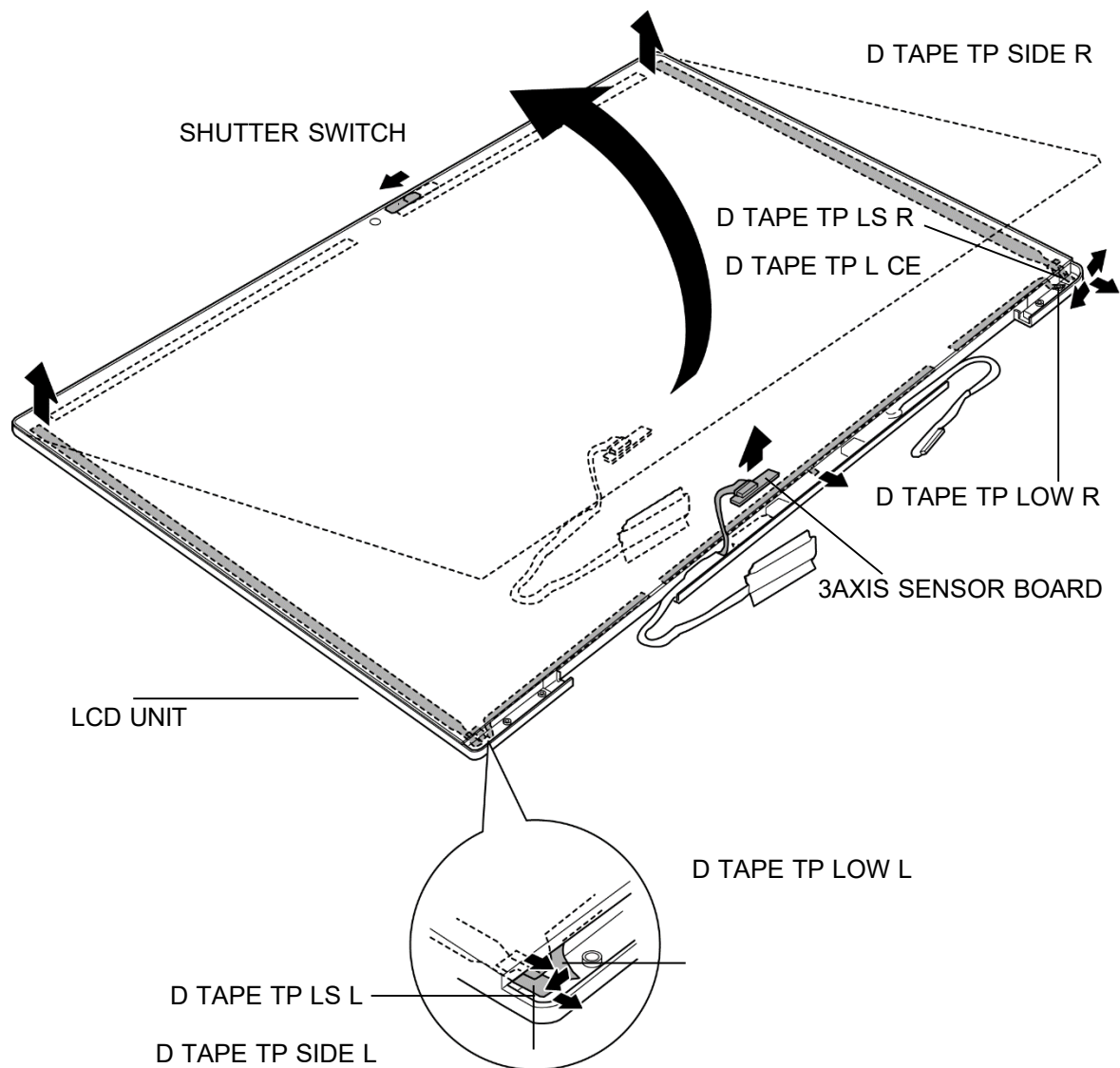


Figure 4-28 Removing the LCD (3)

11. Peel off the **INSU SQUARE**.
12. Release the **lock bar** and disconnect the **LCD HARNESS** from the connector on the LCD UNIT.
13. Disconnect the **TOUCH PANEL HARNESS** from the connector on the TOUCH PANEL.
14. Disconnect the **SENSOR HARNESS** from the connector **CN9860** on the 3AXIS SENSOR BOARD.

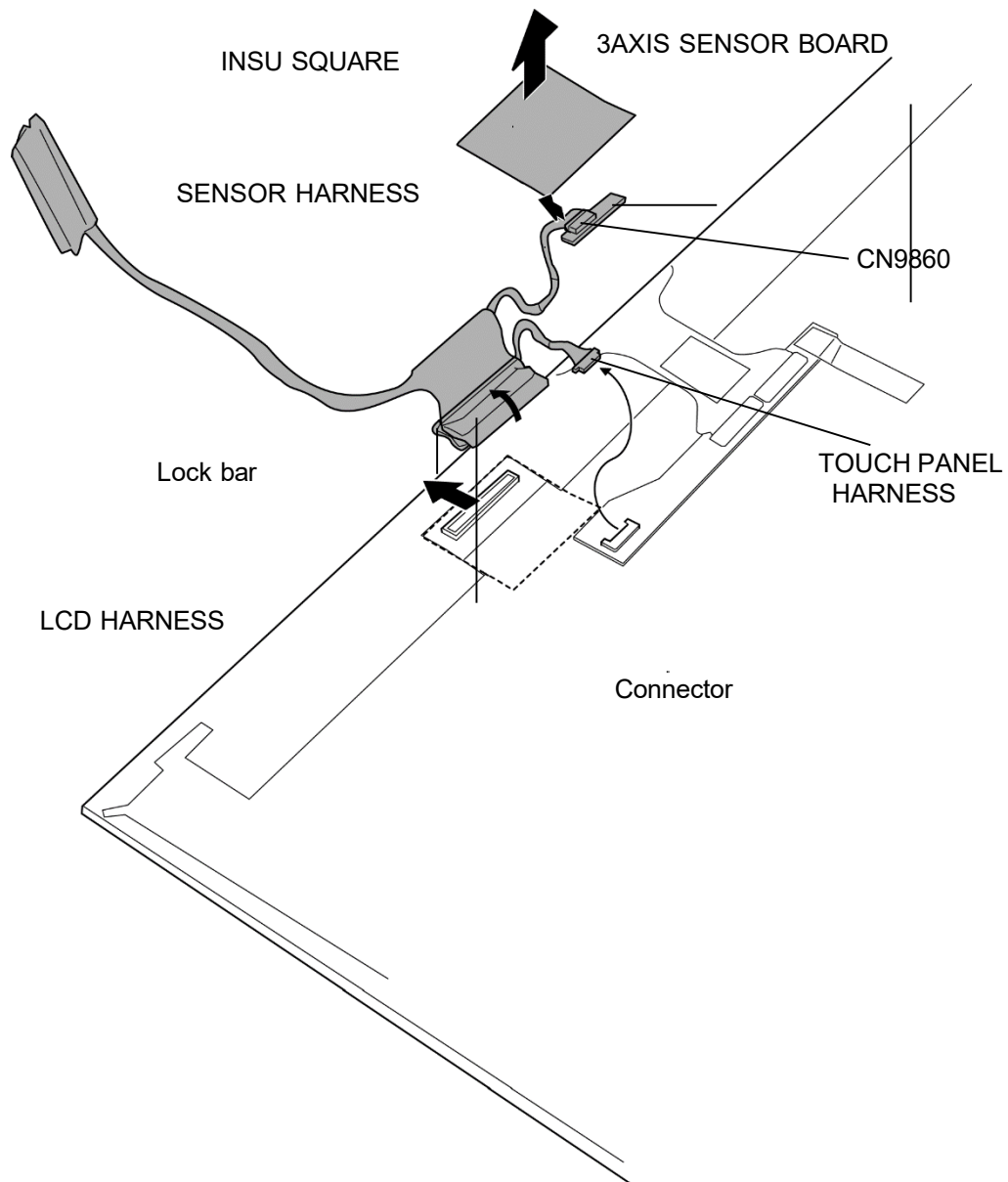


Figure 4-29 Removing the LCD (4)

15. Disconnect the **CAMERA HARNESS** (FPC portion) from the connector on the CAMERA MODULE.
16. Remove the **CAMERA COV ASSY** from the LCD COVER ASSY.
17. Remove the **SHUTTER SWITCH** from the CAMERA COV ASSY.
18. Remove the **CAMERA MODULE** from the LCD COVER ASSY.

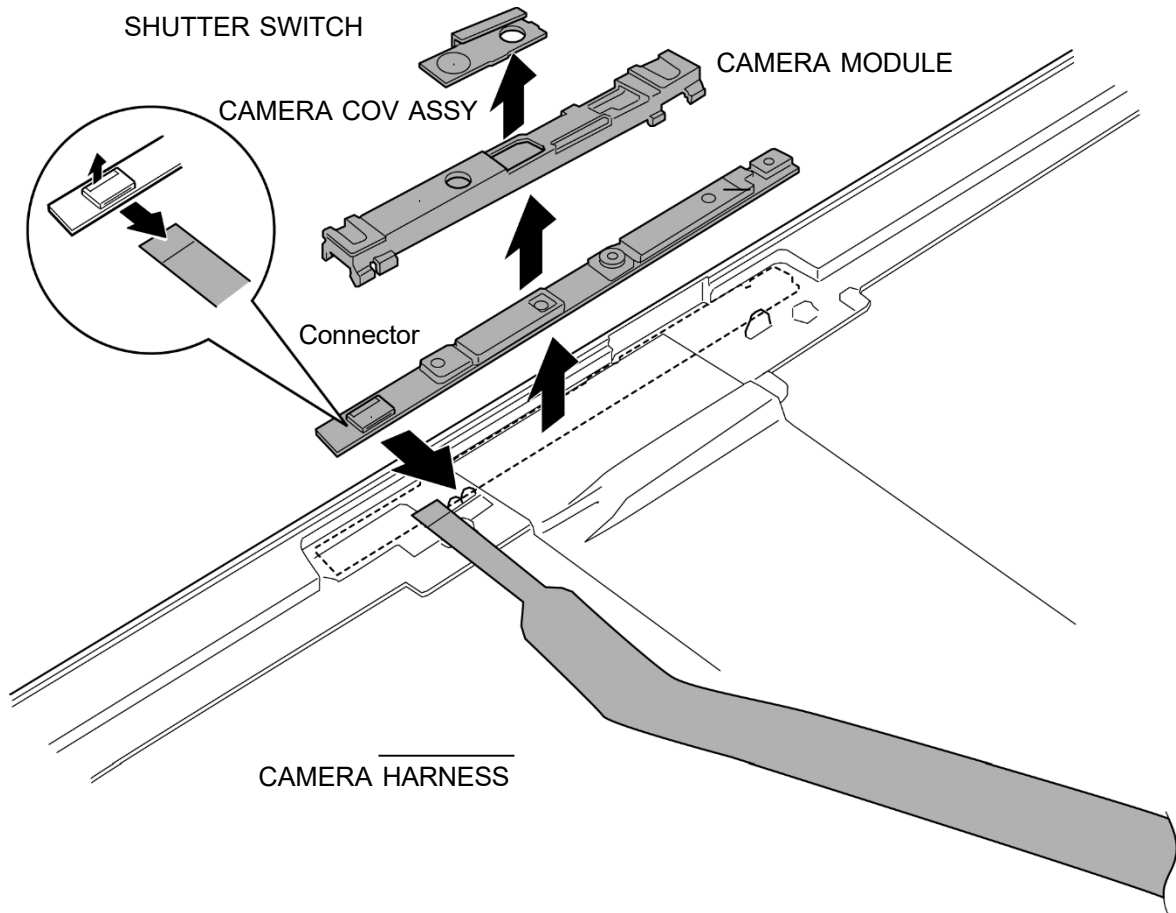
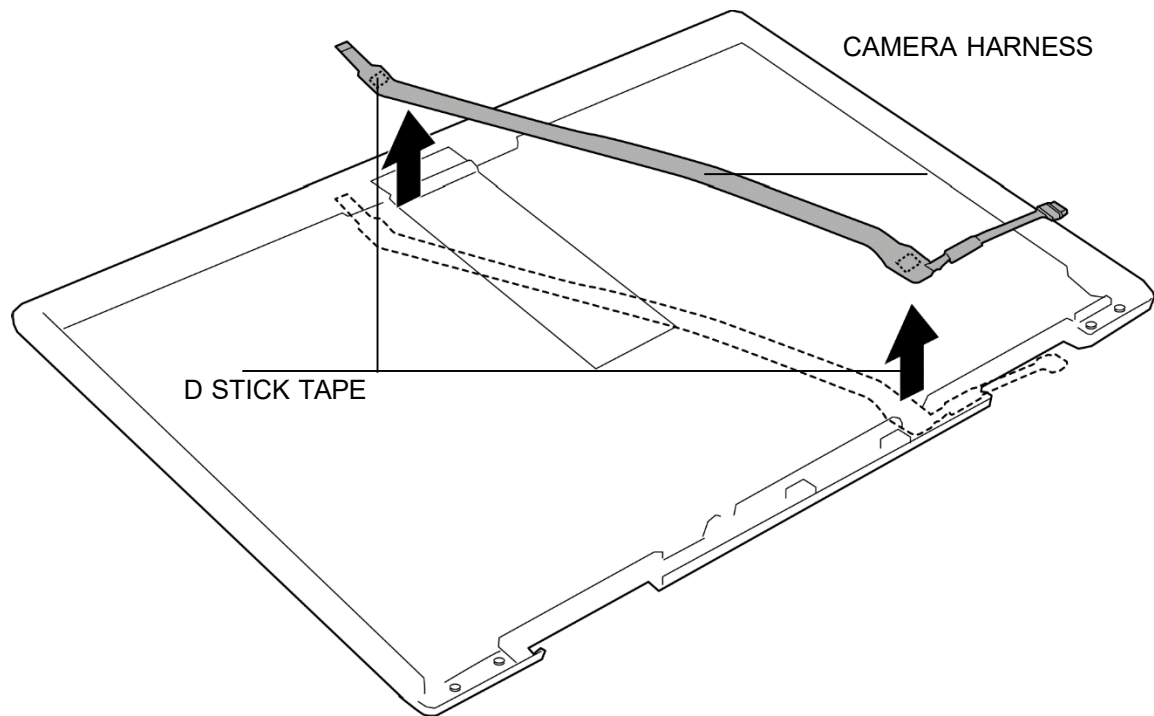


Figure 4-30 Removing the CAMERA MODULE (1)

19. Remove the **CAMERA HARNESS** (FPC portion) from the LCD COVER ASSY.

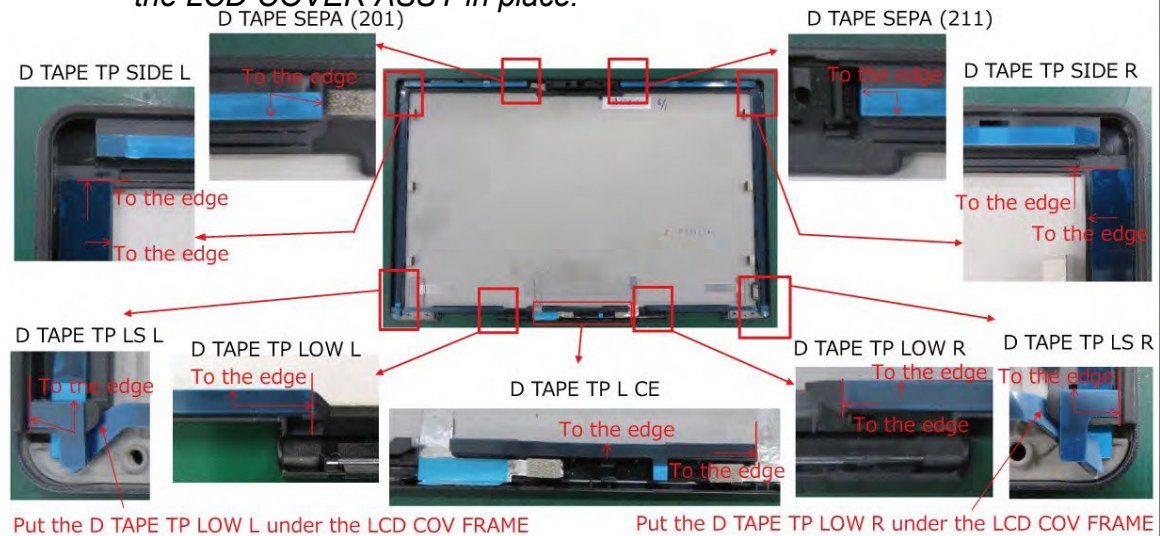


*Figure 4-31 Removing the CAMERA MODULE (2)*

## Installing the LCD/CAMERA MODULE

To install the LCD/CAMERA MODULE, follow the steps below and refer to Figure 4-26 to 4-31.

**NOTE:** When replacing the LCD COVER ASSY with a new one, stick new D TAPE SEPA (201/211), D TAPE TP SIDE L, D TAPE TP LS L, D TAPE TP LOW L, D TAPE TP SIDE R, D TAPE LS R, D TAPE TP LOW R and D TAPE TP L CE to the LCD COVER ASSY in place.



### AC Adapter, External cables provided with the AC adapter and USB cables

The AC adapter as well as all external cables provided with the notebook including the AC adapter cables and USB cables should be segregated and sent for shredding.

The following components contained within the AC adapter potentially contain hazardous substances and require special handling:

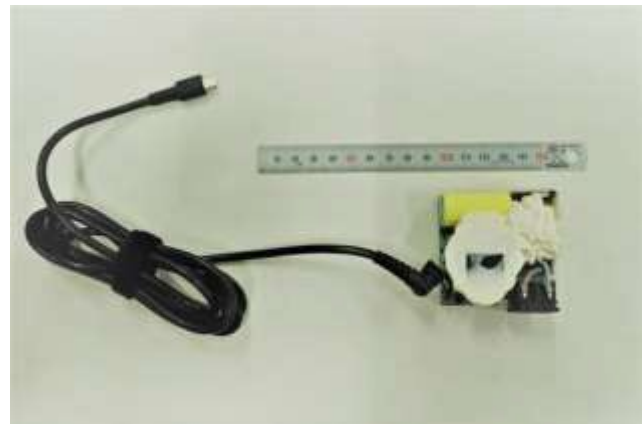
- Printed Circuit Board >10 cm<sup>2</sup>
- Capacitor >25 mm in height

Photos of the AC adapter and the components noted above are included below.  
The notebook has one of two types of AC adapter.

#### **USB connection type**



*AC adapter*



*AC Adapter with casing removed*



*AC Adapter printed circuit board*

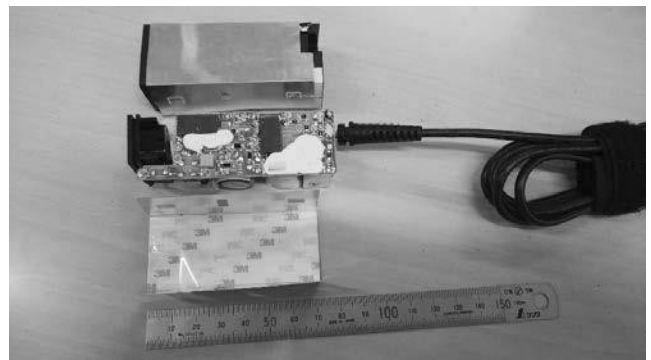


*AC adapter capacitor*

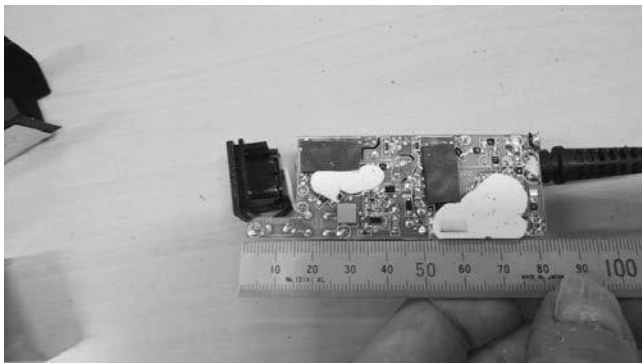
**Conventional type**



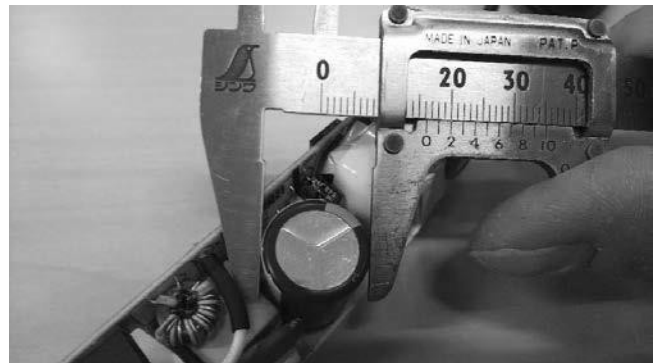
***AC adapter***



***AC Adapter with casing removed***



***AC adapter printed circuit board***



***AC adapter capacitor***