ORDER NO. CPD0610204C1

Service Manual

Personal Computer

CF-W5

This is the Service Manual for
the following areas.
M …for U.S.A. and Canada

Model No. CF-W5LWEZZ*1* *2*

1: Operation System
B: Microsoft® Windows® XP Professional
2: Area
M: Refer to above area table

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

WARNING

For U.K.

This apparatus must be earthed for your safety.

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.
Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe.
For your safety, if you have any doubt about the effective earthing of the power point, consult a qualified electrician.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 3 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 3 amps and that it is approved by ASTA or BSI to BS 1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.
If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

Warning: THIS APPLIANCE MUST BE EARTHED.

Important

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

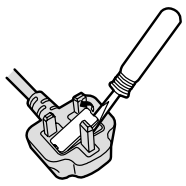
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol coloured GREEN or GREEN-and-YELLOW.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured RED.

The mains plug on this equipment must be used to disconnect the mains power.
Please ensure that a socket outlet is available near the equipment and shall be easily accessible.

■ How to replace the fuse

Open the fuse compartment with a screwdriver and replace the fuse.



Warnings

- This equipment is not designed for connection to an IT power system.
  (An IT system is a system having no direct connections between live parts and Earth; the exposed-conducive-parts of the electrical installation are earthed.
  An IT system is not permitted where the computer is directly connected to public supply systems in the U.K.)
- Disconnect the mains plug from the supply socket when the computer is not in use.

This equipment is produced to BS800/1983.

LASER SAFETY INFORMATION

For U.S.A.

Class 1 LASER-Product

This product is certified to comply with DHHS Rules 21 CFR Subchapter J.
This product complies with European Standard EN60825 (or IEC Publication 825)

For all areas
This equipment is classified as a class 1 level LASER product and there is no hazardous LASER radiation.

Caution:
(1) Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
(2) The drive is designed to be incorporated into a computer-based system or unit which has an enclosing cover. It should never be used as a stand alone drive.

Danger:
The serviceman should not remove the cover of drive unit and should not service because the drive unit is a non-serviceable part.
Please check DANGER label on PD-drive unit.

Unplug the AC power cord to the equipment before opening the top cover of the drive.
When the power switch it on, do not place your eyes close to the front panel door to look into the interior of the unit.

LASER Specification

Class 1 level LASER Product
Wave Length: DVD 658–8 nm
CD 775~815 nm

Laser safety information is appropriate only when drive with laser is installed.

Safety precautions

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacture's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.

Important Safety Instructions

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

SAVE THESE INSTRUCTIONS

Lithium Battery

Lithium Battery!

This computer contains a lithium battery to enable the date, time, and other data to be stored. The battery should only be exchanged by authorized service personnel.

Warning! A risk of explosion from incorrect installation or misapplication may possibly occur.

LITHIUM BATTERY ⚠

• **CAUTION**

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacture.
Discard used batteries according to the manufacturer's instructions.

LITHIUMBATTERIES ⚠

Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben order einen vom Hersteller empfohlenen ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

PILE AU LITHIUM ⚠

ATTENTION: IL Y A DANGER D'EXPLOSION S' IL Y A REMPLACEMENT INCORRECT DE LA PILE. REMPLACER UNIQUEMENT AVEC UNE PILE DU MÈME TYPE OU D'UN TYPE RECOMMANDÉ PAR LE CONSTRUCTEUR. METTRE AU RÉBUT LES PILES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT.

For U.S.A. / CANADA

A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

L'appareil que vous vous êtes procuré est alimenté par une batterie au lithium-ion. Pour des renseignements sur le recyclage de la batterie, veuillez composer le 1-800-8-BATTERY.

Precautions (Battery Pack)

- Care should be exercised with regard to the following in order to avoid the possibility of overheating, fire or damage.

Avoid Heat
Do not throw the battery pack into a fire or expose it to excessive heat.

Keep Articles Away
Do not place the battery pack together with articles such as necklaces or hairpins when carrying or storing.

Do Not Disassemble
Do not insert sharp objects into the battery pack, expose it to bumps or shocks, deform, disassemble, or modify it.

Do Not Short
Do not short the positive (+) and negative (-) contacts.

Avoid Extreme Heat, Cold and Direct Sunlight
Do not charge, use or leave the battery pack for extended periods where it will be exposed to direct sunlight, in a hot place (in an automobile on a sunny day, for example), or in a cold place.

Do Not Use With Any Other Computer
The battery pack is rechargeable and was intended for the specified computer or charger. Do not use it with a computer other than the one for which it was designed.

Do Not Put into a Microwave
Do not put the battery pack into a microwave oven or a pressurized chamber.

Discontinue Use
Should the battery emit an abnormal odor, become hot to the touch, become discolored, change shape, or become in any way different from normal, remove it from the computer or charger and discontinue use.

- Do not touch the terminals on the battery pack. The battery pack may no longer function properly if the contacts are dirty or damaged.
- Do not expose the battery pack to water, or allow it to become wet.
- If the battery pack will not be used for a long period of time (a month or more), charge or discharge (use) the battery pack until the remaining battery level becomes 30% to 40% and store it in a cool, dry place.
- This computer prevents overcharging of the battery by recharging only when the remaining power is less than approx. 95% of capacity.
- The battery pack is not charged when the computer is first purchased. Be sure to charge it before using it for the first time. When the AC adaptor is connected to the computer, charging begins automatically.
- Should the battery leak and the fluid get into your eyes, do not rub your eyes. Immediately flush your eyes with clear water and see a doctor for medical treatment as soon as possible.

NOTE

- The battery pack may become warm during recharging or normal use. This is completely normal.
- Recharging will not commence outside of the allowable temperature range (0 °C to 50 °C {32°F to 122 °F}).(☞ Reference Manual "Battery Power") Once the allowable range requirement is satisfied, charging begins automatically. Note that the recharging time varies based on the usage conditions. (Recharging takes longer than usual when the temperature is 10 °C {50 °F} or less.)
- If the temperature is low, the operating time is shortened. Only use the computer within the allowable temperature range.
- The battery pack is a consumable item. If the amount of time the computer can be run off a particular battery pack becomes dramatically shorter and repeated rechargings do not restore its performance, the battery pack should be replaced with a new one.
- When transporting spare batteries inside a package, briefcase, etc., it is recommended that it be placed in a plastic bag so that its contacts are protected.
- Always power off the computer when it is not in use. Leaving the computer on when the AC adaptor is not connected will exhaust the remaining battery capacity.

CONTENTS

1 Specifications

Main Specifications

Model No.		CF-W5LWEZZBM
CPU/ Secondary cache memory		Intel® Core™ Solo Processor Ultra Low Voltage U1400 (1.20 GHz, 2 MB*1 L2 cache, 533 MHz FSB)
Chip Set		Mobile Intel® 945 GMS Express chip set
Main Memory		512 MB*1, DDR2 SDRAM (1536 MB*1 Max.)
Video Memory		UMA (128 MB*1 Max.)*2
Hard Disk Drive		60 GB*3
CD/DVD Drive		USB 2.0 connection interface
		DVD-ROM & CD-R/RW Drive built-in, Buffer underrun error prevention function: Supported
Continuous Data Transfer Speed*4*5	Reading*6	DVD-RAM*7: 2X (4.7 GB*3)/1X (2.6 GB*3) DVD-R*8: 4X (Max.) DVD-RW: 4X (Max.) DVD-ROM: 8X (Max.) CD-ROM: 24X (Max.) CD-R: 24X (Max.) CD-RW: 24X (Max.) +R: 4X (Max.) +R DL: 4X (Max.) +RW: 4X (Max.)
	Writing*9	CD-R: 4X/8X/10-16X/10-24X CD-RW: 4X High-Speed CD-RW: 4X/8X/10X Ultra-Speed CD-RW: 10X/10-16X/10-24X
Supported Disks/Format*5	Reading	DVD-ROM (Single Layer, Dual Layer) DVD-Video DVD-R*8(1.4 GB, 3.95 GB, 4.7 GB)*3 DVD-RW (Ver.1.1/1.2 1.4 GB, 4.7 GB, 9.4 GB)*3 DVD-RAM*7 (1.4 GB, 2.8 GB, 2.6 GB, 5.2 GB, 4.7 GB, 9.4 GB)*3 +R (4.7 GB)*3 +R DL (8.5 GB)*3 +RW (4.7 GB)*3 CD-Audio CD-ROM (XA compatible) CD-R Photo CD (multiple session compatible) Video CD CD-EXTRA CD-RW CD-TEXT
	Writing	CD-R CD-RW
Display Method		12.1 XGA type (TFT) (1024 × 768 dots)
Internal LCD		65,536/16,777,216 colors (1024 × 768 dots)*10
External Display*11		65,536/16,777,216 colors (800 × 600 dots/1024 × 768 dots/1280 × 768 dots/1280 × 1024 dots/1400 × 1050 dots/1600 × 1200 dots/2048 × 1536 dots (60 Hz)*12)
Simultaneous Display on LCD + External Display*11		65,536/16,777,216 colors (800 × 600 dots, 1024 × 768 dots)*10
Wireless LAN		Intel® PRO/Wireless 3945 ABG Network Connection
LAN*13		IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX
Modem		Data: 56 kbps (V.92) FAX: 14.4 kbps
Sound		WAVE and MIDI playback, Intel® High Definition Audio subsystem support, Monaural Speaker (built in)
Security Chip		TPM (TCG V1.2 compliant)*14
Card Slots	PC Card Slot	× 1, One Type I or Type II, Allowable current 3.3 V: 400 mA, 5 V: 400 mA
	SD Memory Card Slot*15	× 1, Data transfer rate = 8 MB per second
RAM Module Slot		× 1, DDR2 SDRAM, 172-pin, 1.8 V, Micro DIMM, PC2-4200 Compliant*16
Interface		USB Ports × 2 (USB2.0 × 2)*17 / Modem Port (RJ-11) / LAN Port (RJ-45) *13 / External Display Port: Mini Dsub 15-pin female / Microphone Jack: Miniature jack, 3.5 DIA / Headphone Jack: Miniature jack, 3.5 DIA / Mini Port Replicator connector: Dedicated 50-pin male
Keyboard/Pointing Device		83 keys/Touch Pad
Power Supply		AC adaptor or Battery pack
AC Adaptor*18		Input: 100 V - 240 V AC, 50 Hz/60 Hz Output: 16 V DC, 2.5 A
Battery Pack		Li-ion 10.65 V, 5.7 Ah
Operating Time*19		Approx. 5.5 hours - 11 hours*20 (Approx. 8 hours*21) (Disable Economy Mode (ECO))
Charging Time*22		Approx. 5 hours (Power off)/Approx. 6.5 hours (Power on)

Model No.			CF-W5LWEZZBM
Power Consumption[*23]			Approx. 35 W[*24] / Approx. 40 W (maximum when recharging in the ON state)
Physical Dimensions (W × H × D)			268 mm × 33.1 mm (at the front)/50.4 mm (at the rear) × 218 mm (excluding protrusion) {10.6 " × 1.3 " / 2.0 " × 8.6 "}
Weight[*25]			Approx. 1330 g {2.9 lb.}
Environment	Operation	Temperature	5˚C to 35˚C {41˚F to 95˚F}
		Humidity	30% to 80% RH (No condensation)
	Storage	Temperature	-20˚C to 60˚C {-4˚F to 140˚F}
		Humidity	30% to 90% RH (No condensation)
OS[*26]			Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies (NTFS File system)
Pre-installed Software[*26]			Microsoft® Internet Explorer 6 Service Pack 2 / DirectX 9.0c / Microsoft® Windows® Media Player 10 / Microsoft® Windows® Movie Maker 2.1 / Microsoft® .NET Framework 1.1 SP1/2.0 / Adobe Reader / Intel® PROSet/Wireless Software <Only for model with wireless LAN> / SD Utility / Icon Enlarger / Loupe Utility / Touch Pad Utility / DMI Viewer / PC Information Viewer / WinDVD™5 (OEM Version) / B's Recorder GOLD8 BASIC / B's CLiP 6[*27] / Hotkey Settings / Optical Disc Drive Letter-Setting Utility / Optical Disc Drive Power-Saving Utility / Wireless Switch Utility <Only for model with wireless LAN/wireless WAN> / Economy Mode (ECO) Setting Utility / Battery Recalibration Utility / Infineon TPM Professional Package V2.5[*28] / Recover Pro 6[*28]
			Setup Utility / Hard Disk Data Erase Utility[*29] / PC-Diagnostic Utility[*30]

Wireless LAN <Only for model with wireless LAN>

Data Transfer Rates	IEEE802.11a: 54/48/36/24/18/12/9/6 Mbps (automatically switched)[*31] IEEE802.11b: 11/5.5/2/1 Mbps (automatically switched)[*31] IEEE802.11g: 54/48/36/24/18/12/9/6 Mbps (automatically switched)[*31]
Standard Supported	IEEE802.11a/IEEE802.11b/IEEE802.11g
Transmission Method	OFDM system, DS-SS system
Wireless Channels Used	IEEE802.11a: Channels 36/40/44/48/52/56/60/64/149/153/157/161/165 IEEE802.11b/ IEEE802.11g: Channels 1 to 11
RF Frequency Band	IEEE802.11a: 5.18 - 5.32 GHz, 5.745 - 5.825 GHz IEEE802.11b/ IEEE802.11g: 2412 - 2462 MHz

[*1] 1 MB = 1,048,576 bytes

[*2] A segment of the main memory is allotted automatically depending on the computer's operating status. The size of the Video Memory cannot be set by the user.

[*3] 1 GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

[*4] Data transfer speeds indicate values measured by Matsushita Electric Industrial Co., Ltd. The data transfer rate of DVD per 1X speed is 1,350 KB/s. The data transfer rate of CD per 1X speed is 150 KB/s.

[*5] Performance of CD-R, CD-RW, DVD-RAM, DVD-R, DVD-RW, +R, +R DL, and +RW cannot be guaranteed depending on writing status and recording format. Also, some data cannot be played back depending on the disk, settings, and environment being used.
Does not support reading from DVD-R DL.

[*6] If an unbalanced disk (e.g., a disk with which the balance has been displaced from the center) is inserted, the speed may become slower if there are large vibrations while the disk is rotating.

[*7] Only non-cartridge type or removable cartridge type can be used.

[*8] DVD-R is compatible with 4.7 GB (for General) playback. DVD-R (for Authoring) playback is compatible with disks recorded using Disk-at-Once recording.

[*9] Depending on the disk, the writing speed may become slower.

[*10] A 16,777,216 color display is achieved by using the dithering function.

[*11] Display may be impossible using some connected external displays.

[*12] When using an external display with a resolution of 2048 x 1536 dots, use a display that supports a 60Hz refresh rate. If an external display that does not support a 60Hz refresh rate is used, images may not be displayed properly.

[*13] Some devices cannot be used depending on the port type.

[*14] For information on TPM, click [start] - [Run] and input "c:\util\drivers\tpm\README.pdf", and refer to the Installation Manual of "Trusted Platform Module (TPM)".

[*15] Operation has been tested and confirmed using Panasonic SD Memory Cards with a capacity of up to 2 GB.
The transfer rate using the SD Memory Card slot on this computer is 8 MB per second. (This is a theoretical value, and differs from actual speeds.)
The transfer rate is 8 MB per second even if you use an SD Memory Card that supports high-speed transfer rates.
Operation on other SD equipment is not guaranteed.
This computer is not compatible with MultiMediaCards or SDHC Memory Cards.
Do not insert these kinds of cards.

*16 Only a RAM module designed for DDR2 (PC2-4200) can be added (Panasonic : CF-BAW0512U, CF-BAW1024U).
JEDEC standard 214 pin Micro DIMM cannot be used.
PC2100 / PC2700 172 pin Micro DIMM cannot be used.
If a PC2-3200 RAM module is installed, the main memory processing speed may become slower.

*17 Does not guarantee operation of all USB-compatible peripherals.

*18 <Only for North America>
The AC adaptor is compatible with power sources up to 240 V AC adaptor. This computer is supplied with a 125 V AC compatible AC cord.

20-M-2-1

*19 Varies depending on the usage conditions, or when an optional device is attached. Measured when the power saving function on the USB2.0 USB Root Hub is set to on. (At the time of purchase, the power saving function is activated.) When Economy Mode (ECO) is enabled, the operating time becomes approximately 20% shorter than when it is disabled.

*20 Measured using BatteryMark™ Version 4.0.1 (LCD brightness : Maximum - Minimum).

*21 Measured using MobileMark™ 2005 (LCD brightness : 60 cd/m^2).

*22 Varies depending on the usage conditions, CPU speed, etc. It may take a long time to charge a fully discharged battery.

*23 Approx. 1.5 W when the battery pack is fully charged (or not being charged) and the computer is off.

*24 Rated power consumption.

23-E-1

*25 Average value. May differ depending on models.

*26 Operations of this computer are not guaranteed except for the pre-installed OS.

*27 Preinstalled B's CLiP does not support CD-R.

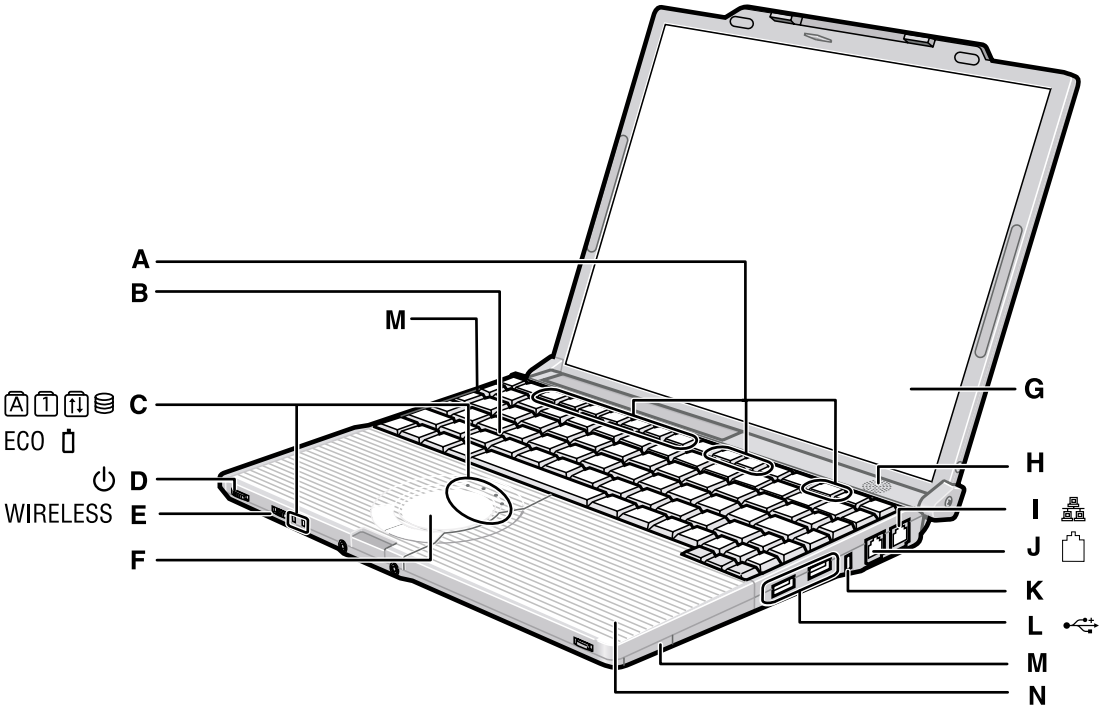
*28 Must be installed before use.

*29 The Product Recovery DVD-ROM is required.

*30 For startup methods, refer to "Hardware Diagnostics".

*31 These are speeds specified in IEEE802.11a+b+g standards. Actual speeds may differ.

2 Names and Functions of Parts



A : Function Key
B : Keyboard
C : LED Indicator

: Caps lock
: Numeric key (NumLk)
: Scroll lock (ScrLk)
: Hard disk drive status
ECO : Economy Mode (ECO) status
: Battery status

D : Power Switch

Power Indicator
Off: Power off/Hibernation
Green: Power on
Blinking green: Standby

E : Wireless Switch
<Only for model with wireless LAN/wireless WAN>

F : Touch Pad
G : LCD
H : Speaker
I : LAN Port
If the Mini Port Replicator is connected to the computer, connect the LAN cable to the LAN port on the Mini Port Replicator. You cannot use the LAN port on the computer.

J : Modem Port
Be sure to use the included modem telephone cable, and insert the end of the cable with the phyllite core into the modem port on the computer.

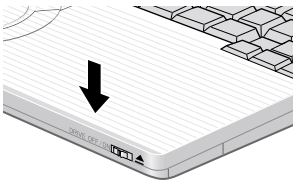
K : Security Lock
You can connect a Kensington cable. Refer to the instruction manual of the cable. The security lock and cable is a theft prevention device. Matsushita Electric Industrial Co., Ltd. will bear no responsibility in the event of theft.

L : USB Ports

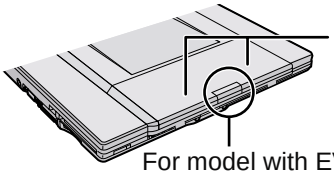
M : Wireless LAN Antenna
<Only for model with wireless LAN>

N : CD/DVD Drive

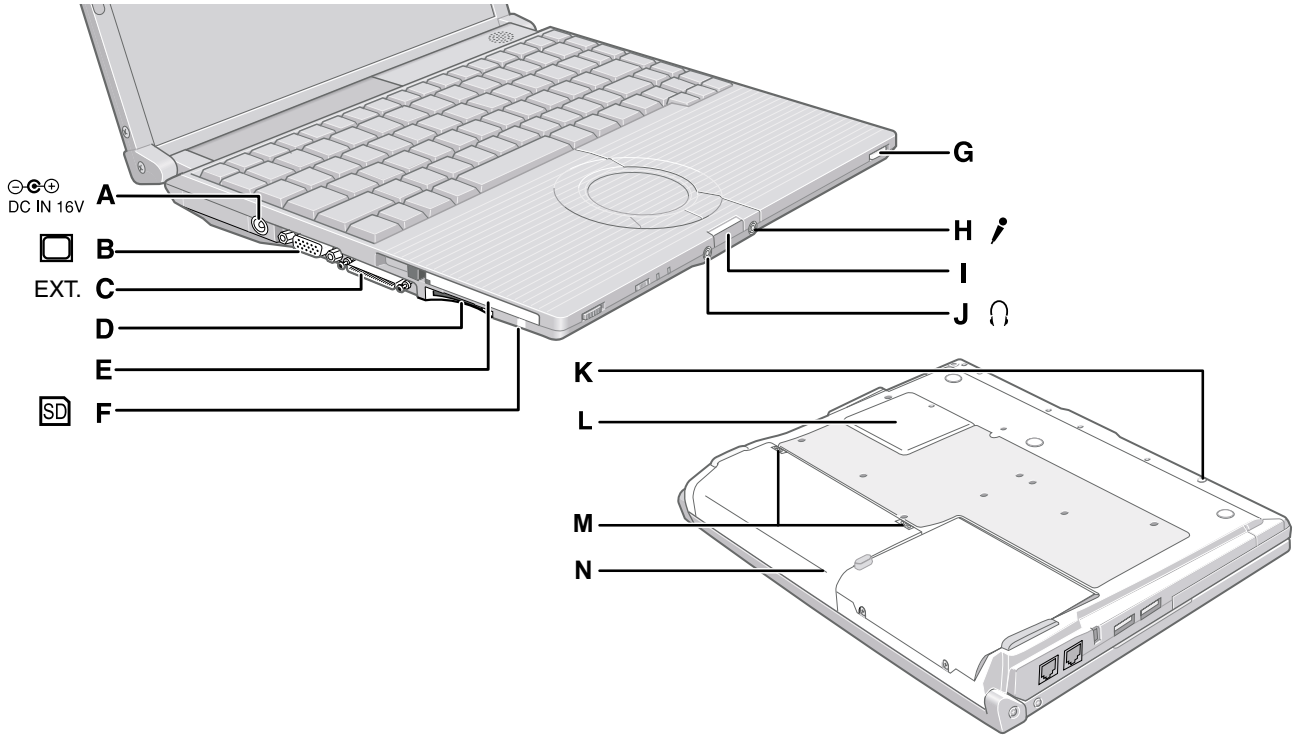
CAUTION



When closing the disk cover, press down near the drive power/ open switch (position of the arrow) to ensure that the cover is locked.



For model with EVDO or without wireless WAN:
The SIM card slot under this cover is not used for this model. Do not open the cover.
For other models:
Refer to the additional instructions.



A : DC-IN Jack

B : External Display Port
If the Mini Port Replicator is connected to the computer, connect the external display to the external display port on the Mini Port Replicator. You cannot use the external display port on the computer.

C : Mini Port Replicator Connector
Connect the Mini Port Replicator (optional).

D : SD Memory Card Slot

E : PC Card Slot

F : SD Memory Card Indicator
Blinking: During access

G : CD/DVD Drive Power/Open Switch
Slide the switch to the right to open the disk cover.
Slide the switch to the left to turn on/off the drive power.

CD/DVD Drive Indicator
Off: Drive power is off.
Green: Drive power is on, but the drive is not accessed.
Blinking green: Drive power is on, and the drive is being accessed.

H : Microphone Jack
A condenser microphone can be used. If other types of microphones are used, audio input may not be possible, or malfunctions may occur as a result.
When recording in stereo using a stereo microphone:
Double-click in the notification area, click [Options] - [Properties], and add a check mark for [Recording], click [OK] - [Options] - [Advanced Controls] - [Advanced], remove a check mark for [Mono Microphone], and then click [Close].
When using a monaural microphone with a 2-terminal plug:
With the settings outlined above, only audio on the left track will be recorded.
When monitoring the microphone audio using headphones, sounds on the left track cannot be heard, regardless of the above settings. This is a result of the computer s specifications, and is not a malfunction.

I : Latch

J : Headphone Jack
You can connect headphones or amplified speakers. When they are connected, audio from the internal speakers is not heard.

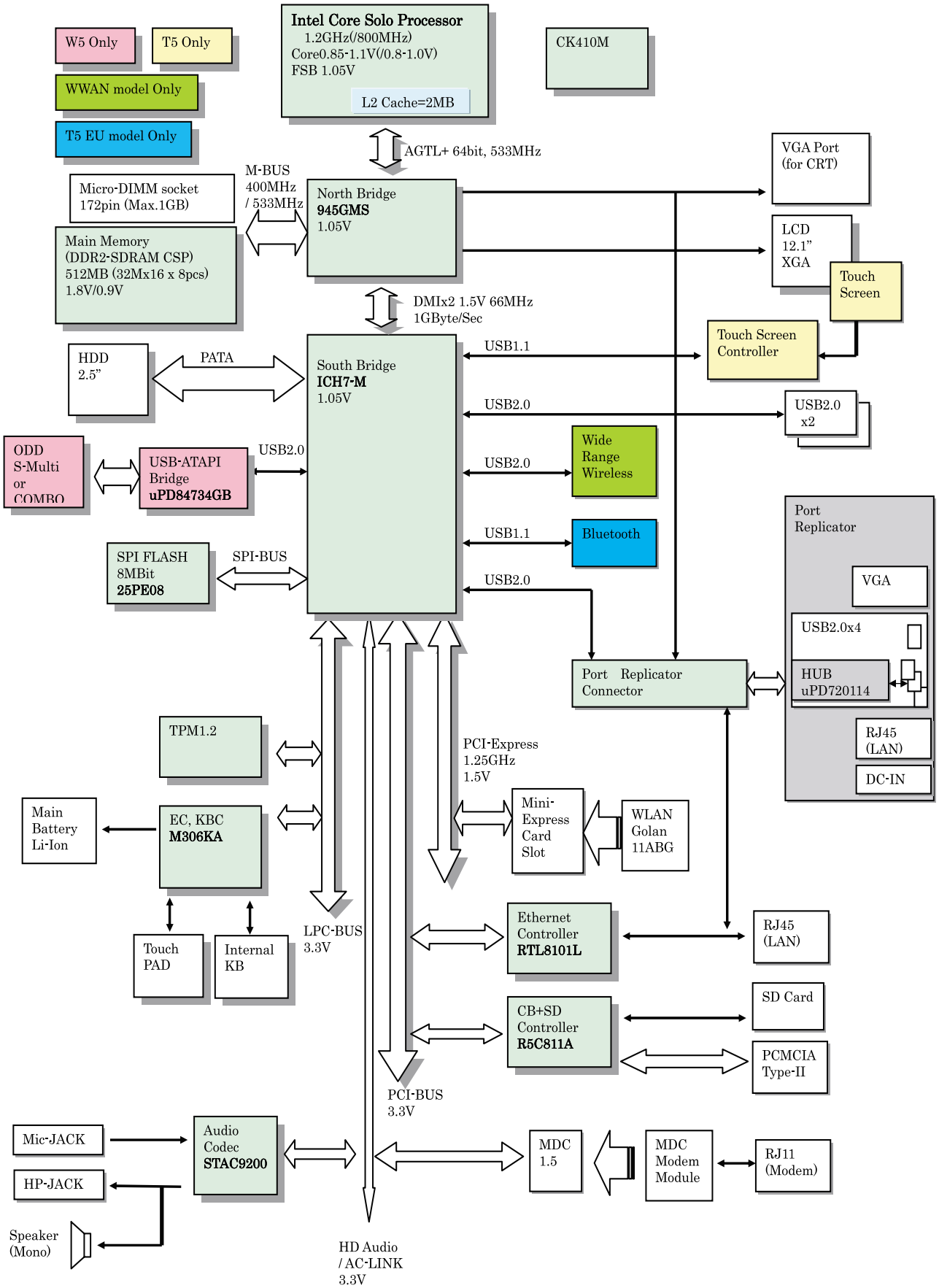
K : Emergency Hole

L : RAM Module Slot

M : Battery Latches

N : Battery Pack

3 Block Diagram

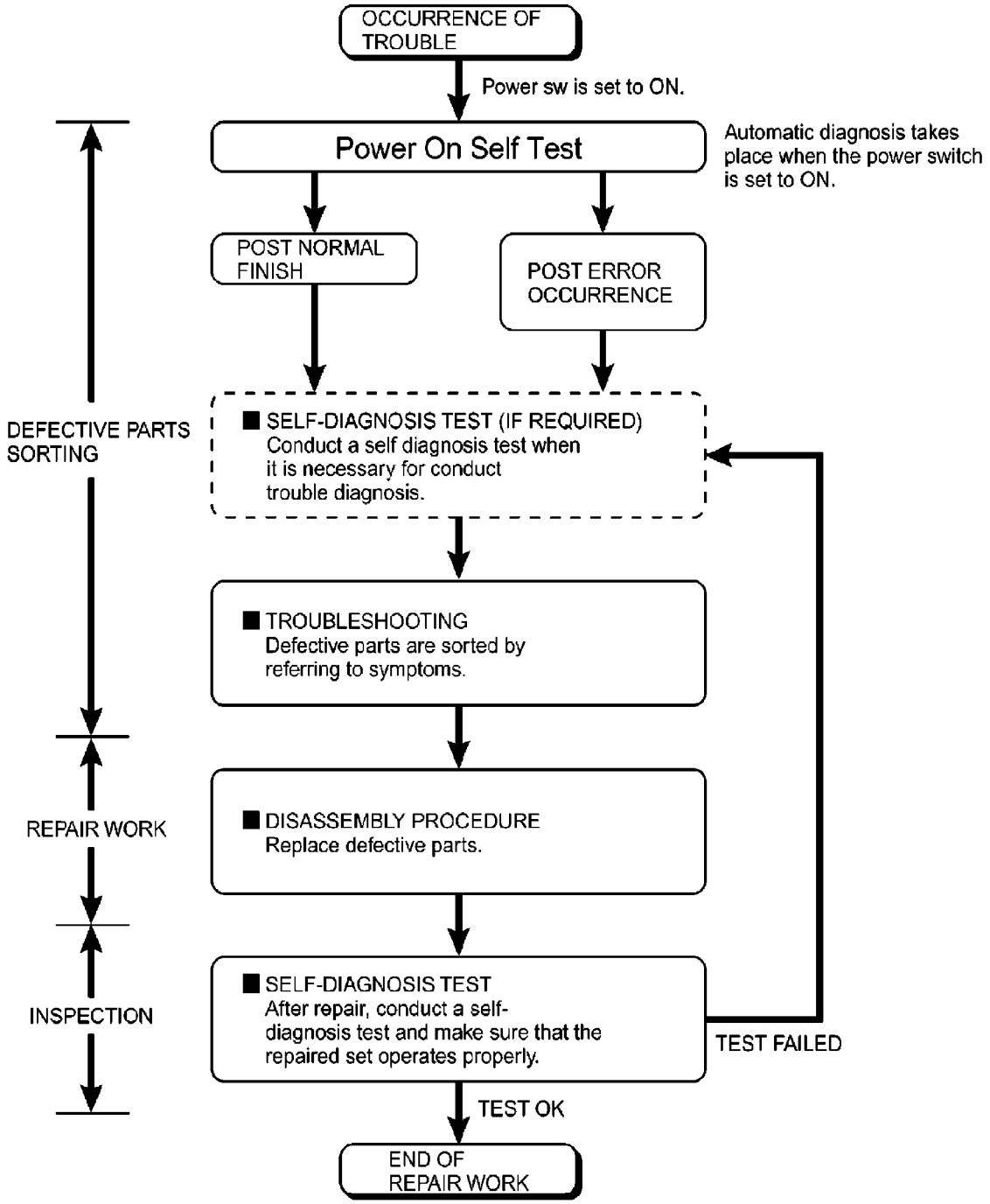


4 Diagnosis Procedure

4.1. Basic Procedures

The basic procedures for diagnosis, disassembly, and test of defective parts of a set to be repaired are summarized below. For details, refer to relevant pages in the Service Manual.

● **Flow Chart**

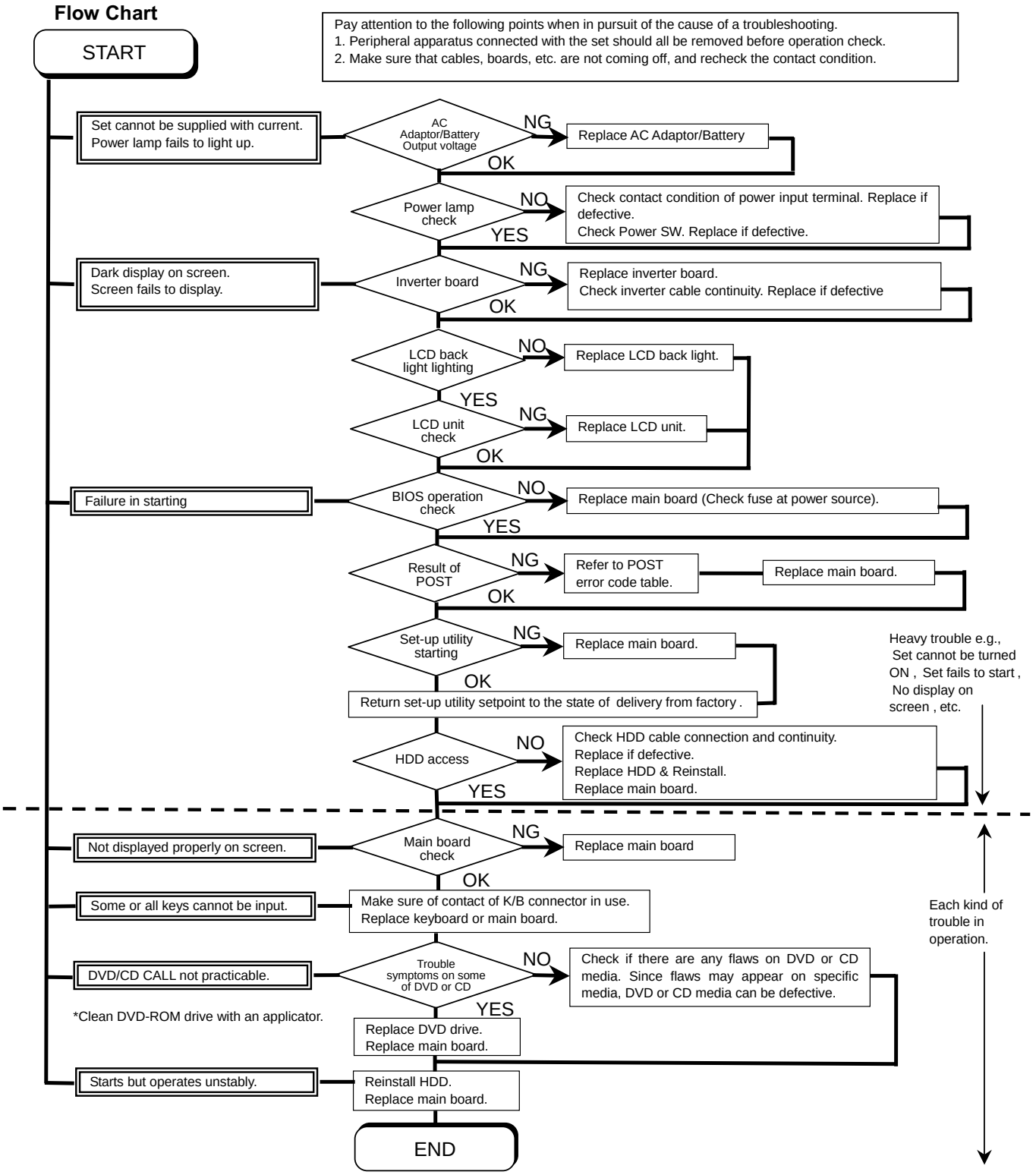


4.2. Troubleshooting

Please take note of the following two points with regard to troubleshooting:

1. Know-how of diagnosis upon occurrence of heavy troubles, e.g. Set cannot be turned ON , Set fails to start , No display on screen , etc.
2. Explanation of each trouble, mainly symptom of trouble in operation.

Flow Chart



5 Power-On Self Test (Boot Check)

Outline of POST

The set has a boot check function called POST (Power-On Self Test) in it.
The condition of the main body is diagnosed by checking beep sound or error code.

Start .....Test begins automatically when power switch is set to ON.

Normal finish .....After memory checking, a beep sound is issued once and the set is placed into automatic stop.

Note: If no error occurs, nothing is displayed. (No display of OK, etc.)

Error Diagnosis by Checking Beep Signal Sound

The beep sound is as follows:

(1 (long sound) -2-3-4)

(Length of bar shows length of sound.)

■ = long sound (about 0.4 sec.), ■ = short sound (about 0.2 sec.), Length between sounds is about 0.1 sec.

Table of errors classified by beep sounds

Diagnosis	Beep signal sound	Error message
Main board	1(long sound)-2	BIOS ROM error
	1-2-2-3	BIOS ROM error
	1-3-1-1	RAM error
	1-3-1-3	Keyboard controller error
	1-3-4-1	RAM error
	1-3-4-3	RAM error
	1-4-1-1	RAM error
	2-1-2-3	BIOS ROM error
	2-2-3-1	Occurrence of unexpected offering

(Note) A beep sound is also issued in case of other I/O trouble.

6 List of Error Codes <Only when the port replicator is connected>

The following is a list of the messages that BIOS can display. Most of them occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured. Following the list are explanations of the messages and remedies for reported problems.
If your system displays one of except the messages marked below with an asterisk (*), write down the message and contact Panasonic Technical Support. If your system fails after you make changes in the Setup menus, reset the computer, enter Setup and install Setup defaults or correct the error.

0200 Failure Fixed Disk
Fixed disk in not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup. Find out if the fixed-disk type is correctly identified.

0210 Stuck key
Stuck key on keyboard.

0211 Keyboard error
Keyboard not working.

0212 Keyboard Controller Failed
Keyboard controller failed test. May require replacing keyboard controller.

0213 Keyboard locked - Unlock key switch
Unlock the system to proceed.

0230 System RAM Failed at offset : *nnnn*
System RAM failed at offset *nnnn* of in the 64k block at which the error was detected.

0231 Shadow RAM Failed at offset : *nnnn*
Shadow RAM failed at offset *nnnn* of the 64k block at which the error was detected.

0232 Extended RAM Failed at offset : *nnnn*
Extended memory not working or not configured properly at offset *nnnn*.

0250 System battery is dead - Replace and run SETUP
The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.

***0251 System CMOS checksum bad - Default configuration used**
System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. The BIOS installed Default SETUP Values. If you do not want these values, enter Setup and enter your own values. If the error persists, check the system battery or contact Panasonic Technical Support.

0260 System timer error
The timer test failed. Requires repair of system board.

0270 Real time clock error
Real-time clock fails BIOS test. May require board repair.

***0280 Previous boot incomplete - Default configuration used**
Previous POST did not complete successfully. POST loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail. On systems with control of **wait states**, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the wait-state configuration is correct. This error is cleared the next time the system is booted.

0281 Memory Size found by POST differed from EISA CMOS
Memory size found by POST differed from EISA CMOS.

02D0 System cache error - Cache disabled

Contact Panasonic Technical Support.

02F0: CPU ID:

CPU socket number for Multi-Processor error.

02F4: EISA CMOS not writable

ServerBIOS2 test error: Cannot write to EISA CMOS.

02F5: DMA Test Failed

ServerBIOS2 test error: Cannot write to extended DMA (Direct Memory Access) registers.

02F6: Software NMI Failed

ServerBIOS2 test error: Cannot generate software NMI (Non-Maskable Interrupt).

02F7: Fail - Safe Timer NMI Failed

ServerBIOS2 test error: Fail-Safe Timer takes too long.

***device* address Conflict**

Address conflict for specified *device*.

Allocation Error for: *device*

Run ISA or EISA Configuration Utility to resolve resource conflict for the specified *device*.

Failing Bits : *nnnn*

The hex number *nnnn* is a map of the bits at the RAM address which failed the memory test. Each 1 (one) in the map indicates a failed bit. See error 230,231 or 232 for offset address of the failure in System, Extended or Shadow memory.

Invalid System Configuration Data

Problem with NVRAM (CMOS) data.

I/O device IRQ conflict

I/O device IRQ conflict error.

Operating System not found

Operating system cannot be located on either drive A: or drive C:. Enter Setup and see if fixed disk and drive A: are properly identified.

Parity Check 1 *nnnn*

Parity error found in the system bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????. Parity is a method for checking errors in binary data. A parity error indicates that some data has been corrupted.

Parity Check 2 *nnnn*

Parity error found in the I/O bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????.

Press <F1> to resume, <F2> to Setup

Displayed after any recoverable error message. Press <F1> to start the boot process or <F2> to enter a Setup and change the settings. Write down and follow the information shown on the screen.

7 Self Diagnosis Test

As for the self-diagnosis test(PC-Diagnostic utility) to use this model, a standard test and the enhancing test by the module of the main body building in are possible.

● Notes To skip BIOS password

Use <Ctrl>+<F10> key to skip BIOS password or authentication of fingerprint.
This key is only for entering DIAG mode. Not available to boot the computer.
If customer set "HDD Lock", the DIAG program cannot perform HDD test.
*This key is for service purpose only. Do not disclose this information to unrelated others.

1. Beginning of self-diagnosis test

1-1. Setting of content of setup

1. The power supply of the computer is turned on.
2. " F2 " is pushed on the screen of "Panasonic" while " press <F2 to enter Setup> " is displayed.
3. The setup utility starts and then takes notes of the content of the BIOS setup of present set.
4. " F9 " is pushed, " Yes" is selected on the screen of " Is the default value loaded? ", and " Enter" is pushed.
5. " F10 " is pushed.
6. " Yes" is selected on the screen of the setup confirmation, and " Enter" is pushed.
7. The computer starts automatically.

Attention

- If the device which can be set is set to "Invalidity" by "Advanced" or "Security" menu, becomes an error by "PC-Diagnostic utility".
  (It is judged that the device which can be set to "Invalidity" by "Main" menu such as "Flat pad" is normal if the controller operates normally though sets to "Invalidity" by the setup.)
- In the model with built-in DVD of the USB connection, even if DVD is normal, becomes an error if legacy USB is set to "Invalidity"

1-2. When you execute an automatic test

1. "Ctrl" + "F7" is pushed while the "Panasonic" start screen is displayed after the computer is started.
2. The test of all devices begins automatically by "PC-Diagnostic utility"'s starting.

Attention

- It is a test which the customer who bought PC can execute. (As for HDD, the enhancing test is also possible.)
- A flat pad does not work for a while after starting "PC-Diagnostic utility".
- The movement of a flat pad might become abnormal If after RAM begins from the CPU/System test, a flat pad will be operated in about 30 seconds. In that case,restarts pushing"Alt" + "Ctrl" + "Del" key. Or, please start "PC-Diagnostic utility" again after doing the power supply switch in the slide, and turning off the power supply.

1-3. When you execute the enhancing test

1. Please let me discontinue diagnosing clicking  to end an automatic test.

2. Please click on the character of "D" "PC-Diagnostic utility" on the screen while pushing both of right "Shift" and left "Shift" keys.

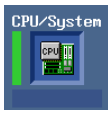
3. All devices which can select the enhancing test make the setting of the enhancing test possible.
4. The district device is made"FULL" display (enhancing test).
5. The test begins clicking  .

*Please refer to item 4 for the error result of each test and the division of the breakdown part.

2. Operation of PC-Diagnostic Utility

-Only the device which can be inspected on the entire screen is displayed.
-The item does not appear when the device of wireless LAN etc. is not physically connected.
-The movement of the item must use an arrow key or a flat pad.

-As for the device under the diagnosis, blue and yellow are alternately displayed at the left of the icon.
- The diagnosis result of the device greens at the left of the icon when it is normal, and becomes red when abnormal.



-When the test of all devices ends, the test result is displayed under the right of the screen.

-Please click  while diagnosing when being stop on the way by the time the test of all devices ends.

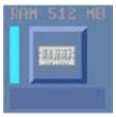
-Please click  when you restart "PC-Diagnostic utility".

*Each device is tested from the beginning, and it is not possible to restart on the way.

2-1. Selection of tested device

-To test only a specific device, "Test" and "Do not test" of each device can be selected.
-The device which can select the enhancing test changes in order of "The standard is tested" and "Do not test" whenever the device icon is clicked.

Start the standard test



Do not test

Please begin testing clicking  if the selection of the tested device ends.

2-2. "PC-Diagnostic utility" End method

When ☒ of "Close" on the right of the screen is clicked, the computer reactivates automatically. Or, the power supply switch is done in the slide and the power supply is turned off.

2-3. The content of the setup is returned to the setting of the user

1. Turned on the computer.
2. "F2" is pushed on the screen while "Press<F2>to enter Setup" is displayed of "Panasonic".
3. Push "F10", and on the screen of "Is the change in the setting preserved and do end?"and then "Yes" is selected, and "Enter" is pushed.
4. The computer reactivates automatically.
5. The end option is chosen by the start menu, and the power supply of the computer is turned off.

Standard at test time
All devices other than RAM and HDD -------- about 1 minute
RAM standard test ---------- 1 - 2 minutes
HDD standard test ---------- 2 - 3 minutes
HDD enhancing test (60GB) ---------- about 40 minutes

Ex.The standard when the standard <all device> is tested becomes 1+2+3=6 minutes.

- There is greatly a difference from RAM test when the memory is increased according to the performance of the memory occasionally.
- Moreover, when the main body of PC under the test is a high temperature, it occasionally takes time.
- There is greatly a difference from HDD according to the performance of the drive occasionally.

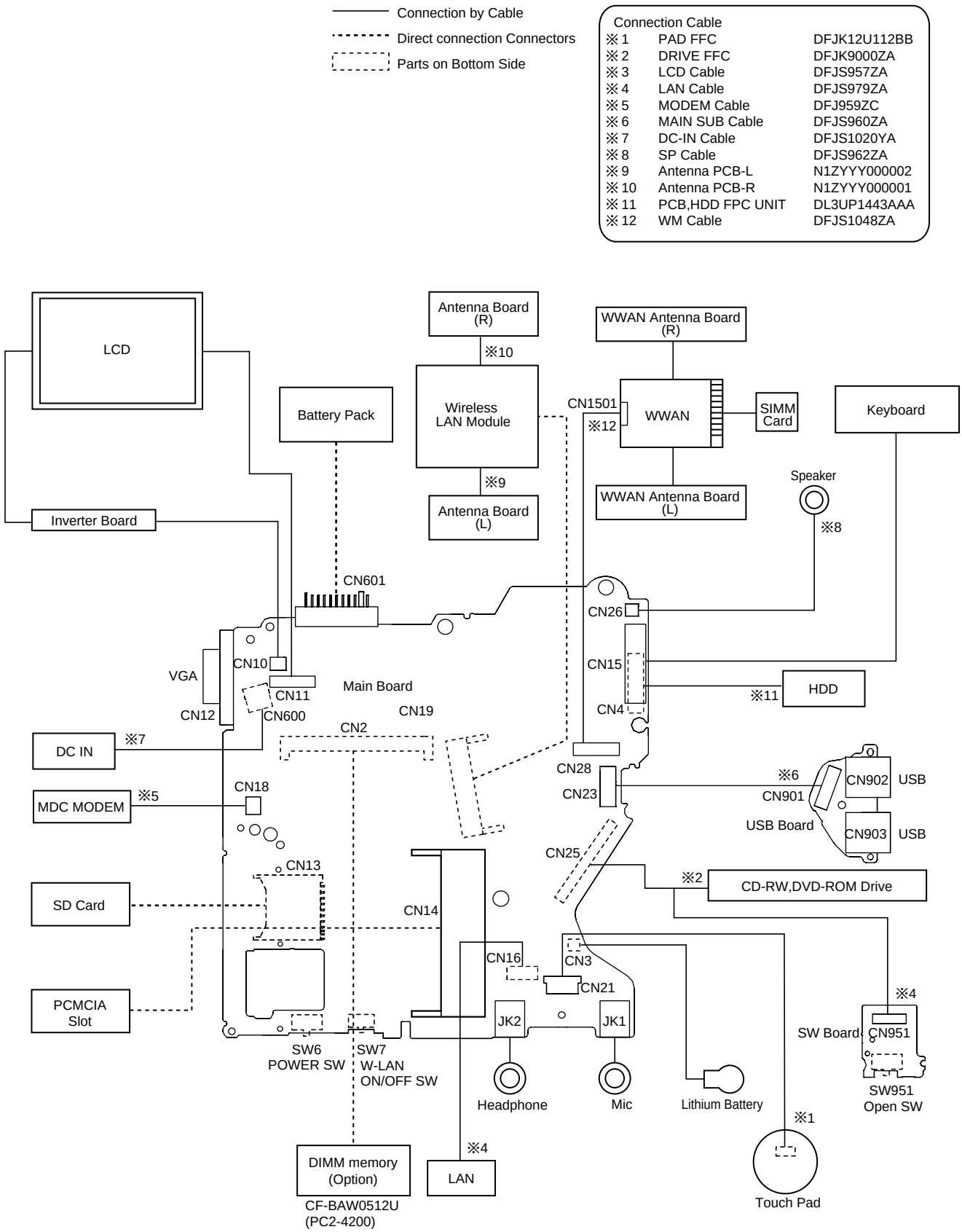
7.1. Test Item and Division of trouble

Test item	Stanard	Enhancing	Content of standard test	Content of enhancing test	Place with possibility of breakdown
CPU / SYSTEM	○	—	CPU is shifted to protected mode, and "Violation of the paging", "Operation of the violation of a privileged instruction", and DMA, INT, TIMER, and the RTC operation are confirmed.	—	CPU / Main board
RAM	○	—	All memory space is tested in a special memory access pattern based on "R.S.T . technology".	—	Memory / Mainboard
HDD	○	○	The record area frequently accessed with Microsoft Windows XP to test in about two minutes regardless of points of HDD is emphatically tested.	All record area is tested.	HDD / Mainboard / Cable / Connector
MODEM	○	—	It is confirmed not to find abnormality in the AC97 modem controller.	—	MODEM/ Mainboard
Wireless LAN	○	—	It is confirmed not to find abnormality in the Wireless LAN modem controller.	—	Wireless LAN board / Connector / Mainboard
Sound *5	○	—			
USB	○	○ *1	It is confirmed not to find abnormality in the USB controller.	It is confirmed not to find abnormality in the wiring between the USB controller and the connector by confirming the connection of the USB equipment connected with the USB connector.	Mainboard / Connector
LAN	○	○ *2	It is confirmed not to find abnormality in the LAN controller.	It is confirmed not to find abnormality in the wiring between the controller and the connector by connecting to HUB with LAN cable.	Mainboard / Connector
PC Card	○	—	It is confirmed not to find abnormality in the CardBus controller.	—	Mainboard
SD	○	—	It is confirmed not to find abnormality in the SD controller.	—	Mainboard
Keyboard	○	○ *3	It is confirmed not to find abnormality in keyboard controller's keyboard interface.	The key is actually input, and the operation is displayed on the screen.	Mainboard / Keyboard
Touch Pad	○	○ *4	Whether keyboard controller's mouse interface operates normally is confirmed.	The operation is actually displayed on the screen by operating the touch pad.	Mainboard / Touch Pad
DVD-ROM	○	○ *6	The drive is normally reset, and it is accessible is confirmed.	It is confirmed to be able to read media normally.	Mainboard / Touch Pad

Test Item	Standard	Enhanced	Content of Standard Test	Content of Extend Test	The place with possibility of breakdown
Touch Screen	○	○	It is confirmed not to find abnormality in the USB connection of Touch Screen. This test cannot find abnormality of Touch Screen.	Perform Touch Screen functionality practically. Operator has to judge PASS/FAIL with test result.	Main board/ Touch Screen
Bluetooth	○		It is confirmed not to find abnormality in the connection of Main board and Bluetooth module.	—	Bluetooth cable
Wireless WAN	○	—	It is confirmed not to find abnormality in the connection of Main board and Wireless WAN module.	—	WWAN cable
Floppy	○	—	It is confirmed not to find abnormality in the legacy FD drive. This test cannot find abnormality of mechanical breakdown. (e.g.. Head, Motor)	—	FD Drive/ Main board (Super I/O)/ FDD cable FDD connector
Video	○	—	It is confirmed not to find abnormality in access to VRAM with VESA. The PC which uses main memory as VRAM may fail with main memory failure.	—	Main board (Chipset, Graphic Controller)/ Memory
GPS	○	—	It is confirmed not to find abnormality in the connection of Main board and GPS	—	GPS cable
IEEE1394	○	—	It is confirmed not to find abnormality in the IEEE1394 controller.	—	Main board (IEEE1394 Controller)
Express Card	—	○	—	It is confirmed not to find abnormality in the wiring between Chipset and Express Card.	Main board (Chipset)/ Express Card Connector
Smart Card	○	—	It is confirmed not to find abnormality in the Smart Card controller.	—	Main board (Smart Card Controller)
Serial Port	○	○ *7	It is confirmed not to find abnormality of Super I/O UART function. This test cannot find lack of wiring between Super I/O and Serial Connector.	It is confirmed not to find abnormality in the wiring between Super I/O and Serial Connector. This test cannot find failure of cable characteristic and device problems.	Main board (Super I/O)/ Serial Connector
Parallel Port	○	○ *8	It is confirmed not to find abnormality of Super I/O parallel function. This test cannot find lack of wiring between Super I/O and Parallel Connector.	It is confirmed not to find abnormality in the wiring between Super I/O and Parallel Connector. This test cannot find failure of cable characteristic and device problems.	Main board (Super I/O)/ Parallel Connector

*1 Please connect the USB device with the port (USB connector) which wants to test before the tests.
*2 Please connect LAN port with LAN HUB with LAN cable before the tests.
*3 The operator actually inputs the key, and the operator judges PASS/FAIL of the test.
*4 The operator actually operates the mouse, and the operator judges PASS/FAIL of the test.
*5 It is not abnormal though the sound is emitted from the speaker while testing.
※ When the test result is PASS, trouble is thought by not hearing of the sound under the test from the speaker and the headphone by the wiring of the audio output system.
*6 Please set DVD/CD media in the drive before the tests.
*7 Please set a Special Loop Back Connector Tool at serial connector for Enhanced Test. (This Connector Tool is same as the one used before.)
*8 Please set a Special Loop Back Connector Tool at parallel connector for Enhanced Test. (This Connector Tools is same as the one used before.)

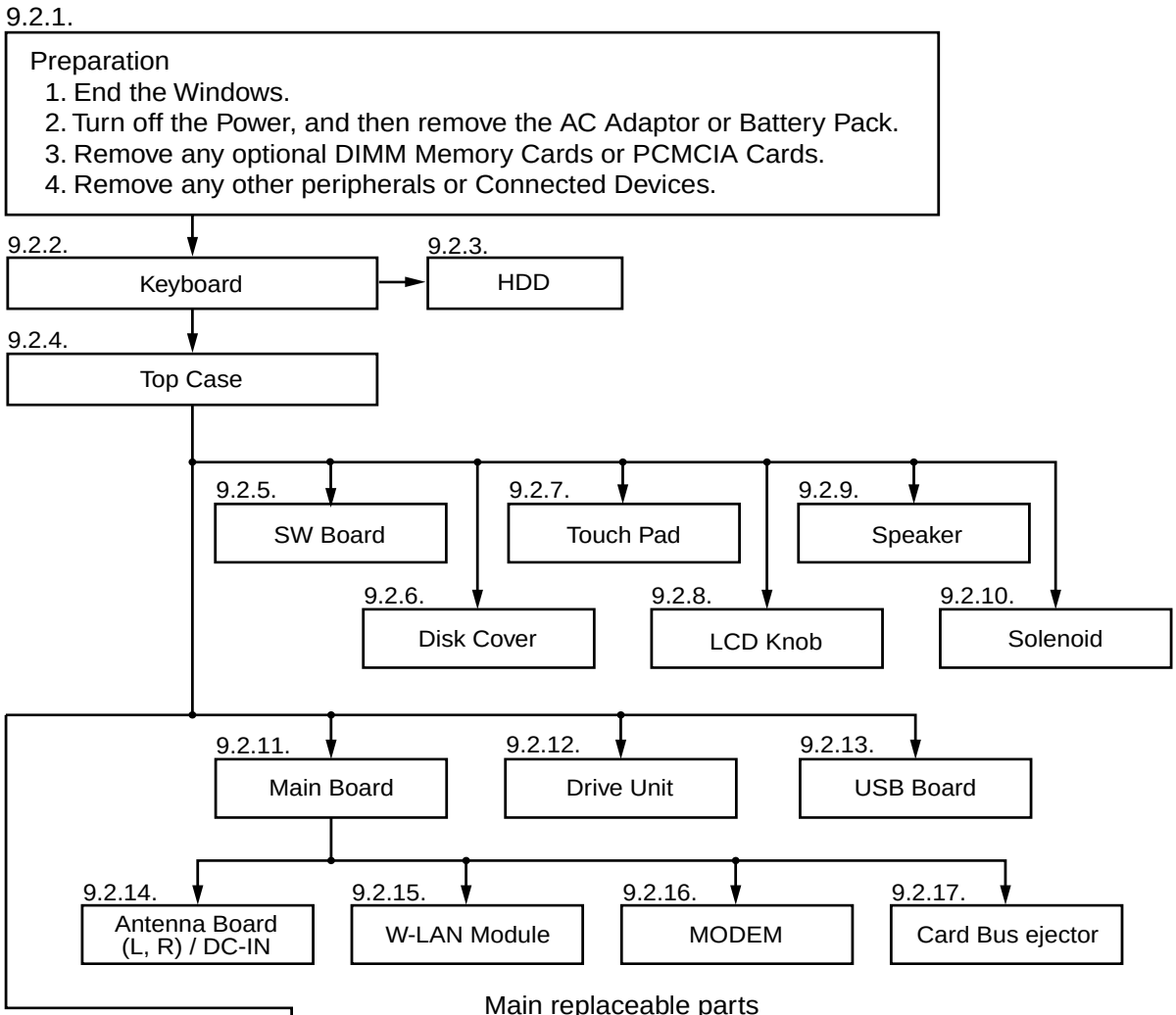
8 Wiring Connection Diagram



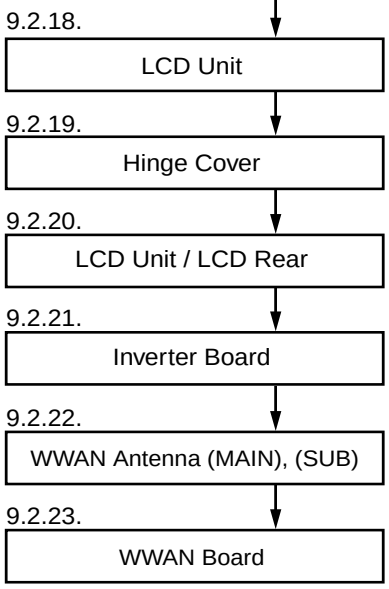
9 Disassembly instructions

9.1. Disassembly Flow Chart

● Main Unit



● Display Unit



Main replaceable parts

9.2.1. -Battery Pack
-DIMM Cover
-Side Cover
9.2.2. -Keyboard
9.2.3. -HDD
-HDD FFC
-HDD Cover
9.2.4. -Top Case
9.2.5. -SW Board
-Disk Cover Open Knob
9.2.6. -Disk Cover
9.2.7. -Touch Pad
-Touch Pad Knob
-Touch Pad Ring
-PAD FFC
9.2.8. -LCD Knob
9.2.9. -Speaker
9.2.10. -Solenoid
9.2.11. -Main Board
9.2.12. -Drive Unit
9.2.13. -USB Board
9.2.14. -Antenna Board
-Antenna Cover(L, R)
9.2.15. -W - LAN Module
-Heat Spreader
9.2.16. -MODEM
9.2.17. -Card Bus ejector
9.2.18. -LCD Unit
9.2.19. -Hinge Cover
-Hinge (L, R)
9.2.20. -LCD Unit
-LCD Rear
-LCD Front
9.2.21. -Inverter Board
-LCD Cable
9.2.22. -WWAN Antenna
(MAIN), (SUB)
-WWAN Antenna Cover
9.2.23. -WWAN Board

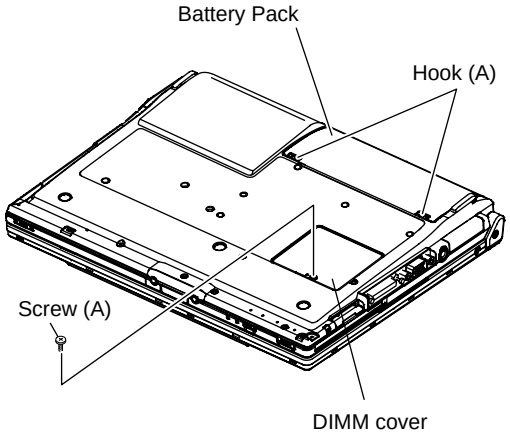
9.2. Disassembly Instructions

9.2.1. Preparation

Attention:

Before disassembly, be sure to perform the following steps.

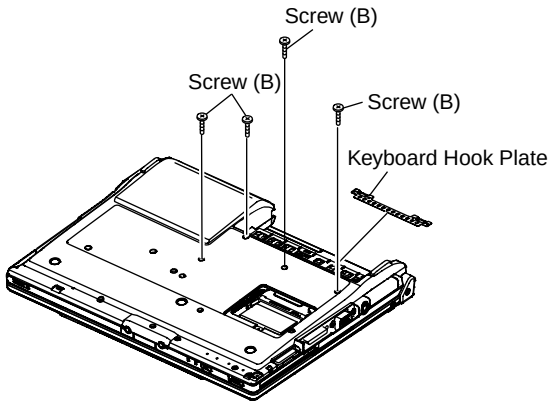
1. End the Windows.
2. Turn off the power and then remove the AC adaptor.
3. Slide the hooks (A) and then remove the battery Pack.
4. Remove the screw (A) and then remove the DIMM cover.
   (Remove if the DIMM memory is equipped with)
   Screw (A) : XSB2+4FNL (N17)



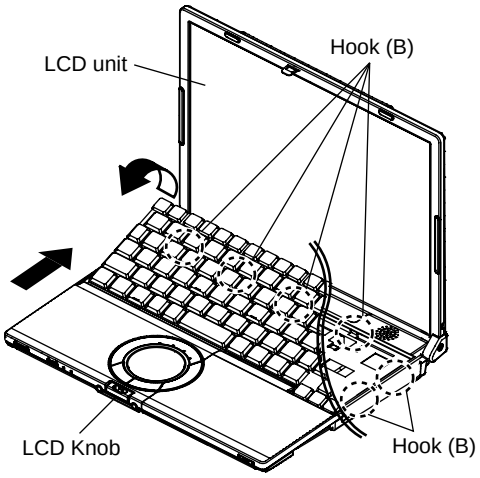
9.2.2. Removing the Keyboard

Preparation : perform the section 9.2.1. first.

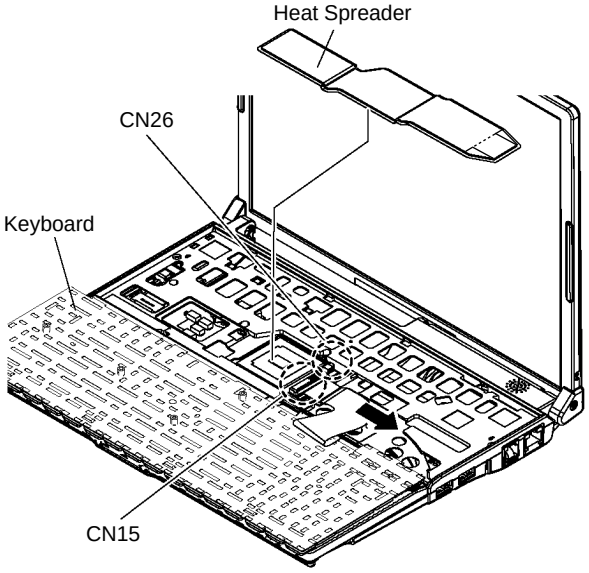
1. Remove the 4 screws (B).
   Screw (B) : DXQT2+E12FNL (N11)
2. Remove the keyboard hook plates,and then remove the hook of back side of keyboard with screwdriver.



3. The LCD unit is opened up to about 90 °by operating the LCD knob.
4. Remove the 6 hooks (B).
5. Open the keyboard from LCD side and then turn it inside out on the top case.



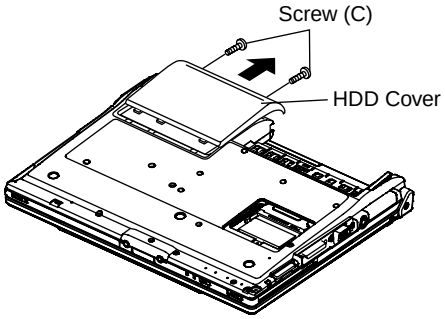
6. Remove the heat spreader from buttom of the keyboard.
7. Remove the keyboard FFC from the connector (CN15), (CN26) and then remove the keyboard.



9.2.3. Removing the HDD

Preparation : perform the section 9.2.1., 9.2.2. first.

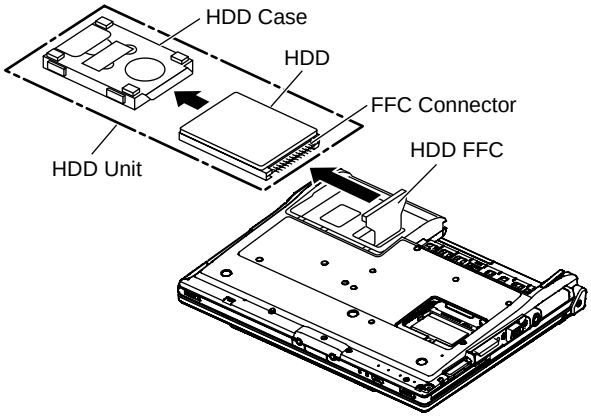
1. Remove the 2 screws (C).
   Screw (C) : DFHE5025XA (N1)
2. The slide is done in the direction of the arrow and the HDD cover is removed.



3. Lift up the HDD unit and remove FFC connector and then remove the HDD unit.
4. HDD is taken out of the HDD case.

Note :

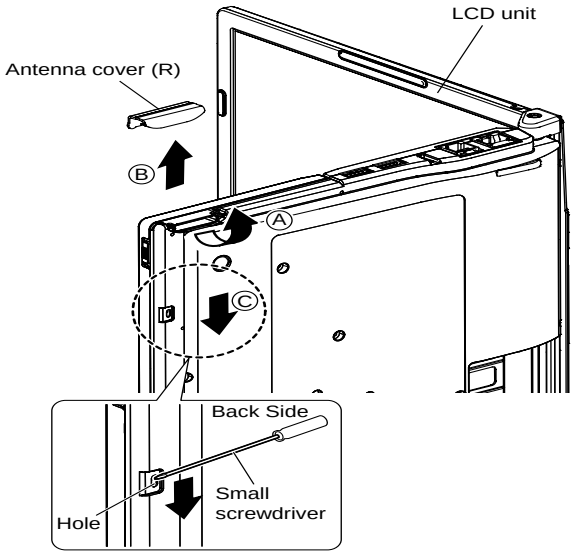
Please do not bend pins of the HDD connector, at the time of removing HDD and FFCconnector.



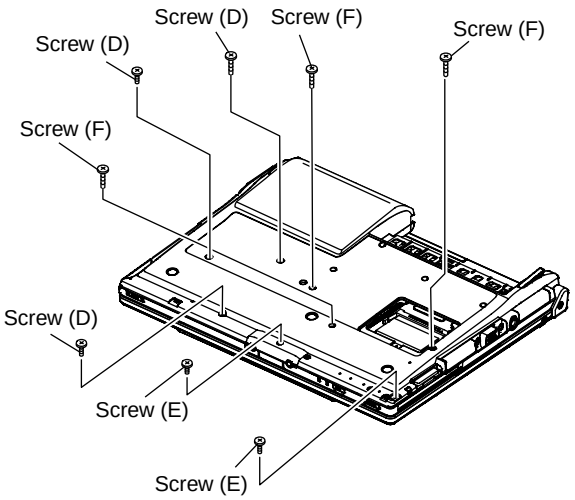
9.2.4. Removing the Top Case

Preparation : perform the section 9.2.1., 9.2.2. first.

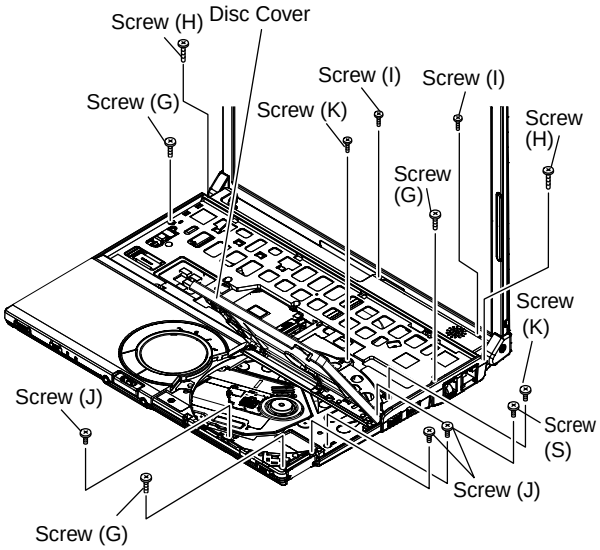
1. Insert a small screwdriver into the hole and slide the look in the direction shown by arrow (C) to open the disc cover.
2. The anttena cover (R) is rotated from the bottom case side in the direction of arrow (A) and the antenna cover (R) removed in the direction of arrow (B).



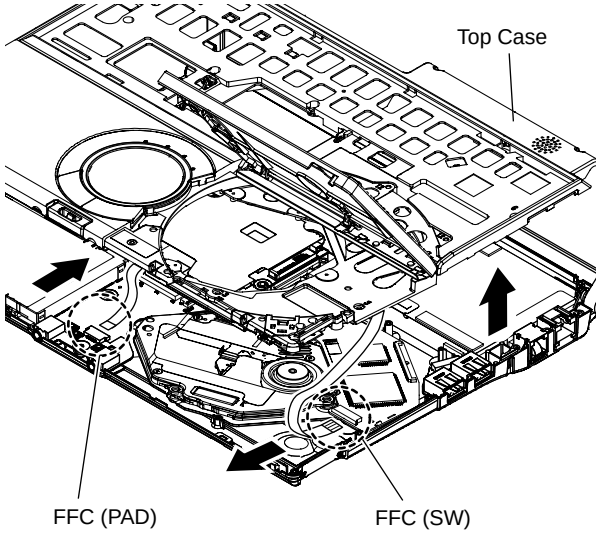
3. Remove the 3 screws (D), 2 screws (E) and 3 screws (F) from the bottom case.
   Screw (D) : DRHM0092ZA (N4)
   Screw (E) : DXHM0057ZA (N7)
   Screw (F) : DXHM0039ZA (N6)



4. Remove the 3 screws (G), 2 screws (H), 2 screws (I), 2 screws (J), 2 screws (K) and 1 screw (L) from the top case.
   Screw (G) : DXQT2+E6FNL (N13)
   Screw (H) : DXQT26+D8FCL (N16)
   Screw (I) : DXQT2+E6FCL (N12)
   Screw (J) : DFHE5025XA (N1)
   Screw (K) : DXQT2+E12FNL (N11)
   Screw (L) : DXQT2+E6FNL (N13)



5. Lift up the top case, remove the pad FFC and then remove the top case.



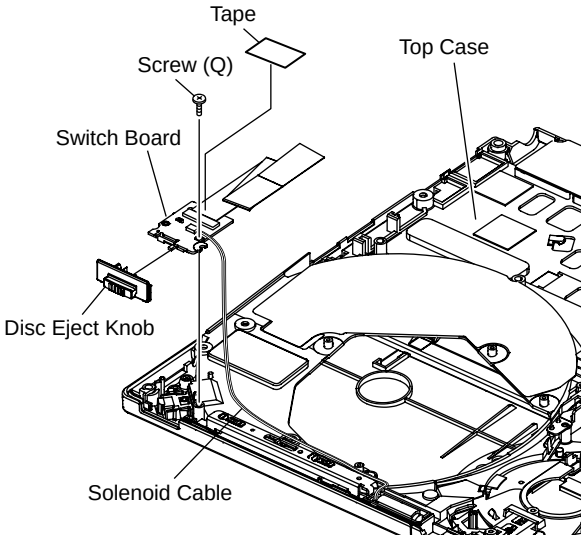
9.2.5. Removing the SW Board

Preparation : perform the section 9.2.1. to 9.2.3. first.

1. Peel off the tape.
2. Remove the solenoid cable.
3. Remove the 1 screw (M) and then remove the SW board.
   Screw (M) : DXHM0057ZA (N7)

Note:

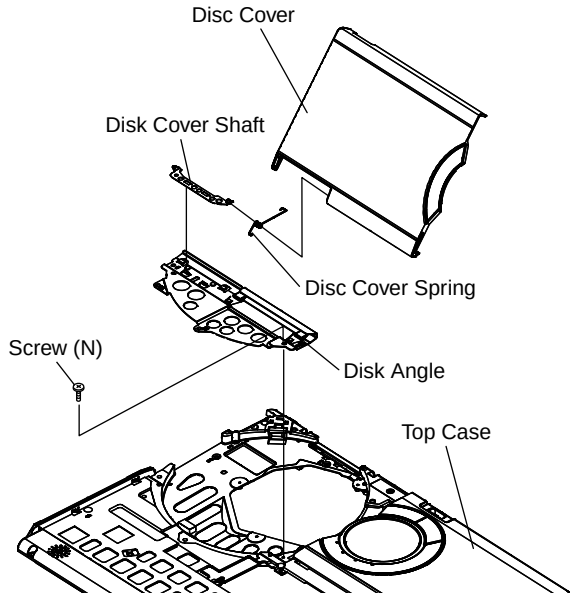
Note it that the disc eject knob comes off at the same time.



9.2.6. Removing the Disc Cover

Preparation : perform the section 9.2.1. to 9.2.3. first.

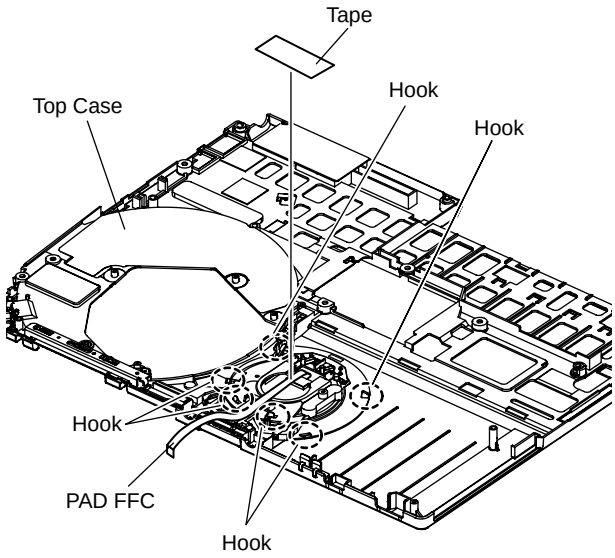
1. Remove the 1 screw (N) of the disk angle.
   Screw (N) : DXHM0057(N7)
2. Slide the disc cover to the disc cover shaft and remove the cover.
3. The disk cover shaft is pulled out while sliding and removed it from the disk angle in the direction of the touch pad.



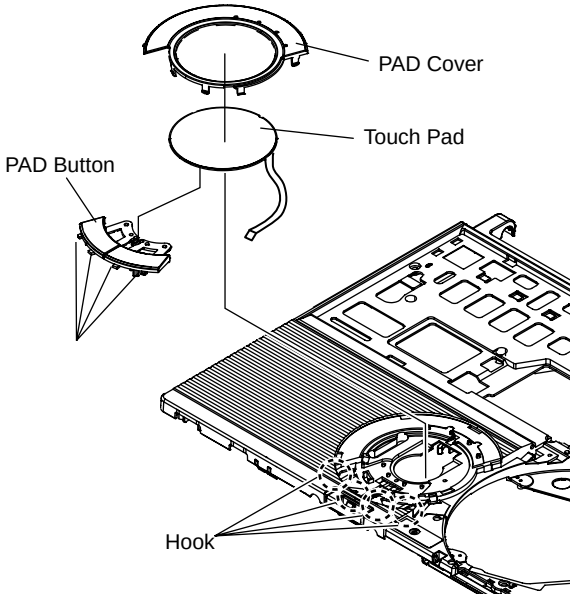
9.2.7. Removing the Touch Pad

Preparation : perform the section 9.2.1. to 9.2.3. first

1. Peel off the tape.
2. The 5 hooks of the pad cover are depressed in the direction of the center of the touch pad by using the small screwdriver.



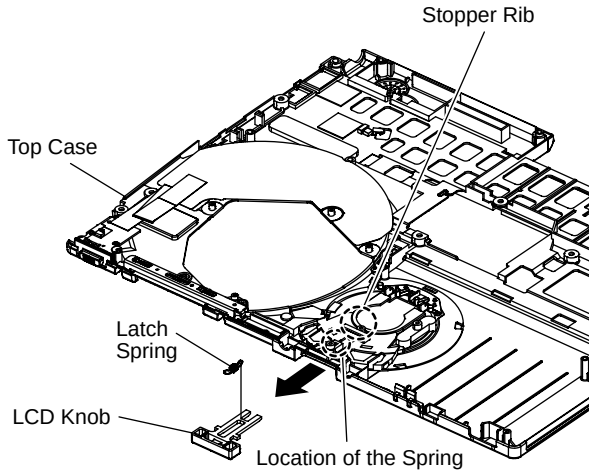
3. Remove the hooks of the toutch pad and the Pad button, and remove the touch pad.



9.2.8. Removing the LCD Knob

Preparation : perform the section 9.2.1. to 9.2.4.

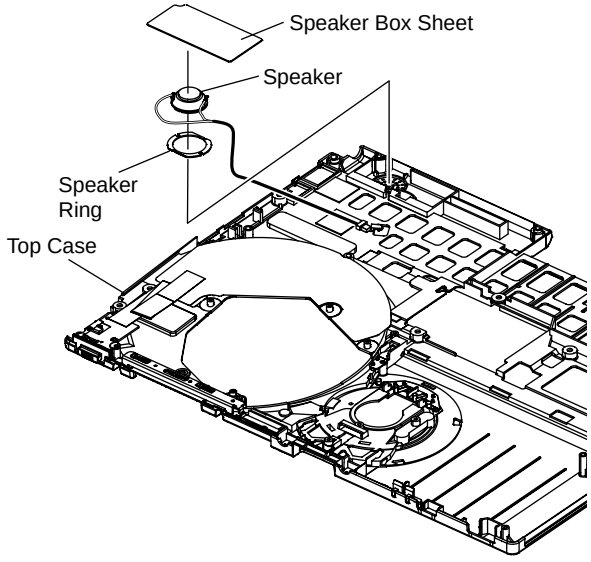
1. Remove the spring from the top case.
2. Remove the hook of LCD knob from the stopper rib of the top case and then the LCD knob is removed.



9.2.9. Removing the Speaker

Preparation : perform the section 9.2.1. to 9.2.4. first.

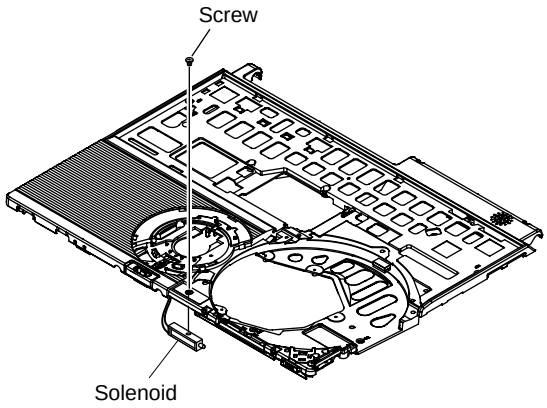
1. Peel off the speaker box sheet.
2. Peel off the tape on the speaker and speakerring and then remove the speaker.



9.2.10. Removing the Solenoid

Preparation : perform the section 9.2.1. to 9.2.4.

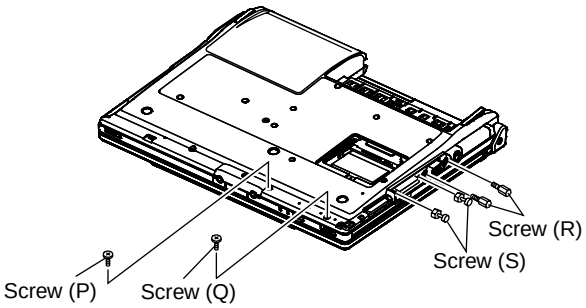
1. Remove the 1 screw (O) and then remove the Solenoid.
   Screw (O) : DXQT2+F2FNL (N14)



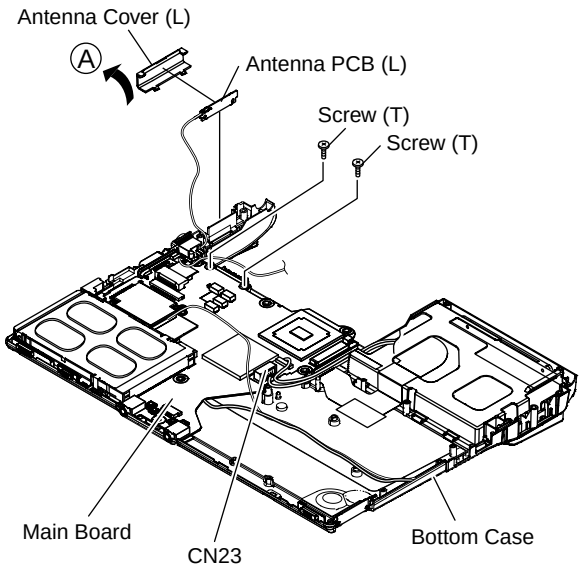
9.2.11. Removing the Main Board

Preparation : perform the section 9.2.1. to 9.2.4. first.

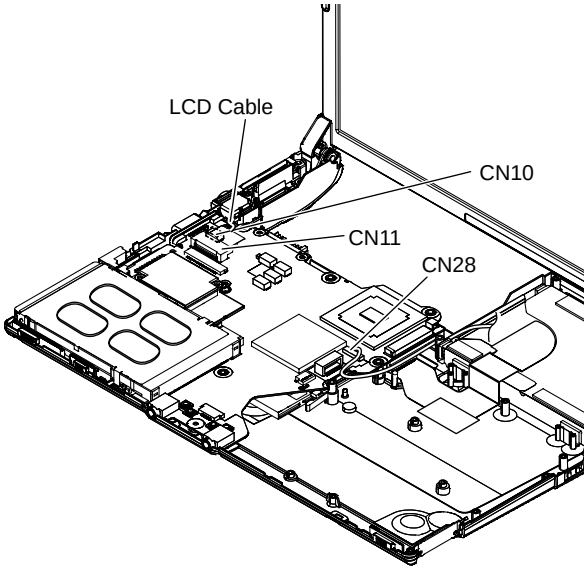
1. Remove the 1 screw (P), (Q) and 2 screws (R), (S).
   Screw (P) : DXQT2+E10FNL (N10)
   Screw (Q) : DXQT2+D4FNL (N9)
   Screw (R) : DFHE5035ZB (N2)
   Screw (S) : K1YE50000022 (N500)



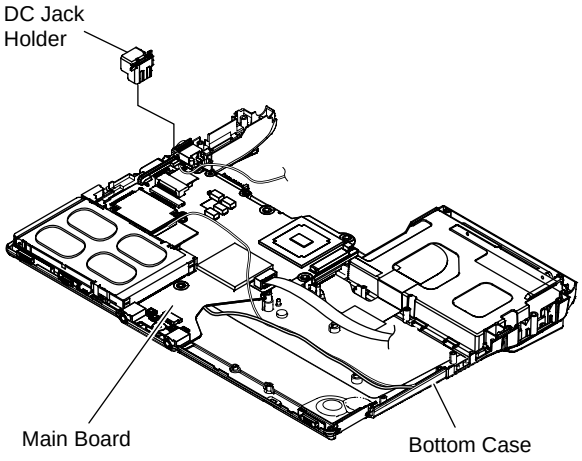
2. Remove the 2 screws (T).
   Screw (T) : DXQT2+E6FNL (N13)
3. Remove the connector (CN23)
4. The antenna cover (L) is inclined in the direction of arrow A and remove it.
   Remove theantenna cover (L) from the topcase.



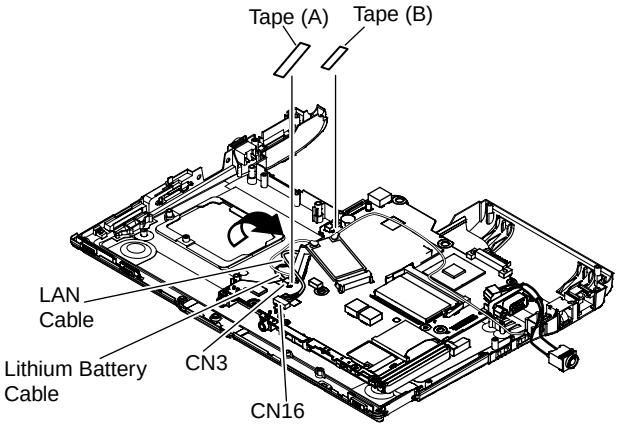
5. Remove the connectors (CN10), (CN11) of LCD cable and (CN28) of WWAN cable.



6. Remove the DC-IN jack holder.



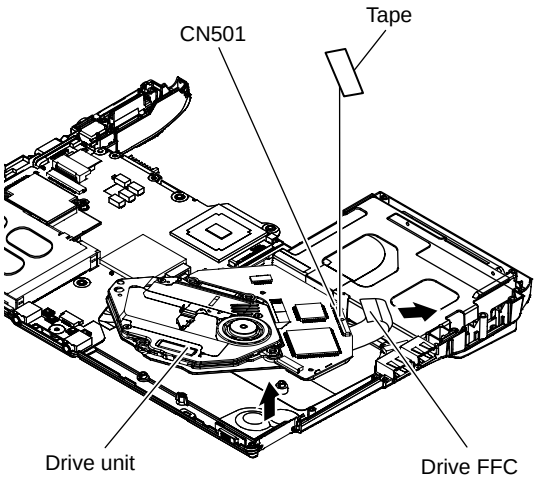
7. Returns the main board on the reverse.
   Peel the tape (A) of the drive FFC and remove the FFC.
8. Remove the connector (CN3) and the connector (CN16) of LAN cable.
   Peel off the tape (B) of HDD FFC and remove the FFC.
9. Remove the main board.



9.2.12. Removing the Drive Unit

Preparation : perform the section 9.2.1. to 9.2.4. first.

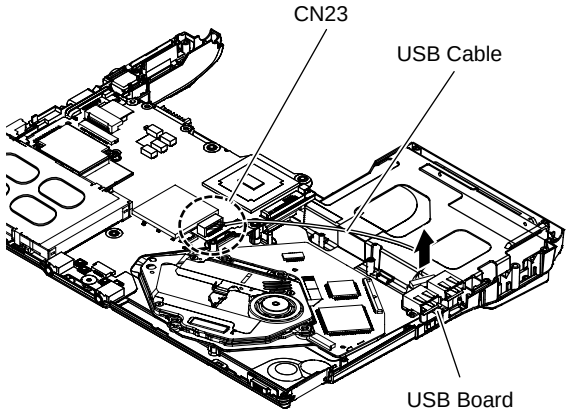
1. Peel off the tape from the connector.
2. Remove the drive FFC from the connector (CN501) and remove out the drive unit.



9.2.13. Removing the USB Board

Preparation : perform the section 9.2.1. to 9.2.4. first.

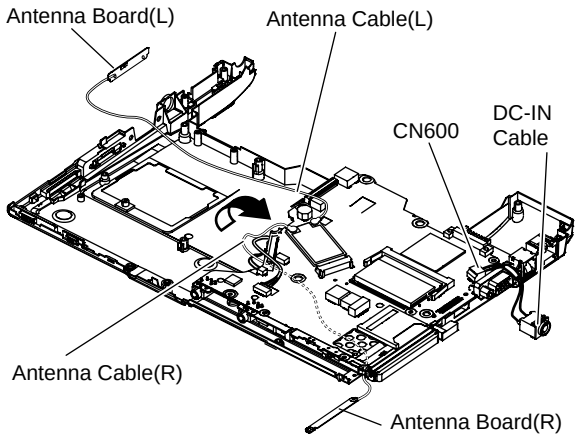
1. Remove the connector (CN23) on the main board.
2. Remove the USB board from the bottom case.



9.2.14. Removing the Antenna Board (L,R)

Preparation : perform the section 9.2.1. to 9.2.11. first.

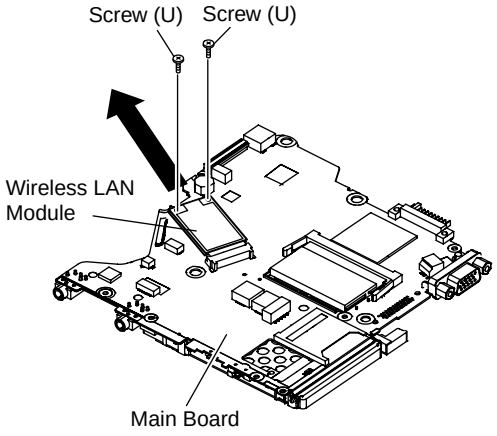
1. Remove the antenna cable (L, R) on the wireless LAN module and then remove the antenna board from the bottom case.
2. Remove the DC-IN cable (CN600) from the main board.



9.2.15 . Removing the Wireless LAN Module

reparation : perform the section 9.2.1. to 9.2.4. and 9.2.14. first.

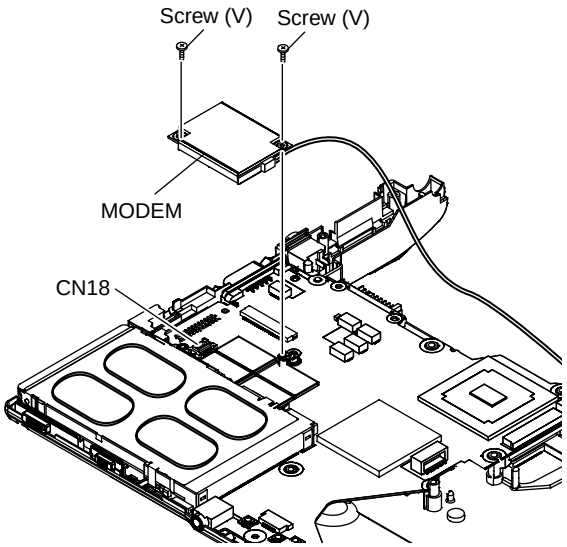
1. Remove the 2 screws (U) and then remove the wireless LAN module.
   Screw (U) : DXQT2+D25FNL (N8)



9.2.16. Removing the MODEM

Preparation : perform the section 9.2.1. to 9.2.4. and 9.2.11. first.

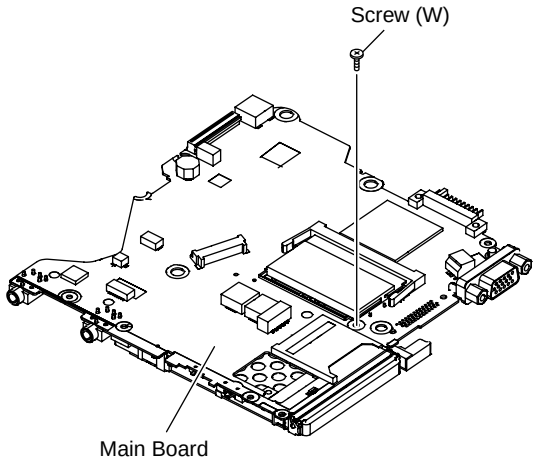
1. Remove the 2 screws (V).
   Screw (V) : DXQT2+D25FNL (N8)
2. Remove the MODEM to the vertical direction from connector (CN18) on the main board.



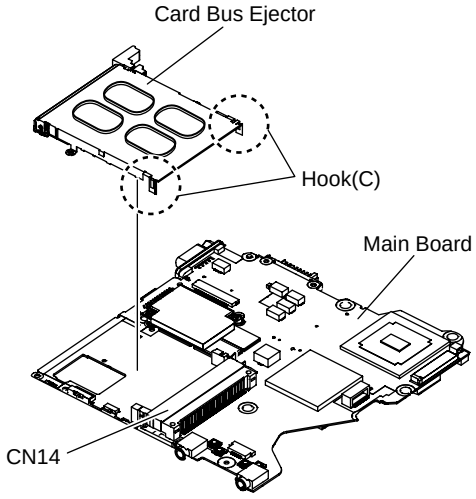
9.2.17. Removing the Card Bus Ejector

Preparation : perform the section 9.2.1. to 9.2.3. and 9.2.11. first.

1. Remove the 1 screw (W) from connection side of wireless LAN.
   Screw (W) : DFHE5025XA (N1)



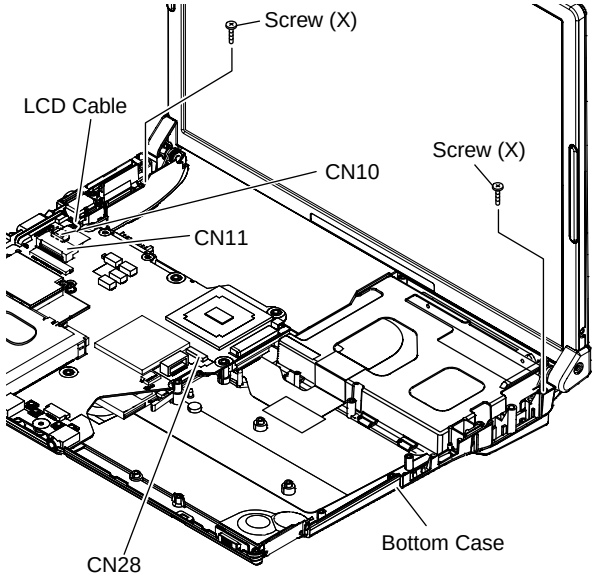
2. Return it on the revers to card bus ejector side.
3. Remove the 2 hooks (C) of the card bus ejector from the connector (CN14) and the card bus ejector is removed.



9.2.18. Removing the LCD Unit

Preparation : perform the section 9.2.1. to 9.2.4. first.

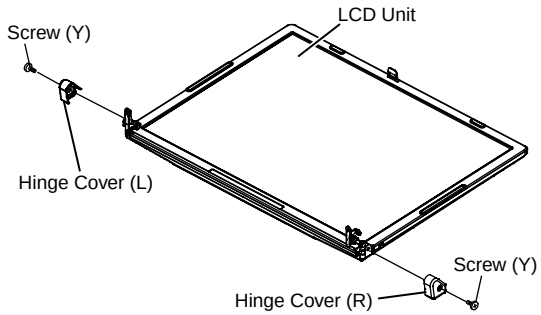
1. Remove the 2 screws (X).
   Screw (X) : DXQT26+D5FNL (N15)
2. Remove the LCD cable from the connector (CN10), (CN11), (CN28) of the main board.



9.2.19. Removing the Hinge Cover

Preparation : perform the section 9.2.1. to 9.2.4. and 9.2.18. first.

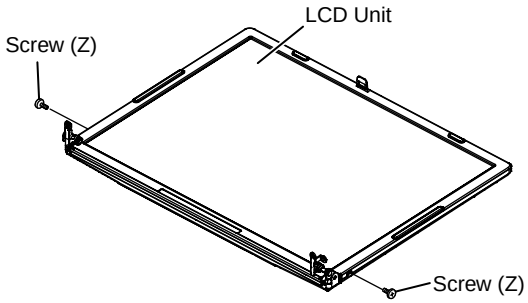
1. Remove the 2 screws (Y) and then remove the hinge cover (L, R).
   Screw (Y) : DRHM0108ZA (N19)



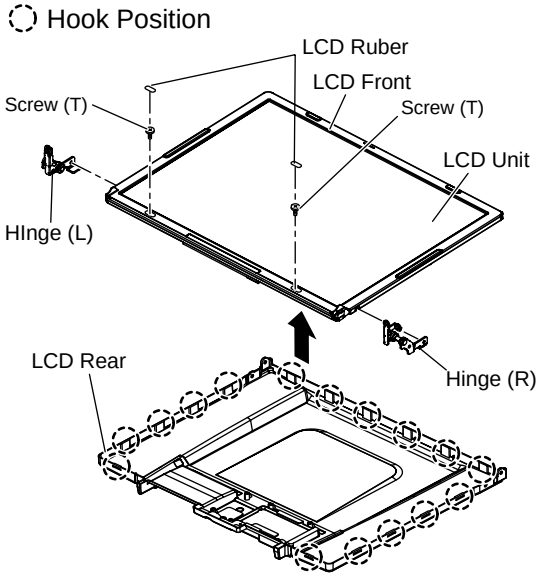
9.2.20. Removing the LCD Unit and the LCD Rear

Preparation : perform the section 9.2.1. to 9.2.4. and 9.2.18. to 9.2.19. first.

1. Remove the 2 screws (Z).
   Screw (Z) : DXHM0076ZA (N18)



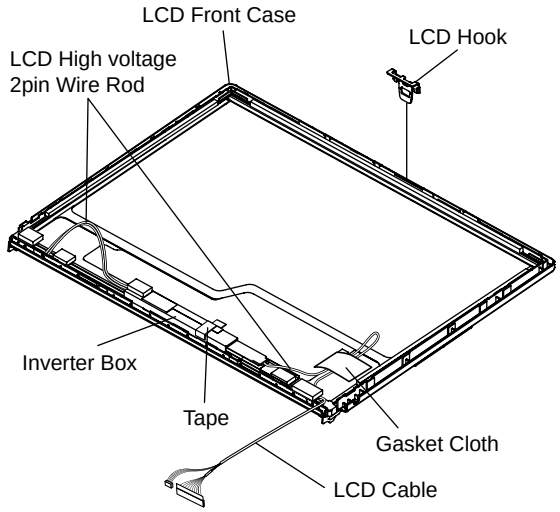
2. The LCD front case and the combination parts of LCD rear case are separated.
   (Combination parts are 6 the top and bottom places for each, 4 right and left places for each)
3. Remove the Hinge (L, R).



9.2.21. Removing the Inverter Board

Preparation : perform the section 9.2.1., 9.2.2.,1 9.2.4. and 9.2.13. to 9.2.18. to 9.2.20. first.

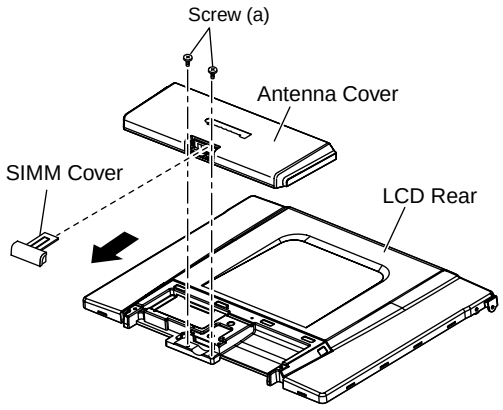
1. Remove the LCD Cable from the Inverter.
2. Peel off the Tape for fixation from Inverter Case.
3. Remove the Inverter with the Inverter Case.



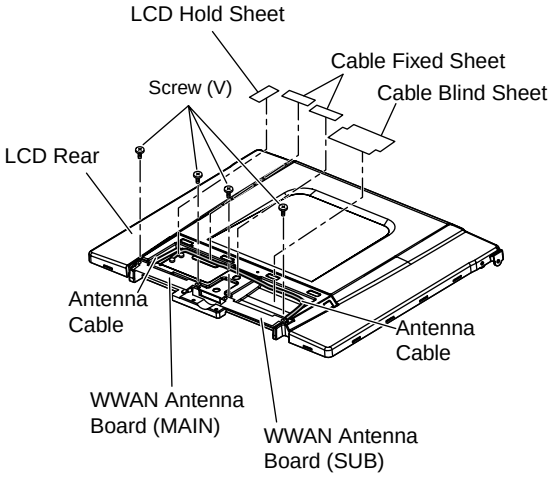
9.2.22. Removing the WWAN Antenna Board (MAIN), (SUB)

Preparation : perform the section 9.2.1., 9.2.2.,1 9.2.4. and 9.2.13. to 9.2.18. to 9.2.20. and 9.2.22. first.

1. Open the SIMM cover and then remove the 2 screws (a).
   Screw (a) : DXHM0057ZA (N7)
2. Remove the antenna cover.



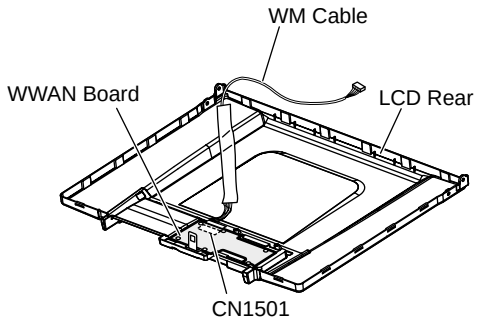
3. Peel off the LCD hold sheet.
   LCD Hold Sheet : DFHR3E92ZA (K1013)
4. Peel off the 2 cable fixed sheets and cable blind sheet.
   Cable Fixed Sheet : DFHR8526ZA (K1023)
   Cable Blind Sheet : DFGX0475ZA (K1016)
5. Remove the each 2 screws (b) and then remove the antenna board (MAIN), (SUB).
   Screw (b) : DFHE5025XA (N1)



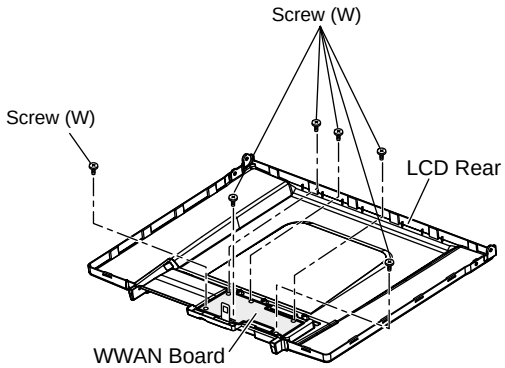
9.2.23. Removing the WWAN Board

Preparation : perform the section 9.2.1., 9.2.2.,1 9.2.4. and 9.2.13. to 9.2.18. to 9.2.20. first.

1. Disconnect the WM cable from the connector (CN1501).



2. Remove the 6 screws (c) and then remove the WWAN board.
   Screw (c) : DFHE5025XA (N1)



9.3. Reassenbly instructions

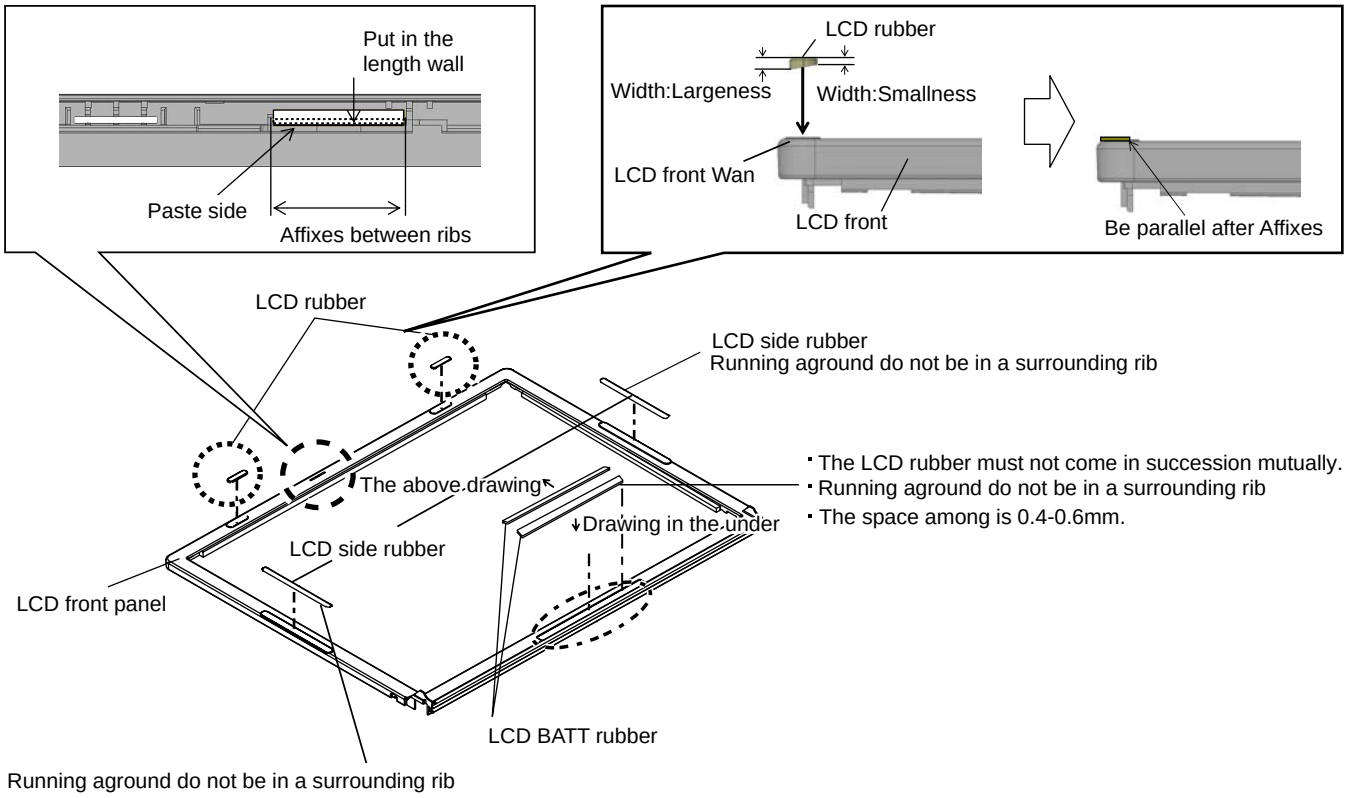
9.3.1. Attention when CF-W5L series is repaired

- Please execute writing BIOS ID when you exchange the main board.
- Parts (sheet and rubber) etc.related various the conductive cloth and heat spreader cannot be recycled.Use new parts.

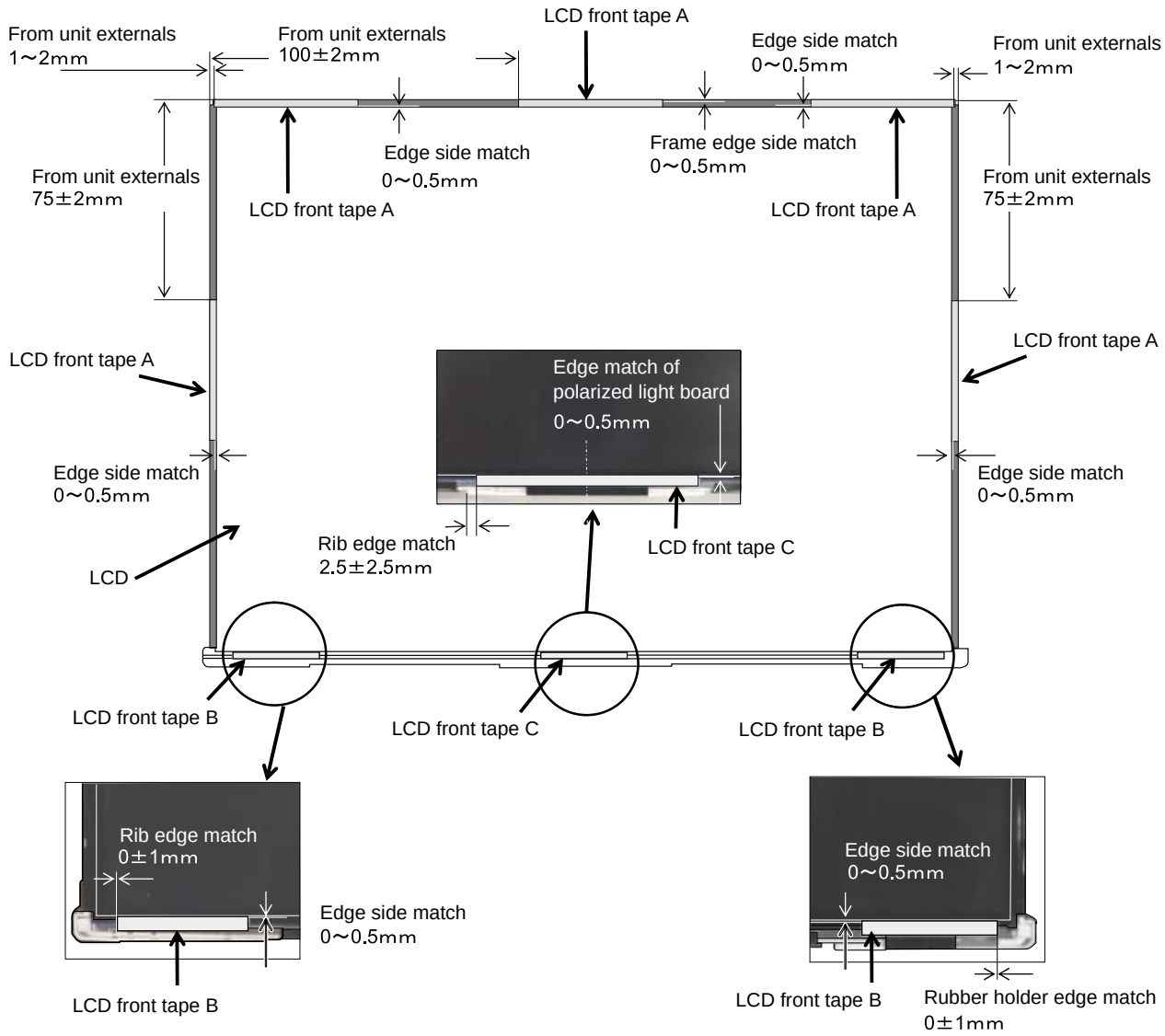
9.3.2. Assembly knowhow of the LCD

9.3.2.1. Assembly of the LCD Front

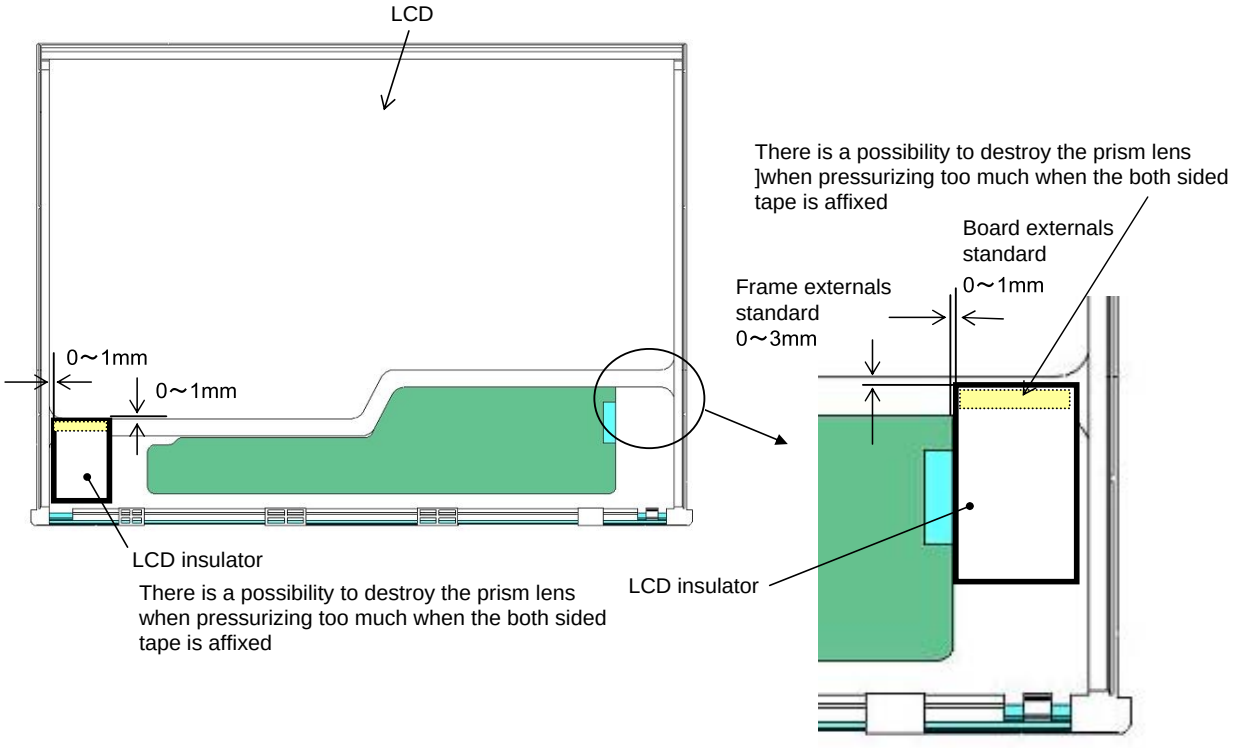
● Affixation of LCD rubber / LCD BATT rubber / LCD BATT rubber



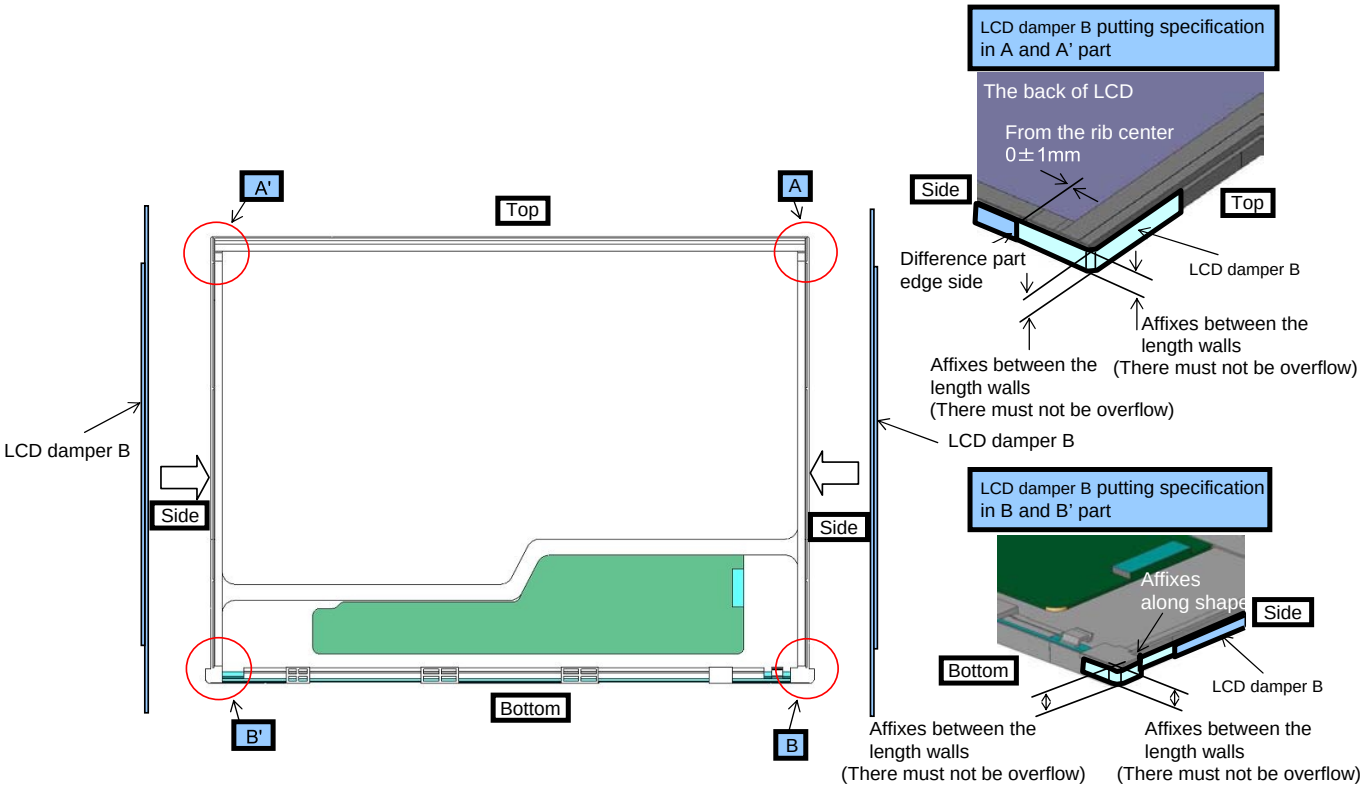
9.3.2.2. Putting TP Flexible Protection Tape



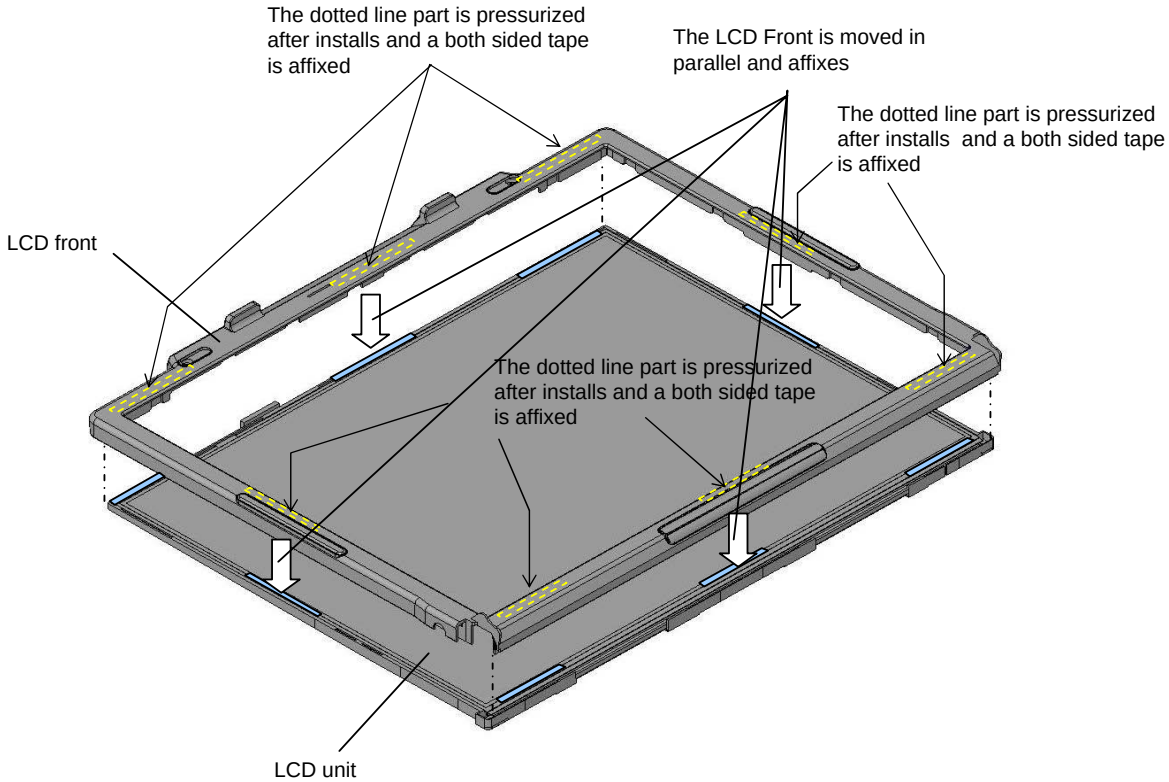
9.3.2.3. Putting LCD Insulator



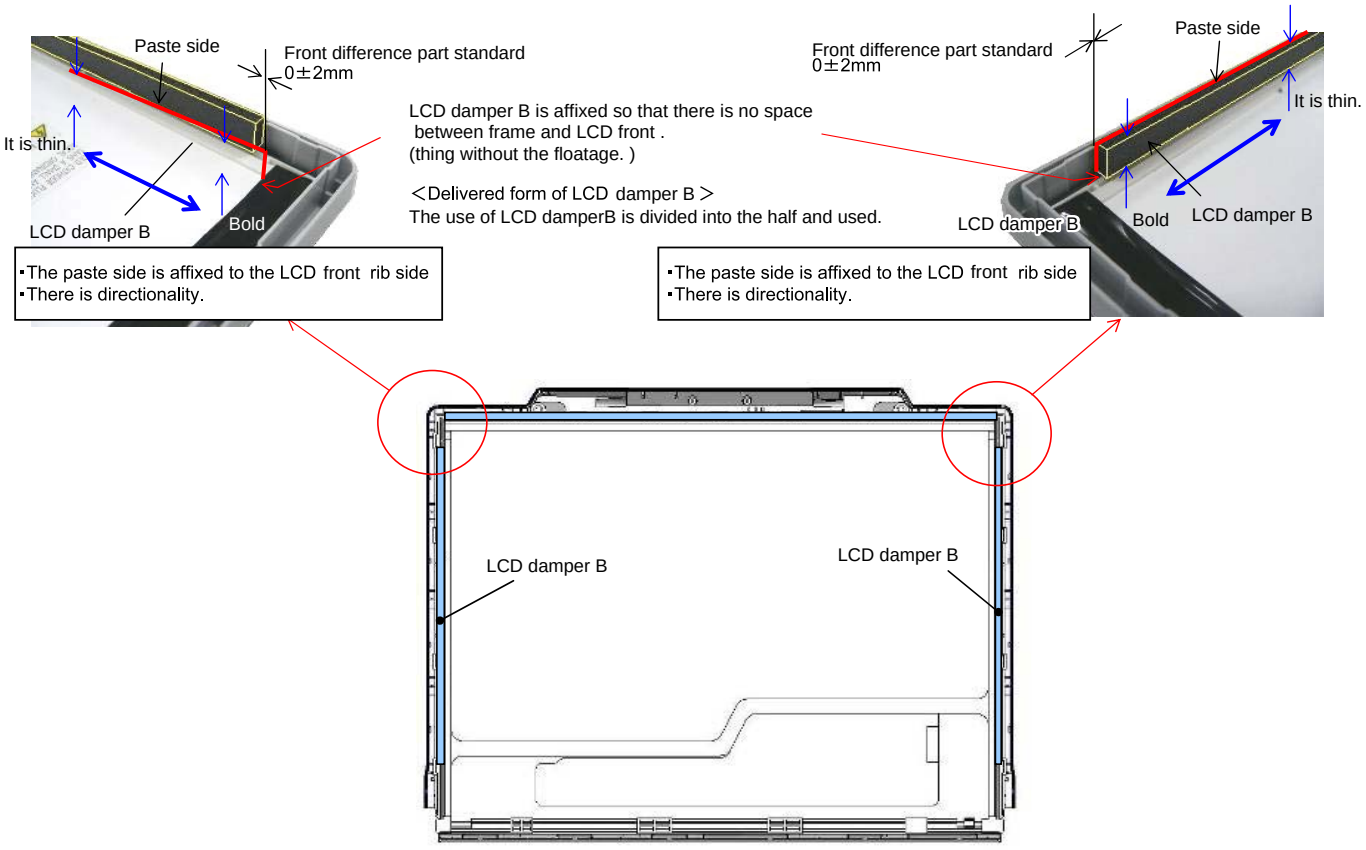
9.3.2.4. Putting LCD Side Dumpers



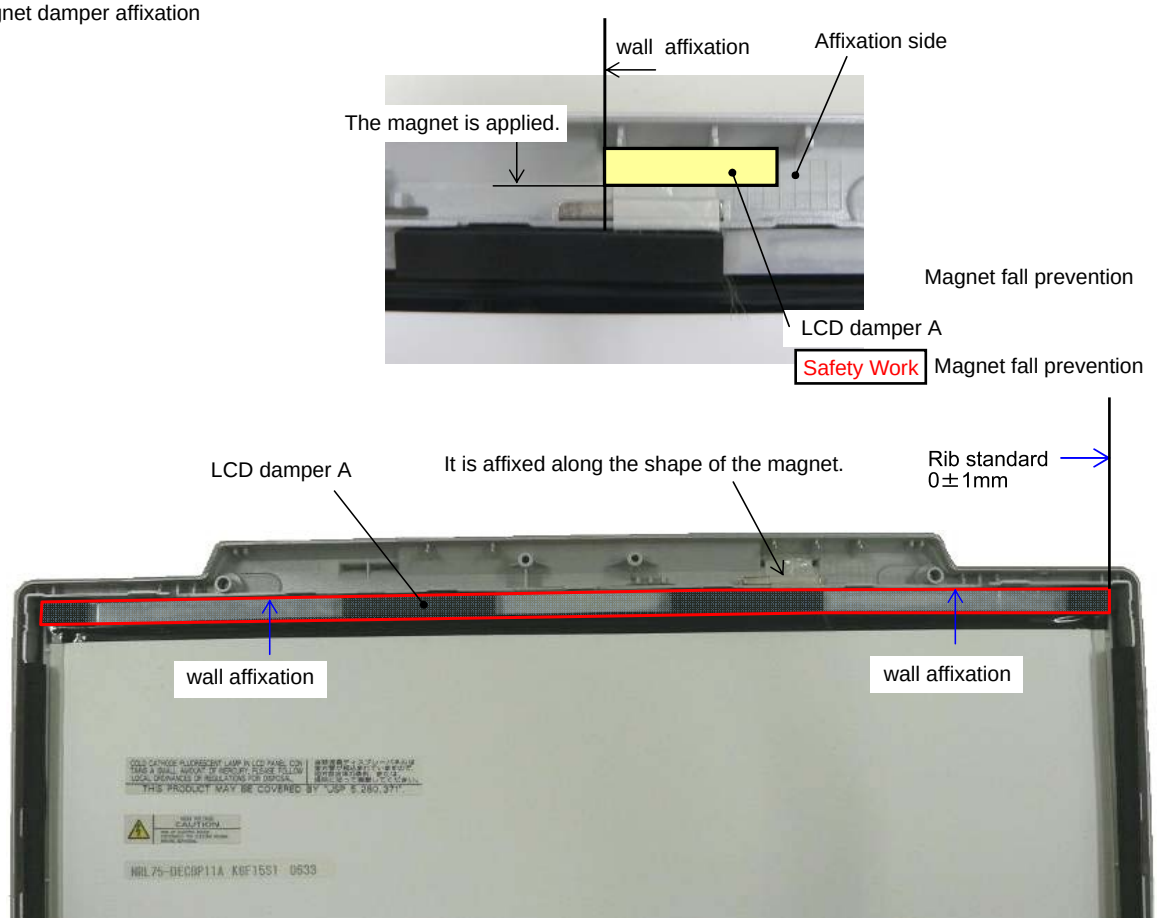
9.3.2.5. Assembly of the LCD Unit



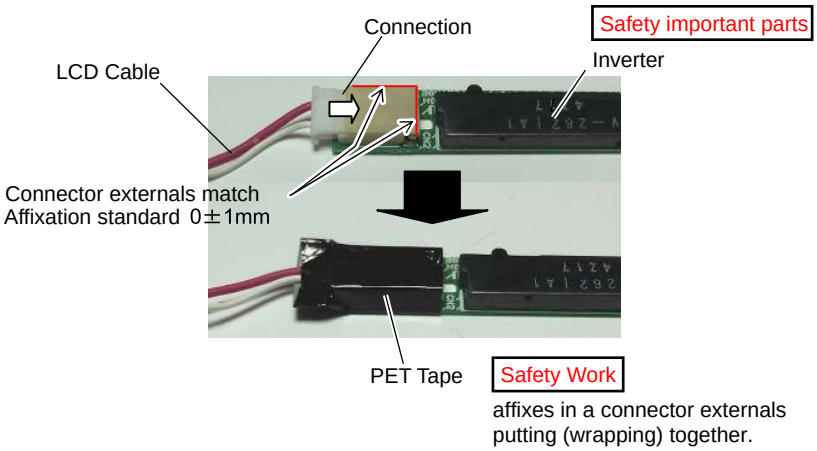
9.3.2.6. Assembly of the LCD Dumper

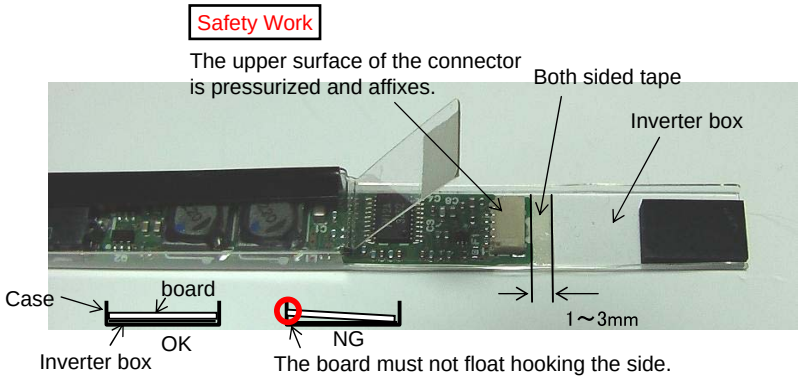


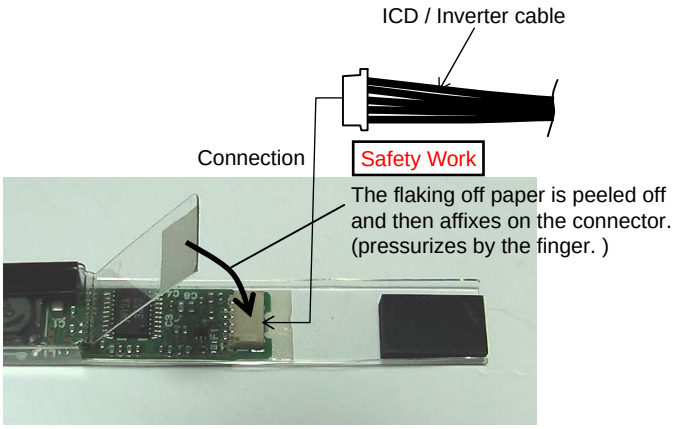
● Magnet damper affixation



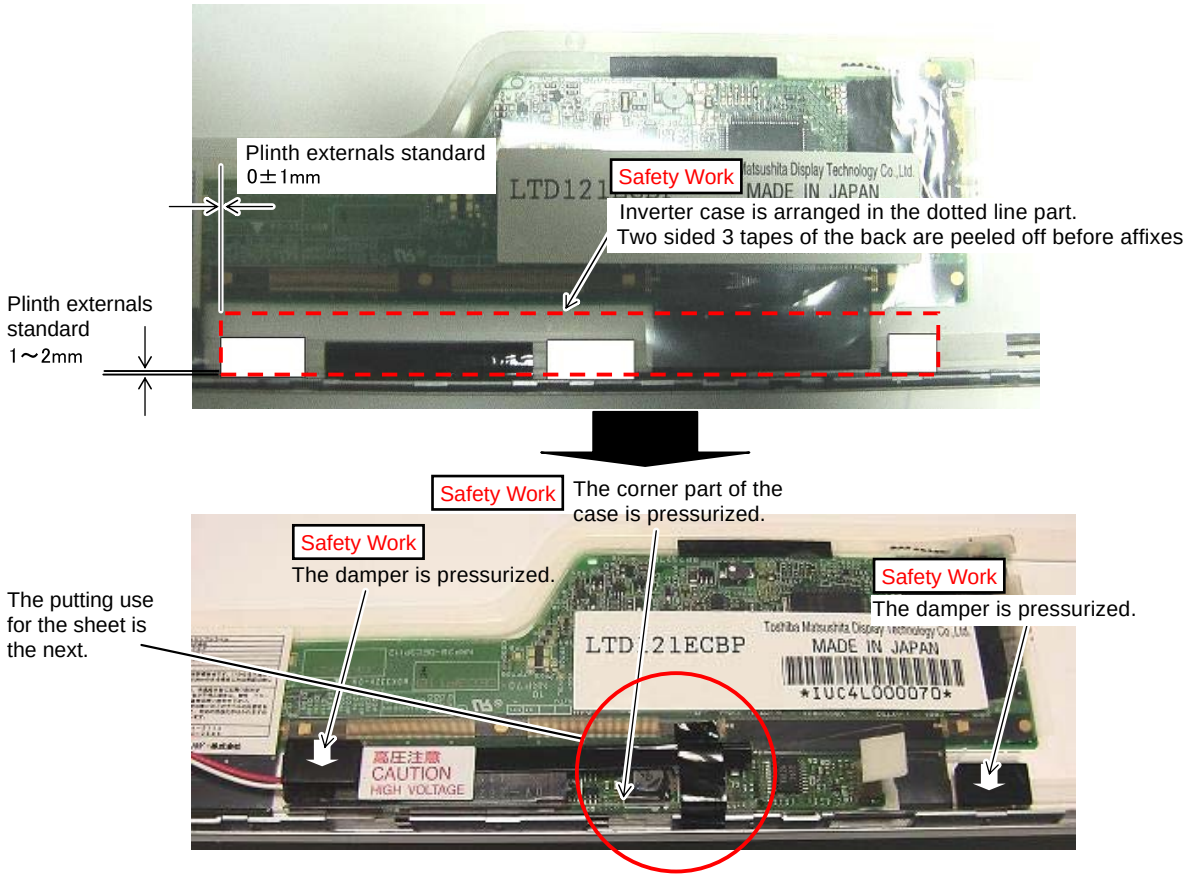
9.3.2.7. Connecting LCD Cable

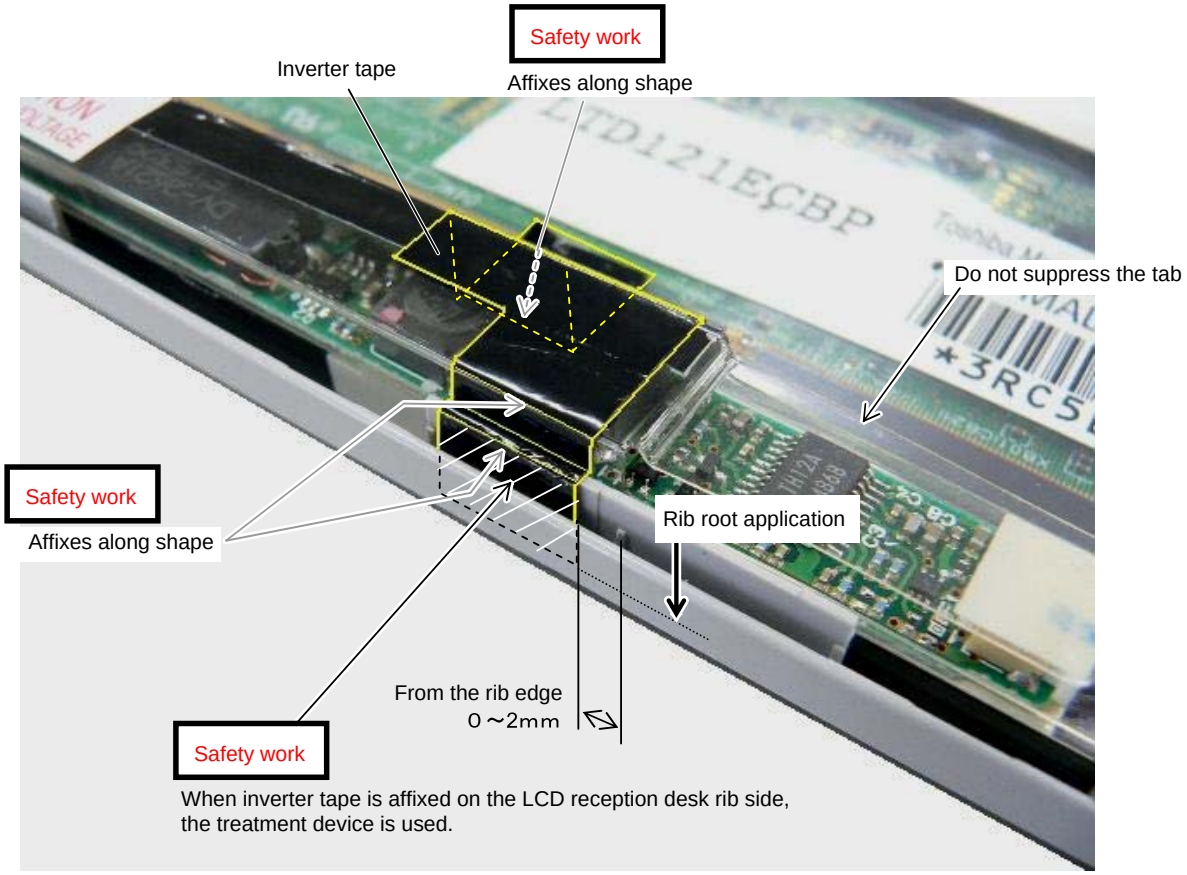




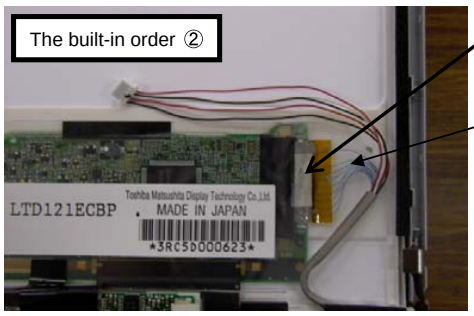


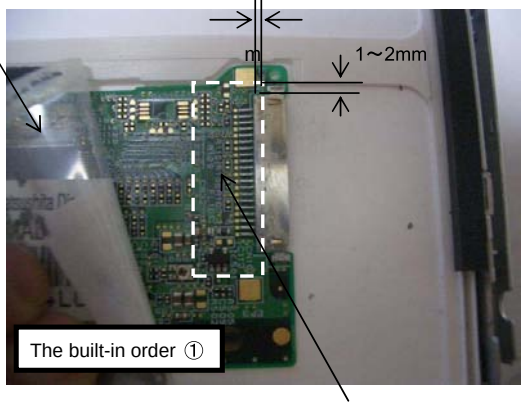
9.3.2.8. Assembly of the Inverter and Putting Inverter Tapes

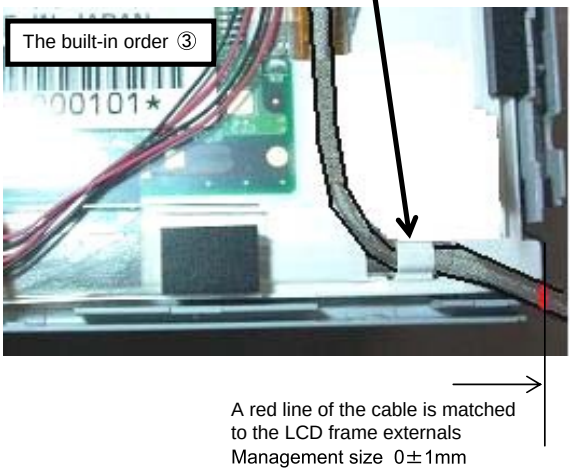


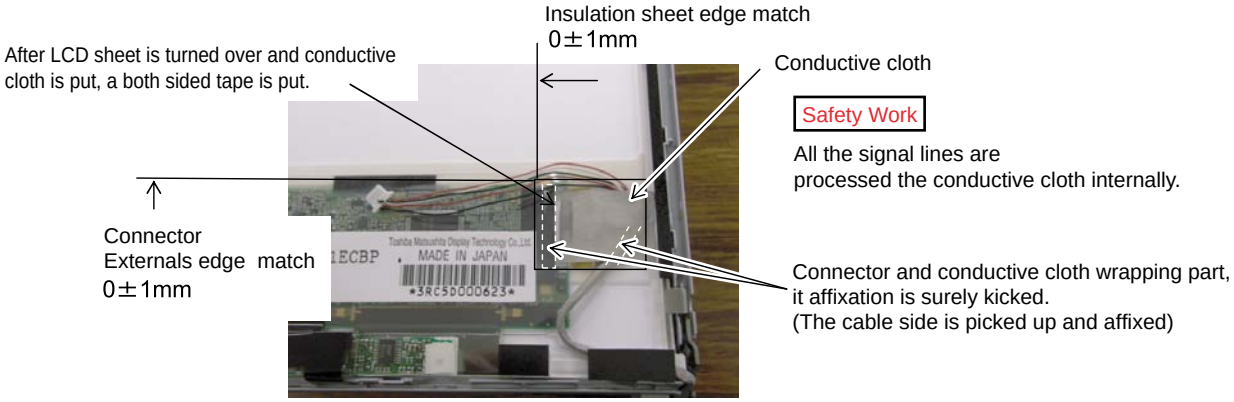


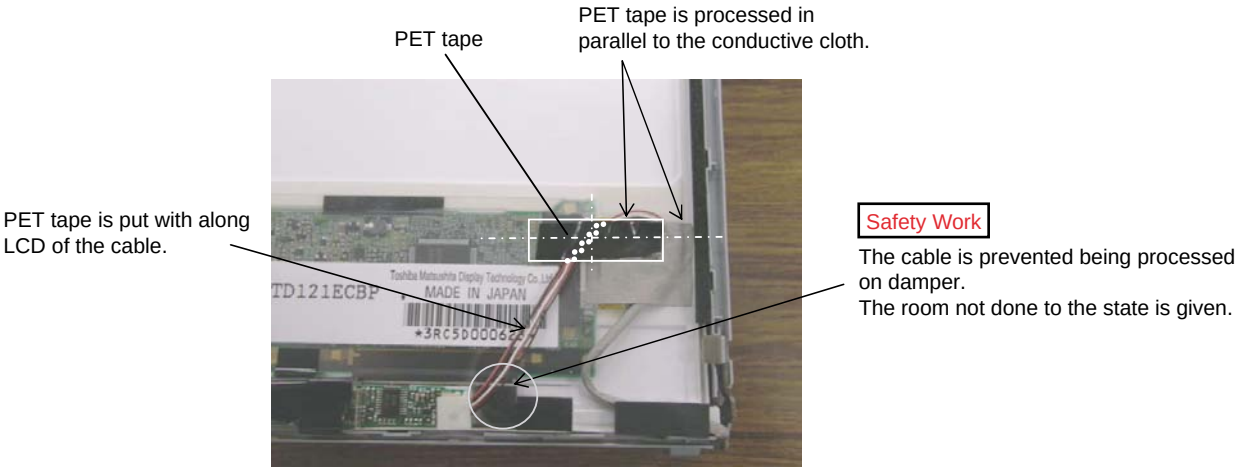
9.3.2.9. Line processing LCD Cable

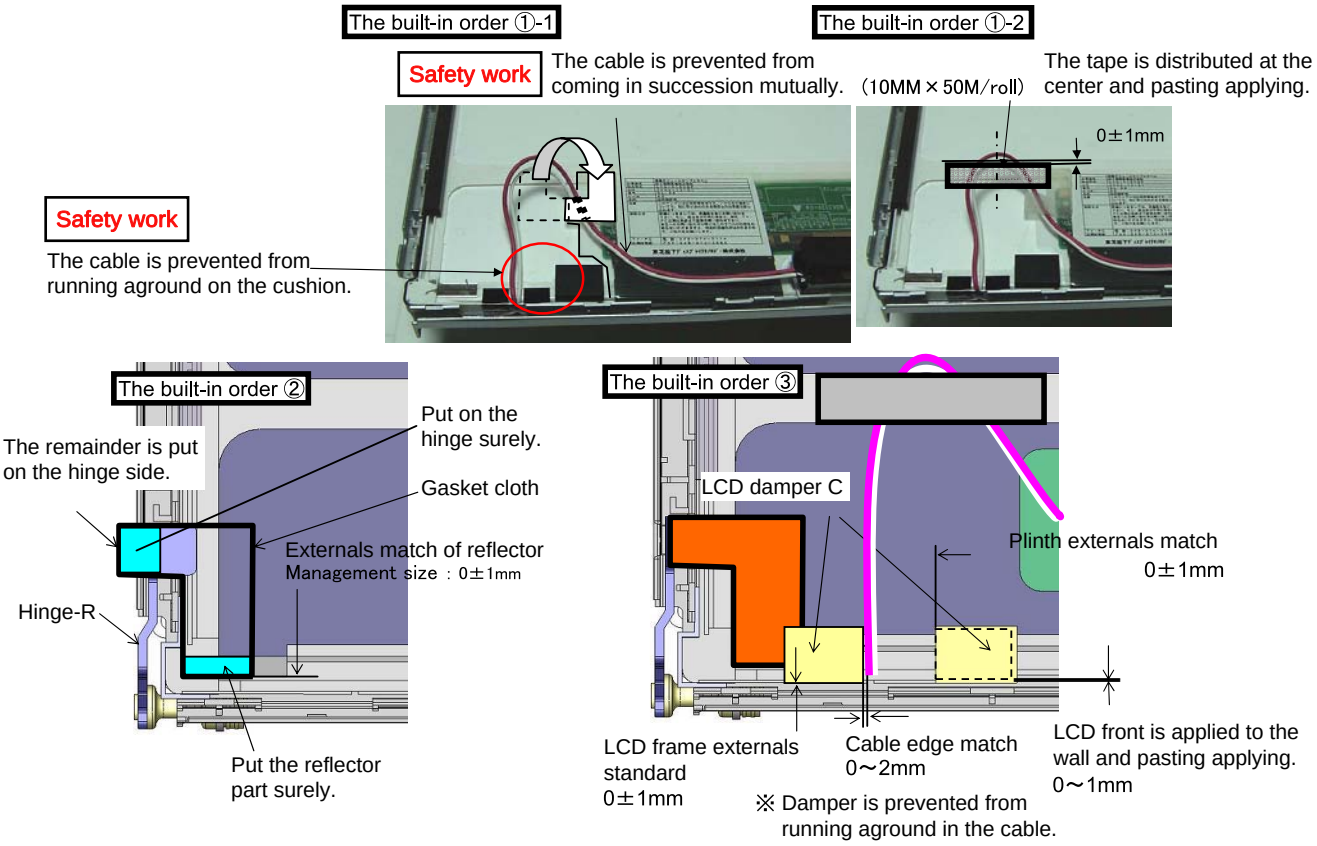




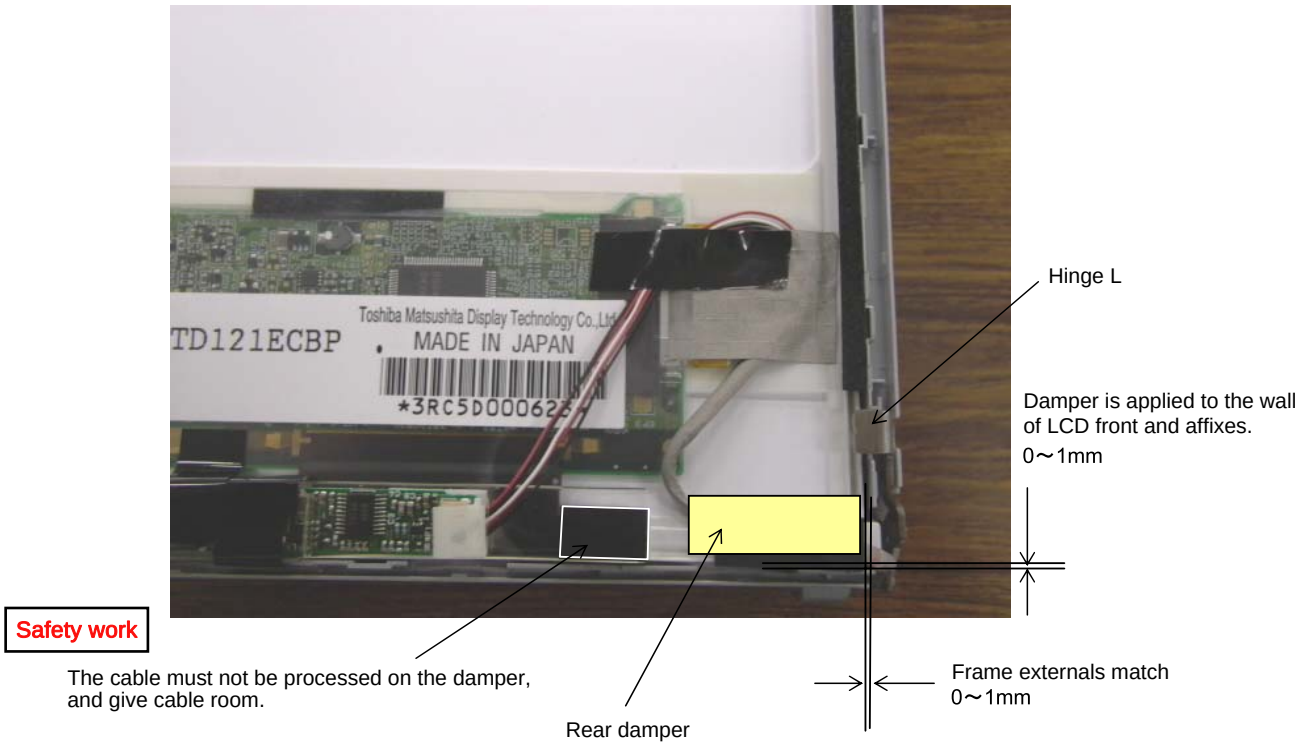




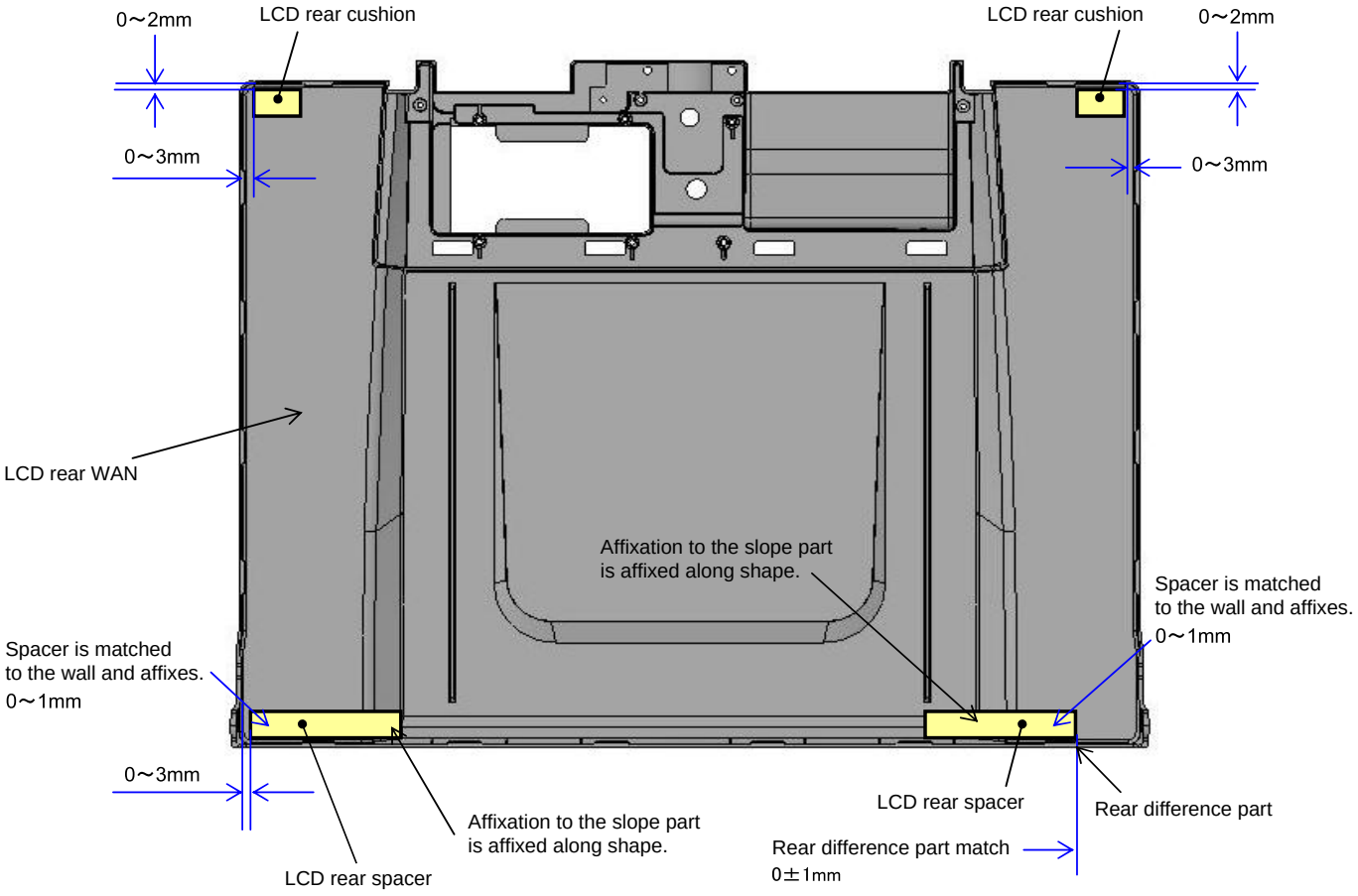




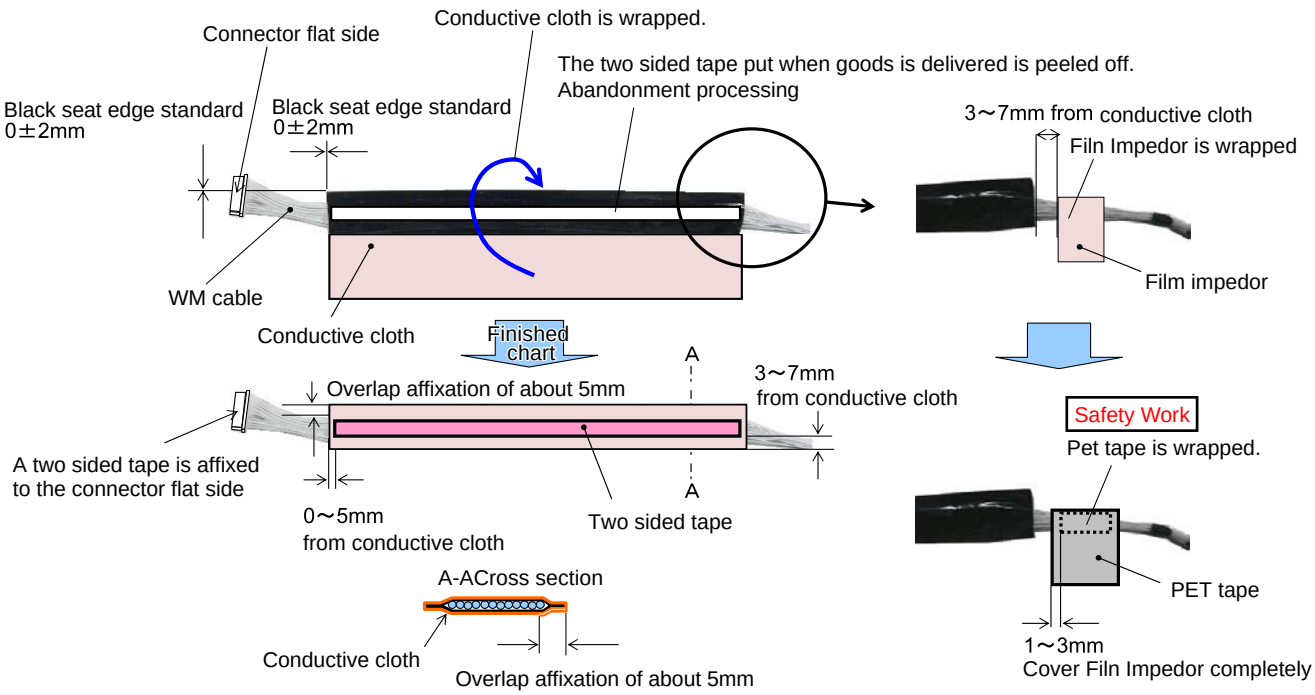
9.3.2.10. Putting Tapes of LCD Cable



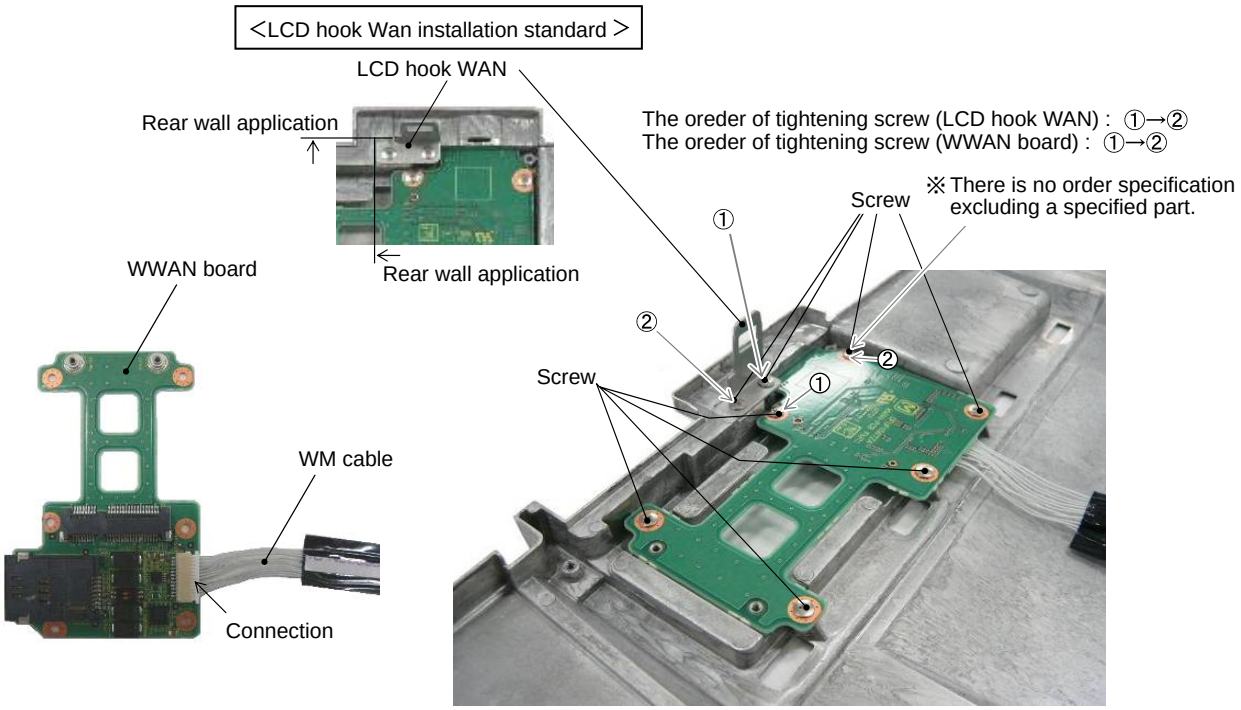
9.3.2.11. Putting LCD Rear Cushions



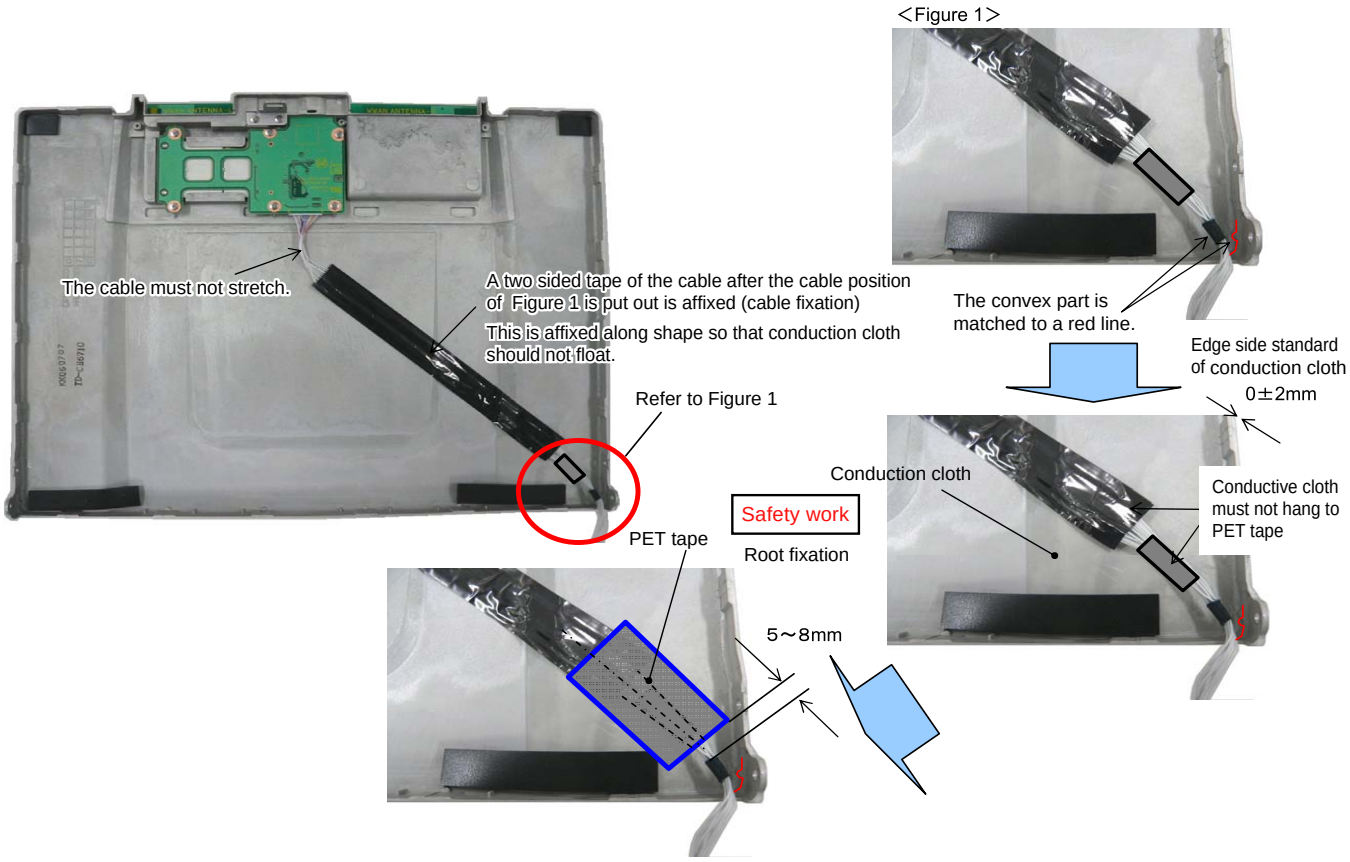
9.3.2.12. Assembly of the WM Cable

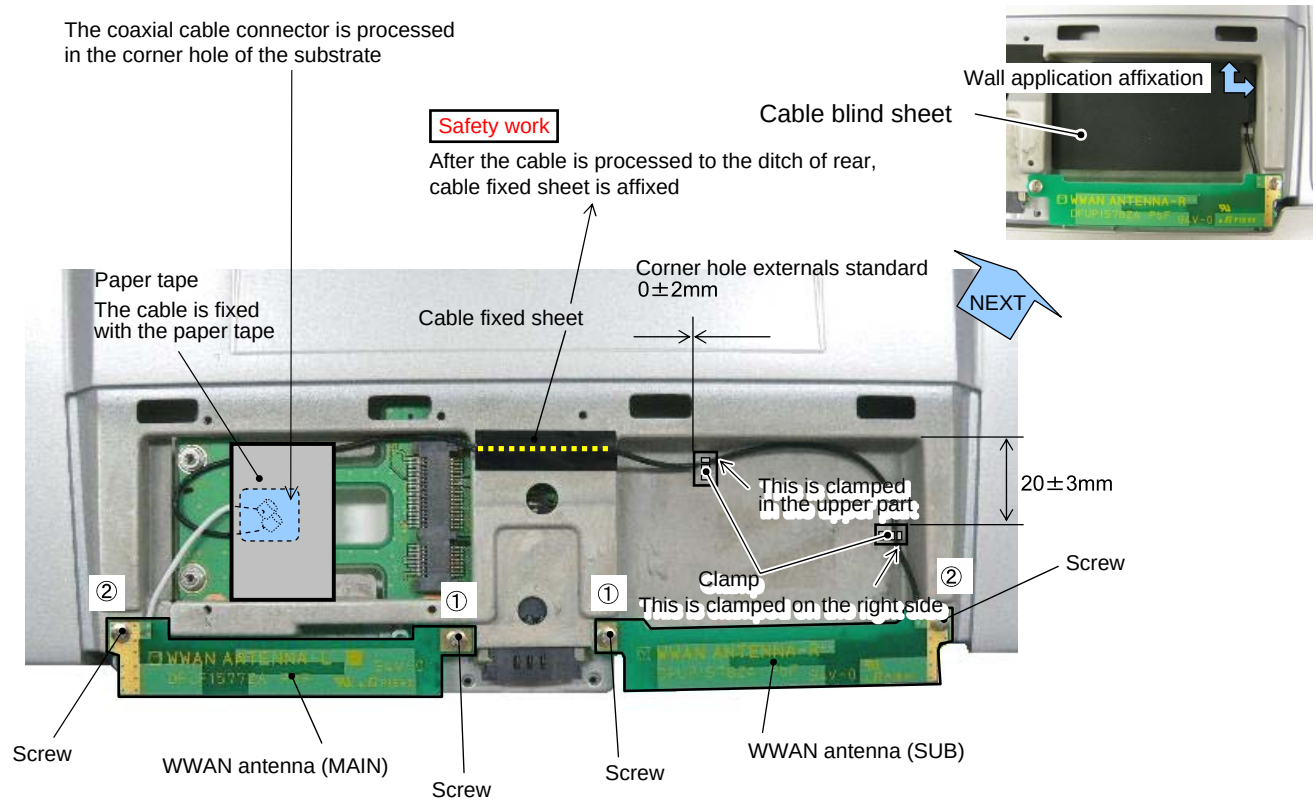


9.3.2.13. Assembly of the WWAN Board



9.3.2.14. Putting Tapes for WM Cable

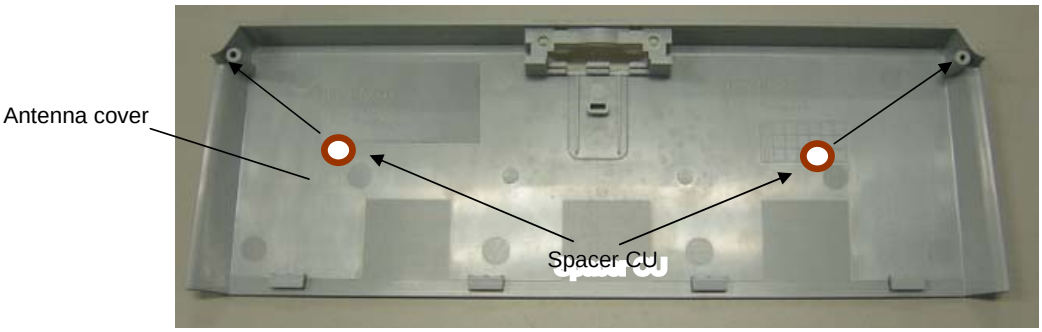




Screw
Conclusion torque:
0.18～0.22N･m {1.8～2.2kgf･cm}

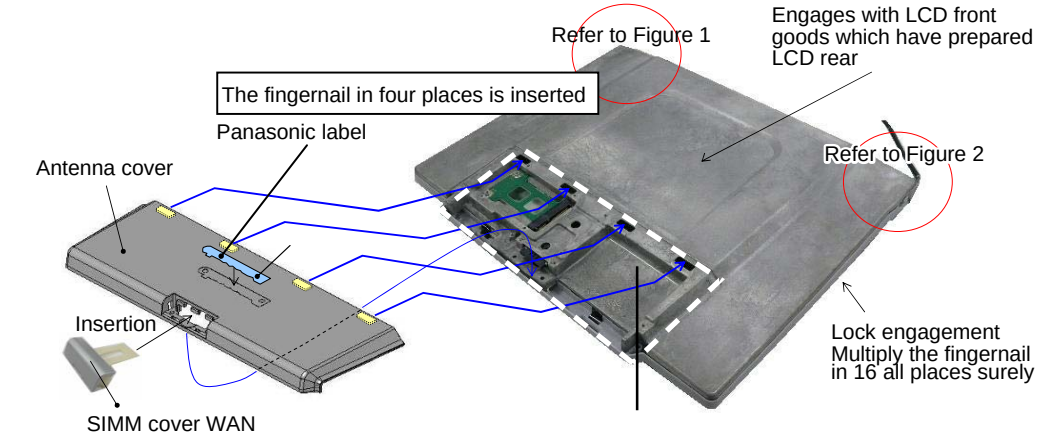
The oreder of tighting screw: ①→②

9.3.2.16. Setting Spacer CU on Antenna Cover

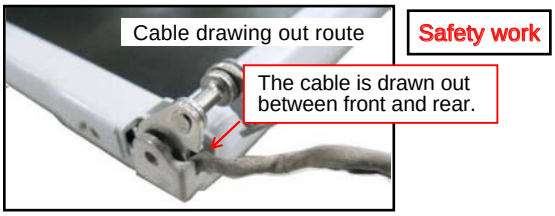


Spacer CU is put on the boss before antenna cover is installed.

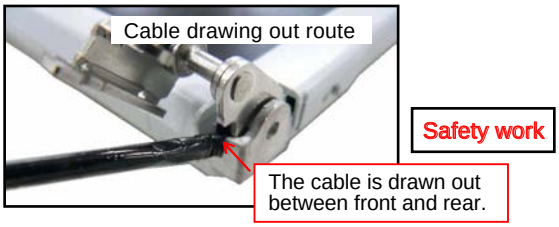
9.3.2.17. Assembly of the LCD Rear



＜Figure 1＞



＜Figure 2＞



9.3.2.18. Assembly of the Hinge Cover (L), (R)

(Note)
- The screw cannot use the fixed lock medicine repeatedly for use.Exchange for the new article when tightening again
- Tighten the back pushing when you tighten the screw.

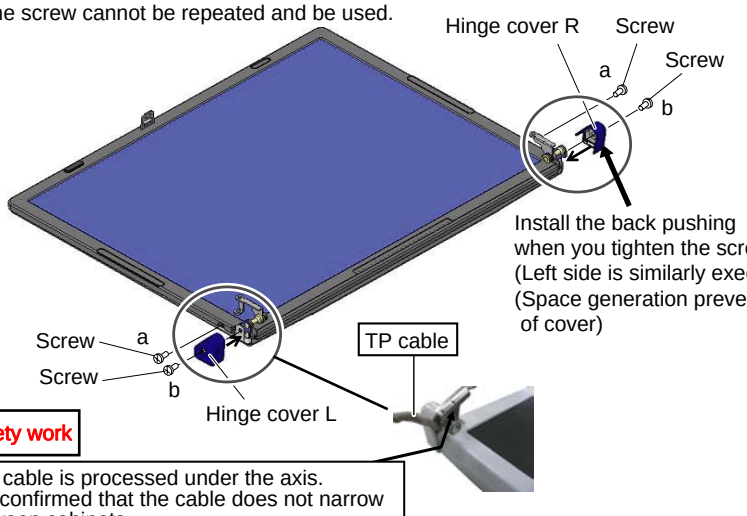
(cover space generation prevention)

The order of tightening screw:a → b
Screw : DRHM0076ZA

Safety work

The cable is processed under the axis . It is confirmed that the cable does not narrow between cabinets.

(Note)
Because the fixed lock medicine is used, the screw cannot be repeated and be used.

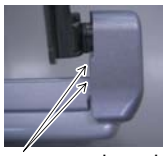


Install the back pushing when you tighten the screw.
(Left side is similarly executed.)
(Space generation prevention of cover)

Safety work

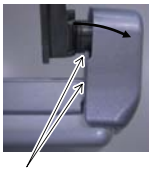
The cable is processed under the axis.
It is confirmed that the cable does not narrow between cabinets.

Hinge cover installation OK figure



The cover externals and the front rib are parallel (agreement).

Hinge cover installation NG figure



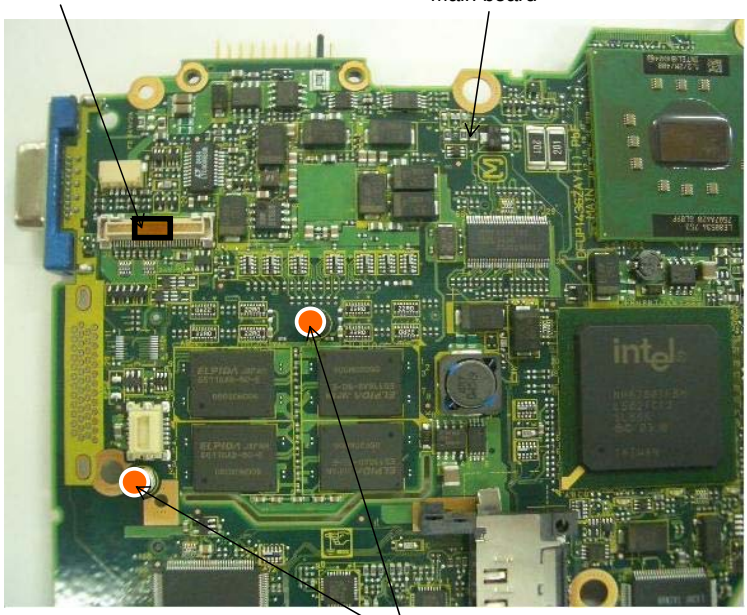
The cover externals are not parallel to the front rib. Inclines.

9.3.3. Assembly knowhow of the Main Board

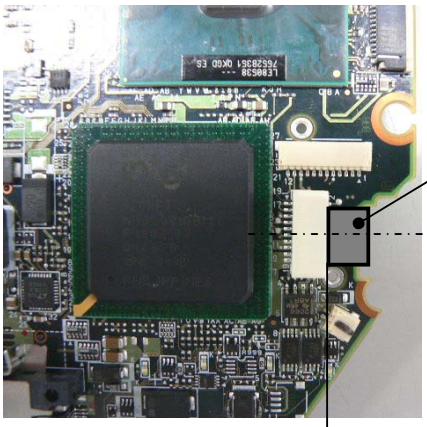
9.3.3.1. Putting tapes for Memory Sheet of top side

Removes with tweezers etc.
(note)
It is noted that there is no damage of an internal terminal.

Main board



Capton tape removing



USB CN sheet

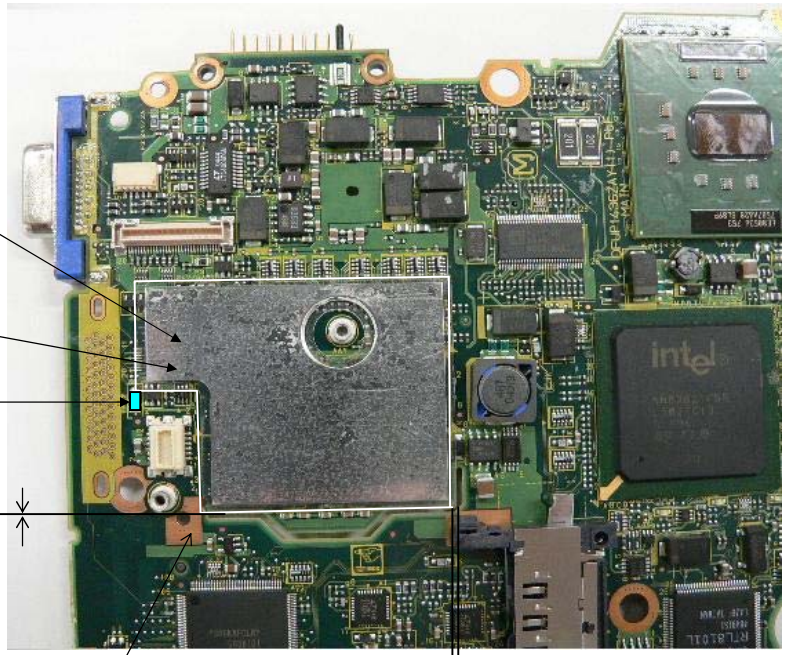
Connector root application affixation

Top side memory sheet

Bond neatly for the memory heat radiation purpose material

Safety work

It is confirmed that top side memory sheet does not run aground on the switch.

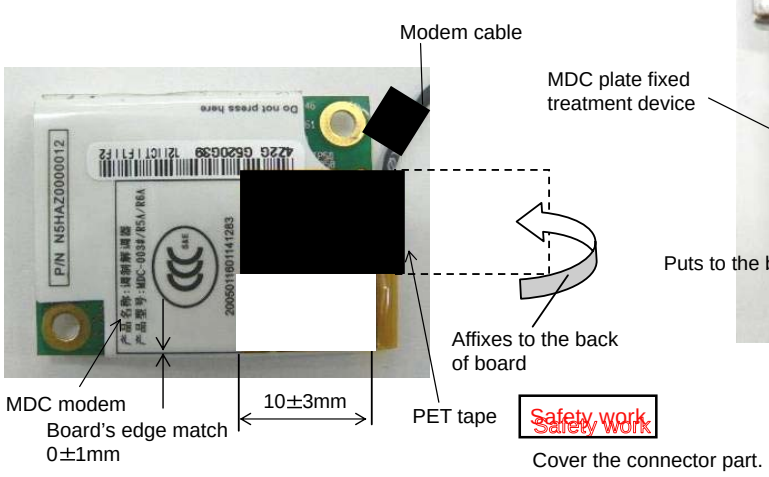


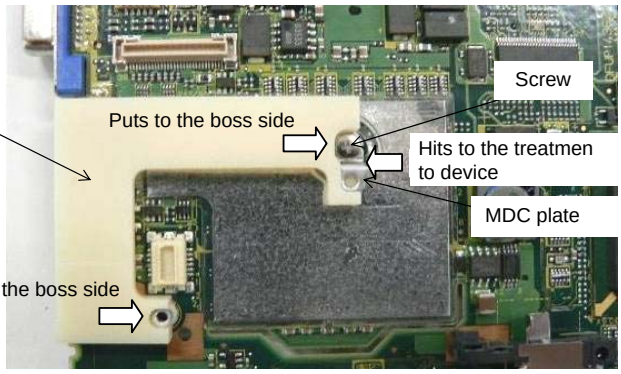
Board slit externals match
0 ±1mm

There must not be running aground

Board slit externals match
0～1mm

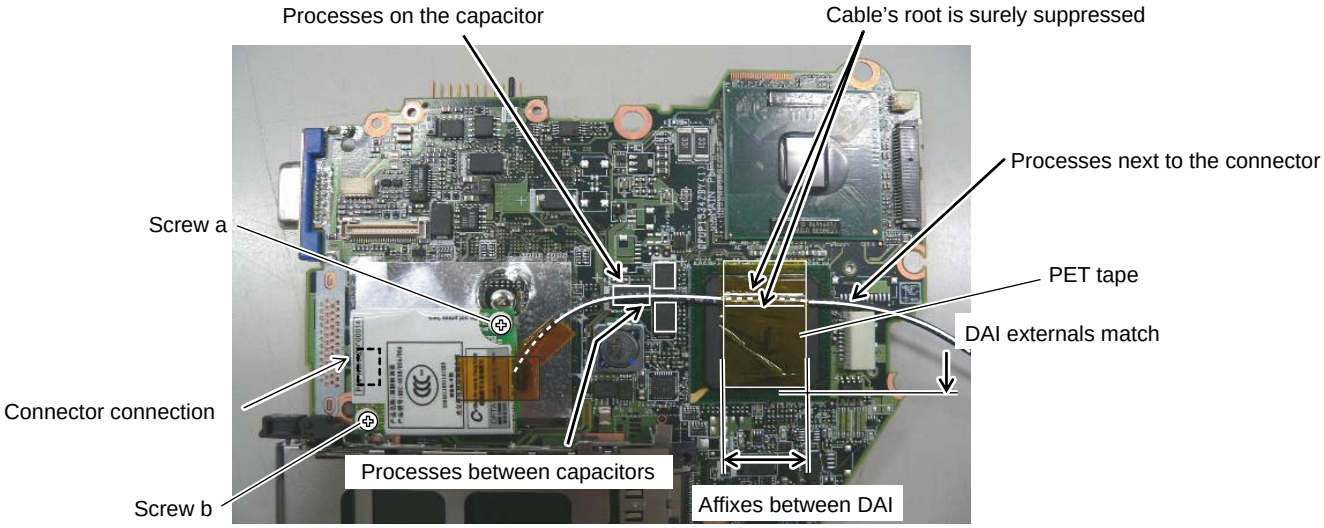
9.3.3.2. Assembly of the MDC MODEM



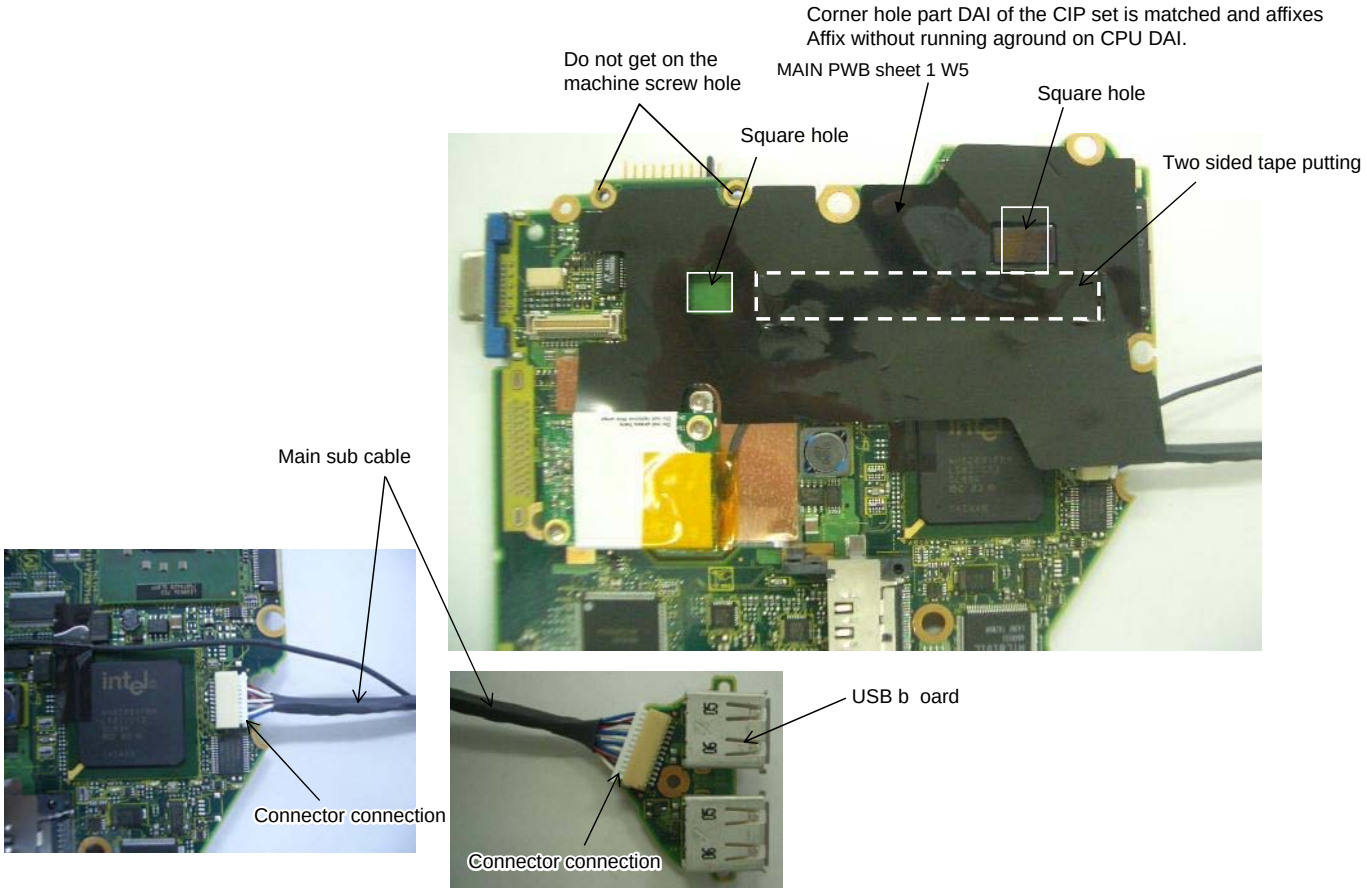


9.3.3.3. Putting PET tapes

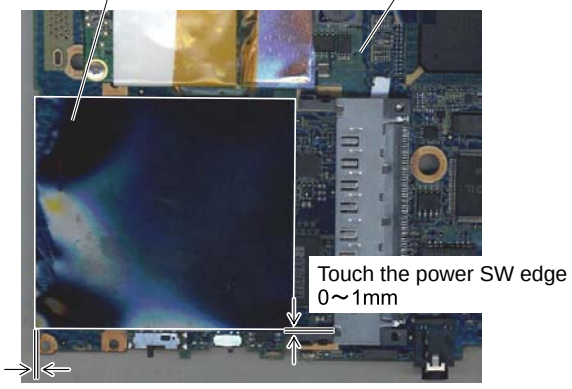
・The order of tightening screw : a→b
Screw : DXQT2+D25FNL



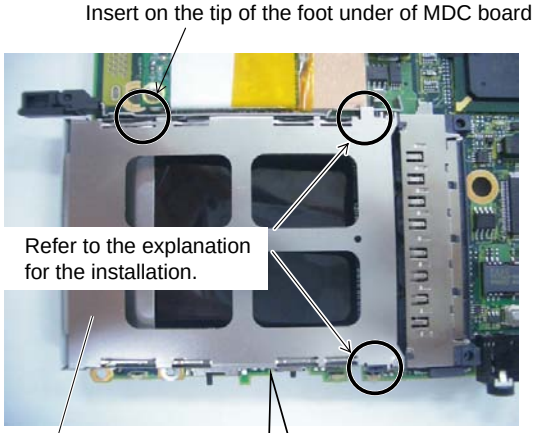
9.3.3.4. Putting Main PW Sheet



9.3.3.5. Assembly of the PCMCIA Ejector



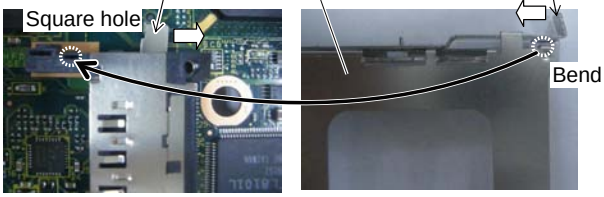
Board externals match
0～1mm
※ There must not be disarrangement from board externals.



Explanation

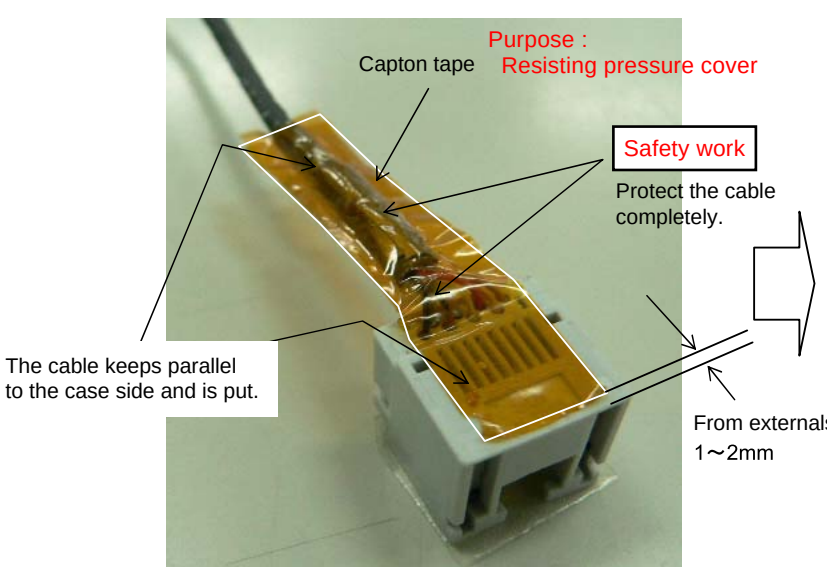
The lever is drawn to the right before building in

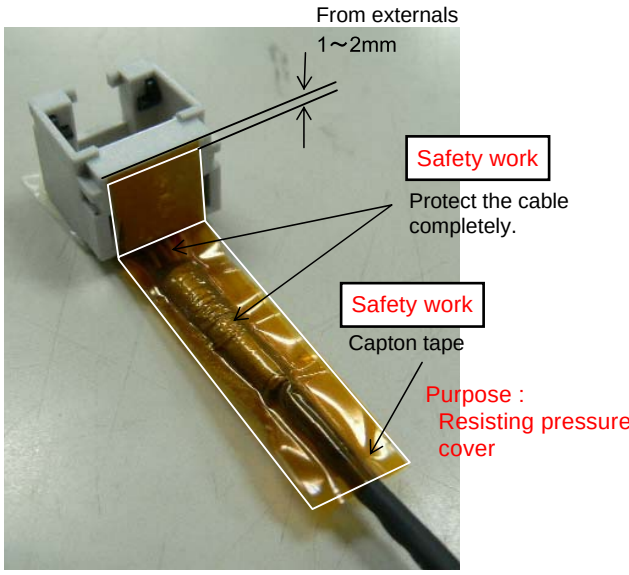
The lever is drawn to the left before building in.



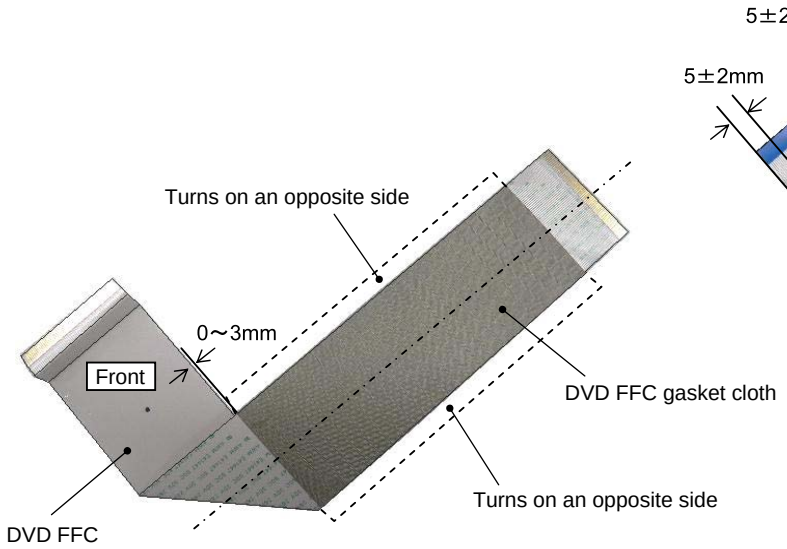
Card bus ejector's sheet metal bend part is inserted in the corner hole part. (An opposite direction is also the same)
Multiply the hook surely. (There must not be floatage)

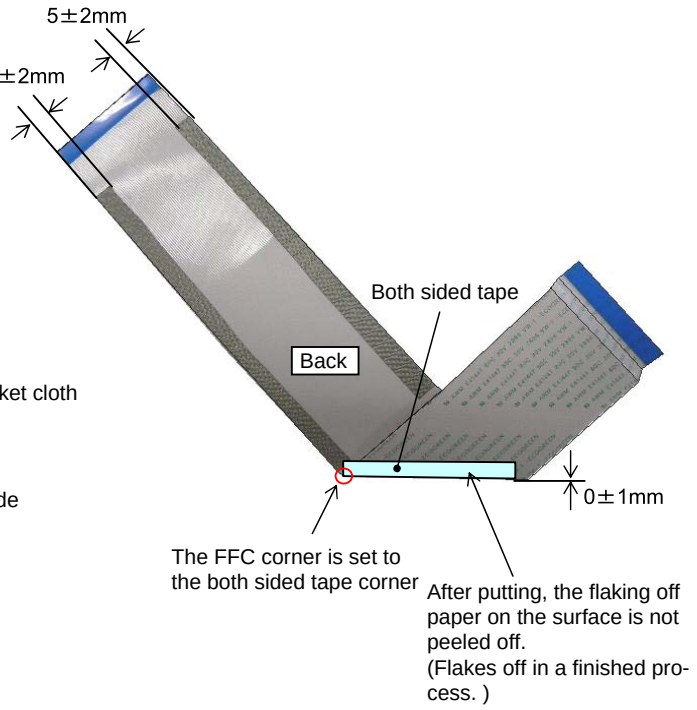
9.3.3.6. Assembly of the LAN Cable



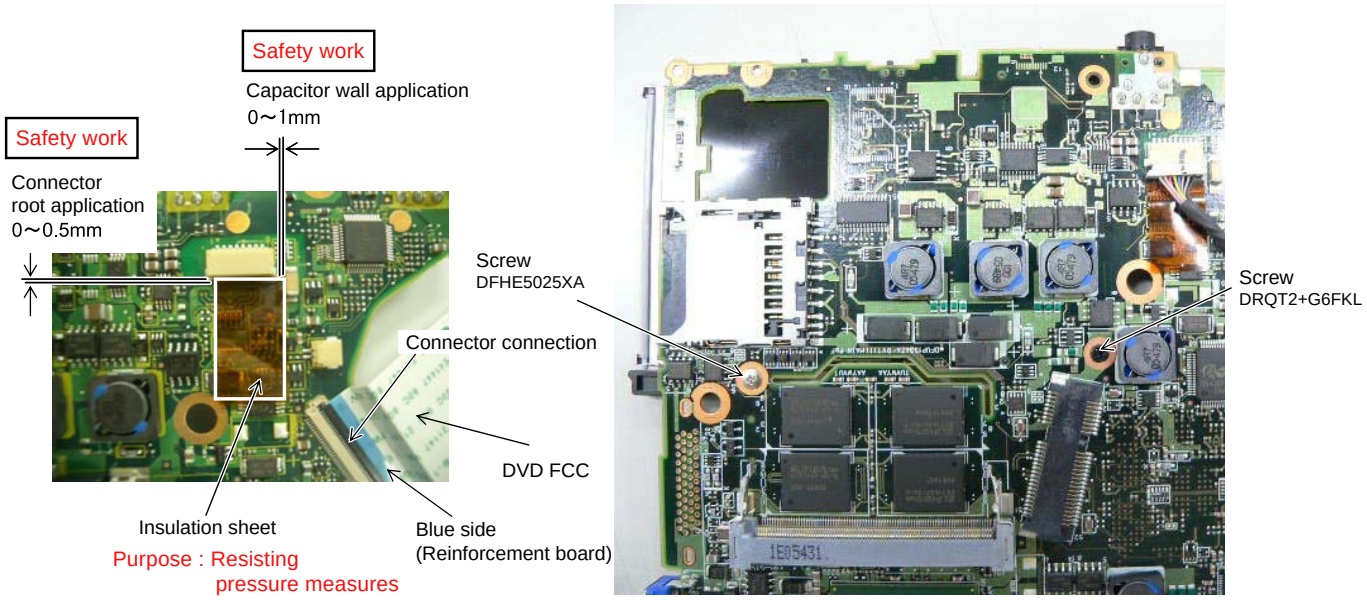


9.3.3.7. Assembly of the DVD FFC

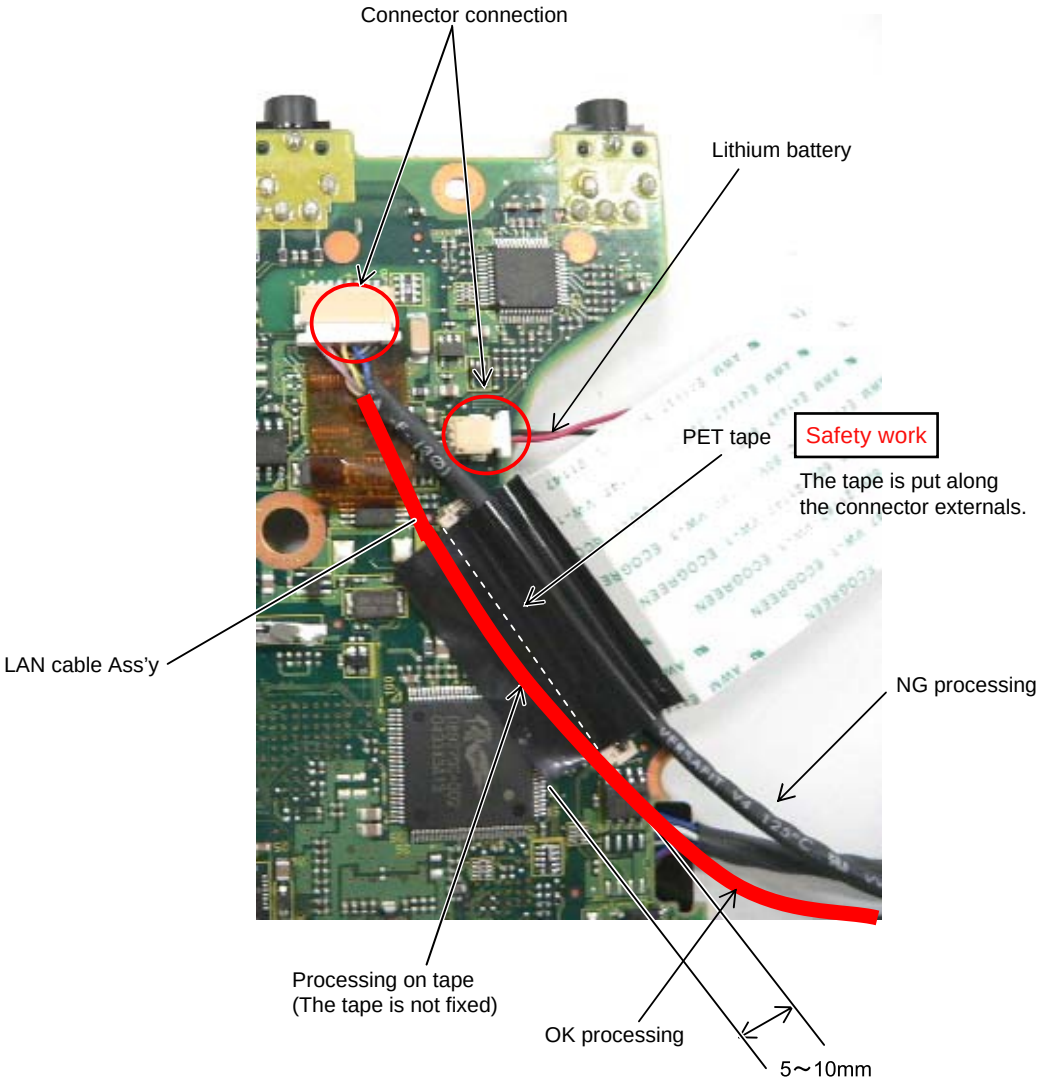




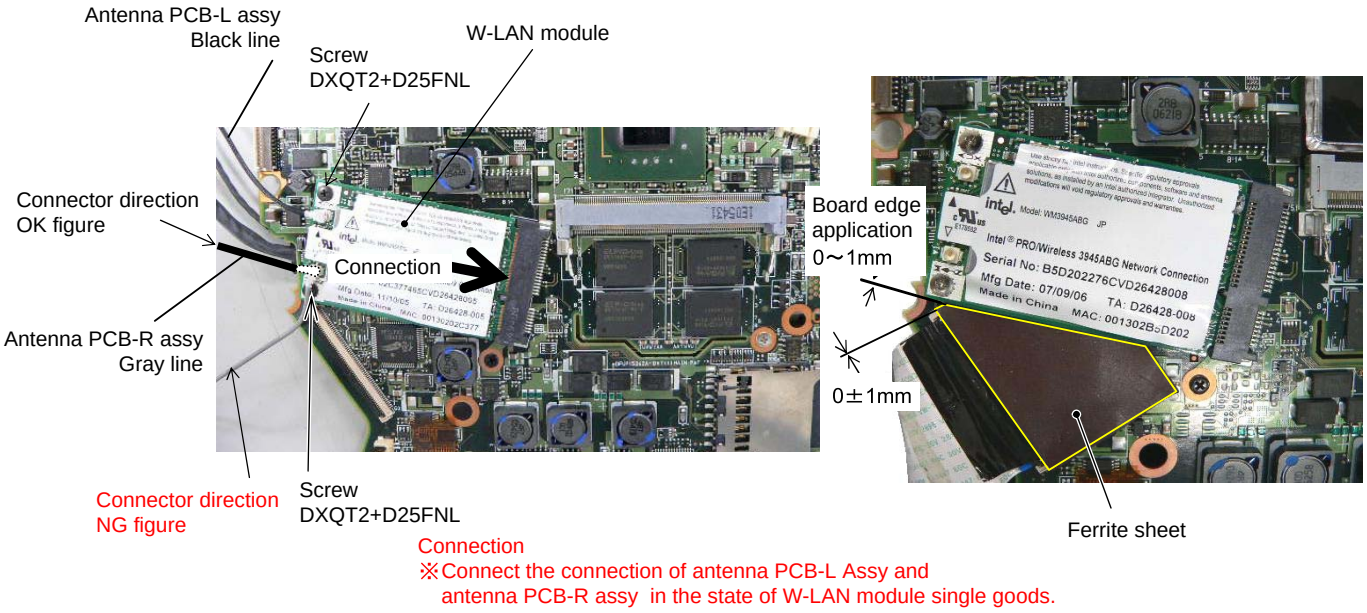
9.3.3.8. Screw tightening of Main Board



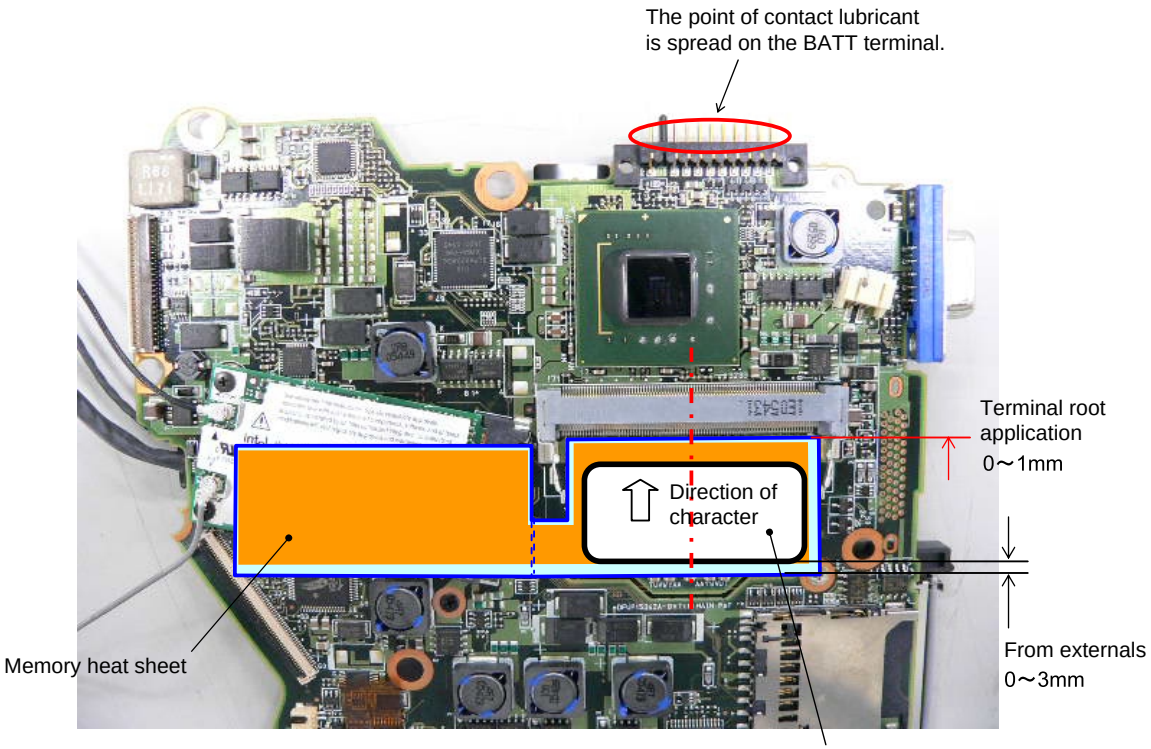
9.3.3.9. Line processing LAN cable



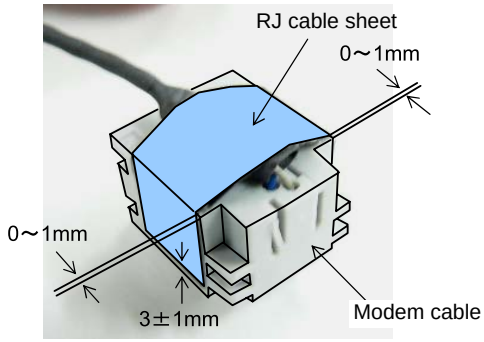
9.3.3.10. Assembly of the W-LAN Module / Putting Memory Heat Sheet

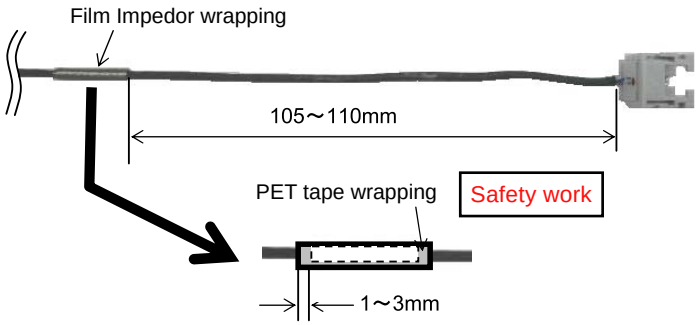


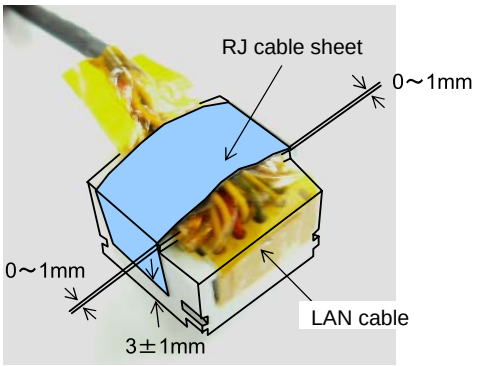
Connection
※Connect the connection of antenna PCB-L Assy and
antenna PCB-R assy in the state of W-LAN module single goods.



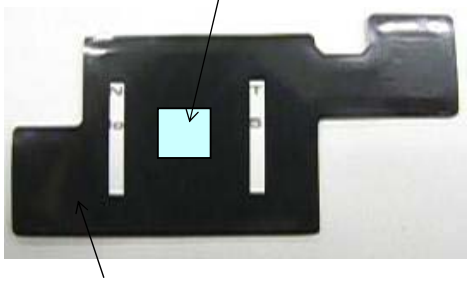
9.3.3.11. Assembly of theMODEM Cable

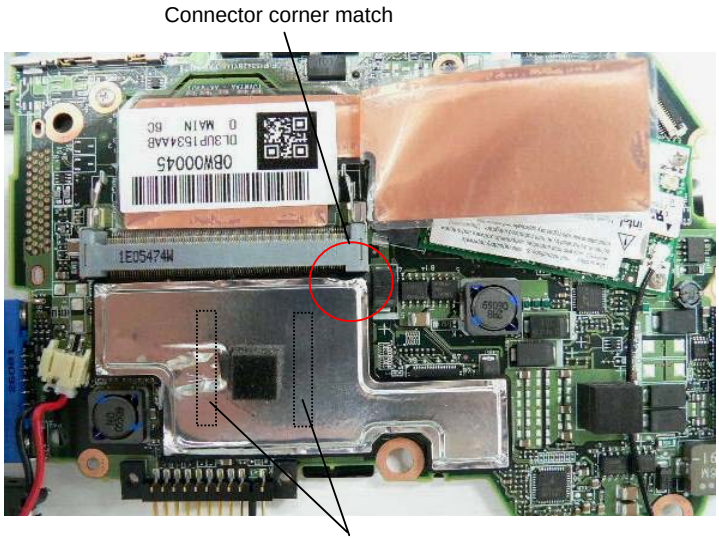


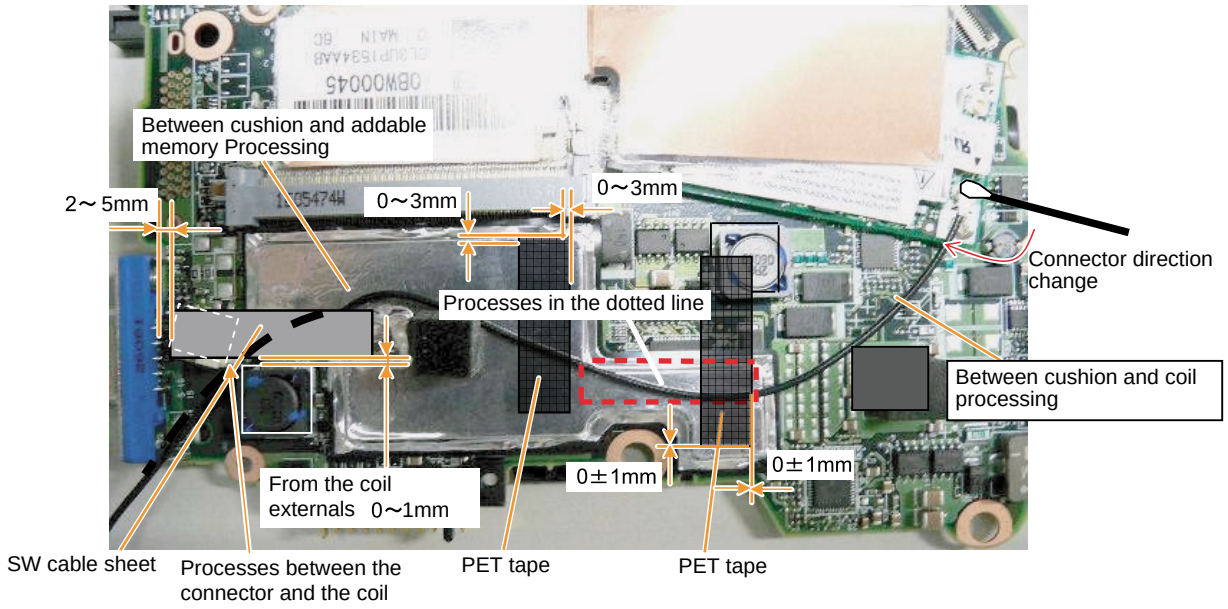




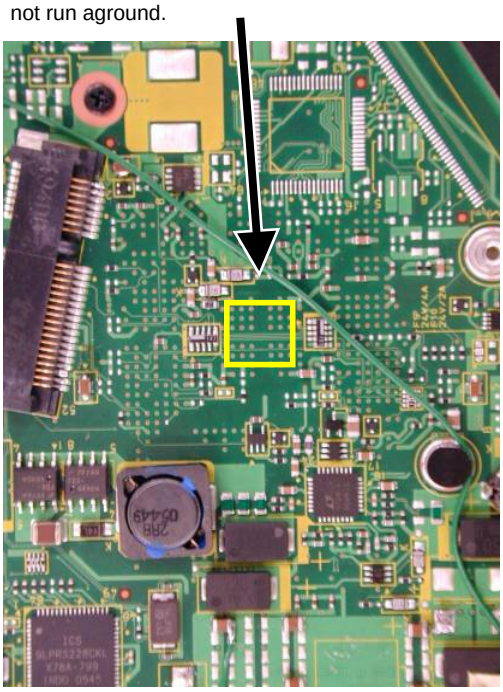
9.3.3.12. Putting Sheets



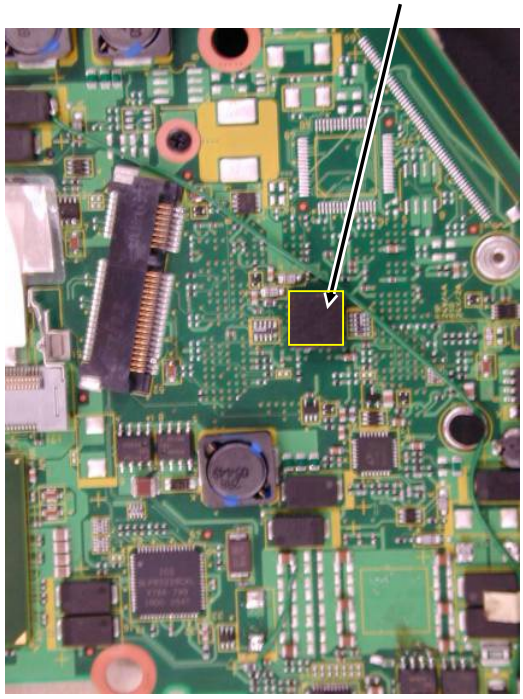




Heat cushion is affixed in the place without the chip wireless LAN connector sideward.
Do not run aground in the chip on side.
It is unquestionable for the inclination as long as does not run aground.

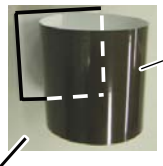


Heat sheet cushion



9.3.3.13. Assembly of the W-LAN Sheet

Sheet is lightly held by the finger and the fold habit is applied.
When suppressing, the fold habit is applied so as not to overflow the box sheet metal externals.



WLAN sheet

(note)
The flaking off paper of a both sided tape is peeled off and affixes.

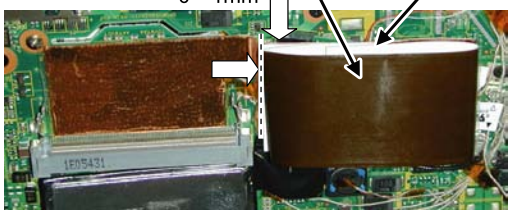
< Preparation of WLAN sheet >

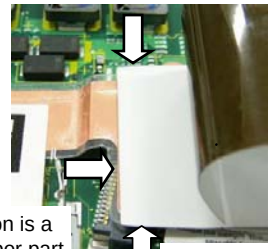
WLAN sheet

Runs side by side.

The cutting lack part is inserted, and puts into the state of the roll.

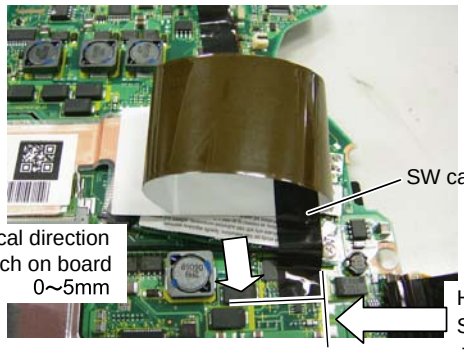
0～1mm





Horizontal direction is a suiting sheet copper part externals. 0～1mm

Vertical direction is a suiting transparent sheet part externals. 0～1mm



SW cable sheet

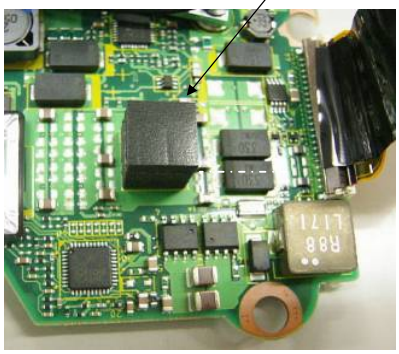
Vertical direction
Chip bottom match on board
0～5mm

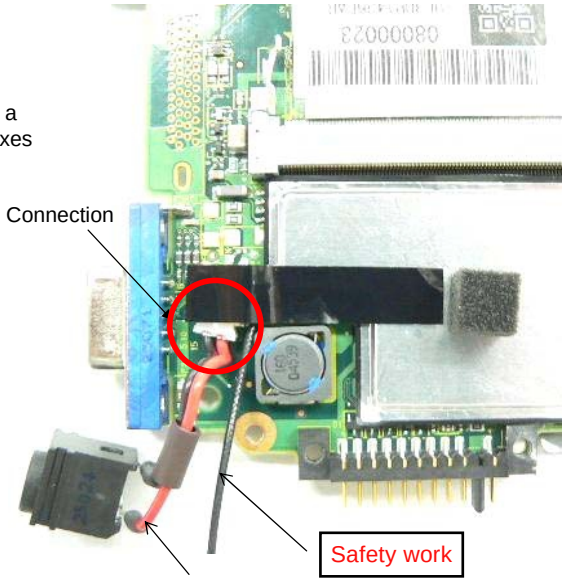
Horizontal direction
Silk line match on board
±2mm

9.3.3.14. Assembly of the HDD FPC

CPU cushion

Silk is made a sign and affixes



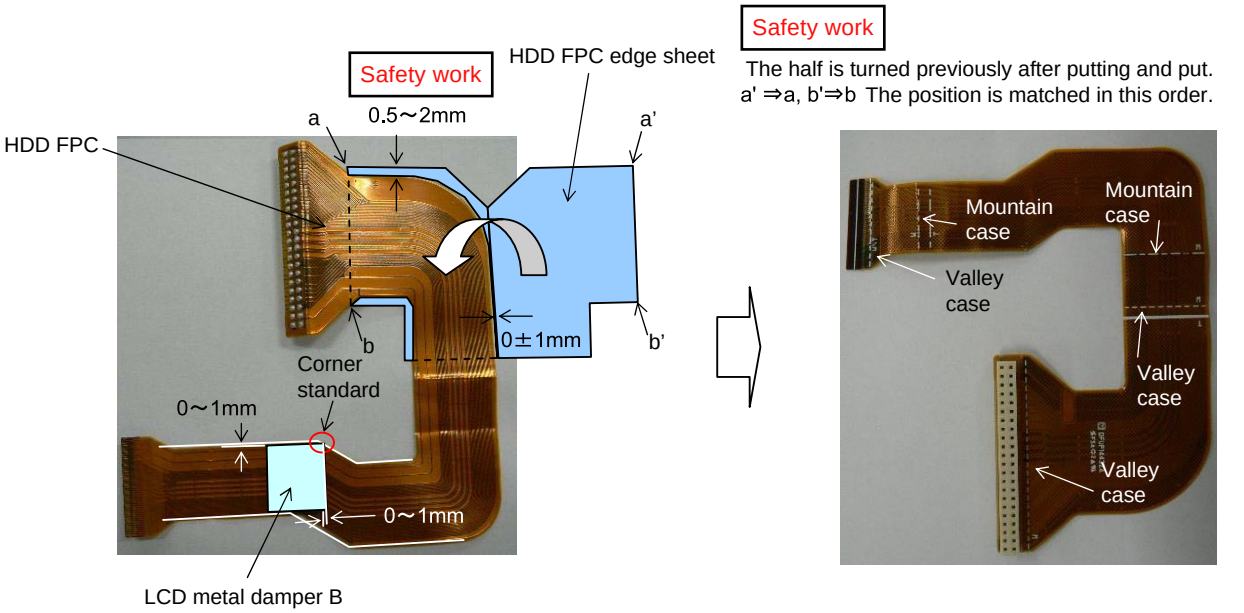


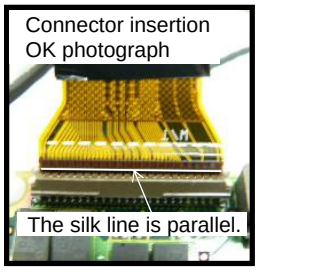
Connection

Safety work

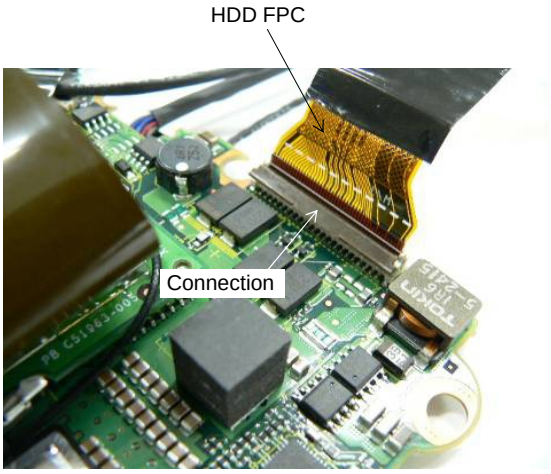
DC IN cable

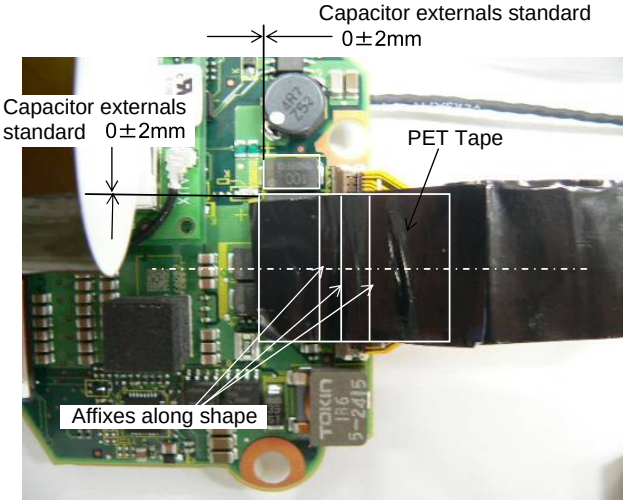
The line is drawn out between the coil and the connector, and the main line is prevented from running aground in the coil and the connector.


Safety work
HDD FPC edge sheet
a
0.5～2mm
a'
HDD FPC
b
0±1mm
b'
Corner
standard
0～1mm
0～1mm
LCD metal damper B
Safety work
The half is turned previously after putting and put.
a' ⇒a, b'⇒b The position is matched in this order.
Mountain
case
Mountain
case
Valley
case
Valley
case
Valley
case

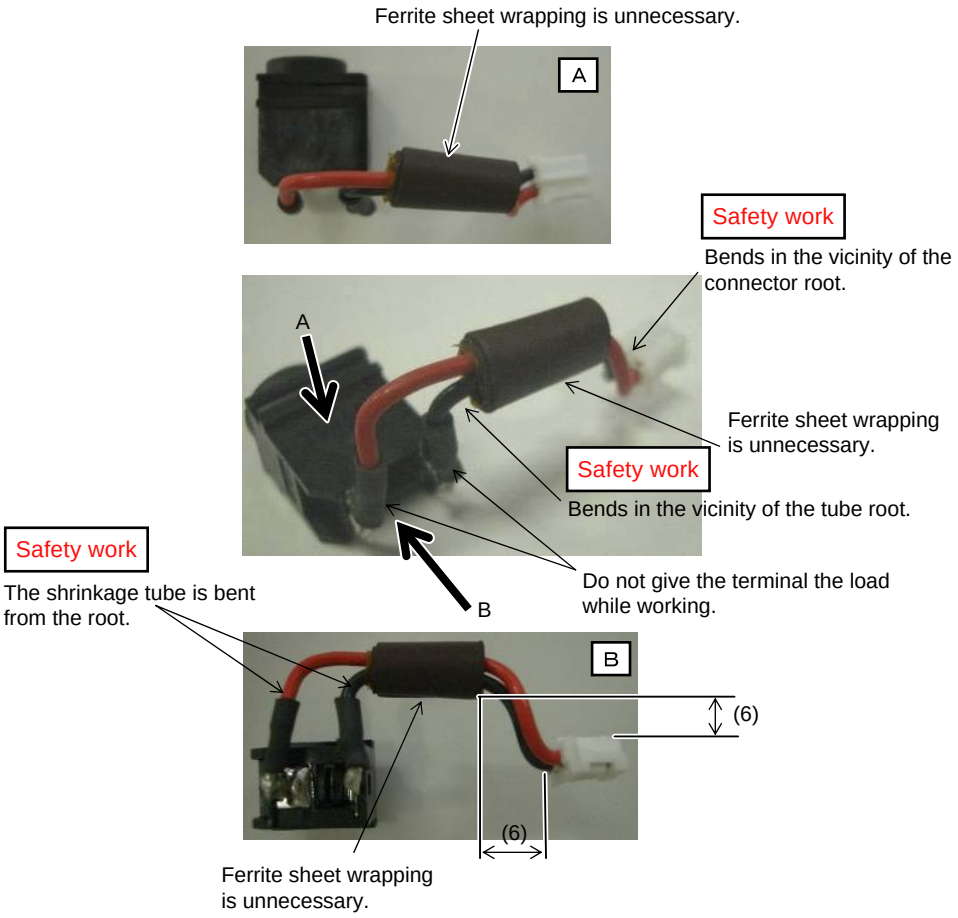

Connector insertion
OK photograph
The silk line is parallel.


Connector insertion
NG photograph
There is an inclination
in the silk line.
(Insertion is imperfect.)

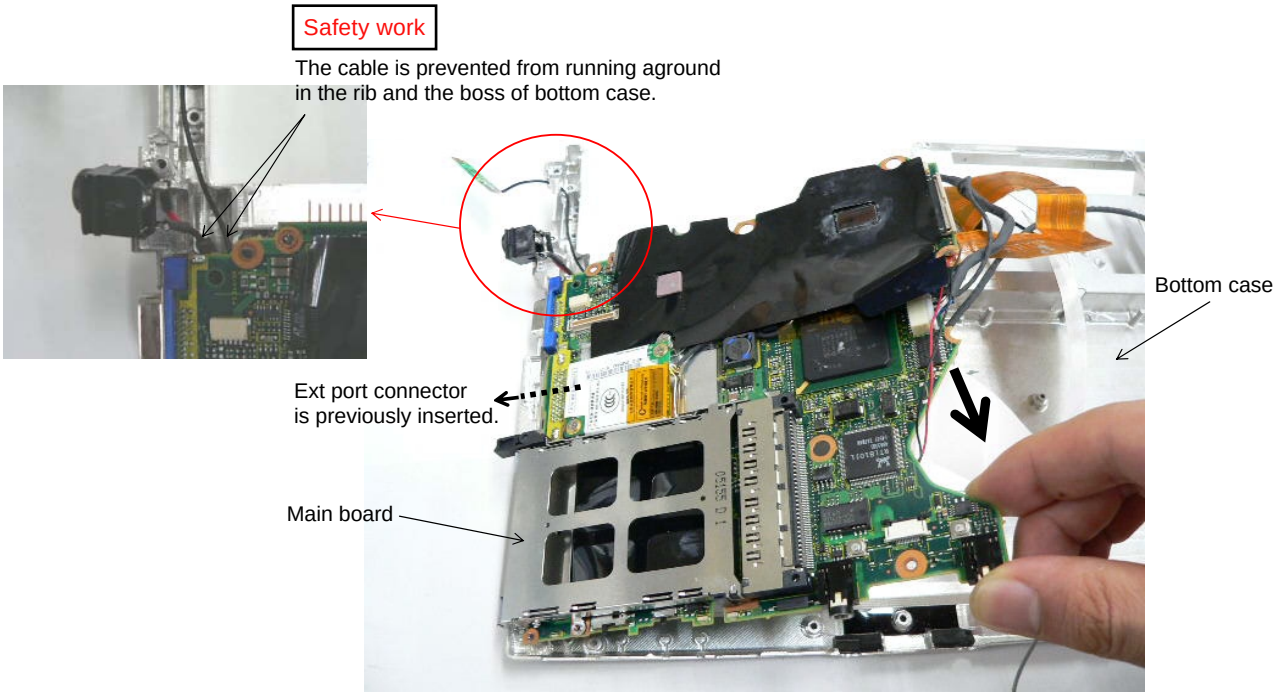

HDD FPC
Connection

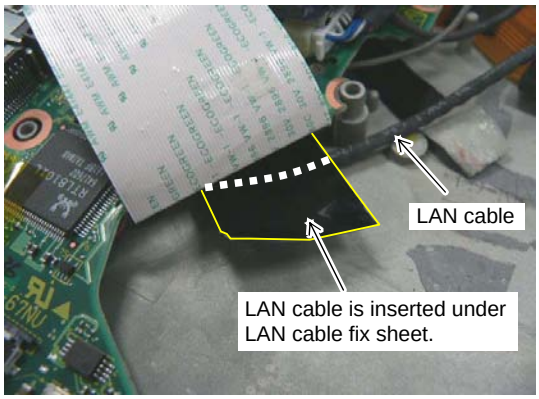

Capacitor externals standard
0±2mm
Capacitor externals
standard 0±2mm
PET Tape
Affixes along shape

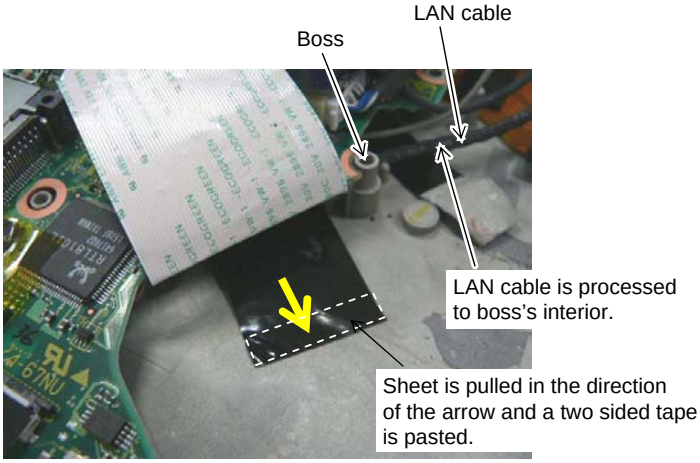
9.3.3.15. Assembly of the DC-IN Cable



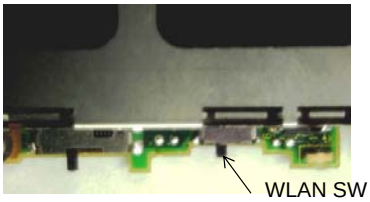
9.3.3.16. Setting the Main Board

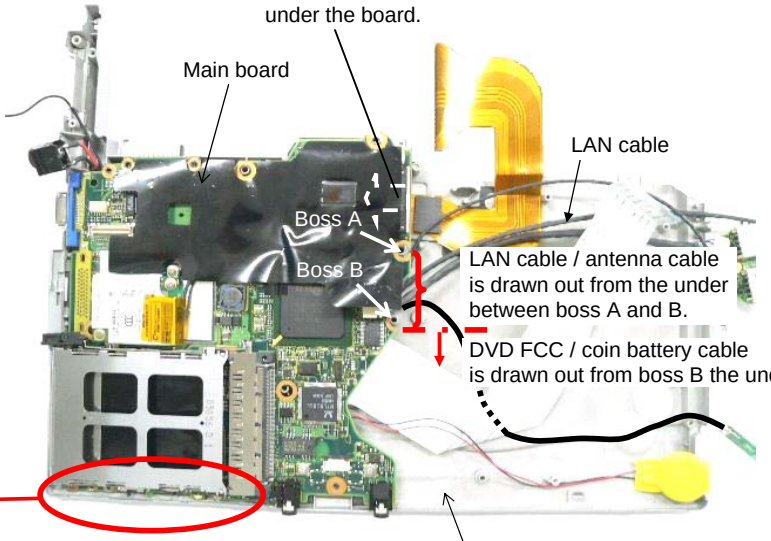


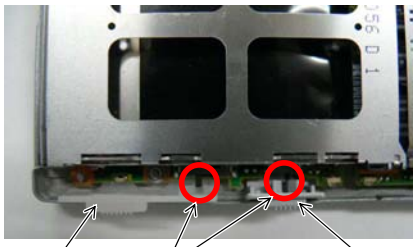


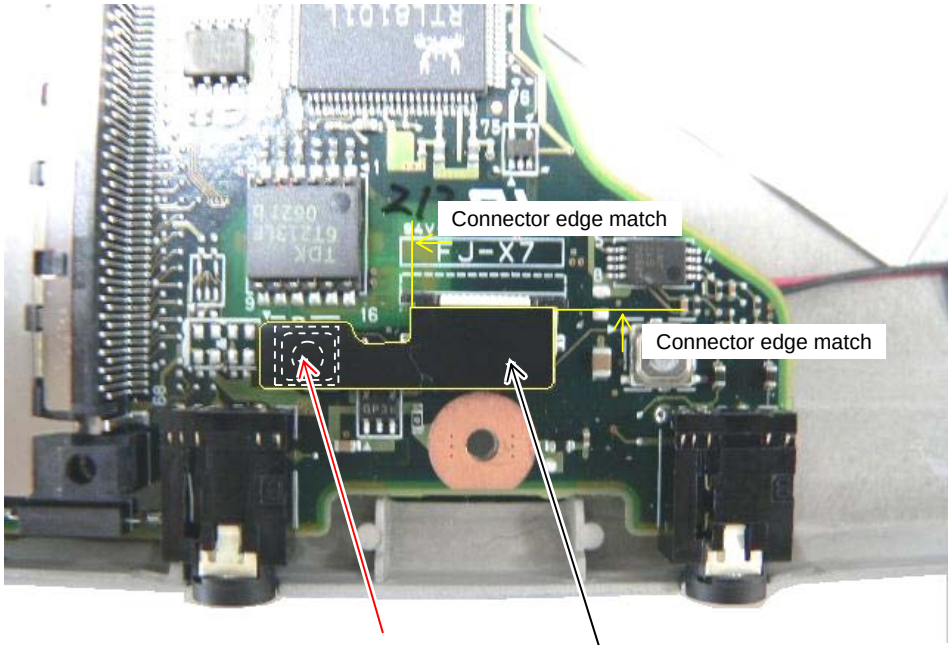


It is confirmed that WLAN SW has become turning off (left side) before building in bottom case.



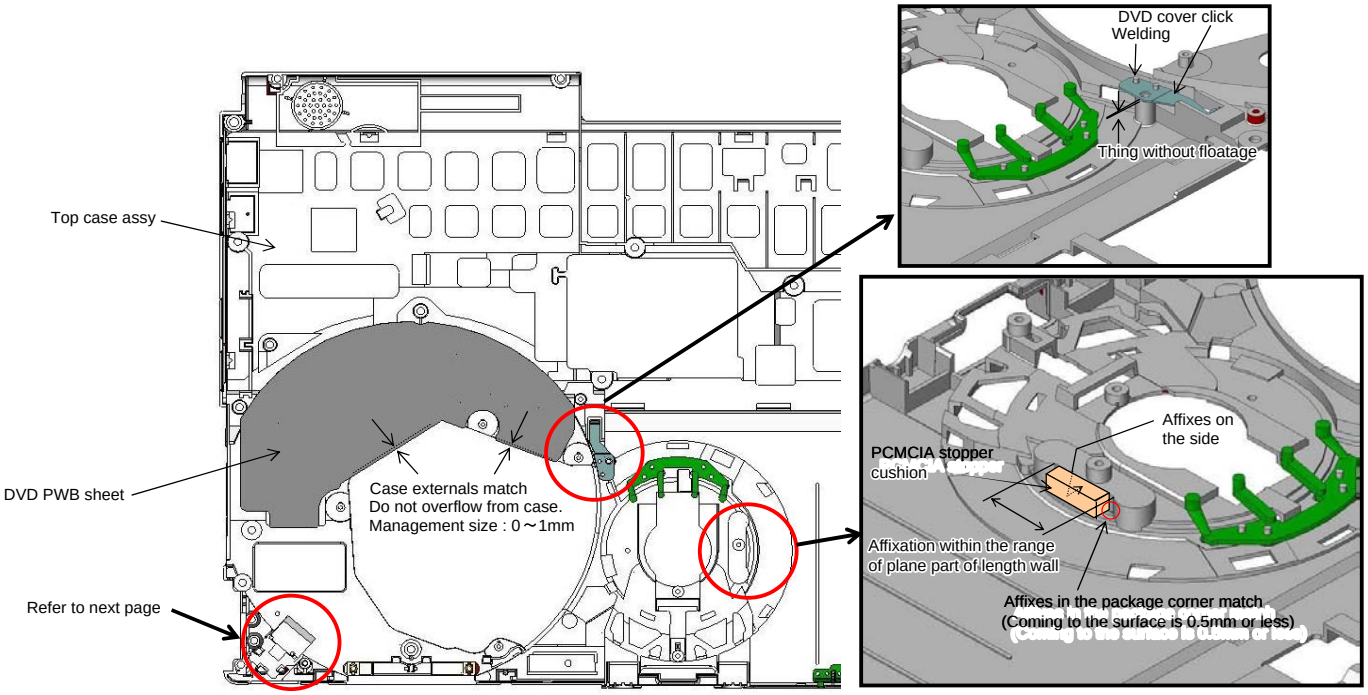




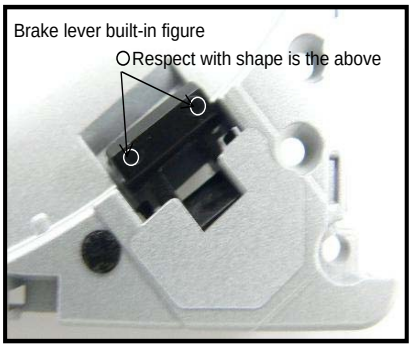


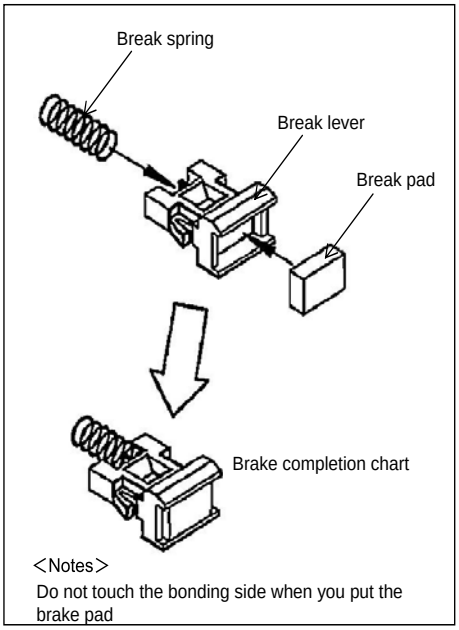
9.3.4. Assembly knowhow of the Top Case

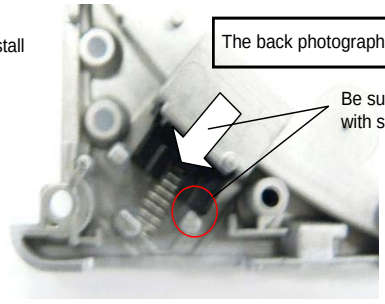
9.3.4.1. Assembly of the DVD Cover



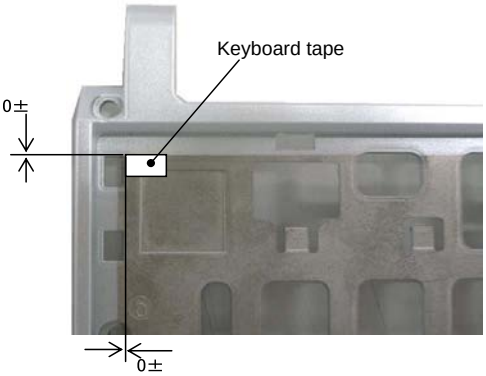
9.3.4.2. Assembly of theBreak Lever

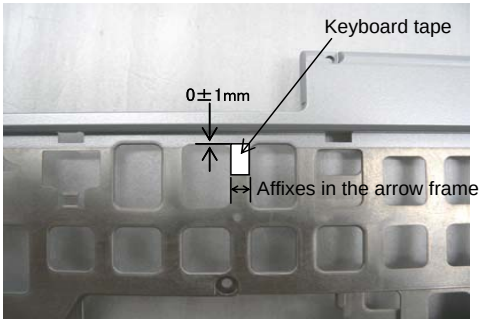


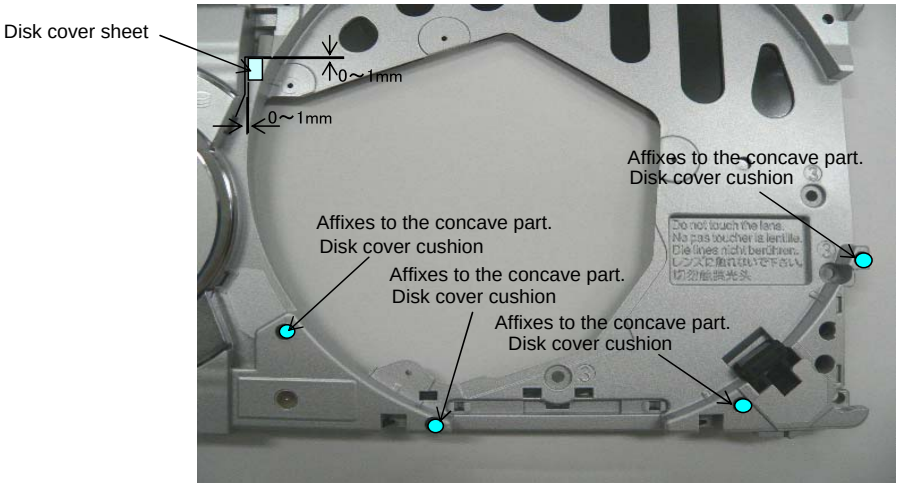




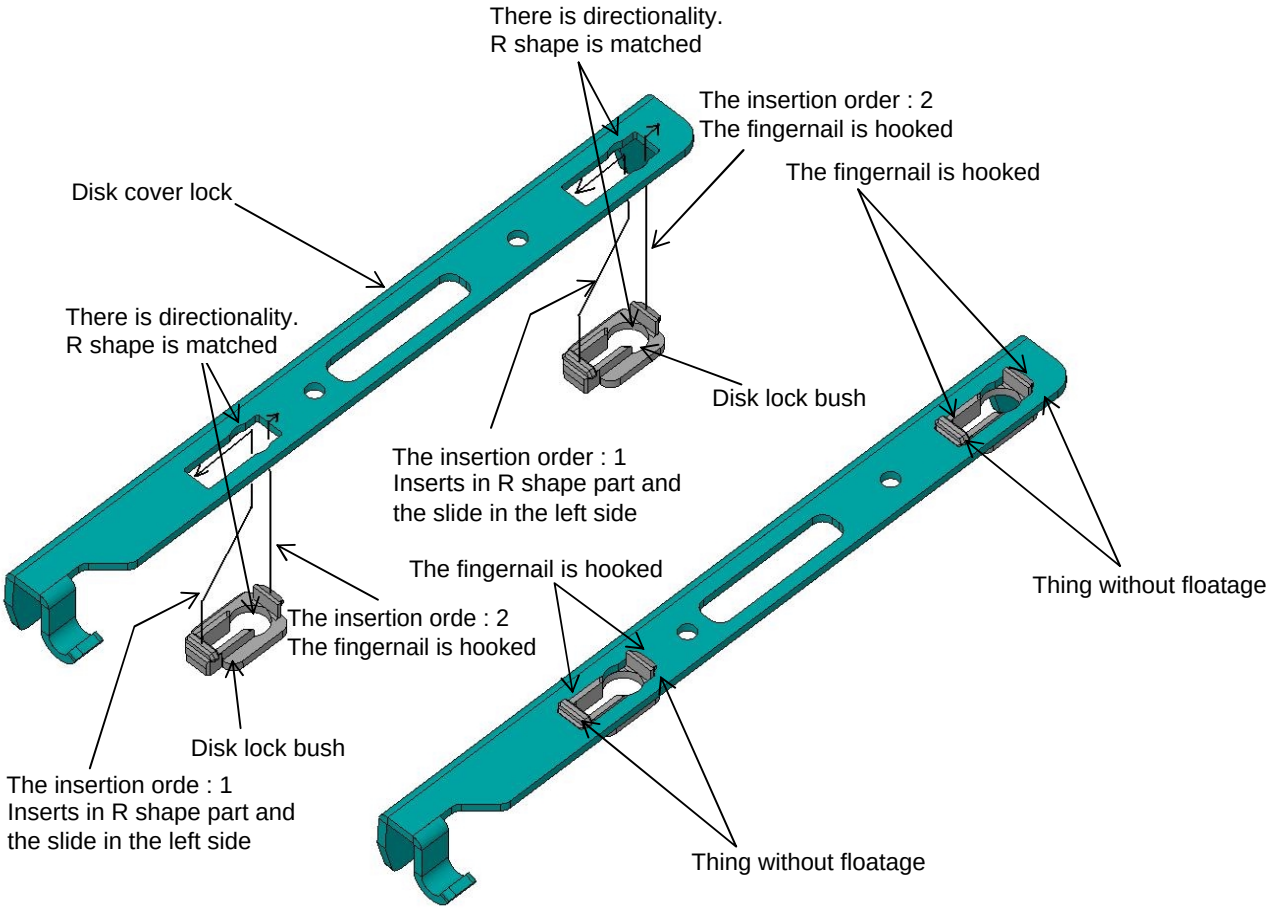
9.3.4.3. Putting Disk Cover Sheet

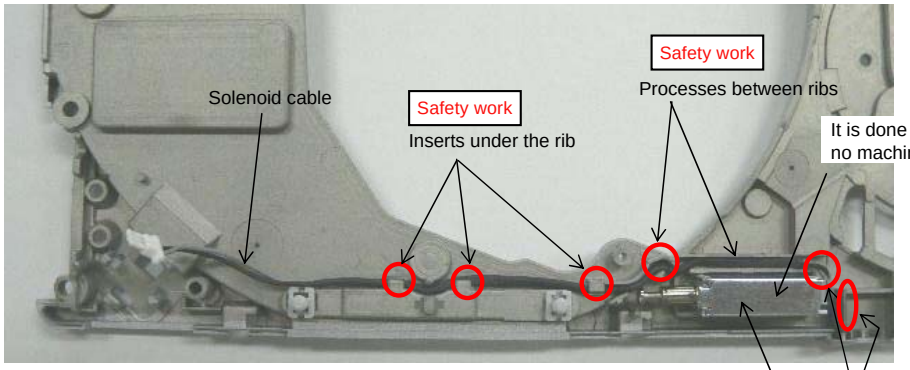




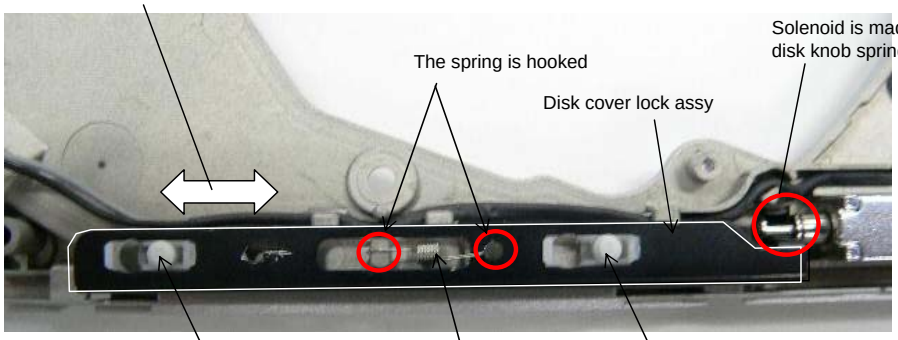


9.3.4.4. Assembly of the Disk Cover Lock



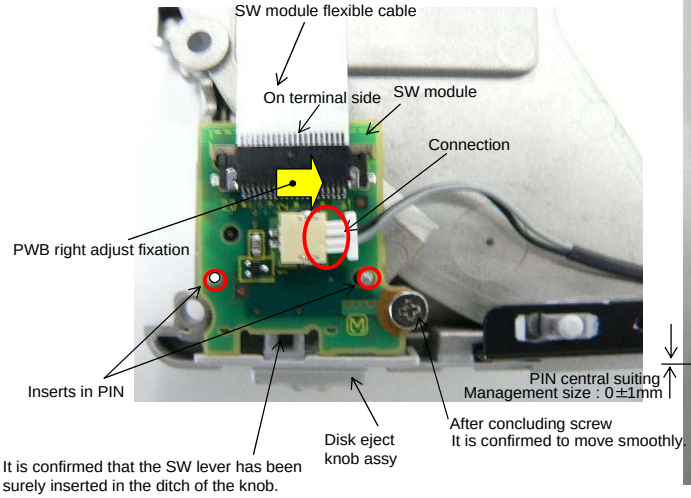


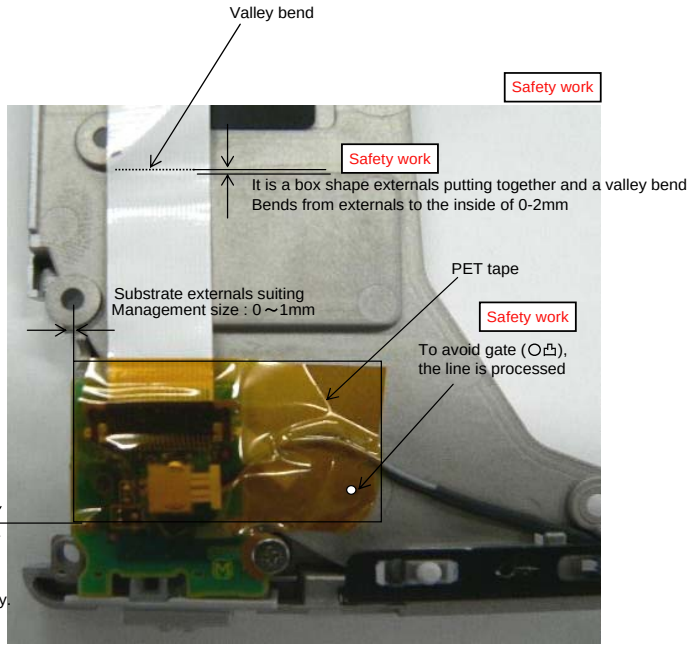
The spring is hooked after whether disk cover lock assy operates smoothly is confirmed.



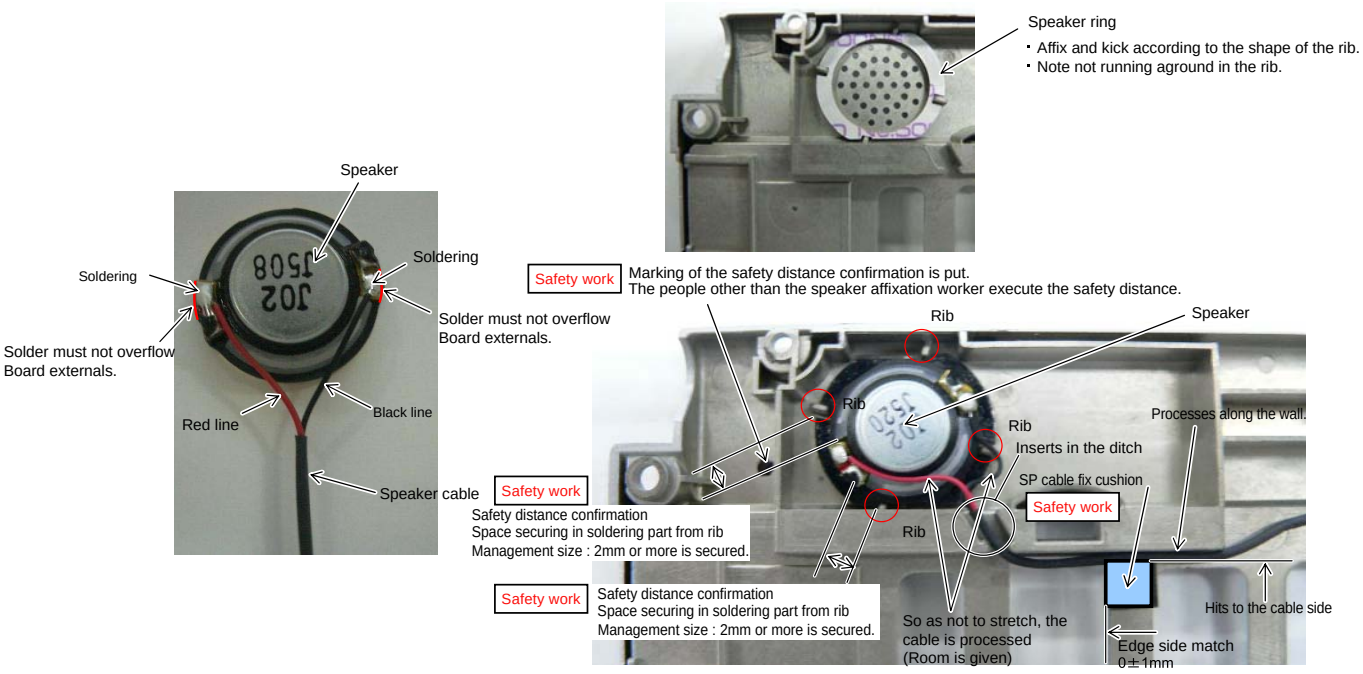
When installing and expanding because handles or transforming, it is not possible to recycle.

9.3.4.5. Assembly of the SW Board

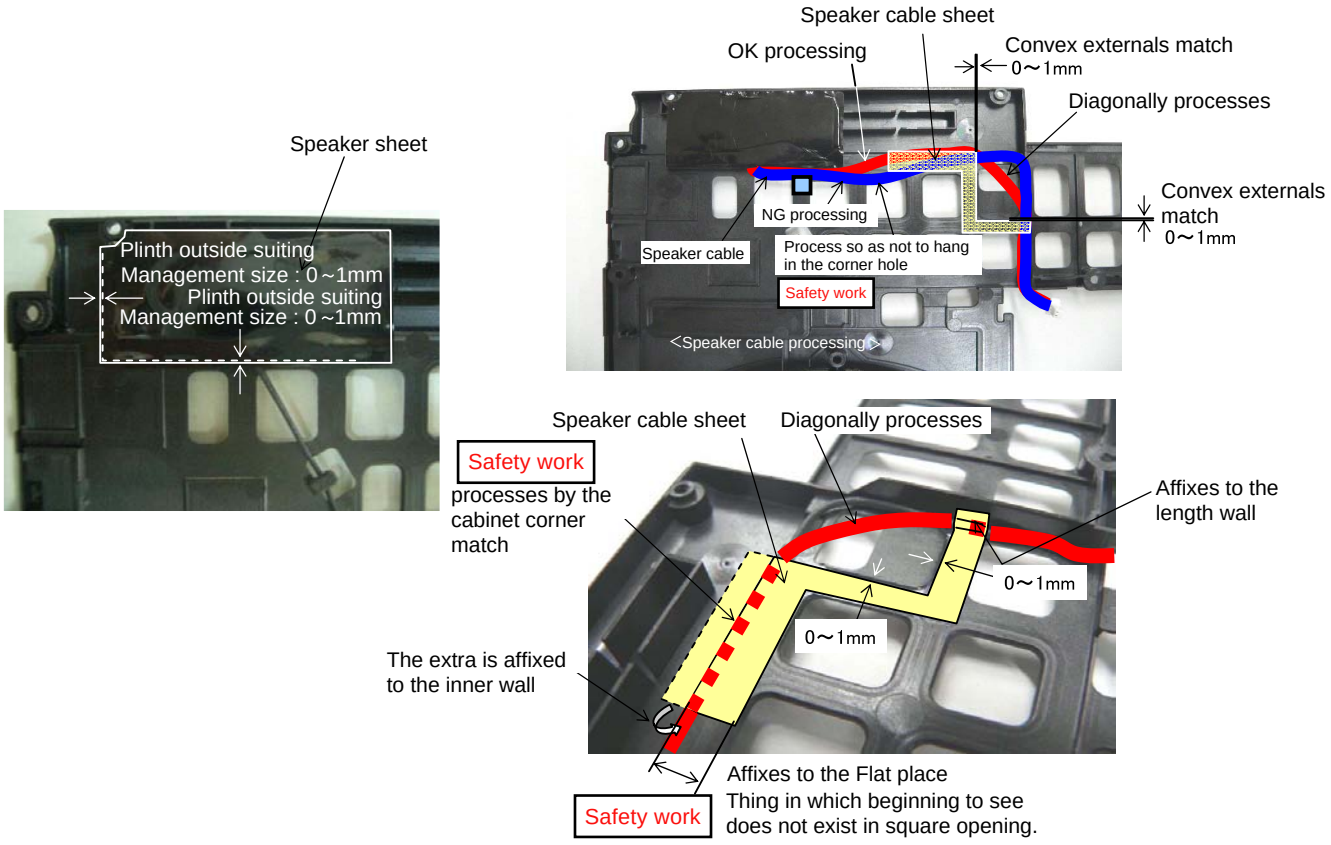




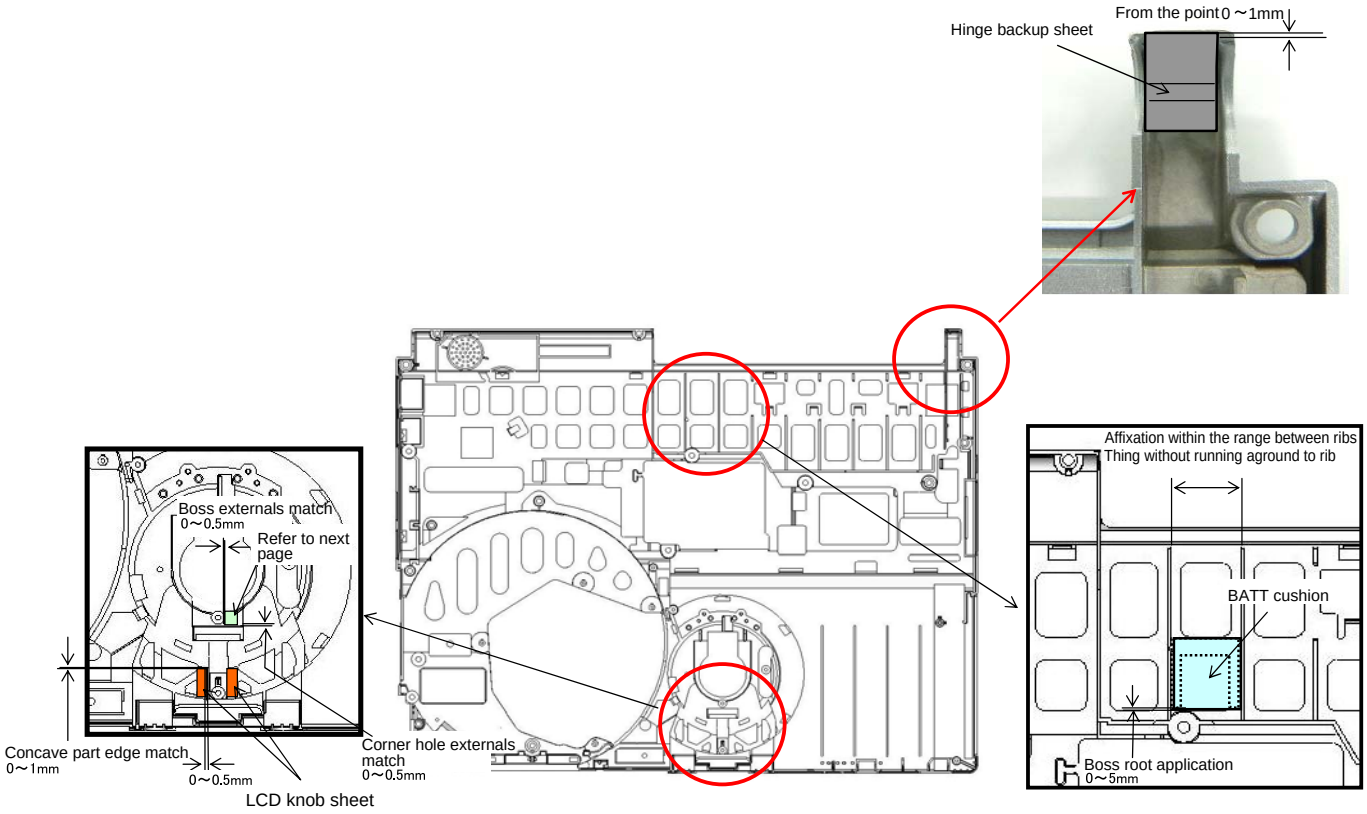
9.3.4.6. Assembly of the Speaker



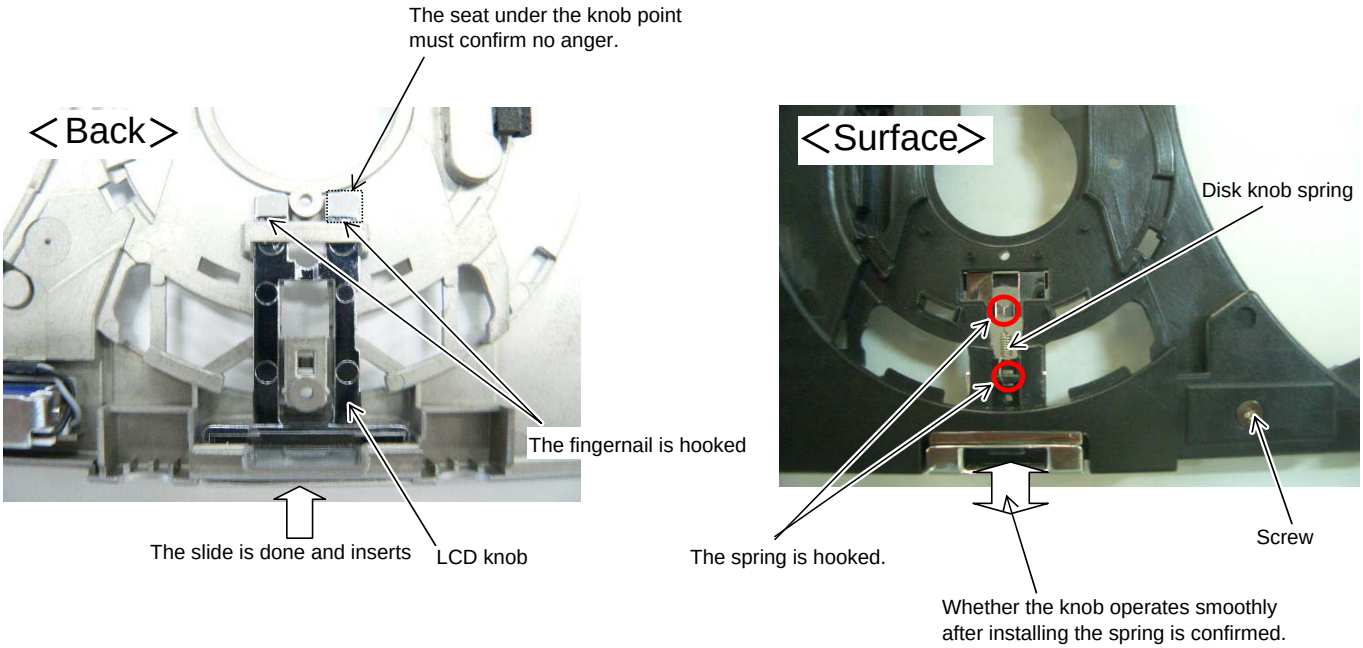
9.3.4.7. Line processing Speaker Cable and putting Speaker Sheet



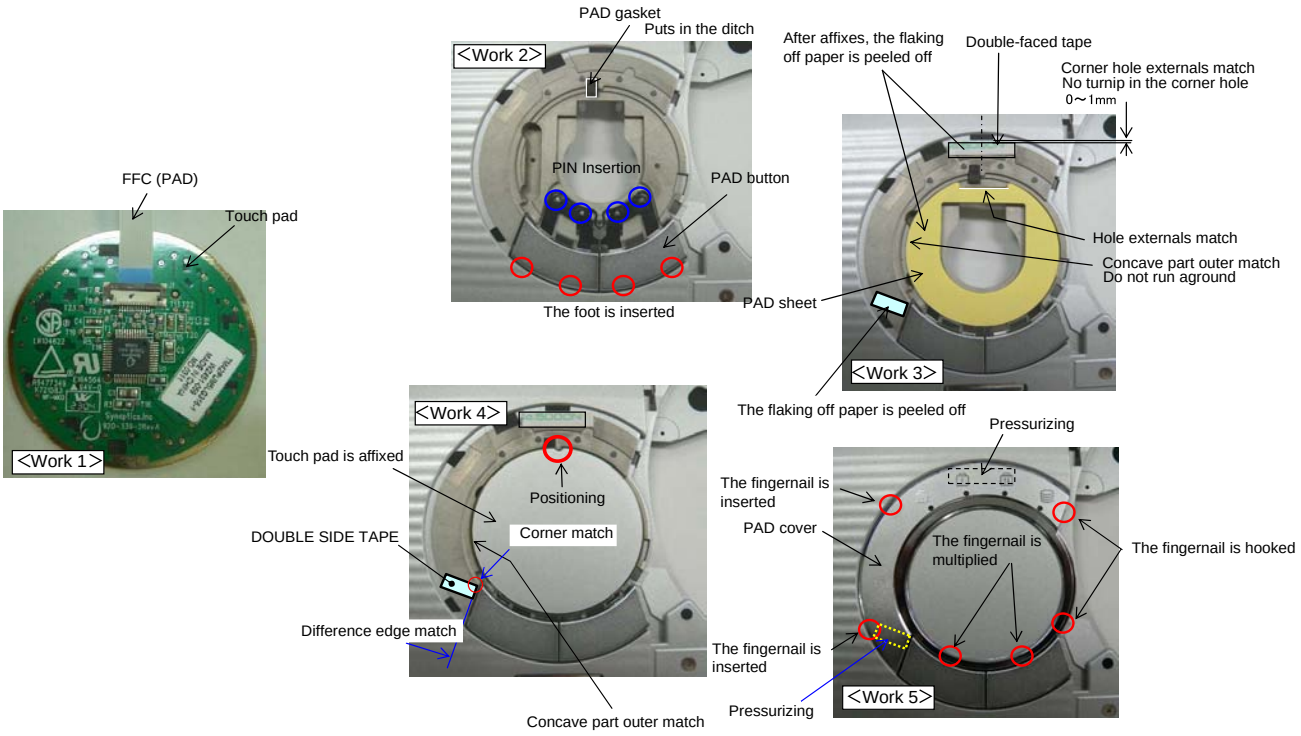
9.3.4.8. Putting Hinge Buckup Sheet and LCD Knob Sheet etc.

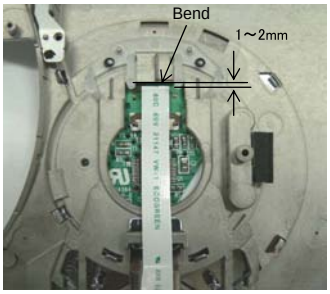


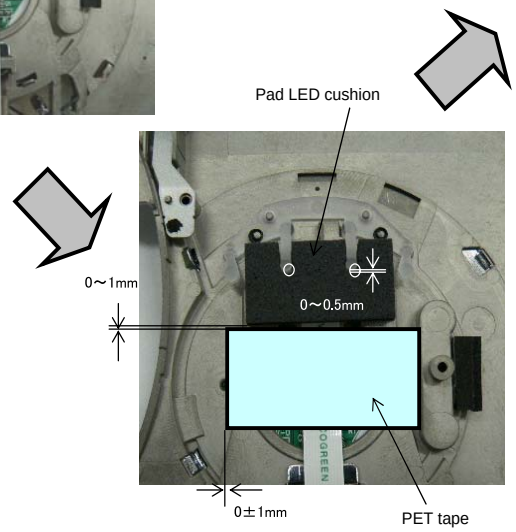
9.3.4.9. Assembly of the LCD Knob

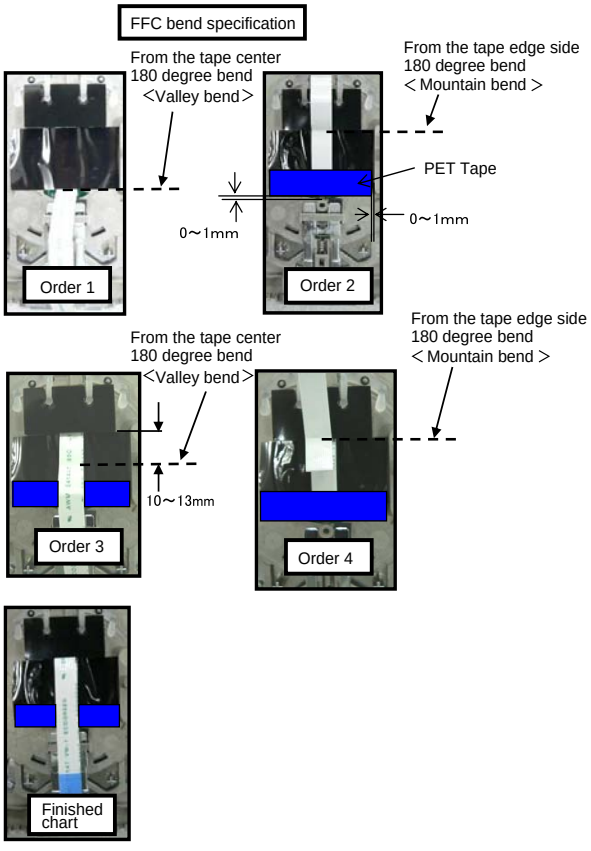


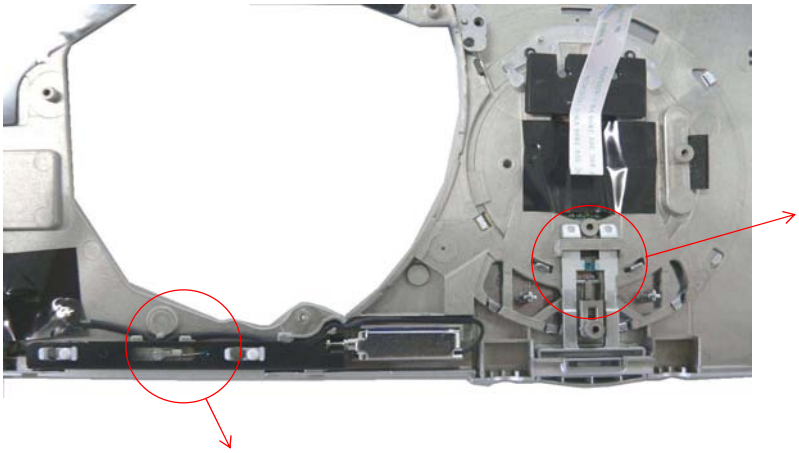
9.3.4.10. Assembly of the Touch Pad



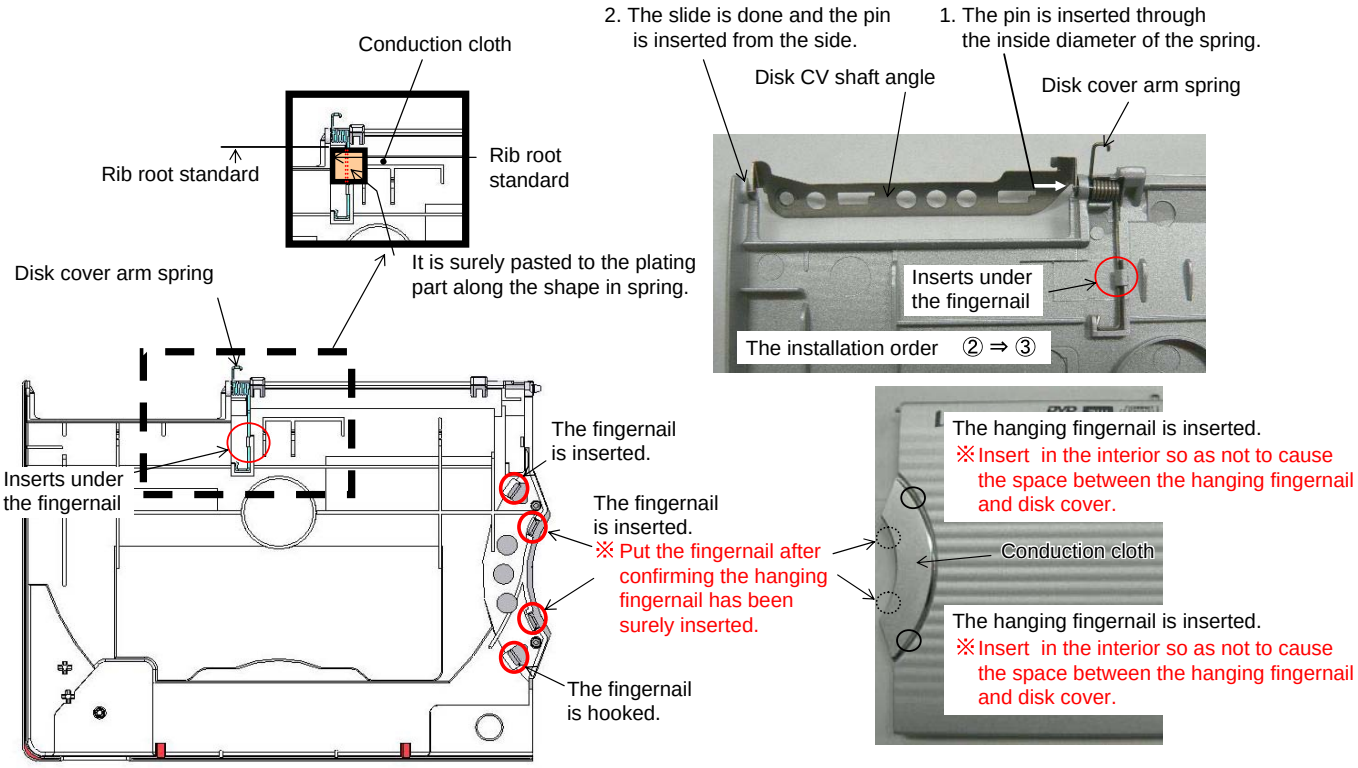


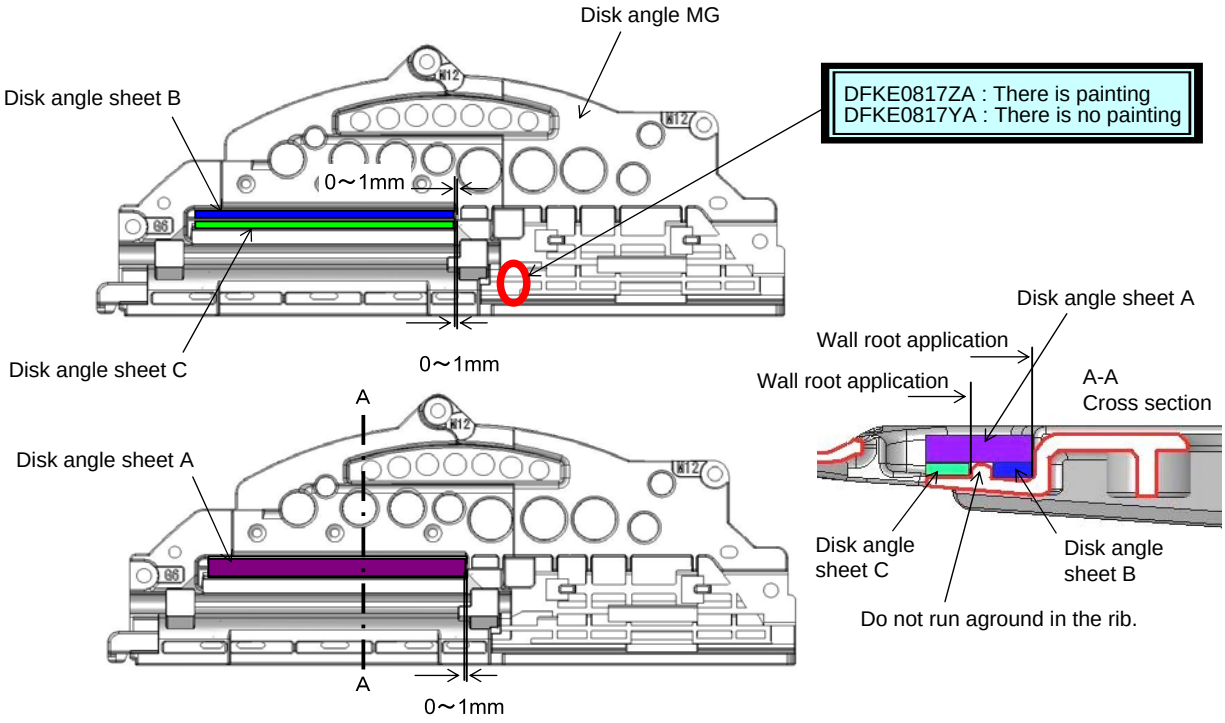


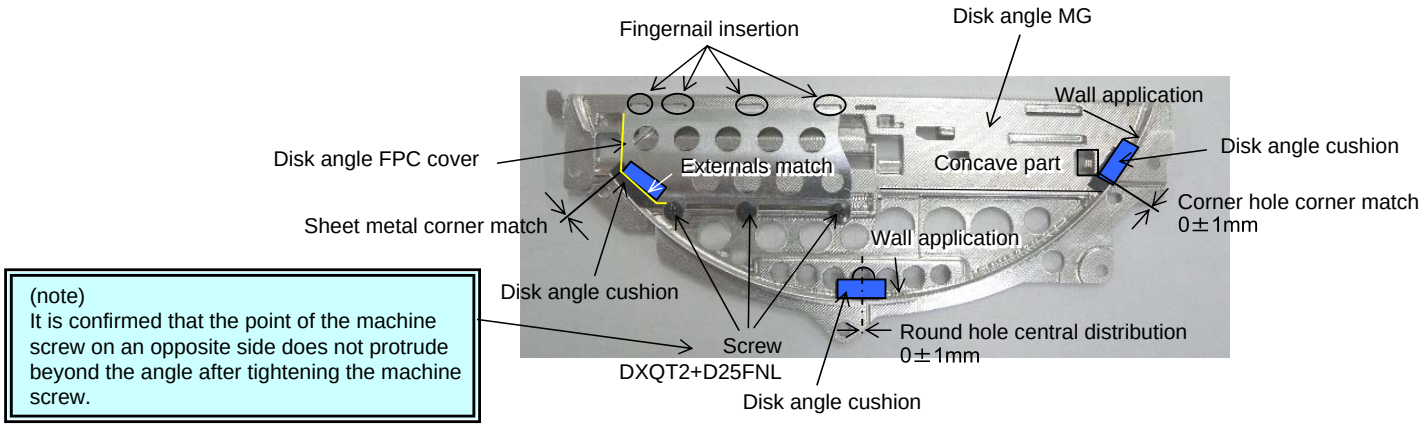


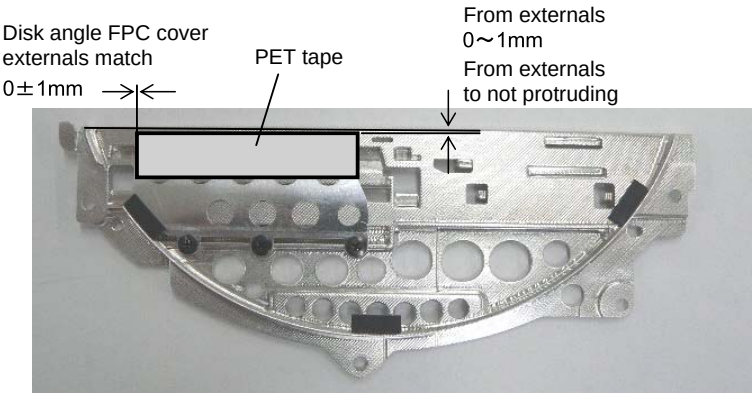


9.3.4.11. Assembly of the Disk Cover



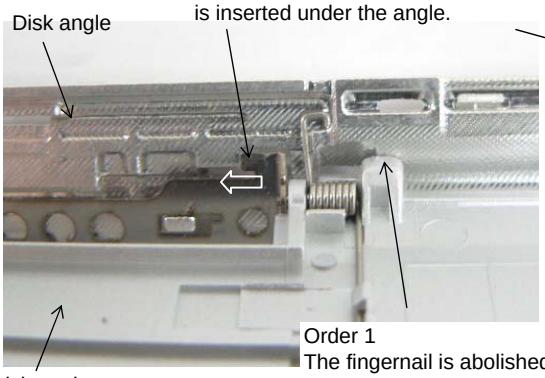

Disk angle MG
Disk angle sheet B
DFKE0817ZA : There is painting
DFKE0817YA : There is no painting
0～1mm
Disk angle sheet C
0～1mm
Disk angle sheet A
Wall root application
Wall root application
A-A
Cross section
A
Disk angle sheet A
A
0～1mm
Disk angle
sheet C
Disk angle
sheet B
Do not run aground in the rib.


Fingernail insertion
Disk angle MG
Wall application
Disk angle FPC cover
Externals match
Concave part
Disk angle cushion
Corner hole corner match
0±1mm
Sheet metal corner match
Wall application
Disk angle cushion
Round hole central distribution
0±1mm
Screw
DXQT2+D25FNL
Disk angle cushion
(note)
It is confirmed that the point of the machine screw on an opposite side does not protrude beyond the angle after tightening the machine screw.


Disk angle FPC cover
externals match
0±1mm
PET tape
From externals
0～1mm
From externals
to not protruding

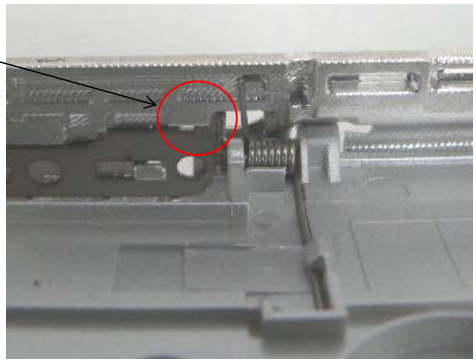
Order 2
The slide is done left and the point is inserted under the angle.

Disk angle

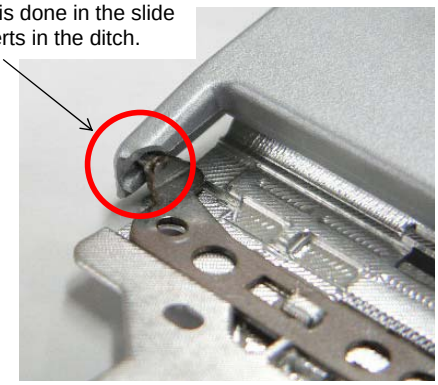


Disk angle

Order 1
The fingernail is abolished at the right of the angle switching off lack part.

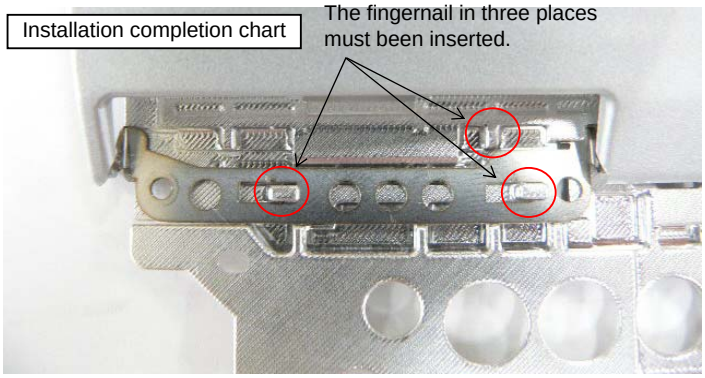


Order 3
The pin is done in the slide and inserts in the ditch.



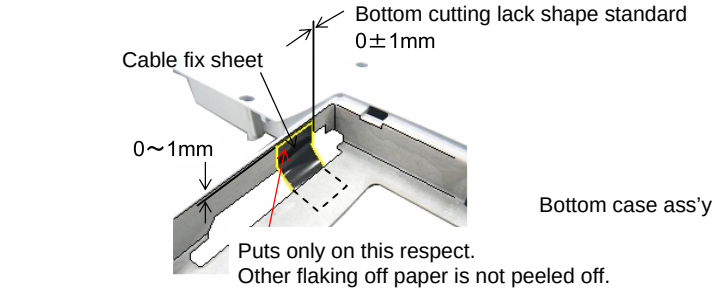
Installation completion chart

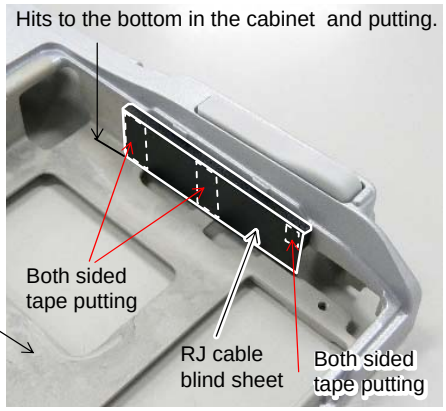
The fingernail in three places must been inserted.

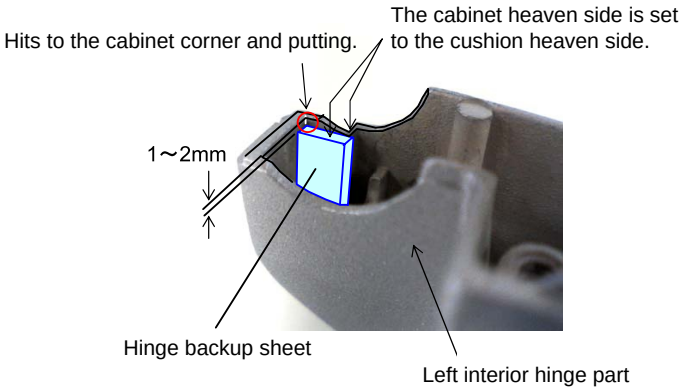


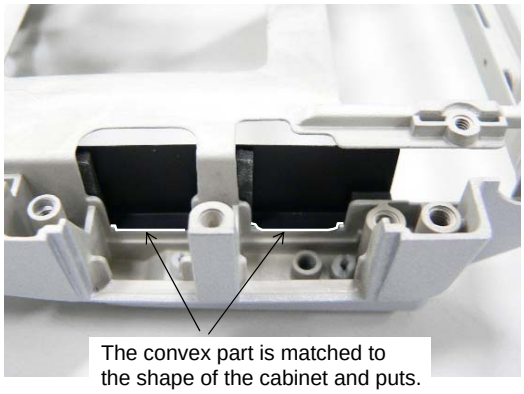
9.3.5. Assembly knowhow of the Bottom Case

9.3.5.1. Putting RJ Cable Bling Sheet / Hinge Buck Up Sheet / Cable Fix Sheet

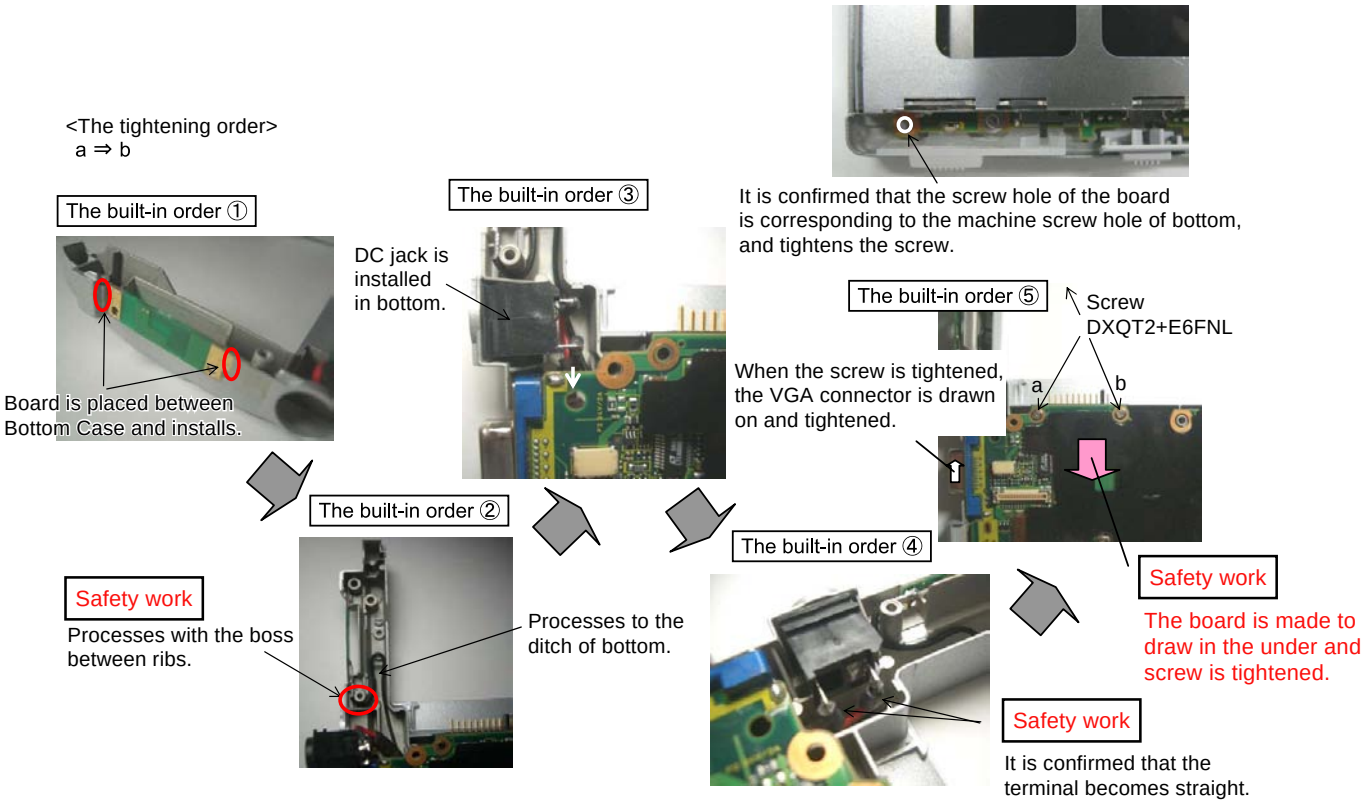




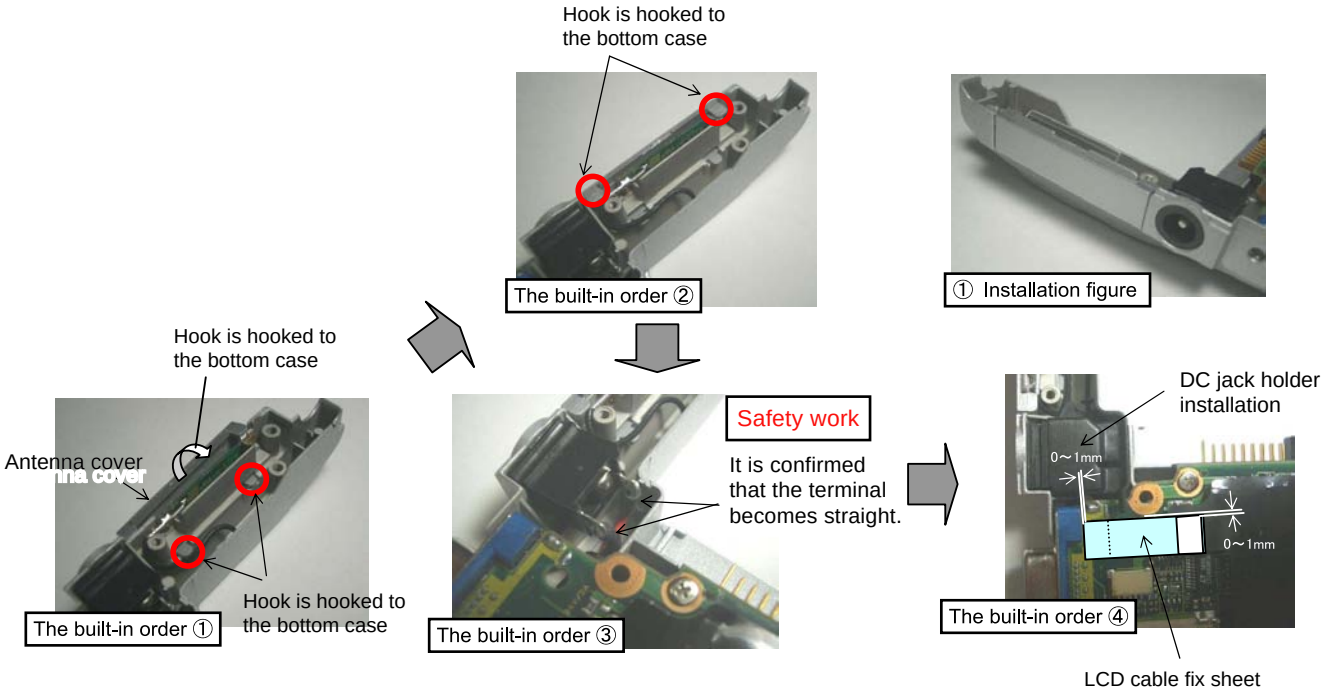




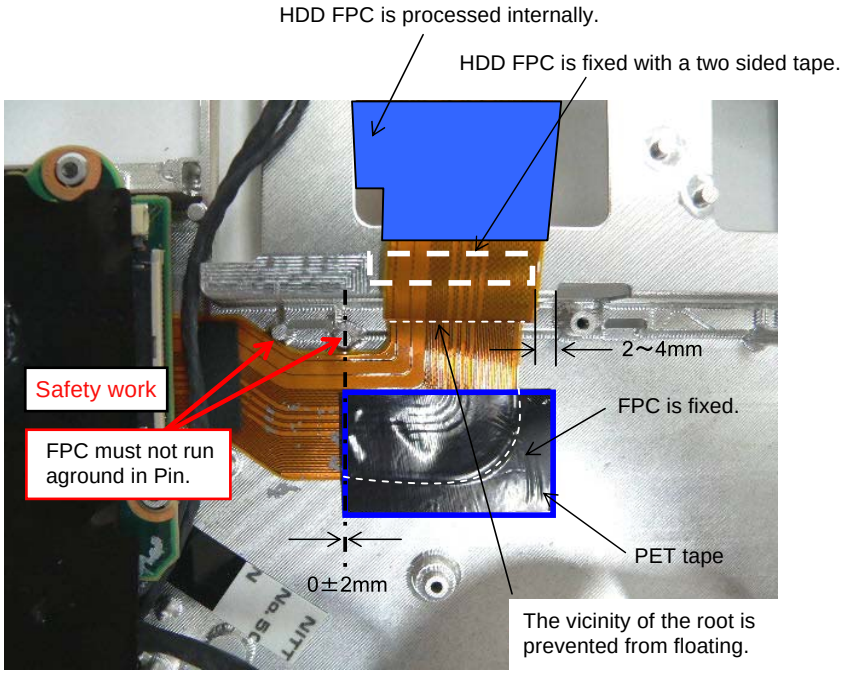
9.3.5.2. Setting Antenna Board and Line processing (1)



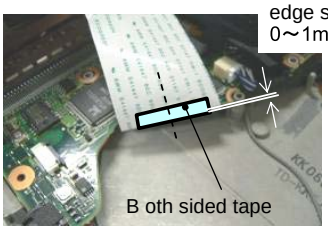
9.3.5.3. Assenbly of the Antenna Cover (L)



9.3.5.4. Line processing HDD FPC



9.3.5.5. Putting Tape and Sheet



FFC bend part edge standard 0～1mm

The part where conduction cloth comes in succession is firmly suppressed.

Processing between bosses

Conduction cloth is processed straight next to the boss.

Slack is processed under the tape.

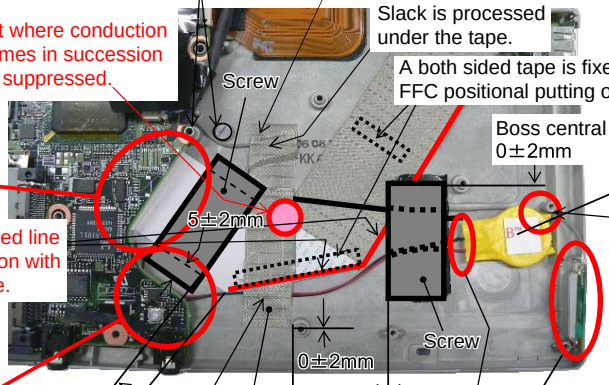
A both sided tape is fixed while installed in the FFC positional putting out treatment device.

Screw

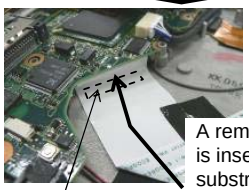
Boss central standard 0±2mm

Refer to the affixation specification to Figure 2

The coaxial cable is processed between the battery and the boss.

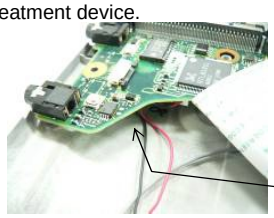


The position of a red line puts out the position with a treatment device.



A remaining amount is inserted under the substrate. (Contact prevention with drive spacer)

Fixes while installed in the FFC positional putting out treatment device.



Safety work

A remaining amount is inserted under the substrate.
Do not process the cable under MIC,H/P jack.

10±3mm

Processing in the vicinity of Bottom difference root

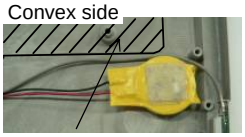
0±1mm

Conduction cloth

Boss central standard 0±2mm

Refer to Figure 1

Convex side



Fixation after processing not put on convex side of bottom is done

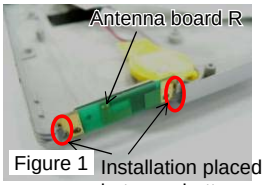
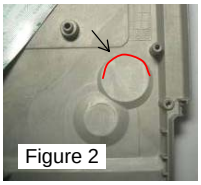


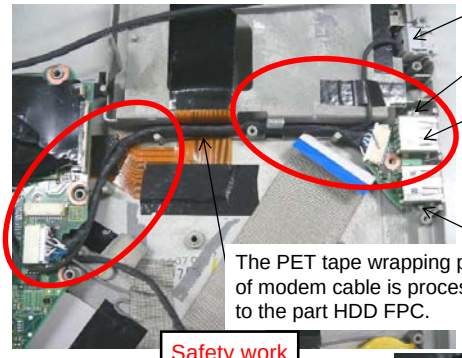
Figure 1

Installation placed between bottom case

Fixes with the tape after the cable is processed below. (Securing of drive and clearance)

Affixation matched to plinth externals (left chart red line)
A curved surface side is affixed to bottom case.





Modem connector installation

Inserts in positioning pin.

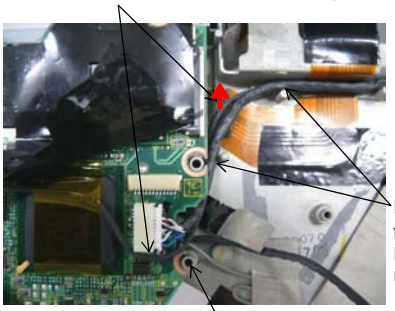
USB board installation

Inserts in positioning Pin.

The PET tape wrapping part of modem cable is processed to the part HDD FPC.

Safety work

Processing which passes side of connector
Slack is lost by processing the cable in the direction of the arrow when slackening.



Safety work

Processing of pin to inside
Modem cable : Under
USB cable : Upper

Safety work

Modem cable is prevented from running aground to the boss.

Safety work

Processing of boss to inside
The cable must not run aground on the boss.

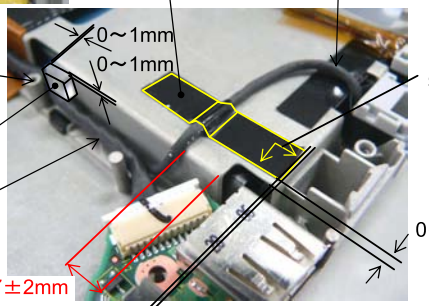
USB cable spacer

Processing of pin to inside
Modem cable : Under
USB cable : Upper

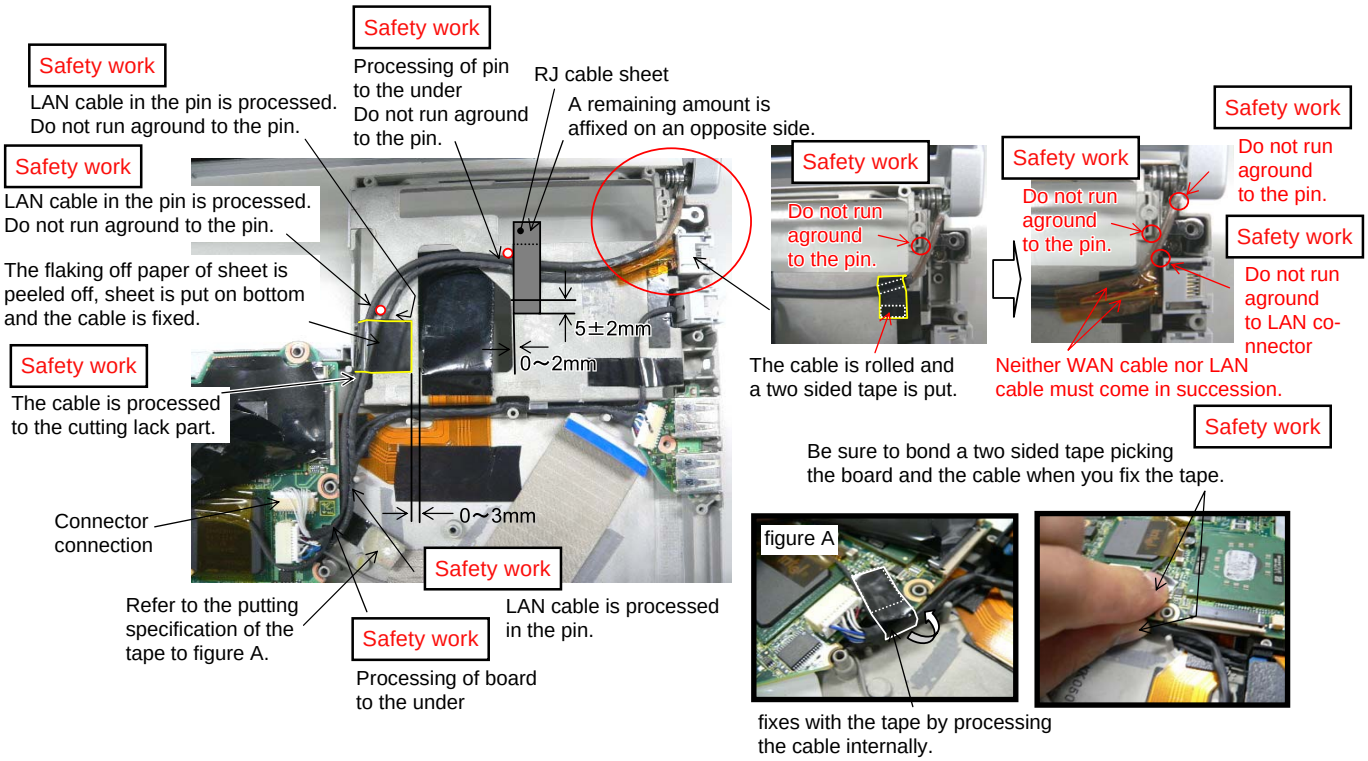
Cable positional accuracy is put out about this size with a cable positioning treatment device.

The cable is drawn out straight.

RJ cable sheet



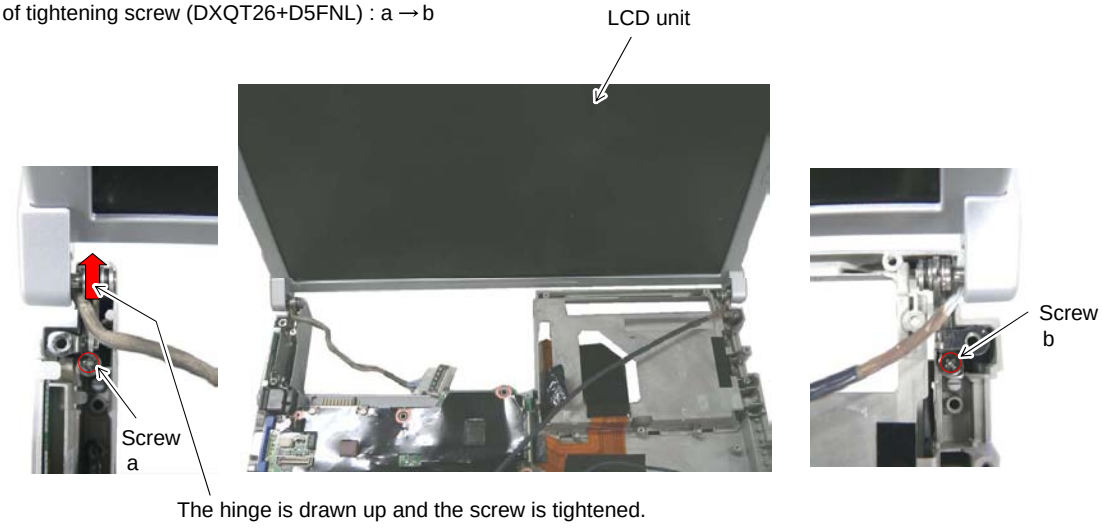
Bottom corner standard Putting


Safety work
LAN cable in the pin is processed.
Do not run aground to the pin.
Safety work
Processing of pin
to the under
Do not run aground
to the pin.
RJ cable sheet
A remaining amount is
affixed on an opposite side.
Safety work
LAN cable in the pin is processed.
Do not run aground to the pin.
The flaking off paper of sheet is
peeled off, sheet is put on bottom
and the cable is fixed.
5±2mm
0～2mm
Safety work
The cable is processed
to the cutting lack part.
Connector
connection
0～3mm
Refer to the putting
specification of the
tape to figure A.
Safety work
LAN cable is processed
in the pin.
Safety work
Processing of board
to the under
Safety work
Do not run
aground
to the pin.
The cable is rolled and
a two sided tape is put.
Safety work
Do not run
aground
to the pin.
Safety work
Do not run
aground
to the pin.
Safety work
Do not run
aground to LAN co-
nnector
Neither WAN cable nor LAN
cable must come in succession.
Safety work
Be sure to bond a two sided tape picking
the board and the cable when you fix the tape.
figure A
fixes with the tape by processing
the cable internally.

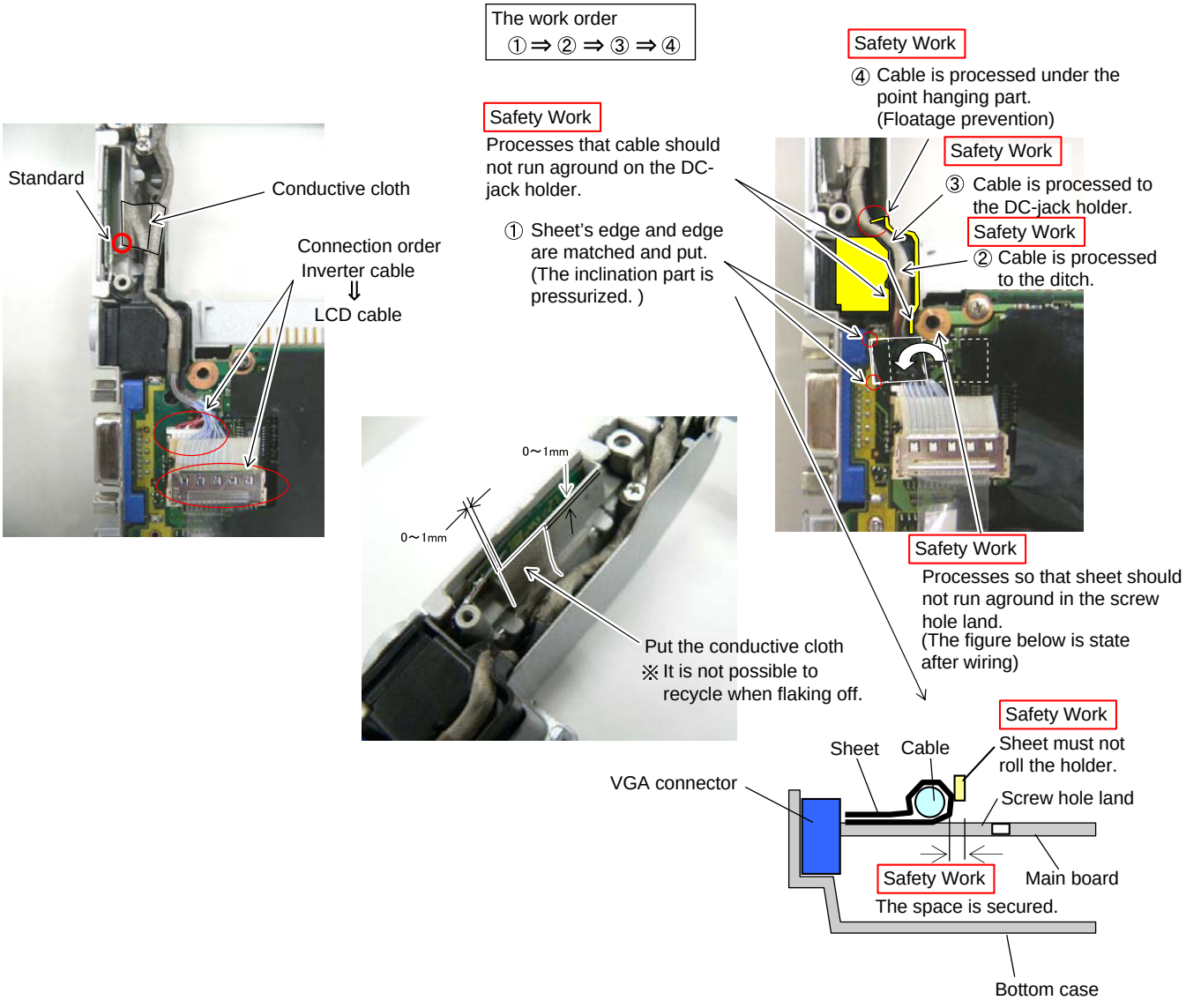
9.3.6. Assembly knowhow of the Body

9.3.6.1. Setting LCD

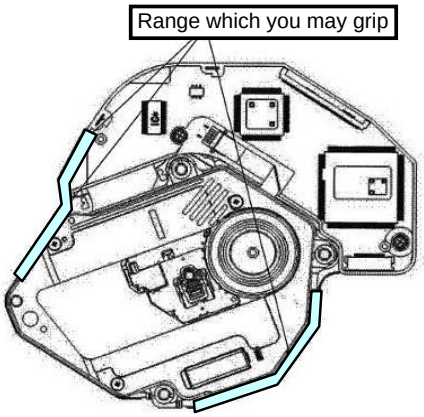
The order of tightening screw (DXQT26+D5FNL) : a → b

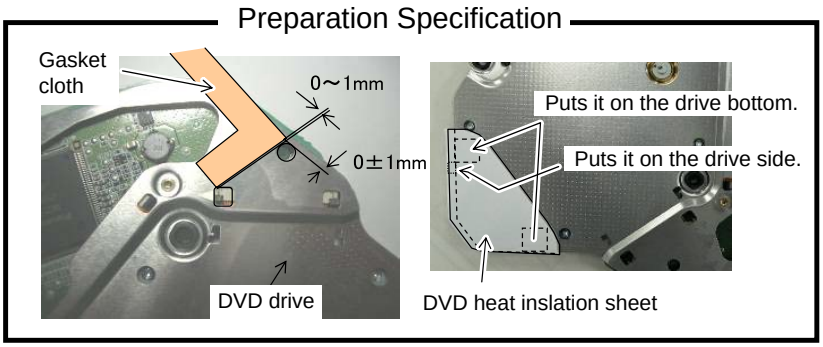


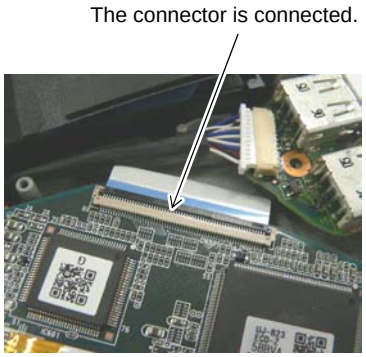
9.3.6.2. Line processing LCD Cable (bottom case side)

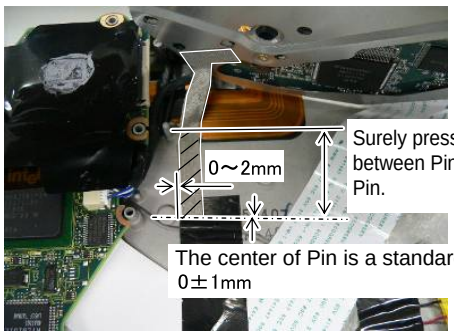


9.3.6.3. Assembly of the Top Case

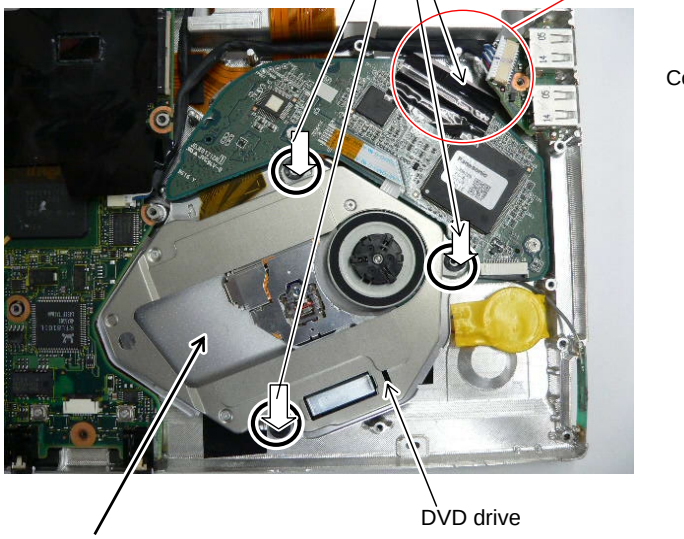


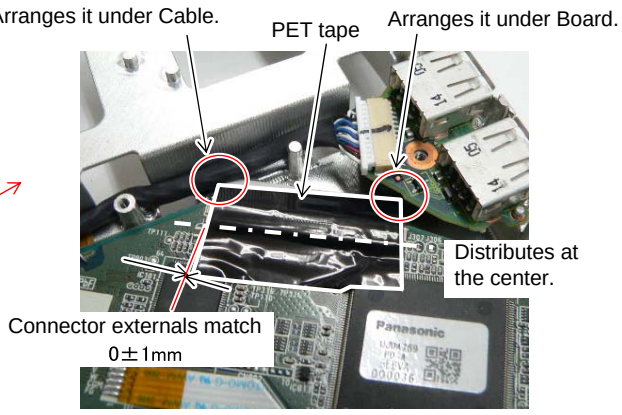


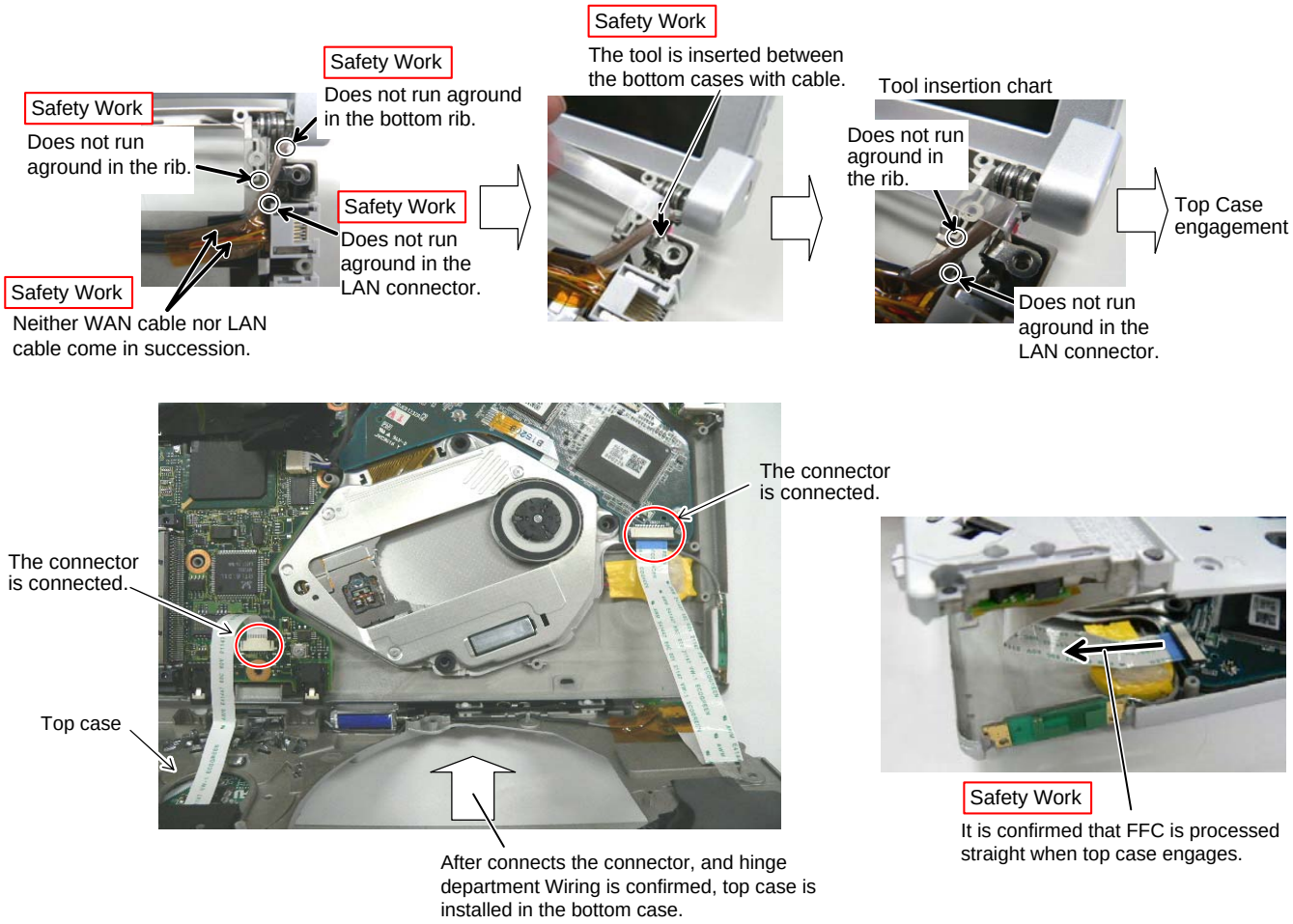




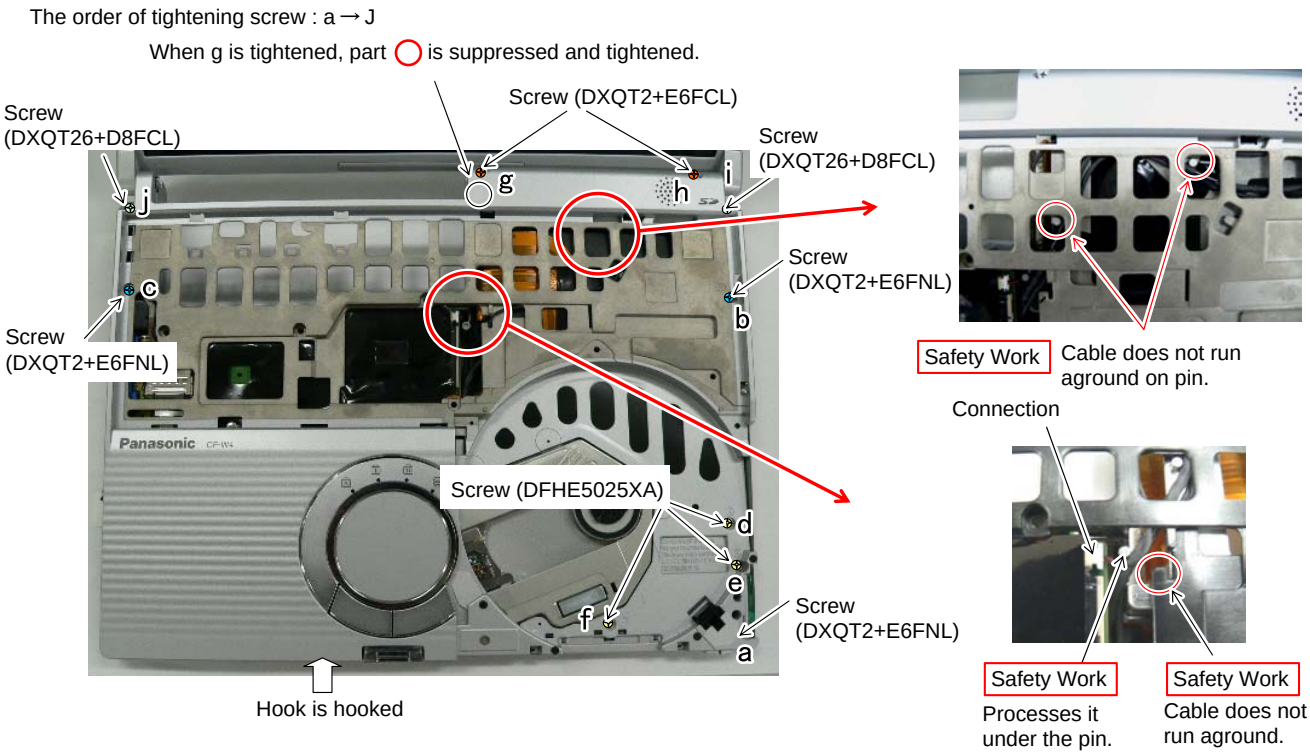
9.3.6.4. Setting Disk Cover



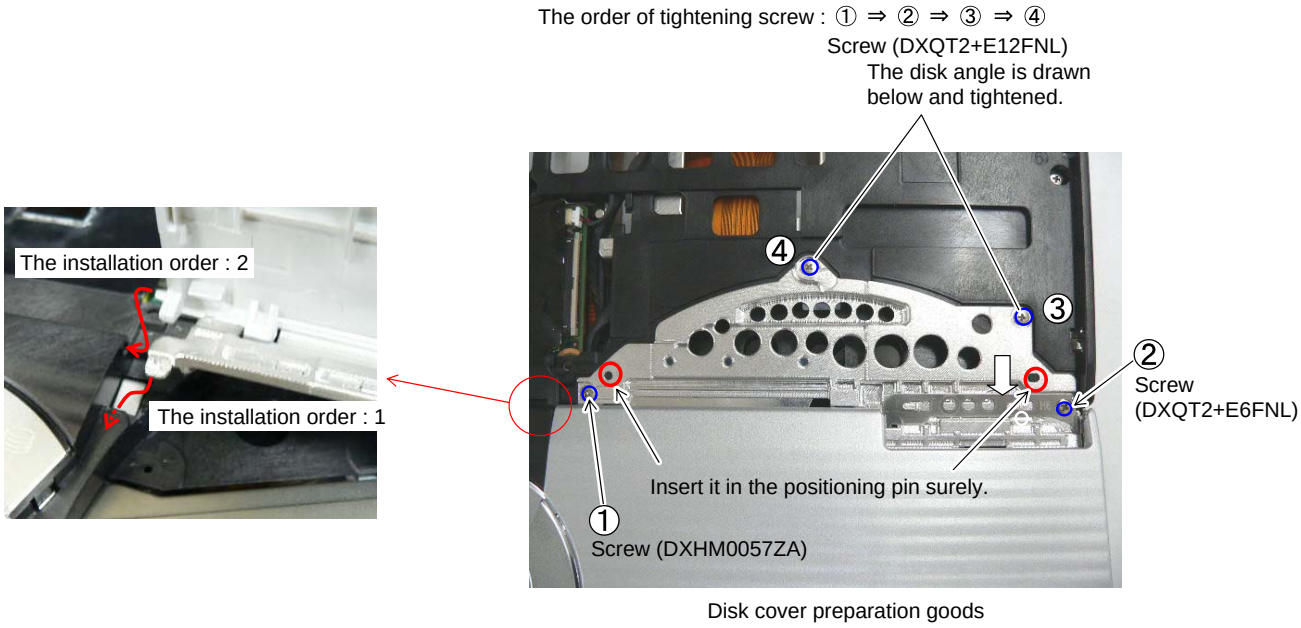




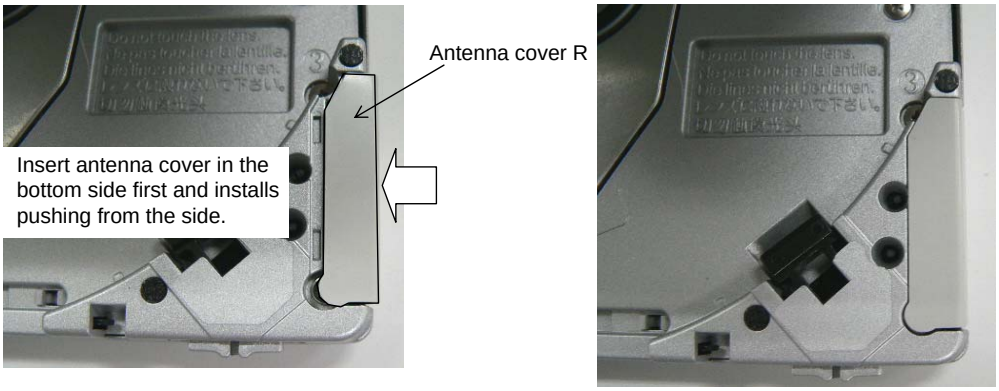
9.3.6.5. Assembly of the Top Case



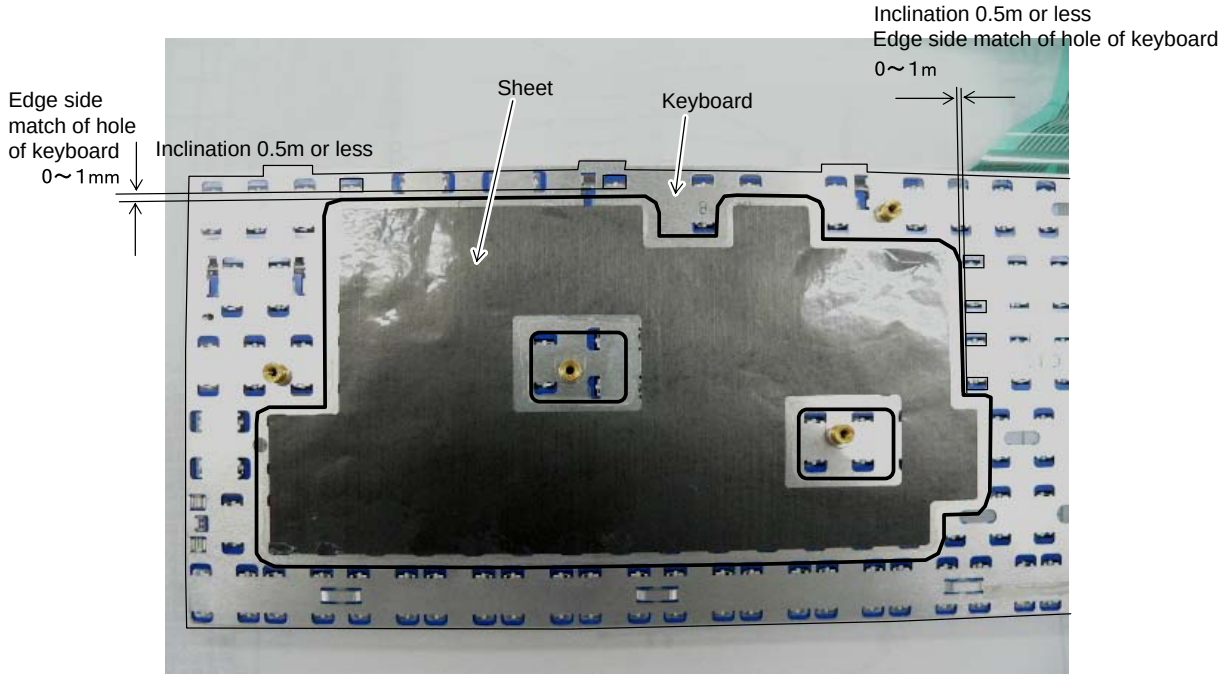
9.3.6.6. Assembly of the Disk Cover and Antenna Cover R

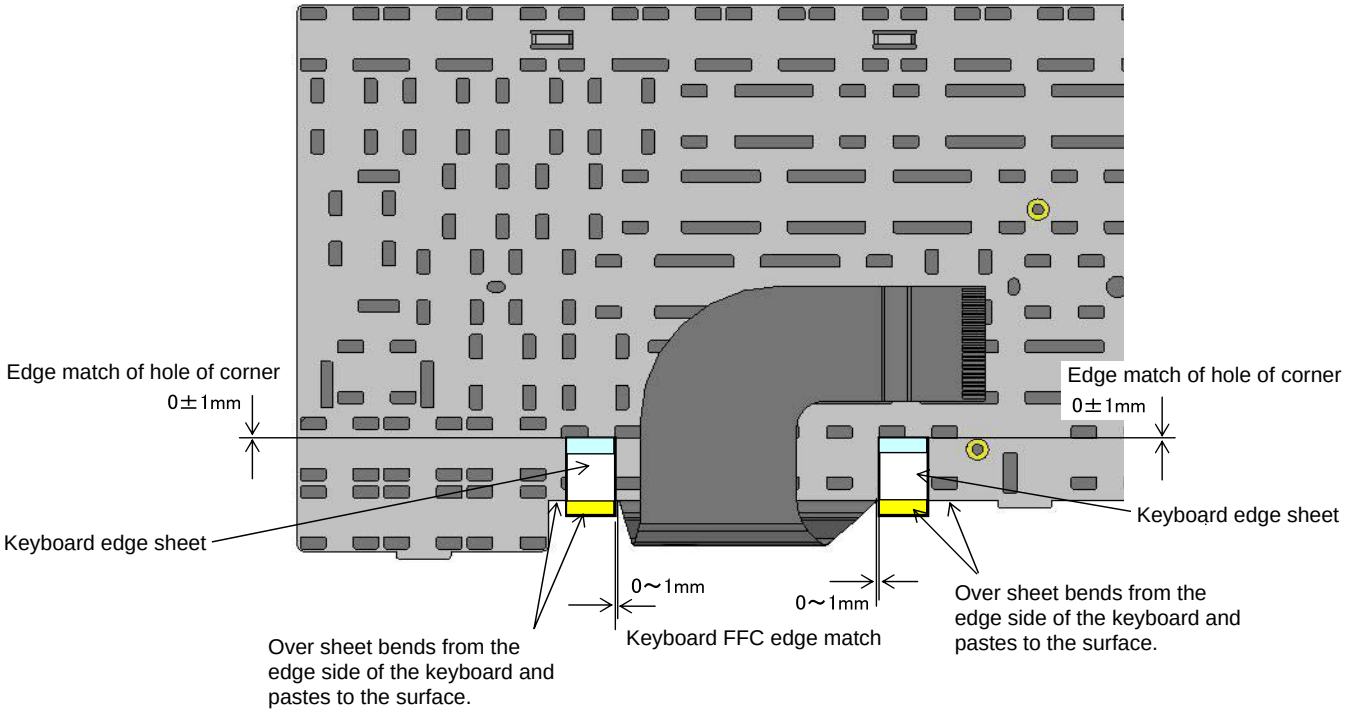


Disk cover preparation goods

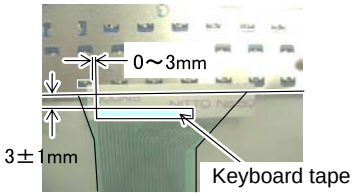


9.3.6.7. Assembly of the Keyboard

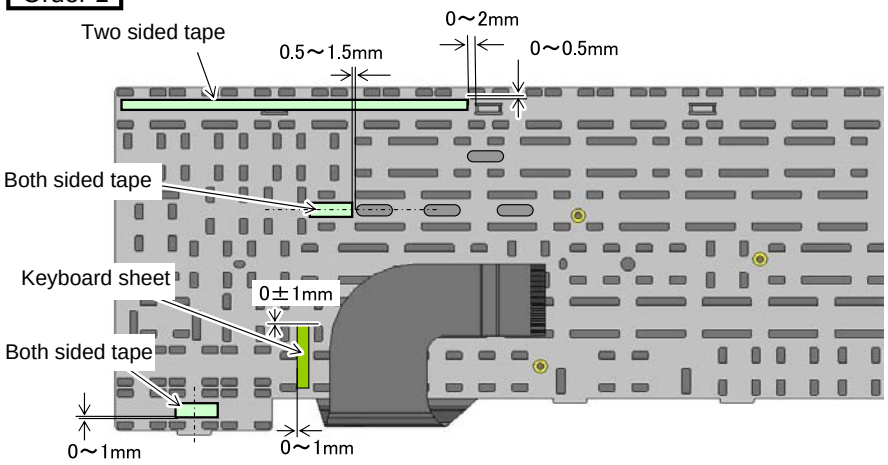




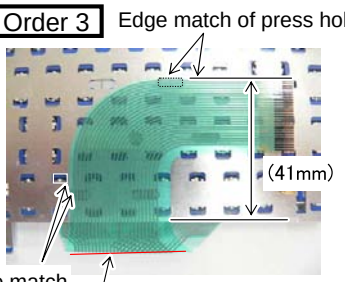
Order 2



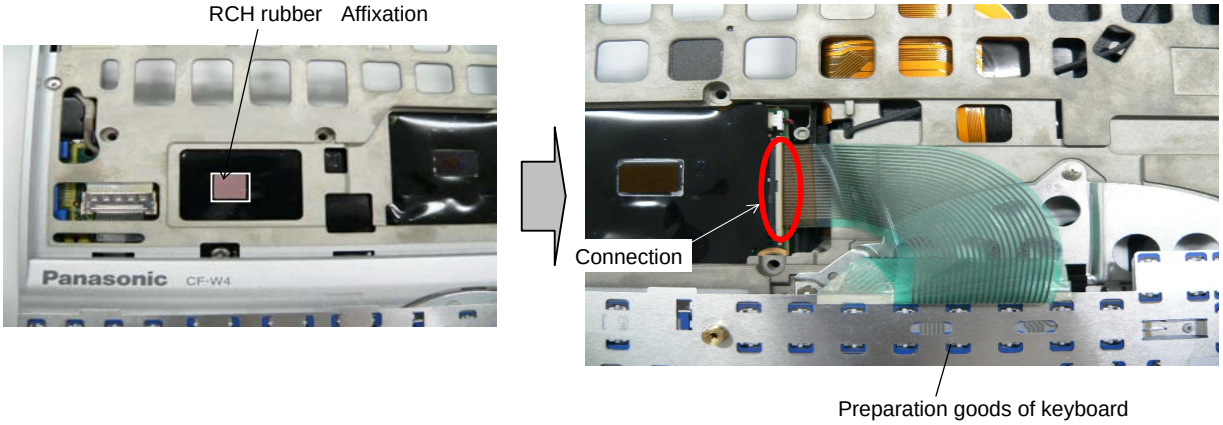
Order 1



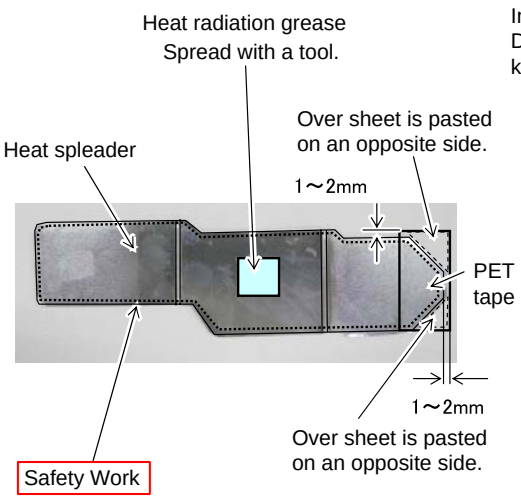
Order 3



Keyboard FFC is bent.
With a pin of ϕ1 or more the bend (bend on inside).
As for the bend, the possibility to disconnect is in ϕ1 or less.



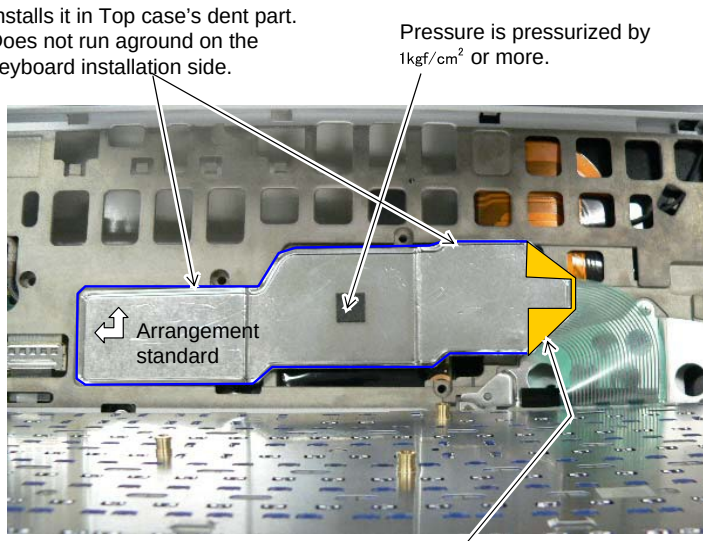
9.3.6.8. Assembly of the Heat Spreader



Safety Work

Attention

There is a possibility to damage sheet and cable when the part where aluminum is thin bends. Returns it if bending. However, use not bare-handed but the tool (pliers etc).

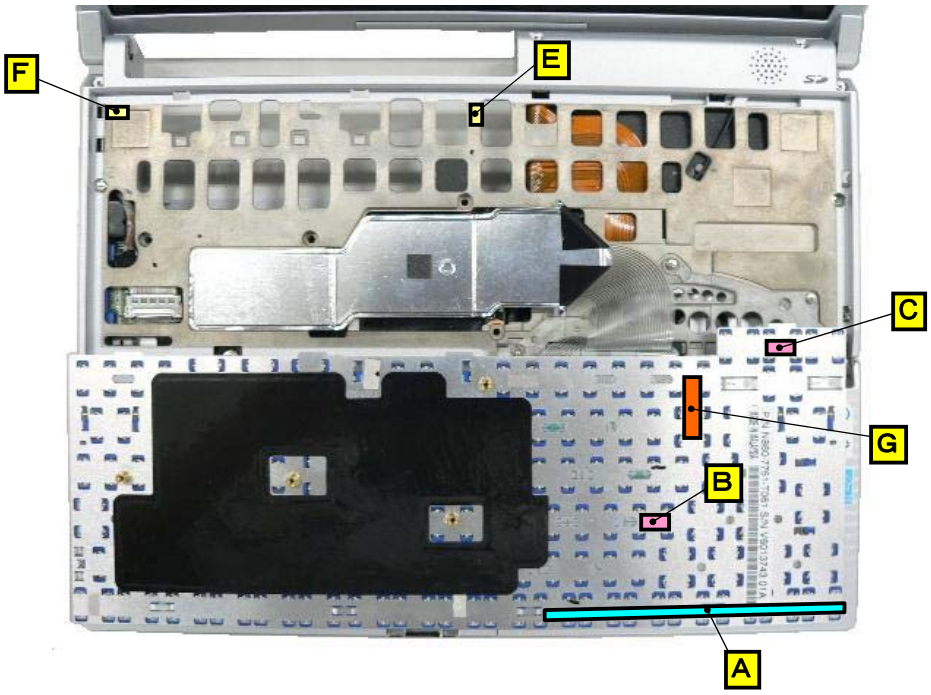


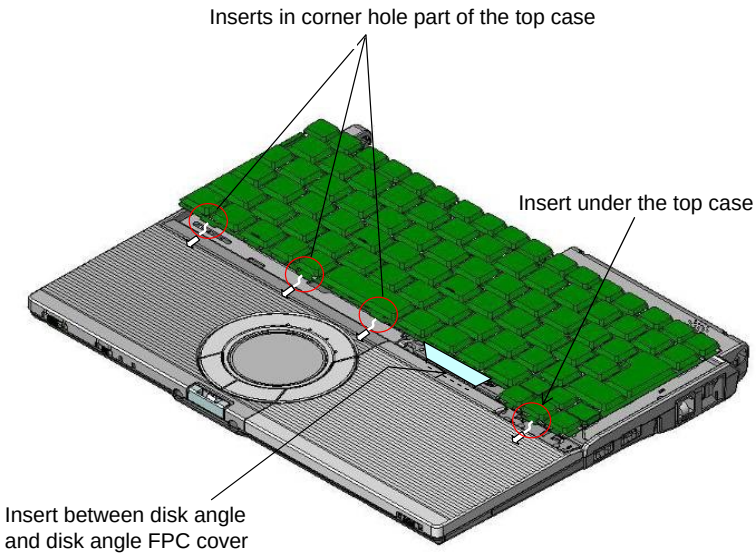
Safety Work

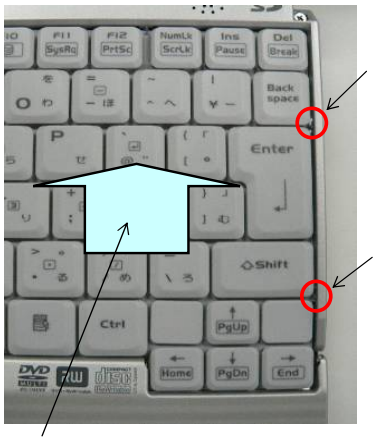
It is confirmed that edge part where on keyboard FFC is surely covered with the PET tape.

9.3.6.9. Setting Keyboard

The flaking off papersa (6 places A to F) of a two sided tape are peeled off.

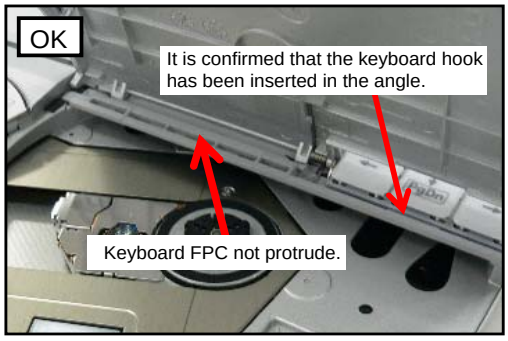


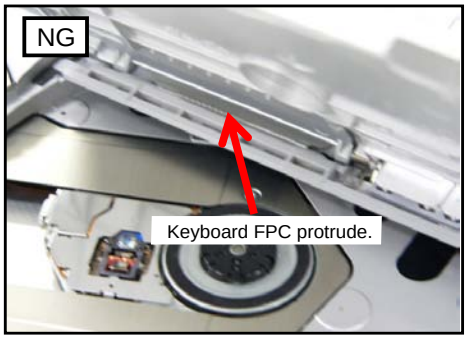




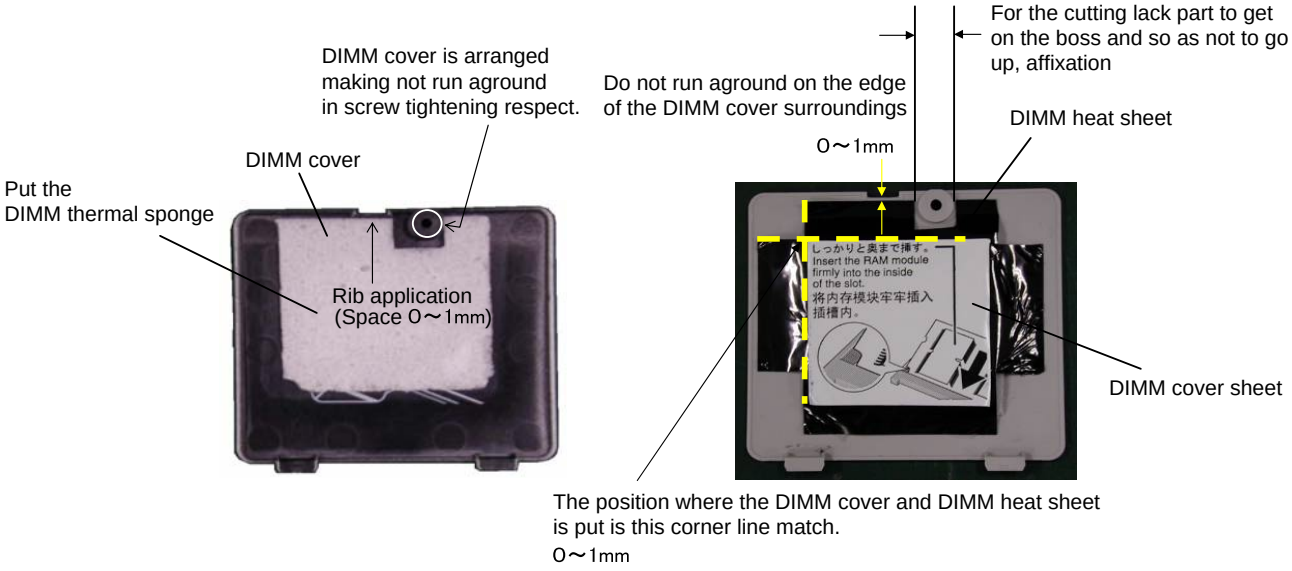
Keyboard pressurizing point

Disk Cover is opened and keyboard FPC is confirmed.





9.3.6.10. Setting DIMM Cover

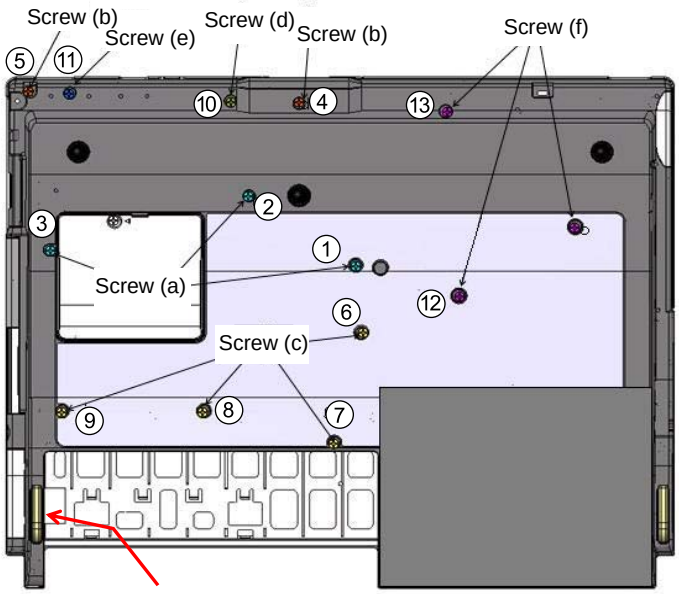


9.3.6.11. The tightening screw of Bottom Case

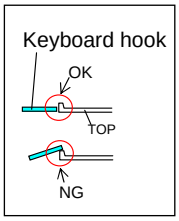
Screw (a) : DXHM0039ZA
Screw (b) : DXHM0057ZA
Screw (c) : DXQT2+E12FNL
Screw (d) : DXQT2+E10FNL
Screw (e) : DXQT2+D4FNL
Screw (f) : DRHM0092ZA

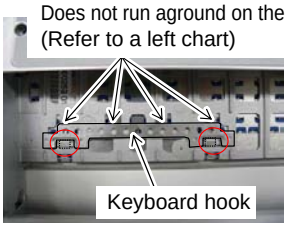
The order of tightening screw : ① ～ ⑭

※ When the screw is tightened, the bottom case is held and the tool is used.

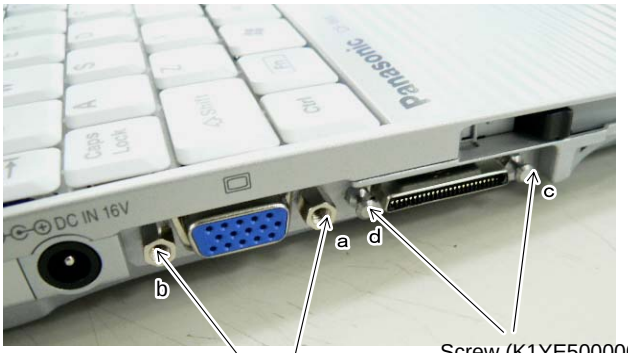


It is confirmed that cable is not narrowing with top case between the bottom cases. LCD cable is exchanged if narrowing.

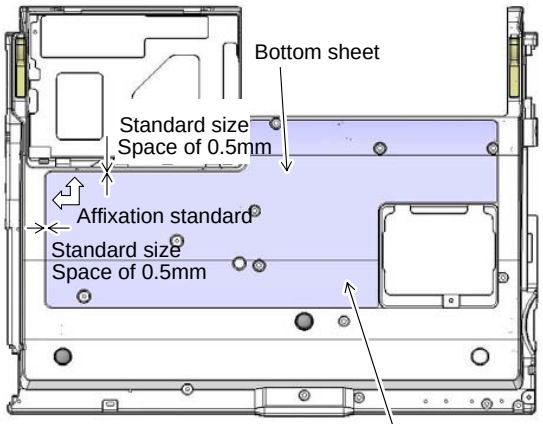




The order of tightening screw : a → d



9.3.6.12. Putting Sheet



- Affixes to the concave part.
  (Does not begin to over from the concave part)
- The label does not float and there is no bubble.

Product number : T1208Z

Figure 2

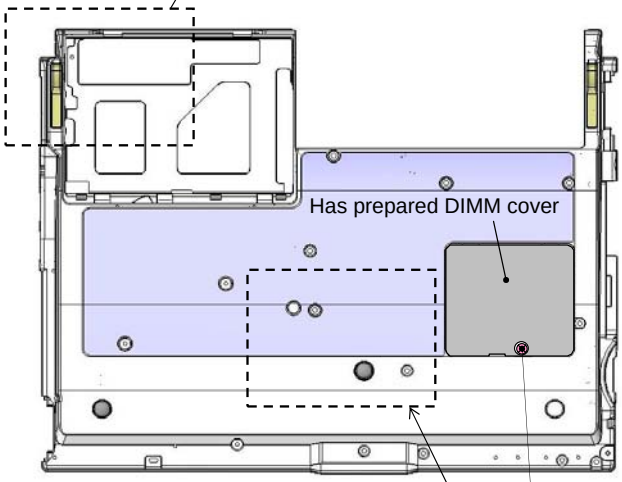


Figure 1
Product inside photograph

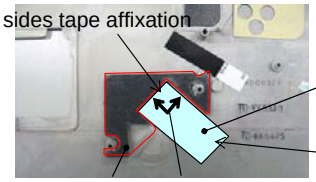
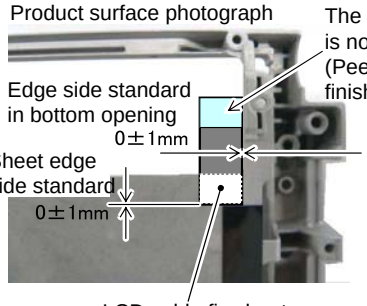
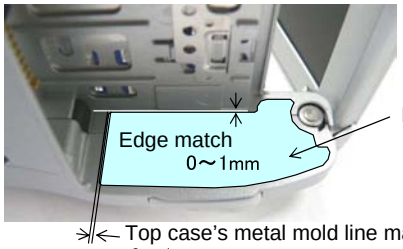


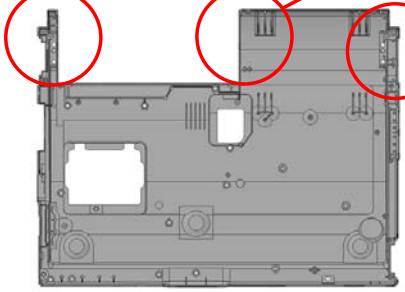
Figure 2
Product surface photograph



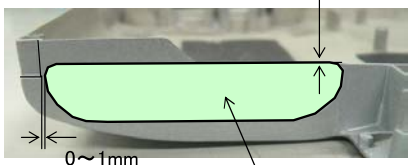
※ All aspects are firmly surely pressurized.
※ It is not possible to recycle.

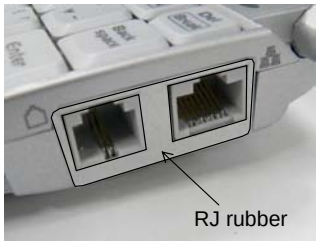


Top case's metal mold line match
0～1mm



Externals match
0～0.5mm
Does not begin to see from externals.

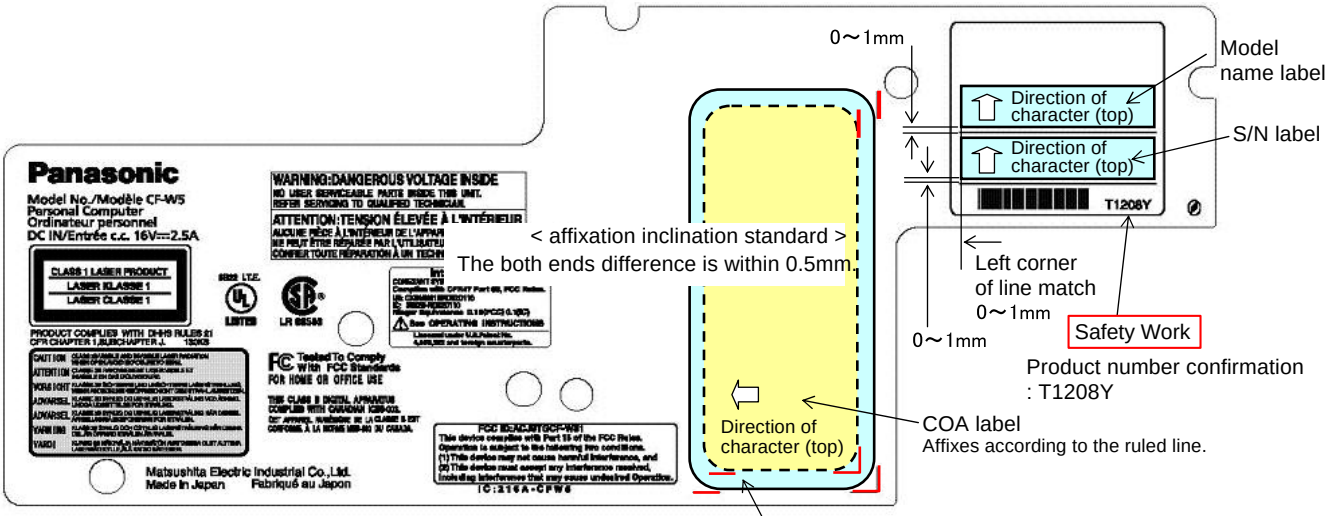




Affixes in the denting part.
※ The paste does not overflow the edge side.
Does not begin to see from the denting part.
Does not run aground.
※ It is not possible to recycle.

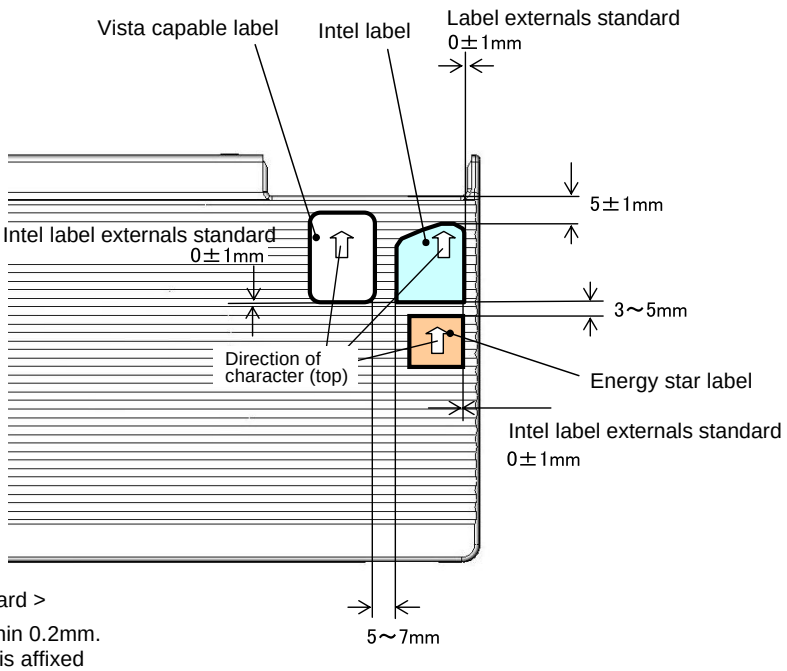
9.3.6.13. Putting Labels

The product back ratings signature board



COA lamination seal
Affixes according to the ruled line.
※ The direction of Microsoft of the hologram character is set in the direction of the character of the COA label.

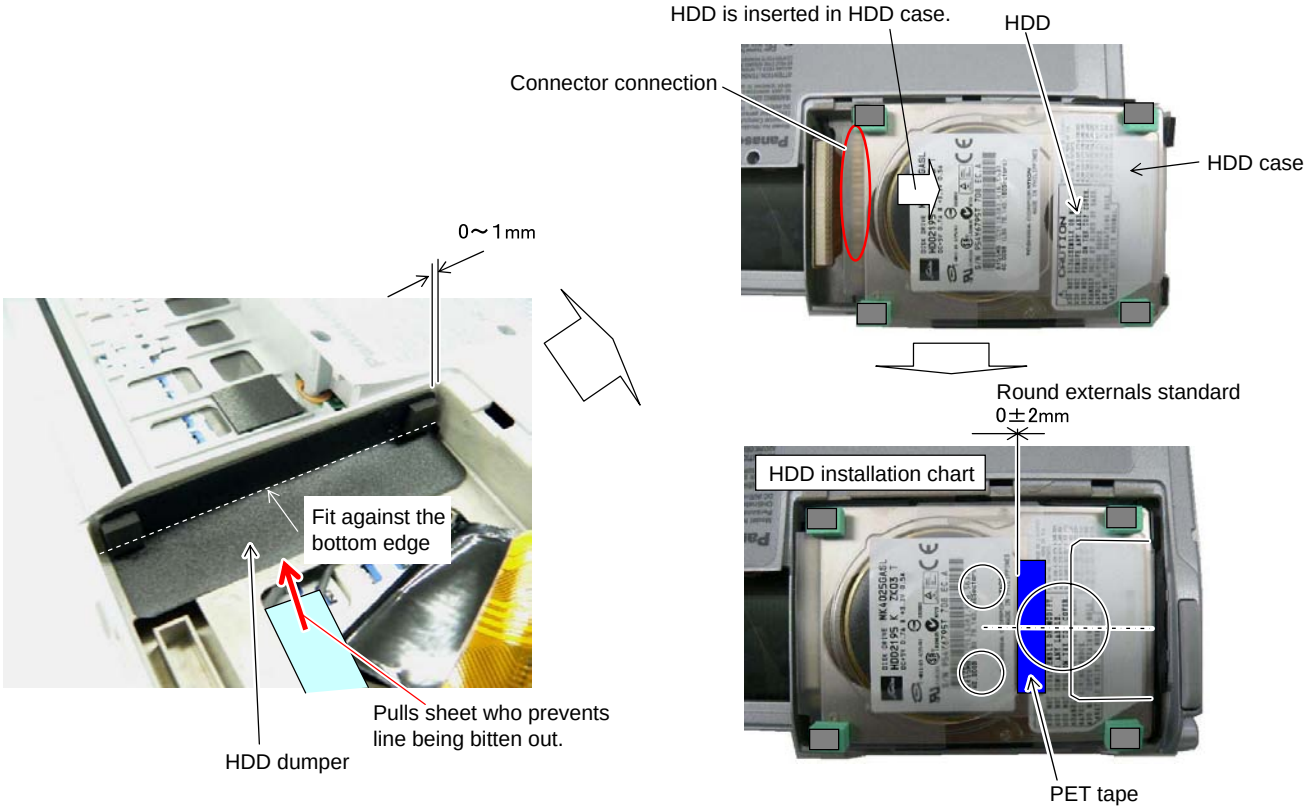
Vista capable label is put, and Intel label and and Energy star label are put.

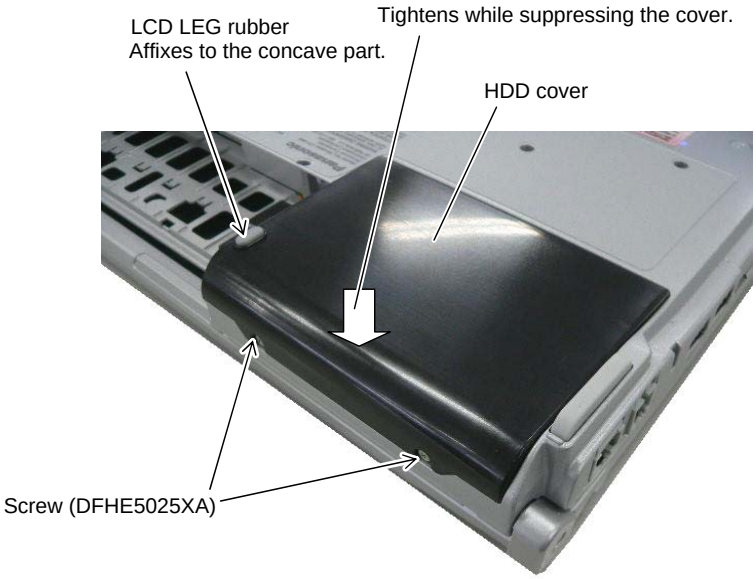


< Labels affixation inclination standard >

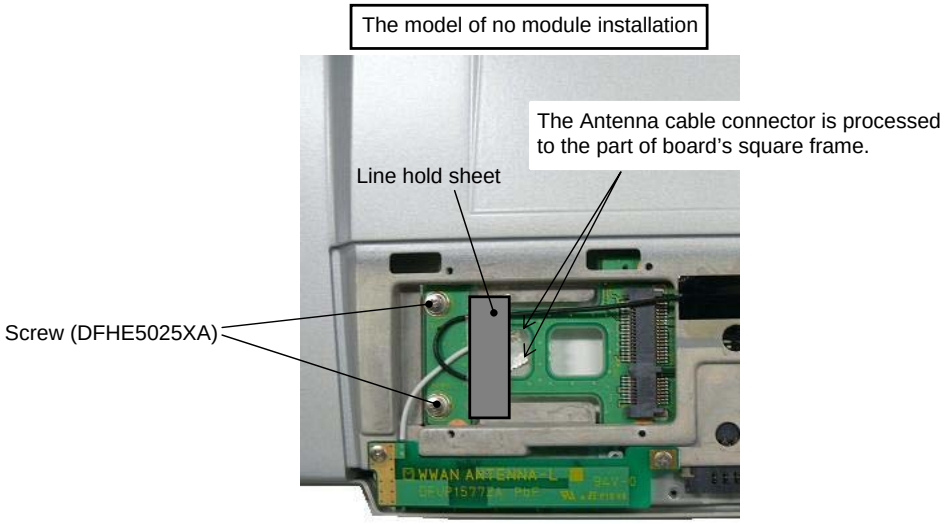
The both ends difference is within 0.2mm.
Externals inspection after label is affixed
※ It is confirmed that the label paste has not overflowed.

9.3.6.14. Assembly of the HDD / HDD Cover

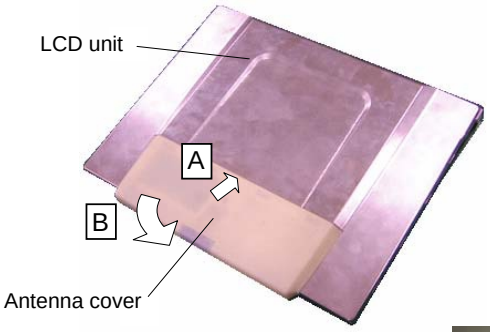




9.3.6.15. Putting Tapes for WWAN Antenna Cable

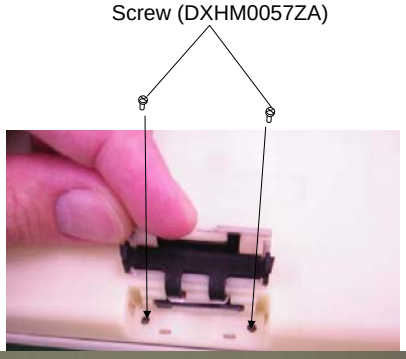


9.3.6.16. Assembly of the LCD Rear



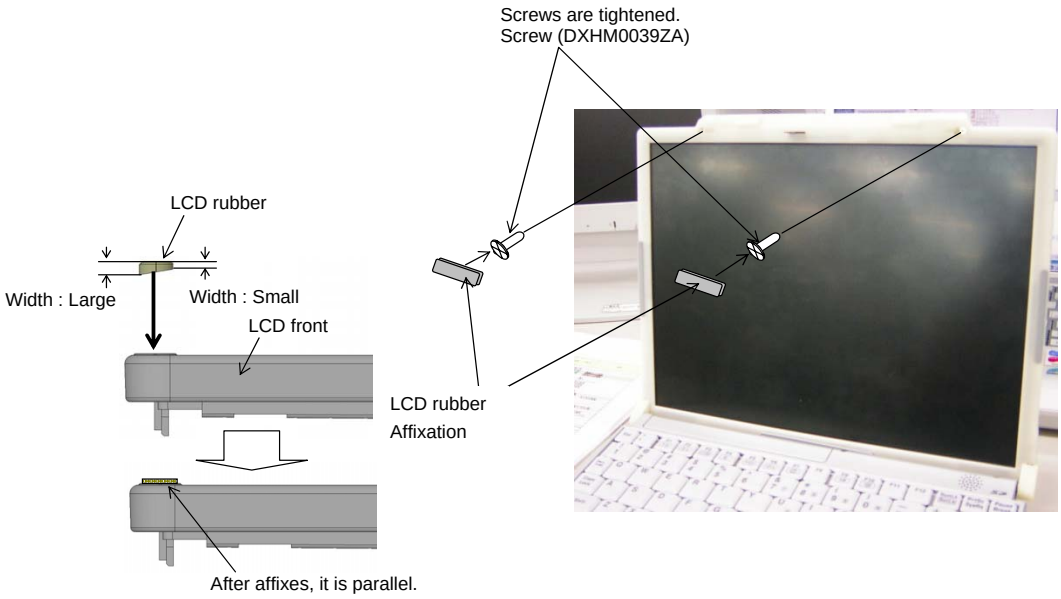
After the hook in the point part is inserted (A), the opposite side is pushed in (B).

SIMM cover is opened and the screw is tightened.



Safety Work

It is confirmed that the both ends of antenna cover and the center of antenna cover are convex does not over 0.3mm.

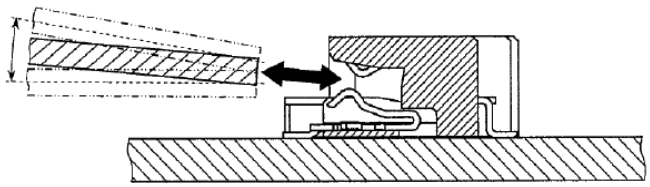


9.3.6.17. Assembly of the WWAN Module

<Notes when module is inserted>

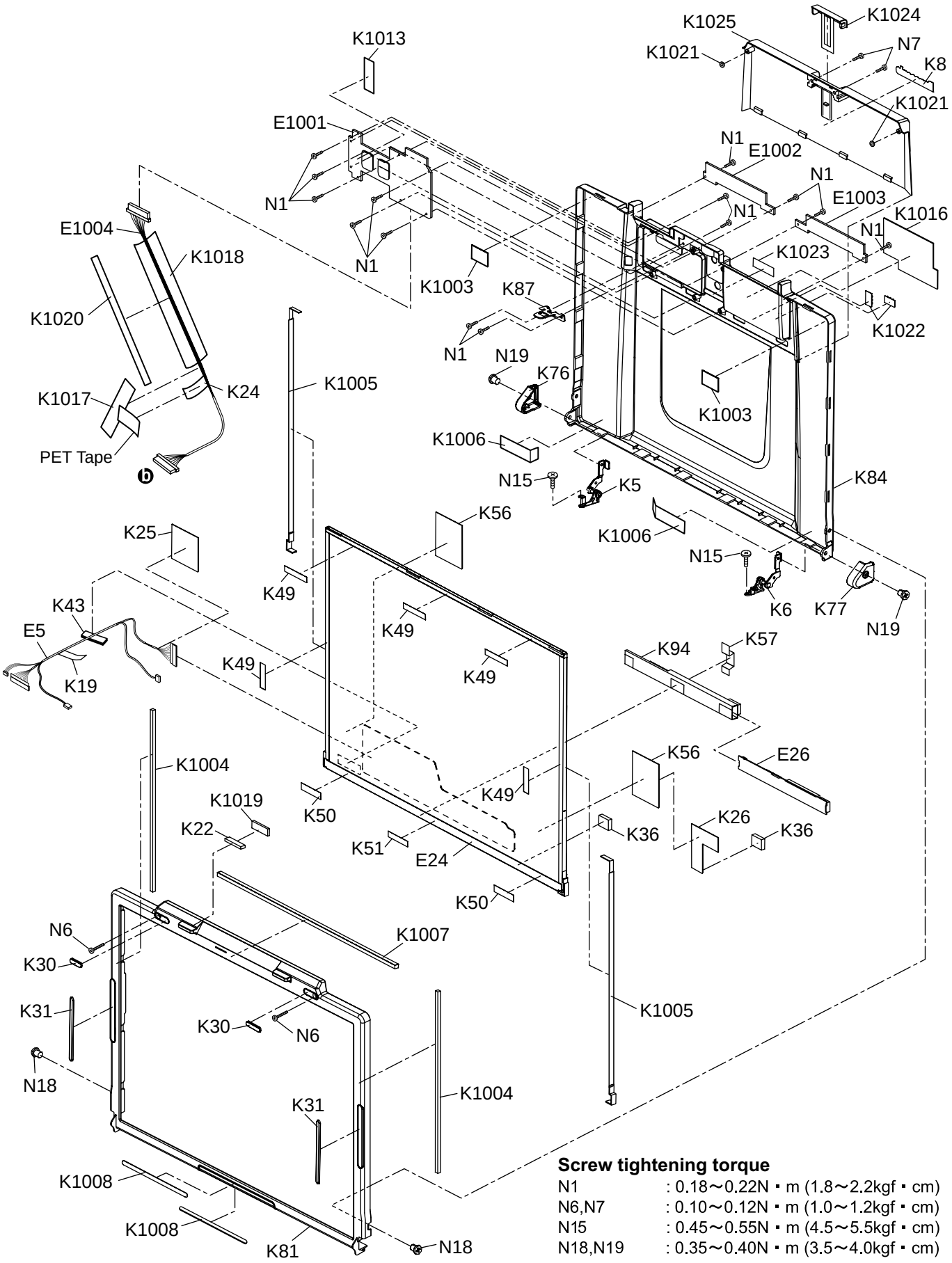
The card shall be inserted and separated correctly according to the direction and the process as shown below.

1. The card shall be inserted or separated with the right parallel to or inclined up to 5°～10° against the mounted board.
2. The card shall be inserted completely.



10 Exploded View

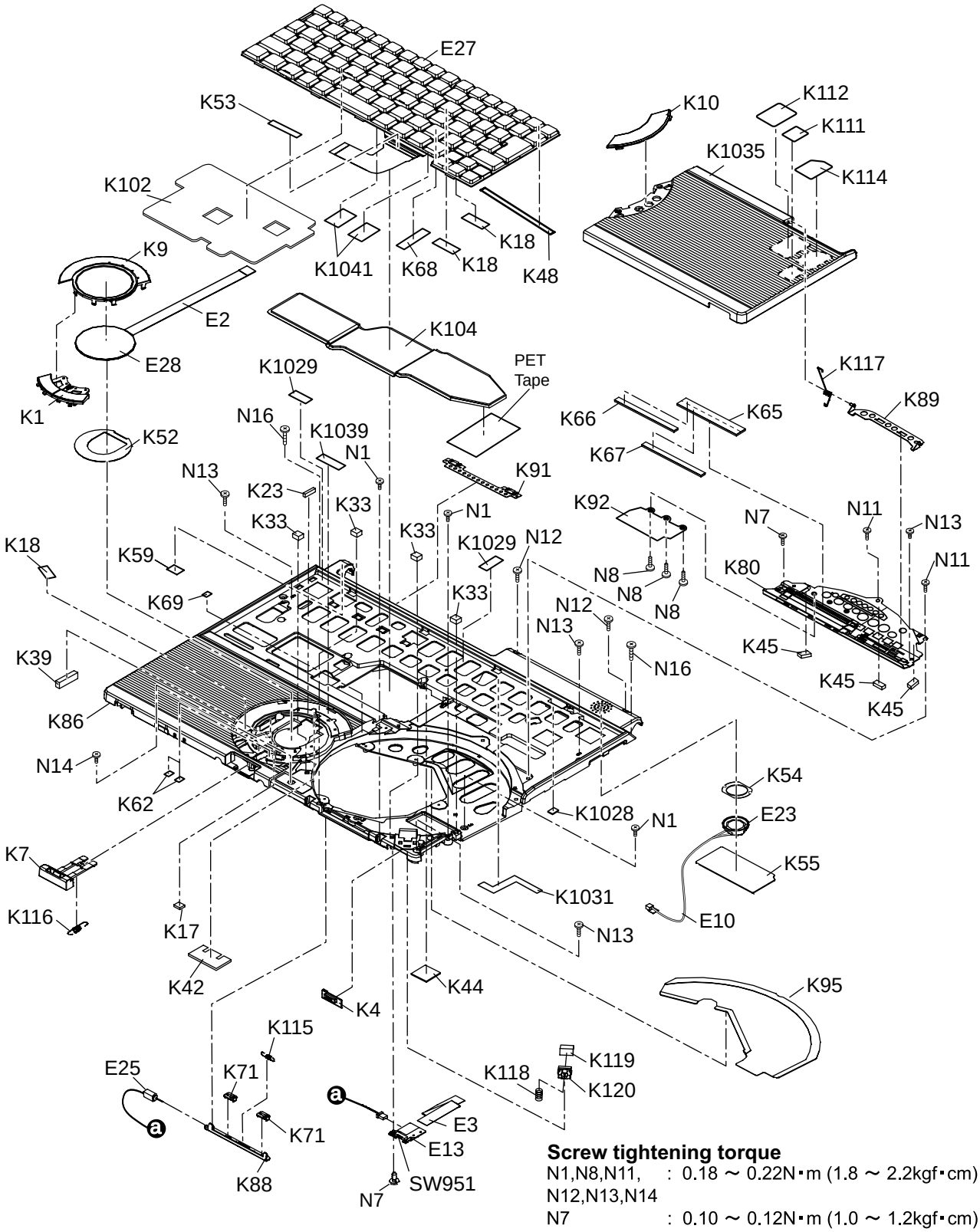
10.1. Display Section



Screw tightening torque

N1	: 0.18～0.22N・m (1.8～2.2kgf・cm)
N6,N7	: 0.10～0.12N・m (1.0～1.2kgf・cm)
N15	: 0.45～0.55N・m (4.5～5.5kgf・cm)
N18,N19	: 0.35～0.40N・m (3.5～4.0kgf・cm)

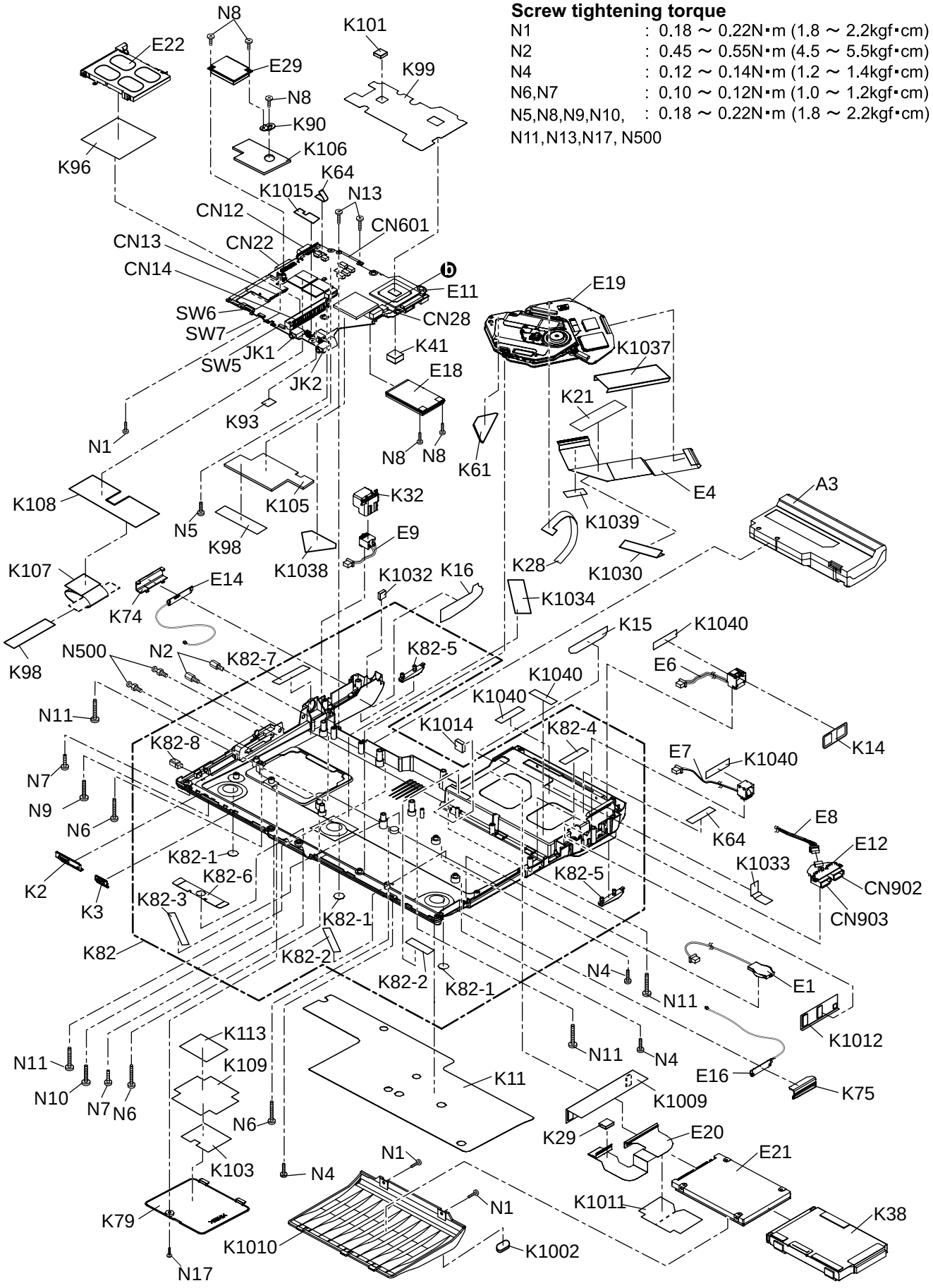
10.2. Cabinet Section



Screw tightening torque

N1,N8,N11, N12,N13,N14	:	0.18 ～ 0.22N･m (1.8 ～ 2.2kgf･cm)
N7	:	0.10 ～ 0.12N･m (1.0 ～ 1.2kgf･cm)
N16	:	0.45 ～ 0.55N･m (4.5 ～ 5.5kgf･cm)

10.3. Bottom Section



11 Replacement Parts List

Note : Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

CF-W5LWEZZBM

REF. NO and AREA	PART NO.	DESCRIPTION	Q'TY
Main Block Unit			
E1 ⚠	CR-2032/K5A	COIN BATTERY	1
E2	DFJK12U112BB	PAD FFC	1
E3	DFJK20T108BB	SW PCB FFC	1
E4	DFJK9000ZA	DRIVE FFC	1
E5	DFJS957ZA	LCD CABLE	1
E6	DFJS979ZA	LAN CABLE	1
E7	DFJS959ZC	MODEM CABLE	1
E8	DFJS960ZA	MAIN SUB CABLE	1
E9	DFJS1020YA	DC－IN CABLE	1
E10	DFJS962ZA	SP CABLE	1
E11	DL3U11534ABB	PCB, MAIN RTL	1
E12	DL3U21534ABB	PCB, USB RTL	1
E13	DL3U31534ABB	PCB, SW RTL	1
E14	N1ZYYY000002	ANTENNA PCB-L ASS'Y	1
E16	N1ZYYY000001	ANTENNA PCB-R ASS'Y	1
E18	N5HZC0000019	WIRELESS LAN MODULE	1
E19	UJDA769PD1-A	CD-R/RW&DVD-ROM DRIVE	1
E20	DL3UP1443AAA	PCB, HDD FPC UNIT	1
E21	N3CAYYY00006	HDD （60GB)	1
E22	K1YYZZ000060	CONNECTOR	1
E23	L0AA01A00018	SPEAKER	1
E24	L5EDDYY00001	LCD	1
E25	L9AAA5DB0010	SOLENOID	1
E26 ⚠	N0GB1J000012	INVERTOR	1
E27	N2AZZJ000038	KEYBOARD US	1
E28	N2EAYYY00008	TOUCH PAD	1
E29 ⚠	N5HAZ0000014	MDC MODEM	1
E1001	DL3UP1567LAA	PCB, WWAN RTL	1
E1002	DL3UP1577LAA	PCB, WLAN ANTENNA UNIT(SUB) RTL	1
E1003	DL3UP1578LAA	PCB, WLAN ANTENNA UNIT(MAIN) RTL	1
E1004	DFJS1048ZA	WM CABLE	1
Accessories			
A1 ⚠	CFAA1623AM9	AC ADAPTOR	1
A2 ⚠	K2CG3DR00003	AC CORD	1
A3 ⚠	NCR-B/602A	LITHIUM ION BATTERY PACK	1
A4 ⚠	DFQX5617ZA	MANUAL	1
A5	DFJS1070ZA	MODEM CABLE	1
A6	DFHR3E85ZA	EDGE PROTECTION SHEET A	1
A7	DFHG1546ZB-0	LCD RUBBER	2
Packing Material			
P5	DFPK1194YA	PACKING CASE(OVERSEAS)	1
P6	DFPN0846ZA	CUSHION B	2
P7	DFPN0847ZA	CUSHION T	2
Mechanical Parts			
K1	DFBC0314ZB-0	PAD BUTTON	1
K2	DFBD0180ZB-0	POWER SWITCH KNOB	1

K3	DFBD0182ZA-0	LAN SWITCH KNOB	1
K4	DFBD9006ZA-0	DISK EJECT KNOB ASS'Y	1
K5	DFBH3056ZA	HINGE-L	1
K6	DFBH3057ZA	HINGE-R	1
K7	DFBS0076ZA-0	LCD KNOB T5 WAN1	1
K8	DFGB0089VB-0	PANASONIC LABEL	1
K9	DFGE0106ZB-0	PAD COVER	1
K10	DFGE0107ZB-0	PAD COVER RING	1
K11 ⚠	DFGT1208YA	BOTTOM SHEET W5 WAN	1
K14	DFGX0425ZA-0	RJ COVER	1
K15	DFGX0428ZA-0	BATT SHEET	1
K16	DFGX0429ZA-0	BATT SHEET L W4	1
K17	DFHE0215ZA	SHEET	1
K18	DFHE0416ZA	DOUBLE SIDE TAPE(KBD)	3
K19	DFHE0436ZA	CLOTH LCD CABLE 1	1
K21	DFHE0835ZA	DOUDENFU	1
K22	DFHE0843ZA	LCD MAGNET	1
K23	DFHE0844ZA	GASKET PAD	1
K24	DFHE0862ZA	FILM IMPEDOR	1
K25	DFHE0943ZA	GASKET CLOTH(LCD CABLE)	1
K26	DFHE0945ZA	GASKET CLOTH(LCD)	1
K28	DFHE0957ZA	GASKET CLOTH	1
K29	DFHG1471YA	LCD METAL DAMPER B	1
K30	DFHG1546ZB-0	LCD RUBBER	2
K31	DFHG1766ZA-0	LCD SIDE RUBBER	2
K32	DFHG1767ZA-0	DC JACK HOLDER	1
K33	DFHG1768XA-0	DISK COVER CUSHION	4
K36	DFHG1773ZA	LCD DAMPER C	2
K38	DFHG1936ZB	HDD CASE WAN	1
K39	DFHG1778ZA	PCMCIA STOPPER CUSHION	1
K41	DFHG1786ZA	CPU CUSHION	1
K42	DFHG1787ZA	MINI-PCI CUSHION	1
K43	DFHG1797ZA	REAR DAMPER	1
K44	DFHG1800ZA	BATT CUSHION(W4)	1
K45	DFHG1833ZA	DISK ANGLE CUSHION	3
K48	DFHP7180ZA	LCD TAPE E	1
K49	DFHP7208YA	LCD FRONT TAPE A	5
K50	DFHP7209ZA	LCD FORNT TAPE B	2
K51	DFHP7210ZA	LCD FRONT TAPE C	1
K52	DFHP7221YA	PAD SHEET	1
K53	DFHP7226ZA	KB FPC TAPE	1
K54	DFHR3A37ZB	SPEAKER RING	1
K55	DFHR3A38ZA	SPEAKER BOX	1
K56	DFHR3A78ZA	LCD INSULATOR	2
K57	DFHR3A95ZA	INVERTER TAPE	1
K59	DFHR3B19ZA	HINGE BACKUP SHEET	1
K61	DFHR3B86ZA	DVD HEAT INSULATION PACK	1
K62	DFHR3C14ZA	LCD KNOB SPACER	2
K64	DFHR3C33ZA	LCD CABEL FIX SHEET	2
K65	DFHR3C36ZA	DISK ANGLE SHEET A	1
K66	DFHR3C37ZA	DISK ANGLE SHEET B	1
K67	DFHR3C38ZA	DISK ANGLE SHEET C	1
K68	DFHR3C39ZA	KB SHEET	1
K69	DFHR3C40ZA	DISK COVER SHEET	1
K71	DFHR6188ZA	DISK LOCK BUSH	2
K74	DFKE0772ZA-0	ANTENNA COVER-L	1
K75	DFKE0773ZA-0	ANTENNA COVER-R	1
K76	DFKE0877ZA-0	HINGE COVER L	1

K77	DFKE0878ZA-0	HINGE COVER R	1
K79	DFKE0815ZA-0	DIMM COVER LIGHT	1
K80	DFKE0817ZA	DISK ANGLE	1
K81	DFKF0274ZA-0	LCD FRONT WAN	1
K82 ⚠	DFKF8165XA-0	BOTTOM CASE ASS'Y	1
K82-1	DFHG371ZA-1	FOOT RUBBER	3
K82-2	DFHP7106YA	BOTH SLDES TAPE	2
K82-3	DFHR3B18ZA	LINE HOLD SHEET	1
K82-4	DFHR3C13ZA	RJ CABLE SHEET	1
K82-5	DFKL0029ZA-0	FOOT RUBBER BACK WAN	2
K82-6	DFMX1174ZA	AUDIO JACK SHEET	1
K82-7	DFMX1251ZA	BOTTOM CABLE SHEET	1
K82-8	DFGL0138ZA-0	SD LENZ	1
K84	DFKM0523ZA-0	LCD REAR WAN	1
K86	DFKM8170RA-0	TOP CASE ASS'Y	1
K87	DFMD1203ZA	LCD HOOK WAN	1
K88	DFMD1190YA	DISK COVER LOCK	1
K89	DFMD2165ZA	DISK CV SHAFT ANGLE	1
K90	DFMD3121ZA	MDC PLATE	1
K91	DFMD4057ZA	KB HOOK F999	1
K92	DFMD7A63ZA	DISK ANGLE FPC COVER	1
K93	DFMX0635ZB	EDGE SHEET	1
K94	DFMX1155ZA	INVERTER BOX	1
K95	DFMX1158ZA	DVD PWB SHEET	1
K96	DFMX1160ZA	PCMCIA-MAIN SHEET	1
K98	DFMX1184ZA	SW CABLE SHEET	2
K99	DFMX1242ZA	MAIN PWB SHEET1 W5	1
K101	DFMY0399ZA	MCH RUBBER	1
K102	DFMY0421ZA	HEAT SHEET KB LARGE	1
K103	DFMY0432ZA	DIMM THERMAL SPONGE	1
K104	DFMY3191YA	HEAT SPREADER TOP	1
K105	DFMY3192ZA	HEAT SPLEADER BOTTOM	1
K106	DFMY3206ZA	MEMORY SHEET TOP	1
K107	DFMY3208ZA	WLAN SHEET	1
K108	DFMY3230ZA	MEMORY HEAT SHEET	1
K109	DFMY3231ZA	DIMM HEAT SHEET	1
K111	DFQT0045ZA	ENERGY STAR LABEL	1
K112	DFQT0046ZA	VISTA CAPABLE LABEL	1
K113	DFQT6342ZA	DIMM COVER SHEET T5	1
K114	DFQT9983ZA	CENTRINO SOLO LABEL	1
K115	DFUD0037ZA	DISK KNOB SPRING	1
K116	DFUD0040ZA	LATCH SPRING	1
K117	DFUN0078ZB	DISK COVER ARM SPRING	1
K118	JDBC0044ZA	BREAK SPRING	1
K119	JDBG0032ZA	BREAK PAD	1
K120	JDKJ0059ZA	BREAK LEVER	1
K1002	DFHG1399XA-0	LCD LEG RUBBER	1
K1003	DFHG1944ZA	LCD REAR CUSHION	2
K1004	DFHG1945ZA	LCD SIDE CUSHION	1
K1005	DFHG1946ZA	LCD DAMPER B	2
K1006	DFHG1947ZA	LCD REAR SPACER	2
K1007	DFHG1949ZA	LCD DAMPER A	1
K1008	DFHG1953ZA	LCD BATT RUBBER WAN	2
K1009	DFHG1835ZA	HDD DAMPER	1
K1010	DFKE0883ZB-0	HDD COVER WAN	1
K1011	DFHR3C19ZA	HDD FPC EDGE SHEET	1
K1012	DFHR3B99ZA	RJ CABLE BLIND SHEET	1
K1013	DFHR3E92ZA	LINE HOLD SHEET A	1

K1014	DFHR3F77ZA	USB CABLE FIX SHEET 2	1
K1015	DFMX1259YA	PAD BUTTON SHEET	1
K1016 ⚠	DFGX0475ZA	CABLE BLIND SHEET	1
K1017	DFHE0463ZA	EMI SHEET 3	1
K1018	DFHE1035ZA	WWAN EMI SHEET	1
K1019	DFHG1965ZA	MAGNET SPACER	1
K1020	DFHP7272ZA	WWAN TAPE	1
K1021	DFHR3416ZA	SPACER CU	2
K1022	DFHR5484ZA	CLAMP	2
K1023	DFHR8526ZA	CABLE FIXED SHEET	1
K1024	DFKE0879ZA-0	SIMM COVER WAN	1
K1025	DFKF0275ZB-0	ANTENNA COVER	1
K1028	DFHG1834ZA	SP CABLE FIX CUSHION	1
K1029	DFHP7231ZA	KBD TAPE	2
K1030	DFHP7106ZA	K/B FIXED TAPE	1
K1031	DFHR3C12ZA	SP CABLE SHEET	1
K1032	DFHR3C54ZA	HINGE BACKUP SHEET	1
K1033	DFHR3E90ZA	LINE HOLD SHEET(WM)	1
K1034	DFHR3F69ZA	LAN HOLD SHEET	1
K1035	DFKM0483PA-0	DISK COVER	1
K1037	DFHE1029ZA	DVD FFC GASKET CLOTH	1
K1038	DFHE1030ZA	FERRITE SHEET	1
K1039	DFHP7106YA	BOTH SLDES TAPE	2
K1040	DFHR3C13ZA	RJ CABLE SHEET	4
K1041	DFHR3C18ZA	KB EDGE SHEET	2
N1	DFHE5025XA	SCREW	20
N2	DFHE5035ZB	SCREW	2
N4	DRHM0092ZA	SCREW	3
N5	DRQT2+G6FKL	SCREW	1
N6	DXHM0039ZA	SCREW	5
N7	DXHM0057ZA	SCREW	6
N8	DXQT2+D25FNL	SCREW	8
N9	DXQT2+D4FNL	SCREW	1
N10	DXQT2+E10FNL	SCREW	1
N11	DXQT2+E12FNL	SCREW	6
N12	DXQT2+E6FCL	SCREW	2
N13	DXQT2+E6FNL	SCREW	6
N14	DXQT2+F2FNL	SCREW	1
N15	DXQT26+D5FNL	SCREW	2
N16	DXQT26+D8FCL	SCREW	2
N17	XSB2+4FNL	SCREW	1
N18	DRHM0076ZA	SCREW	2
N19	DRHM0108ZA	SCREW	2
N500	K1YE50000022	SCREW, I/O PIN	2

Replacement Parts List

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CF-W5LWEZZBM (06-11-16)

REF. NO and AREA		PART NO.	DESCRIPTION	Q'TY
MAIN PCB				
C 657 C 696		EEFCD0D101ER	CAPACITOR, 2V, 100µF	2
C 5 C 60 C 61 C 69 C 89 C 185		EEFCX0D221R	CAPACITOR, 2V, 220µF	6
C 630 C 675		EEFCX0G151R	CAPACITOR, 2V, 150µF	2
C 224 C 611 C 612		EEFCX0J101R	CAPACITOR, 6.3V, 100µF	3
C 181 C 676 C 698 C 708 C 709		EEFSX0D331ER	CAPACITOR, 2V, 330µF	5
C 223		EEFUD0J151ER	CAPACITOR, 6.3V, 150µF	1
C 264 C 265 C 333 C 334 C 335 C 336 C 366		F1G0J224A001	CAPACITOR, 6.3V, 0.22µF	7
C 53 C 54 C 165 C 166 C 337 C 342 C 343 C 344 C 345		F1G1A104A014	CAPACITOR, 10V, 0.1µF	9
C 73 C 76 C 88 C 91		F1G1A474A018	CAPACITOR, 10V, 0.47µF	4
C 400		F1G1A683A014	CAPACITOR, 10V, 0.068µF	1
C 9 C 10 C 14 C 18 C 22 C 27 C 50		F1G1C104A042	CAPACITOR, 16V, 0.1µF	158

C 51					
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C 65					
C 66					
C 68					
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C 319 C 321 C 323 C 326 C 328 C 332 C 347 C 351 C 355 C 358 C 364 C 375 C 377 C 378 C 379 C 383 C 384 C 386 C 392 C 393 C 394 C 406 C 413 C 420 C 430 C 431 C 434 C 435 C 436 C 437 C 438 C 442 C 445 C 604 C 609 C 639 C 641 C 674 C 717				
C 631 C 636 C 637 C 638 C 640		F1G1C473A004	CAPACITOR, 16V, 0.047µF	5
C 46 C 151 C 152 C 153 C 154 C 174 C 179 C 218 C 230 C 231 C 238 C 240		F1G1E103A062	CAPACITOR, 25V, 0.01µF	23

C 272 C 277 C 308 C 312 C 340 C 352 C 401 C 432 C 602 C 605 C 692				
C 210 C 211 C 212 C 404 C 415 C 416 C 418 C 419		F1G1H100A544	CAPACITOR, 50V, 10pF	8
C 306 C 307 C 362 C 363 C 385 C 615 C 664 C 691		F1G1H1010005	CAPACITOR, 50V, 100pF	8
C 225 C 229 C 256 C 266 C 267 C 268 C 269 C 270 C 271 C 273 C 274 C 276 C 278 C 360 C 361 C 387 C 388 C 389 C 403 C 405 C 443 C 619 C 622 C 626 C 644 C 647 C 663 C 665 C 670		F1G1H102A496	CAPACITOR, 50V, 1000pF	33

C 682 C 689 C 714 C 716				
C 642		F1G1H121A495	CAPACITOR, 50V, 120pF	1
C 701		F1G1H152A496	CAPACITOR, 50V, 1500pF	1
C 646		F1G1H182A496	CAPACITOR, 50V, 1800pF	1
C 159 C 160 C 620 C 623 C 628 C 667 C 683 C 686		F1G1H220A542	CAPACITOR, 50V, 22pF	8
C 600 C 621 C 648 C 661 C 666 C 672 C 679 C 684 C 685		F1G1H221A495	CAPACITOR, 50V, 220pF	9
C 49 C 251		F1G1H222A496	CAPACITOR, 50V, 2200pF	2
C 226 C 227 C 281 C 282 C 284 C 285 C 286 C 287 C 288		F1G1H330A542	CAPACITOR, 50V, 33pF	9
C 715		F1G1H331A496	CAPACITOR, 50V, 330pF	1
C 213 C 215		F1G1H3R0A543	CAPACITOR, 50V, 3pF	2
C 120 C 121		F1G1H3R3A543	CAPACITOR, 50V, 3.3pF	2
C 411 C 412		F1G1H470A542	CAPACITOR, 50V, 47pF	2
C 367 C 439		F1G1H471A496	CAPACITOR, 50V, 470pF	2
C 643		F1G1H561A496	CAPACITOR, 50V, 560pF	1
C 320 C 324		F1G1H5R0A543	CAPACITOR, 50V, 5pF	2
C 242 C 248		F1G1H8R0A544	CAPACITOR, 50V, 8pF	2
C 81 C 82 C 83 C 84 C 86 C 129 C 155		F1H0J1050022	CAPACITOR, 6.3V, 1µF	11

C 156 C 157 C 158 C 391				
C 55 C 56 C 67 C 78 C 79 C 94 C 97 C 98 C 103 C 104 C 109 C 110 C 113 C 116 C 117 C 130 C 131 C 132 C 133 C 138 C 139 C 140 C 141 C 172 C 173 C 184 C 186 C 214 C 216 C 237 C 301 C 322 C 338 C 346 C 390 C 399 C 606 C 694 C 702		F1H1A1050015	CAPACITOR, 10V, 1µF	39
C 617 C 627		F1H1H103A748	CAPACITOR, 50V, 0.01µF	2
C 601		F1H1H104A731	CAPACITOR, 50V, 0.1µF	1
C 616 C 618 C 625 C 659 C 662 C 669 C 678 C 681 C 688 C 697		F1H1H104A748	CAPACITOR, 50V, 0.1µF	16

C 699 C 700 C 703 C 704 C 719 C 732				
C 671 C 680		F1H1H182A748	CAPACITOR, 50V, 1800pF	2
C 645		F1H1H1830001	CAPACITOR, 50V, 0.018µF	1
C 720		F1H1H222A748	CAPACITOA, 50V, 2200pF	1
C 660 C 690		F1H1H472A748	CAPACITOR, 50V, 4700pF	2
C 45 C 48 C 58 C 59 C 62 C 63 C 70 C 72 C 74 C 87 C 93 C 167 C 176 C 206 C 244 C 246 C 250 C 254 C 297 C 303 C 304 C 325 C 339 C 368 C 395 C 441 C 446 C 447 C 668 C 695		F1J0J106A016	CAPACITOR, 6.3V, 10µF	30
C 3 C 13 C 15 C 29 C 33 C 34 C 37 C 41		F1J0J226A051	CAPACITOR, 6.3V, 22µF	8
C 77 C 80 C 149 C 150 C 279 C 330		F1J0J4750019	CAPACITOR, 6.3V, 4.7µF	11

C 341 C 370 C 372 C 373 C 374				
C 235 C 624 C 649 C 687 C 718 C 733		F1J0J475A009	CAPACITOR, 6.3V, 4.7µF	6
C 263		F1J1A1050021	CAPACITOR, 10V, 1µF	1
C 608		F1J1E104A081	CAPACITOR, 25V, 0.1µF	1
C 607		F1J1E105A009	CAPACITOR, 25V, 1µF	1
C 650		F1J1H224A533	CAPACITOR, 50V, 0.22µF	1
C 614 C 706 C 707 C 722		F1K1E106A078	CERAMIC CAPACITOR	4
C 354 C 356		F1L0J107A016	CAPACITOR, 6.3V, 100µF	2
C 603 C 629 C 651 C 652 C 658 C 673 C 677 C 693 C 705		F1L1E106A021	CAPACITOR, 25V, 10µF	9
C 329		F1L3D102A003	CAPACITOR, 2000V, 1000pF	1
CF 1		D4CC1103A038	THERMISTOR	1
CN 2		K1MMH2B00003	CONNECTOR	1
CN 3 CN 26		K1KA02BA0014	CONNECTOR	2
CN 4		K1MN45AA0044	CONNECTOR	1
CN 10		K1KA05BA0014	CONNECTOR	1
CN 16		K1KA08BA0014	CONNECTOR	1
CN 11		K1KB30AA0049	CONNECTOR	1
CN 12		K1FB315BA003	CONNECTOR	1
CN 13		K1NA09E00076	CONNECTOR	1
CN 14		K1NA68E00096	CONNECTOR	1
CN 15		K1MY26BA0001	CONNECTOR	1
CN 18		K1KB12A00099	CONNECTOR	1
CN 19		K1MY52BA0190	CONNECTOR	1
CN 21		K1MN12BA0134	CONNECTOR	1
CN 23		K1KA20BA0114	CONNECTOR	1
CN 22		K1FY150BA007	CONNECTOR	1
CN 25		K1MN60B00008	CONNECTOR	1
CN 28		K1KA12BA0014	CONNECTOR	1
CN 600		K1KA02B00247	CONNECTOR	1
CN 601		K1KA10B00233	CONNECTOR	1
D 7 D 8 D 9 D 601		B0ADDH000004	DIODE	6

D 602 D 604				
D 628 D 639		B0JCCE000008	DIODE	2
D 609 D 611 D 624 D 626 D 627 D 629 D 630		B0JCMD000014	DIODE	7
D 600 D 603 D 636		B0JCPD000023	DIODE	3
D 608		B0JCQD000001	DIODE	1
D 623		DEDRB081L20	DIODE	1
D 610 D 625		B0JDAE000004	DIODE	2
D 5 D 6		B0KB00000044	DIODE	2
D 620		B2ABAM000002	DIODE	1
D 10 D 11 D 12 D 13		B3ABB0000164	DIODE	4
D 20		B3ABB0000274	LED	1
D 16 D 21		B3ACB0000020	DIODE	2
D 15		B3AKB0000008	DIODE	1
D 1 D 2 D 3 D 22		MA2J72900L	DIODE	4
D 4		MA3J741E0L	DIODE	1
D 23 D 619 D 621		MA2S111-TX	DIODE	3
D 605		MAZ81200ML	DIODE	1
D 606		MAZ81800ML	DIODE	1
D 607 D 622		MA3S132E0L	DIODE	2
D 612 D 613 D 614 D 615 D 617 D 618		MAZ80510ML	DIODE	6
D 616		MAZ80620ML	DIODE	1
F 1 F 7	⚠ ⚠	K5H2021A0003	FUSE, 2A	2
F 9	⚠	K5H402Z00003	FUSE, 4A	1
F 600	⚠	K5H632300002	FUSE, 6.3A	1
IC 53 IC 601		C0ABBA000093	IC, OP AMP	2
IC 608		C0ABZA000047	IC, AMP	1
IC 15		C0CBCAC00183	IC, REGULATOR	1

IC 19		C0CBCBC00137	IC, REGULATOR	1
IC 31		C0CBCBC00181	IC	1
IC 16		C0CBCBG00008	IC, REGULATOR	1
IC 600 IC 602 IC 609 IC 611		C0DBALH00003	IC	4
IC 605		C0DBAYY00155	IC, DC/DC	1
IC 607		C0DBDJH00009	IC, LINER	1
IC 606		C0DBEFH00002	IC, REGULATOR	1
IC 28		C0DBZYY00016	IC	1
IC 4		C0DBZYY00017	IC	1
IC 58		C0DBZYY00019	IC, POWER MANAGEMENT SWITCH	1
IC 21 IC 22 IC 71		C0DBZYY00026	IC, USB POWER SW	3
IC 610		C0EBE0000333	IC	1
IC 26 IC 37 IC 38		C0EBE0000460	IC	3
IC 43 IC 44 IC 54 IC 55 IC 61 IC 614		C0JBAA000344	IC, GATE LOGIC	6
IC 46 IC 47 IC 48 IC 49		C0JBAA000346	IC, LOGIC	4
IC 52 IC 603 IC 604		C0JBAB000616	IC, LOGIC	3
IC 42		C0JBAB000619	IC, GATE LOGIC	1
IC 45 IC 51		C0JBAE000302	IC, LOGIC	2
IC 27 IC 29		C0JBAR000515	IC, Q-SWITCH	2
IC 25 IC 64		C0JBAZ002422	IC, FET SWITCH	2
IC 70		C0JBAZ002422	IC, FET SWITCH	1
IC 13		C0JBZZ000388	IC, CLOCK GENERATOR	1
IC 69		C1BB00001025	IC, AUDIO AMP	1
IC 33		C1CB00002268	IC, SECURITY CHIP	1
IC 50		C1CB00002295	IC	1
IC 2		C1CB00002432	IC, CHIP SET	1
IC 30		C1CB00002449	IC, AUDIO CODEC	1
IC 20		C1CB00002540	IC, TEMPERATURE CENSOR IC	1
IC 17		C1DB00001182	IC, LAN CONTROLLER	1
IC 24		C1DB00001373	IC, USB-ATA CHIP	1
IC 3		C1DB00001541	IC, CHIPSET	1
IC 36		C2CBJA000003	IC, MICON	1
IC 1		C2GBC0000312	IC, CPU	1
IC 5 IC 6 IC 7		C3ABSG000029	IC, DDR2 SDRAM	8

IC 8 IC 9 IC 10 IC 11 IC 12				
IC 18		C3EBCG000100	IC, EEPROM	1
IC 23		C3EBEC000061	IC, EEPROM	1
IC 34		C3FBLY000024	IC, SPI FLASH MEMORY	1
JK 1 JK 2		K2HC1YYB0027	JACK	2
L 608		G1A160H00001	INDUCTOR	1
L 602		DDAZS100MT3T	INDUCTOR	1
L 1 L 3		G1C1R0MA0076	INDUCTOR	2
L 20		G1C1R0Z00002	INDUCTOR	1
L 605		G1C220MA0077	INDUCTOR	1
L 604		G1C2R8MA0022	INDUCTOR	1
L 601 L 606 L 607		G1C4R7MA0022	INDUCTOR	3
L 2		G1C91NM00001	INDUCTOR	1
L 603		G1CR88ZA0140	INDUCTOR, COIL	1
L 17 L 18 L 19		J0JBC0000072	INDUCTOR, FILTER	3
L 25		DDB5Z024E-L	INDUCTOR	1
L 38 L 39 L 40 L 41 L 42 L 43		DDB5Z021C-Y	INDUCTOR	6
L 34 L 35 L 36 L 37		DDB5Z024C-L	IDUCTOR, FERRITE PARTS	4
L 13 L 14 L 27 L 28 L 29 L 30 L 31 L 32 L 33		J0JCC0000186	INDUCTOR	9
L 5 L 7 L 26		J0JHC0000074	INDUCTOR	3
L 4		J0JJC0000021	INDUCTOR	1
L 600		J0JKC0000007	INDUCTOR	1
L 57 L 21 L 22		J0MAB0000116 J0ZZB0000080	INDUCTOR IDUCTOR, COMMON MODE FILTER	1 2
PA 1 PA 2 PA 3		D4FB1R100009	SWITCH	3

Q 614 Q 643		B1CFGD000003	TRANSISTOR	2
Q 6 Q 7 Q 27 Q 647 Q 654 Q 662 Q 663 Q 666		B1CFGD000023	TRANSISTOR	8
Q 602		B1CFMC000008	TRANSISTOR	1
Q 649		B1CFRD000013	FET	1
Q 612 Q 613		B1CFRD000014	FET	2
Q 622 Q 627		B1CHRC000009	TRANSISTOR	2
Q 607 Q 610		B1CHRD000001	TRANSISTOR	2
Q 637 Q 641 Q 642 Q 650 Q 656		B1DBGD000006	TRANSISTOR	5
Q 638		B1DFGD000032	TRANSISTOR	1
Q 11 Q 40 Q 626 Q 630 Q 633		B1DHDC000028	TRANSISTOR	5
Q 608 Q 655		B1DHFD000015	TRANSISTOR	2
Q 2 Q 3 Q 4 Q 43 Q 50 Q 604 Q 606 Q 619 Q 645 Q 646 Q 651 Q 652 Q 653 Q 657		B1GBCFJN0037	TRANSISTOR	14
Q 53		B1GBCFNL0017	TRANSISTOR	1
Q 29 Q 54 Q 601 Q 603 Q 605 Q 611 Q 624		B1GBCFNN0042	TRANSISTOR	7
Q 1 Q 41 Q 51		B1GDCFNN0031	TRANSISTOR	4

Q 52				
Q 48		B1GFCFEN0003	TRANSISTOR	1
Q 28 Q 35 Q 37		B1MBDCA00004	TRANSISTOR	3
Q 615 Q 644		B1MBEDA00017	TRANSISTOR	2
Q 648		B1MBEDA00018	TRANSISTOR	1
Q 10 Q 36 Q 38 Q 616 Q 621 Q 628 Q 631 Q 632 Q 634 Q 635 Q 636		XP0421300L	TRANSISTOR	11
Q 46 Q 47 Q 600		XP0421400L	TRANSISTOR	3
R 630 R 631		D1BDR018A099	RESISTOR, 1/3W, 0.018Ω	2
R 629 R 701 R 702 R 724 R 741 R 742 R 777 R 651 R 652 R 723		D1BDR0220001	RESISTOR, 1/8W, 0.022Ω	10
R 721		D1BDR0470002	RESISTOR, 1/8W, 0.047Ω	1
R 755 R 756		D1BDR0680001	RESISTOR, 1/8W, 0.068Ω	2
R 628		D1BDR1000002	RESISTOR, 1/8W, 0.1Ω	1
R 626 R 627		RL1220SR15F	RESISTOR, 1/8W, 0.15Ω	2
R 604		D1BDR4700001	RESISTOR, 1/8W, 0.47Ω	1
R 78 R 170 R 196 R 197 R 220 R 268 R 457		D1H81034A024	RESISTOR ARRAY	7
R 216		D1H84724A024	RESISTOR ARRAY	1
R 384		D1H84734A024	RESISTOR ARRAY	1
R 219 R 265 R 266 R 267 R 455 R 456		DEARA8AJ103M	RESISTOR ARRAY	7

R 513				
R 157 R 158 R 159 R 160 R 161 R 162 R 163		D1HA56080001	RESISTOR ARRAY	7
R 99 R 100 R 101 R 102 R 127 R 128 R 129 R 130		D1HG1008A001	RESISTOR ARRAY	8
R 602		D1ZZ00000046	RESISTOR, 1W, 5mΩ	1
R 700		D1ZZ00000093	RESISTOR, 1W, 1mΩ	1
R 647		ERA3YEB123V	RESISTOR, 1/16W, 12KΩ	1
R 643 R 731		ERA3YEB203V	RESISTOR, 1/16W, 20KΩ	2
R 732 R 792		ERA3YEB243V	RESISTOR, 1/16W, 24KΩ	2
R 646 R 753 R 793		ERA3YEB333V	RESISTOR, 1/16W, 33KΩ	3
R 730		ERA3YEB621V	RESISTOR, 1/16W, 620Ω	1
R 641 R 648		ERA3YEB622V	RESISTOR, 1/16W, 6.2KΩ	2
R 642 R 751 R 752		ERA3YKB104V	RESISTOR, 1/16W, 100KΩ	3
R 791		ERA3YKB513V	RESISTOR, 1/16W, 51KΩ	1
R 615 R 617		ERJ1TYJ331U	RESISTOR, 1W, 330Ω	2
R 131 R 132 R 133 R 134 R 135 R 136 R 137 R 138 R 139 R 140 R 141 R 142 R 143 R 144 R 145 R 146 R 147 R 148 R 149 R 150 R 151		ERJ2GE0R00X	RESISTOR, 1/16W, 0Ω	71

R 152 R 153 R 154 R 155 R 156 R 175 R 176 R 189 R 192 R 224 R 226 R 233 R 238 R 239 R 240 R 247 R 252 R 257 R 296 R 316 R 317 R 333 R 346 R 386 R 406 R 407 R 430 R 431 R 449 R 450 R 458 R 472 R 481 R 485 R 487 R 491 R 501 R 511 R 600 R 692 R 703 R 719 R 760 R 761 R 763 R 768 R 773 R 774 R 785 R 787				
R 103 R 104 R 105 R 106 R 107 R 108		ERJ2GEJ100X	RESISTOR, 1/16W, 10Ω	37

R 109 R 110 R 111 R 112 R 113 R 114 R 115 R 116 R 117 R 118 R 119 R 120 R 121 R 122 R 123 R 124 R 125 R 126 R 341 R 636 R 637 R 649 R 650 R 705 R 706 R 716 R 717 R 725 R 726 R 737 R 738				
R 13 R 14 R 65 R 203 R 237 R 332 R 350 R 362 R 391 R 478 R 486 R 502 R 504 R 508 R 518 R 608 R 609 R 667 R 668 R 673 R 676 R 677 R 678 R 679 R 697		ERJ2GEJ101X	RESISTOR, 1/16W, 100Ω	25

R 1 R 57 R 61 R 62 R 187 R 218 R 235 R 272 R 273 R 392 R 393 R 462 R 479 R 480 R 492 R 656		ERJ2GEJ102X	RESISTOR, 1/16W, 1KΩ	16
R 93 R 173 R 234 R 242 R 243 R 264 R 277 R 282 R 283 R 284 R 289 R 290 R 291 R 298 R 300 R 303 R 313 R 314 R 335 R 336 R 338 R 348 R 349 R 358 R 372 R 374 R 396 R 402 R 413 R 421 R 422 R 426 R 428 R 437 R 444 R 447 R 448 R 452 R 453 R 484		ERJ2GEJ103X	RESISTOR, 1/16W, 10KΩ	56

R 519 R 520 R 521 R 619 R 639 R 644 R 688 R 704 R 708 R 712 R 713 R 728 R 733 R 734 R 743 R 817				
R 165 R 171 R 215 R 248 R 249 R 250 R 308 R 311 R 331 R 334 R 337 R 342 R 343 R 352 R 383 R 454 R 459 R 460 R 461 R 475 R 476 R 503 R 506 R 611 R 621 R 623 R 624 R 625 R 662 R 664 R 666 R 672		ERJ2GEJ104X	RESISTOR, 1/16W, 100KΩ	32
R 260 R 361 R 397 R 398 R 622 R 661 R 669		ERJ2GEJ105X	RESISTOR, 1/16W, 1MΩ	7
R 259		ERJ2GEJ106X	RESISTOR, 1/16W, 10MΩ	1

R 638 R 707 R 727 R 816		ERJ2GEJ153X	RESISTOR, 1/16W, 15KΩ	4
R 748		ERJ2GEJ154X	RESISTOR, 1/16W, 150KΩ	1
R 95 R 96 R 97 R 98		ERJ2GEJ201X	RESISTOR, 1/16W, 200Ω	4
R 258		ERJ2GEJ203X	RESISTOR, 1/16W, 20KΩ	1
R 522 R 740		ERJ2GEJ221X	RESISTOR, 1/16W, 220Ω	2
R 66 R 319 R 320 R 325 R 326 R 394 R 395		ERJ2GEJ222X	RESISTOR, 1/16W, 2.2KΩ	7
R 680		ERJ2GEJ223X	RESISTOR, 1/16W, 22KΩ	1
R 665		ERJ2GEJ225X	RESISTOR, 1/16W, 2.2MΩ	1
R 507		ERJ2GEJ273X	RESISTOR, 1/16W, 27KΩ	1
R 179 R 181 R 183 R 184 R 185 R 186 R 191 R 217 R 271 R 368 R 404 R 419 R 424 R 493 R 494 R 495 R 496 R 497 R 498 R 499		ERJ2GEJ330X	RESISTOR, 1/16W, 33Ω	20
R 525		ERJ2GEJ331X	RESISTOR, 1/16W, 330Ω	1
R 645		ERJ2GEJ333X	RESISTOR, 1/16W, 33KΩ	1
R 255 R 280 R 355 R 653		ERJ2GEJ334X	RESISTOR, 1/16W, 330KΩ	4
R 79 R 80		ERJ2GEJ390X	RESISTOR, 1/16W, 39Ω	2
R 221 R 222 R 295 R 443 R 473		ERJ2GEJ470X	RESISTOR, 1/16W, 47Ω	5
R 401		ERJ2GEJ471X	RESISTOR, 1/16W, 470Ω	2

R 757				
R 174 R 302 R 754		ERJ2GEJ472X	RESISTOR, 1/16W, 4.7KΩ	3
R 193 R 195 R 270 R 274 R 275 R 292 R 347 R 370 R 371 R 378 R 388 R 390 R 400 R 505 R 515 R 517 R 620 R 634 R 684		ERJ2GEJ473X	RESISTOR, 1/16W, 47KΩ	19
R 635 R 654 R 718 R 720 R 739 R 745 R 772		ERJ2GEJ474X	RESISTOR, 1/16W, 470KΩ	7
R 2 R 5 R 6 R 9		ERJ2GEJ510X	RESISTOR, 1/16W, 51Ω	4
R 25 R 27 R 28		ERJ2GEJ560X	RESISTOR, 1/16W, 56Ω	3
R 415 R 471		ERJ2GEJ561X	RESISTOR, 1/16W, 560Ω	2
R 31 R 354 R 610 R 614 R 616 R 747		ERJ2GEJ562X	RESISTOR, 1/16W, 5.6KΩ	6
R 24		ERJ2GEJ680X	RESISTOR, 1/16W, 68Ω	1
R 663		ERJ2GEJ684X	RESISTOR, 1/16W, 680KΩ	1
R 451 R 603 R 607		ERJ2RHD103X	RESISTOR, 1/16W, 10KΩ	3
R 736		ERJ2RHD123X	RESISTOR, 1/16W, 12KΩ	1
R 749 R 750		ERJ2RHD302X	RESISTOR, 1/16W, 3KΩ	2
R 746		ERJ2RHD3652X	RESISTOR, 1/16W, 36.5KΩ	1
R 353		ERJ2RHD562X	RESISTOR, 1/16W, 5.6KΩ	1
R 744		ERJ2RKD114X	RESISTOR, 1/16W, 110KΩ	1

R 605 R 613		ERJ2RKD244X	RESISTOR, 1/16W, 240KΩ	2
R 606 R 612		ERJ2RKD364X	RESISTOR, 1/16W, 360KΩ	2
R 38 R 40 R 42		ERJ2RKF1000X	RESISTOR, 1/16W, 100Ω	3
R 15 R 696		ERJ2RKF1001X	RESISTOR, 1/16W, 1KΩ	2
R 63		ERJ2RKF1002X	RESISTOR, 1/16W, 10KΩ	1
R 689		ERJ2RKF1003X	RESISTOR, 1/16W, 100KΩ	1
R 632		ERJ2RKF1102X	RESISTOR, 1/16W, 11KΩ	1
R 633		ERJ2RKF1302X	RESISTOR, 1/16W, 13KΩ	1
R 83 R 84 R 85 R 327 R 328 R 329 R 488 R 489 R 490		ERJ2RKF1500X	RESISTOR, 1/16W, 150Ω	9
R 81 R 285 R 759		ERJ2RKF1501X	RESISTOR, 1/16W, 1.5KΩ	3
R 711 R 735		ERJ2RKF1502X	RESISTOR, 1/16W, 15KΩ	2
R 687		ERJ2RKF1603X	RESISTOR, 1/16W, 160KΩ	1
R 690		ERJ2RKF1800X	RESISTOR, 1/16W, 180Ω	1
R 693		ERJ2RKF1801X	RESISTOR, 1/16W, 1.80KΩ	1
R 41		ERJ2RKF2000X	RESISTOR, 1/16W, 200Ω	1
R 16		ERJ2RKF2001X	RESISTOR, 1/16W, 2KΩ	1
R 339		ERJ2RKF2002X	RESISTOR, 1/16W, 20KΩ	1
R 37		ERJ2RKF2210X	RESISTOR, 1/16W, 221Ω	1
R 39		ERJ2RKF2210X	RESISTOR, 1/16W, 221Ω	1
R 229		ERJ2RKF22R6X	RESISTOR, 1/16W, 22.6Ω	1
R 715		ERJ2RKF2402X	RESISTOR, 1/16W, 24KΩ	1
R 288		ERJ2RKF2431X	RESISTOR, 1/16W, 2.43KΩ	1
R 30 R 34 R 35 R 86 R 228		ERJ2RKF24R9X	RESISTOR, 1/16W, 24.9Ω	5
R 82		ERJ2RKF2550X	RESISTOR, 1/16W, 255Ω	1
R 19 R 21		ERJ2RKF27R4X	RESISTOR, 1/16W, 27.4Ω	2
R 446		ERJ2RKF3901X	RESISTOR, 1/16W, 3.9KΩ	1
R 305		ERJ2RKF3922X	RESISTOR, 1/16W, 39.2KΩ	1
R 286 R 287		ERJ2RKF39R0X	RESISTOR, 1/16W, 39Ω	2
R 695		ERJ2RKF4221X	RESISTOR, 1/16W, 4.22KΩ	1
R 694 R 710		ERJ2RKF4701X	RESISTOR, 1/16W, 4.7KΩ	2
R 758		ERJ2RKF4702X	RESISTOR, 1/16W, 47KΩ	1
R 356 R 357		ERJ2RKF49R9X	RESISTOR, 1/16W, 49.9Ω	4

R 359 R 360				
R 369		ERJ2RKF5101X	RESISTOR, 1/16W, 5.1KΩ	1
R 714		ERJ2RKF5102X	RESISTOR, 1/16W, 51KΩ	1
R 18		ERJ2RKF51R0X	RESISTOR, 1/16W, 51Ω	1
R 20 R 22 R 32 R 33		ERJ2RKF54R9X	RESISTOR, 1/16W, 54.9Ω	4
R 771		ERJ2RKF6801X	RESISTOR, 1/16W, 6.80KΩ	1
R 74 R 75		ERJ2RKF80R6X	RESISTOR, 1/16W, 80.6Ω	2
R 294 R 382 R 385 R 423 R 767 R 775 R 776		ERJ3GEY0R00V	RESISTOR, 1/16W, 0Ω	7
R 640 R 709 R 729 R 818		ERJ3GEYJ100V	RESISTOR, 1/16W, 10Ω	4
R 766		ERJ3GEYJ101V	RESISTOR, 1/16W, 100Ω	1
R 246		ERJ3GEYJ121V	RESISTOR, 1/16W, 120Ω	1
R 523 R 524		ERJ3GEYJ151V	RESISTOR, 1/16W, 150Ω	2
R 166 R 167 R 168 R 169 R 245 R 699 R 762 R 769		ERJ3GEYJ1R0V	RESISTOR, 1/16W, 1Ω	8
R 26		ERJ3GEYJ201V	RESISTOR, 1/16W, 200Ω	1
R 91		ERJ3GEYJ220V	RESISTOR, 1/16W, 22Ω	1
R 376 R 377		ERJ3GEYJ330V	RESISTOR, 1/16W, 33Ω	2
R 618		ERJ3GEYJ3R3V	RESISTOR, 1/16W, 3.3Ω	1
R 601		ERJ3GEYJ562V	RESISTOR, 1/16W, 5.6KΩ	1
R 790		ERJ3RED754V	RESISTOR, 1/16W, 750KΩ	1
R 330		ERJ6GEY0R00V	RESISTOR, 1/10W, 0Ω	1
R 474 R 483		ERJ6GEYJ101V	RESISTOR, 1/10W, 100Ω	2
R 681 R 821		ERJ6GEYJ122V	RESISTOR, 1/10W, 1.2KΩ	2
R 682 R 683		ERJ6GEYJ222V	RESISTOR, 1/10W, 2.2KΩ	2
R 367		EXBV8V750JV	RESISTOR ARRAY	1
R 465 R 467 R 469 R 470		J0JBC0000107	RESISTOR, 150mA, 0.8Ω	4
SW 5		K0ZZ00000617	SW	1
SW 6		ESD165225	SLIDE SWITCH	1

SW 7		K0D112B00071	SW	1
SW 8 SW 9		EVQPLDA15	SWITCH	2
T 1		G5BYC0000015	TRANCE	1
X 1		H0J143500058	OSCILLATOR, 14.318MHz	1
X 4		H0J250500067	OSCILLATOR, 25MHz	1
X 3		H0J300500018	CRYSTAL OSCILLATOR	1
X 2		H0J327200115	OSCILLATOR, 32.768KHz	1
X 5		H2D800400015	OSCILLATOR, 8MHz	1
ZA 1		DRHM0114ZA	SCREW	1
ZA 2		DRHM0113ZA	SCREW	1
ZA 3 ZA 4		K1YGZZ000060	SPACER	2
USB PCB				
C 901 C 902		EEFUD0J151ER	CAPACITOR, 6.3V, 150µF	2
CN 901		K1KA12BA0014	CONNECTOR	1
CN 902 CN 903		K1FB104B0062	USB CONNECTOR	2
D 901 D 902		B0KB00000044	DIODE	2
L 901 L 902		J0MAB0000116	INDUCTOR	2
L 903 L 904 L 905 L 906		J0JHC0000074	INDUCTOR	4
SW PCB				
C 952 C 953		F1G1A104A014	CAPACITOR, 10V, 0.1µF	2
C 954		F1G1E103A062	CAPACITOR, 25V, 0.01µF	1
CN 951		K1MY20BA0002	CONNECTOR	1
CN 952		K1KA02BA0181	CONNECTOR	1
D 951		B3ABB0000196	DIODE	1
D 952		MA2S111-TX	DIODE	1
IC 951		C0JBAA000346	IC, LOGIC	1
IC 952		C0EBE0000460	IC	1
Q 951		B1GBCFJN0037	TRANSISTOR	1
Q 952		B1DHFB000003	TRANSISTOR	1
R 951		ERJ3GEYJ101V	RESISTOR, 1/16W, 100Ω	1
R 954		ERJ2GEJ104X	RESISTOR, 1/16W, 100KΩ	1
SW 951		K0D113B00081	SW	1
SW 952 SW 953		K0L1BA000115	SW	2
WWAN PCB				
C 1524 C 1525		EEFCX0G151R	CAPACITOR, 2V, 150µF	2
C 1502 C 1503 C 1504 C 1516 C 1528		F1G1C104A042	CAPACITOR, 16V, 0.1µF	5
C 1505		F1G1H101A451	CAPACITOR, 50V, 100pF	1

C 1520		F1G1H221A495	CAPACITOR, 50V, 220pF	1
C 1501 C 1523 C 1527		F1J0J106A016	CAPACITOR, 6.3V, 10µF	3
CN 1501		K1KA12BA0014	CONNECTOR	1
CN 1502		K1MY52BA0190	CONNECTOR	1
CN 1503		K1NA08E00007	CONNECTOR	1
D 1520		DEDRB081L20	DIODE	1
IC 1520		C0DBAYY00204	IC, DC/DC CONVERTER	1
L 1520		G1C2R7MA0273	INDUCTOR, COIL	1
Q 1520		B1CFGD000023	TRANSISTOR	1
Q 1522		B1DHFD000015	TRANSISTOR	1
Q 1521		B1GBCFNN0042	TRANSISTOR	1
R 1522		D1BDR0330001	RESISTOR, 1/8W, 0.033Ω	1
R 1527		D1BDR0470002	RESISTOR, 1/8W, 0.047Ω	1
R 1525		ERA3YEB303V	RESISTOR, 1/16W, 30KΩ	1
R 1503 R 1505		ERJ2GE0R00X	RESISTOR, 1/16W, 0Ω	2
R 1502 R 1504		ERJ2GEJ101X	RESISTOR, 1/16W, 100Ω	2
R 1521 R 1523		ERJ2GEJ103X	RESISTOR, 1/16W, 10KΩ	2
R 1526		ERJ2RKF1001X	RESISTOR, 1/16W, 1KΩ	1
R 1524		ERJ2RKF1002X	RESISTOR, 1/16W, 10KΩ	1
SW 1501		K0D211A00015	DIP SWITCH	1
ZA 1501 ZA 1502		K1YGZZ000060	SPACER	2