ORDER NO. CPD2609248CE

# Service Manual

Personal Computer

Model No. **FZ-56mk1 Series**

TOUGHBOOK

## Disassembly and Assembly Procedure for DC Jack

## DISCLAIMER

**This repair information is provided to support maintenance and repair of Panasonic products. Repair procedures may involve disassembly of electrical and electronic components and should be performed only by persons with appropriate technical knowledge, skills, tools, and safety precautions.**

**Improper repair, modification, or handling of the product may result in personal injury, electric shock, fire, data loss, product malfunction, or other property damage.**

**Before starting any repair work, ensure that proper electrostatic discharge (ESD) protection measures are in place to prevent damage to electronic components.**

**Repair procedures, required parts, and product configurations may vary depending on the model, region, or product specification. The procedures and illustrations provided in this document are intended as general guidance and may not represent all product variations.**

**Panasonic does not assume responsibility for any injury, loss, damage, cost, expense, or product failure arising from repairs, modifications, or servicing performed by users or third parties. Any repair work is performed at the sole risk and responsibility of the person carrying out the repair.**

**Required Tool:**
**Refer to the section "Required tools" in the website of "Repair Information and Manual for FZ-56."**

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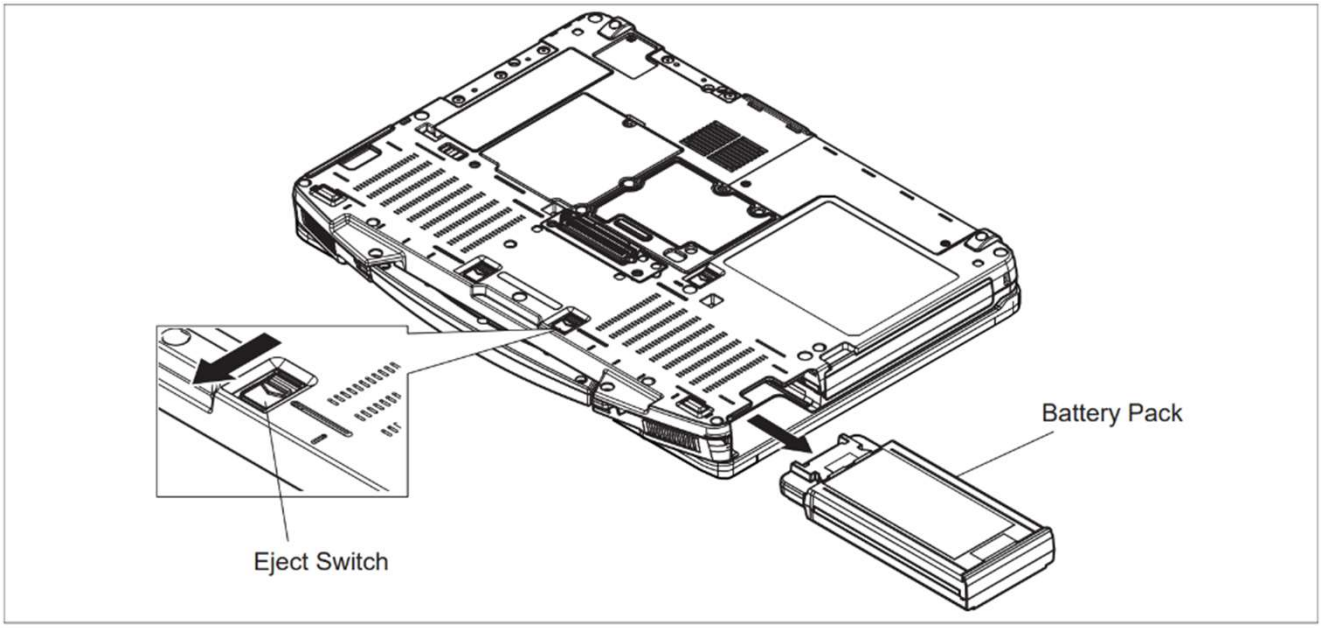
# External power connector

# Disassembly procedure

### Preparation

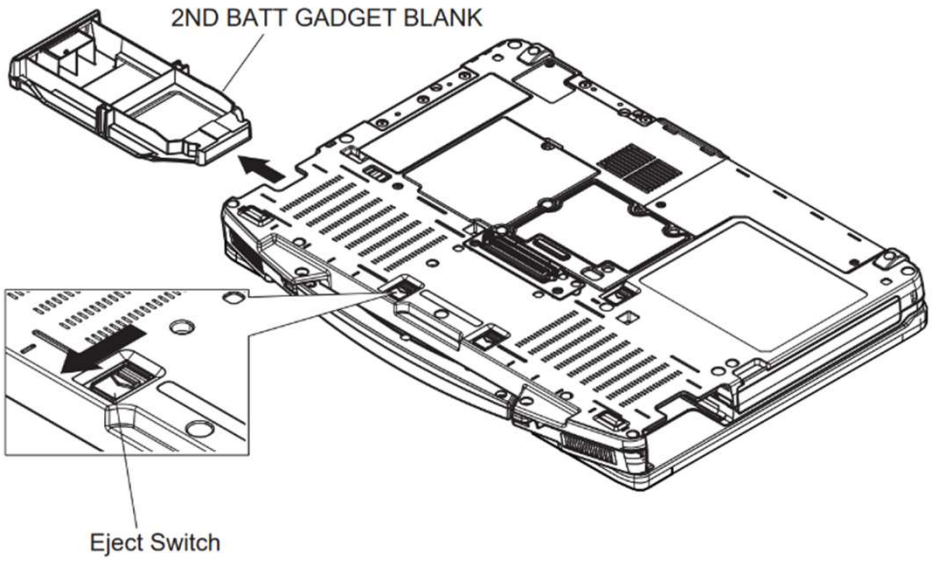
- Before disassembling, be sure to follow the steps below.

1. Shut down Windows.
2. Turn off the power and unplug the AC adapter.
3. Slide the Eject Switch in the direction of the arrow and remove the Battery Pack.



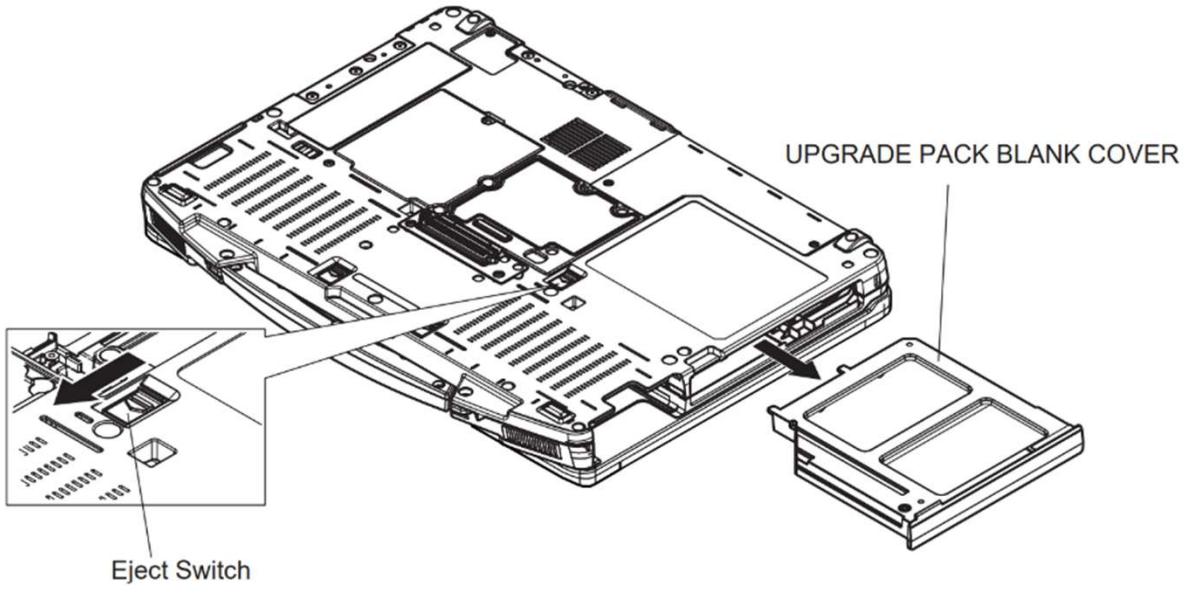

### Remove the 2ND BATT GADGET BLANK

1. Slide the Eject Switch in the direction of the arrow and remove the 2ND BATT GADGET BLANK.



## Remove the UPGRADE PACK BLANK COVER

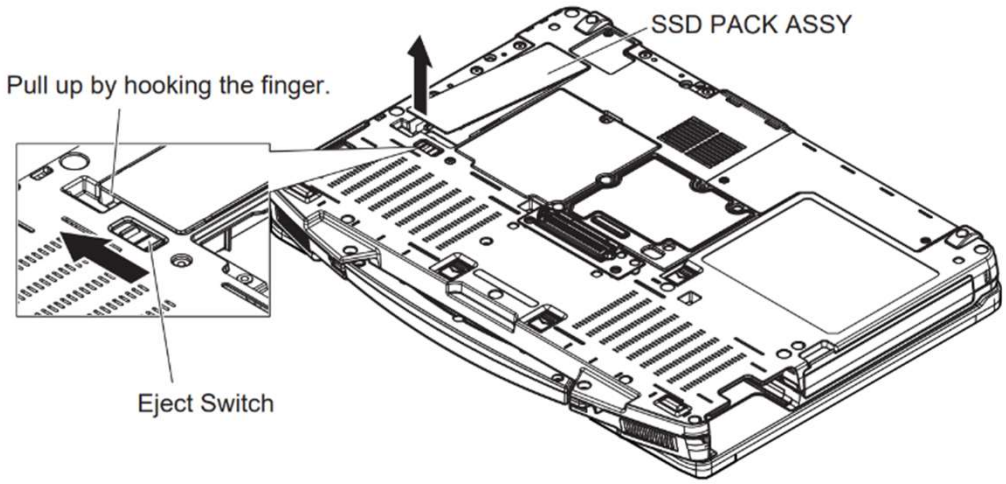
1. Slide the Eject Switch in the direction of the arrow and remove the UPGRADE PACK BLANK COVER.




## Remove the SSD PACK ASSY

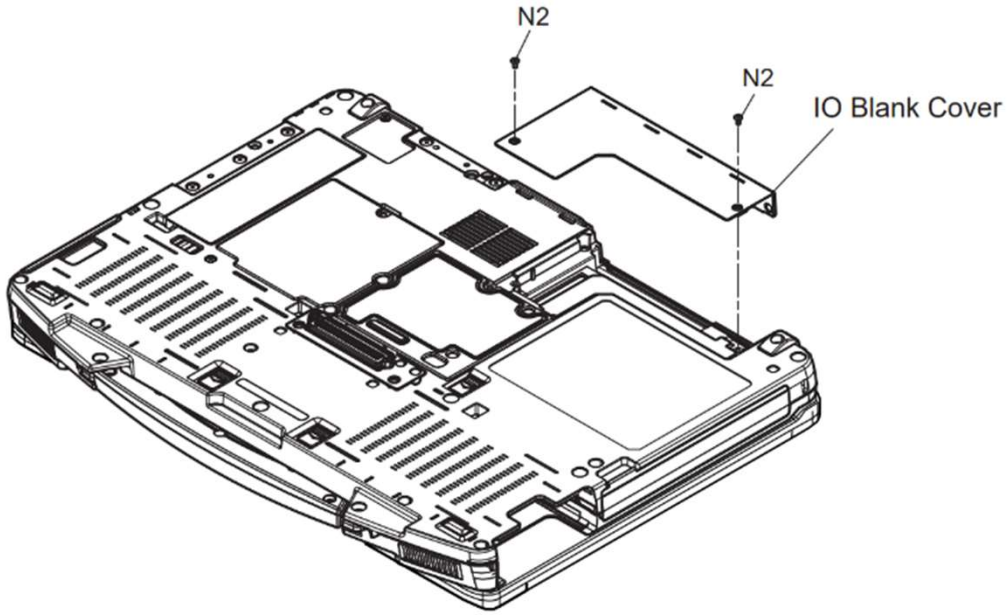
■ Handling of SSD
Note that it is necessary to take countermeasures against static electricity.

1. Slide the Eject Switch in the direction of the arrow, and remove the SSD PACK ASSY while hooking the finger in the groove.



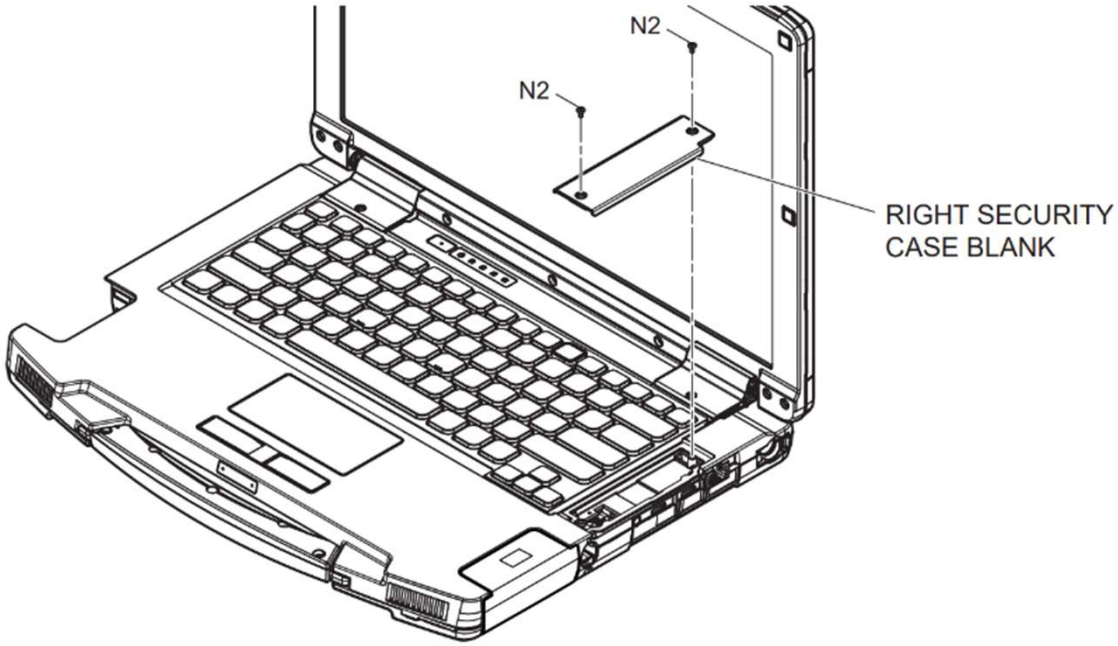
## Remove the IO BLANK COVER

1. Remove 2 screws(N2) and remove the IO BLANK COVER.



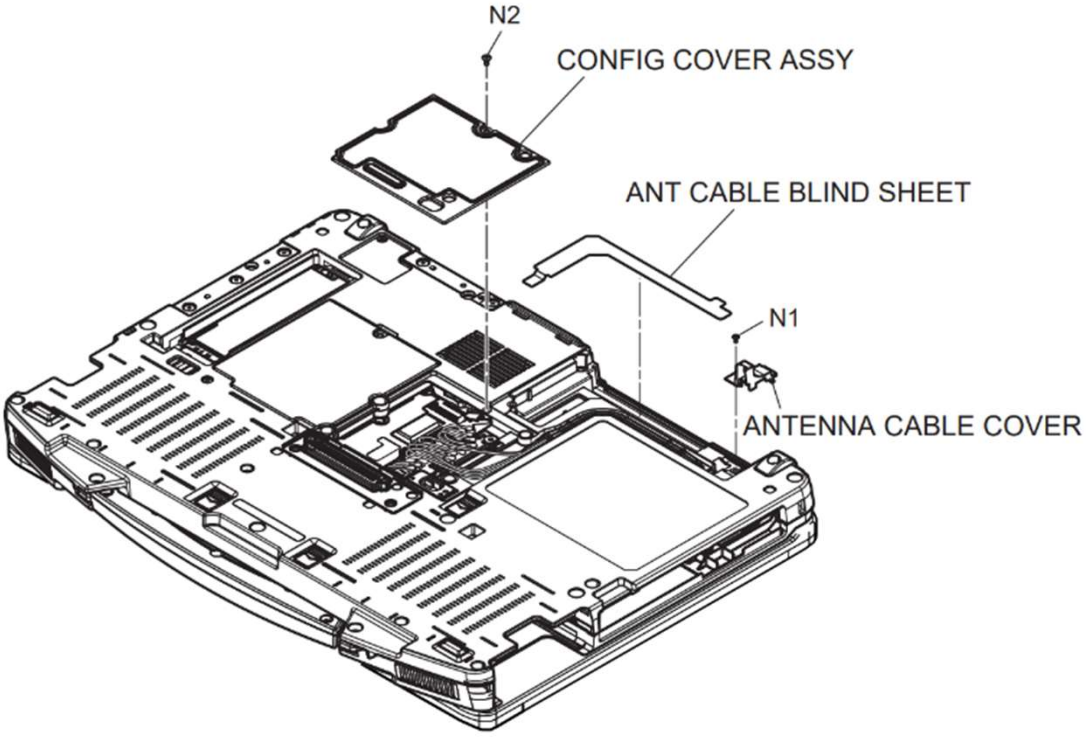

## Remove the RIGHT SECURITY CASE BLANK

1. Remove 2 screws(N2) and remove the RIGHT SECURITY CASE BLANK.

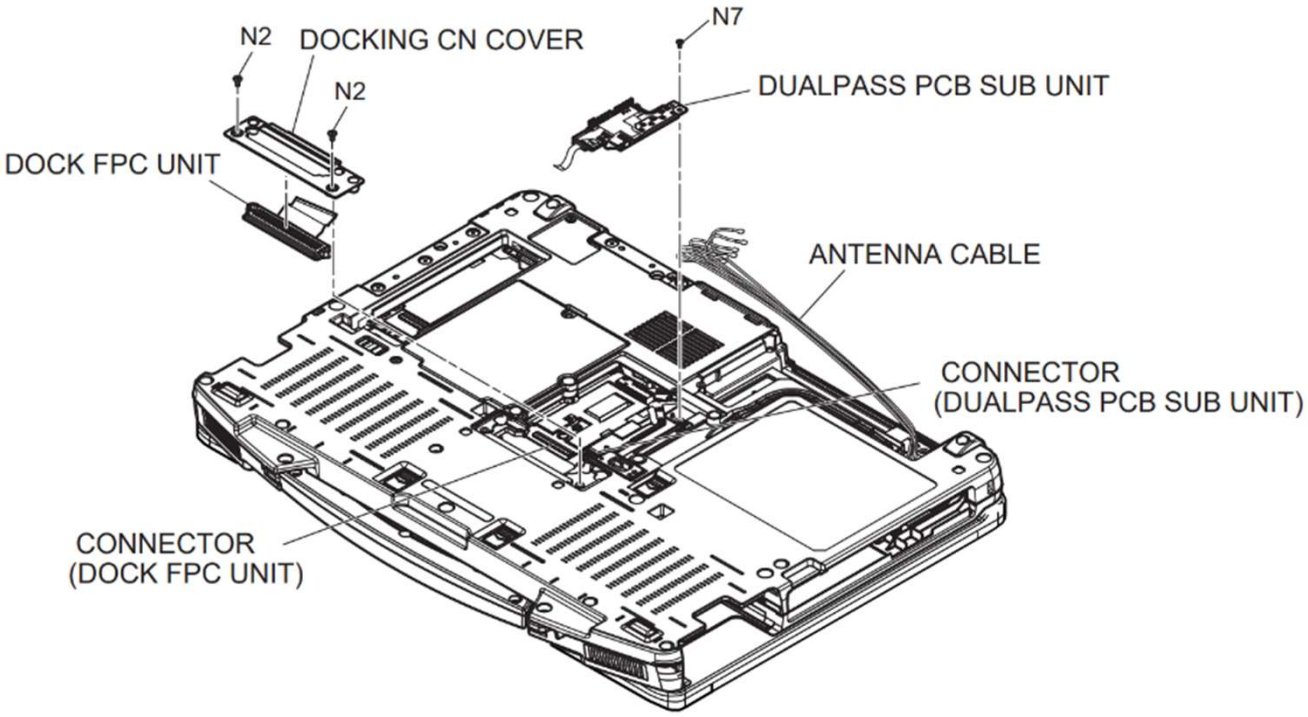


## Remove the BOTTOM CASE ASSY

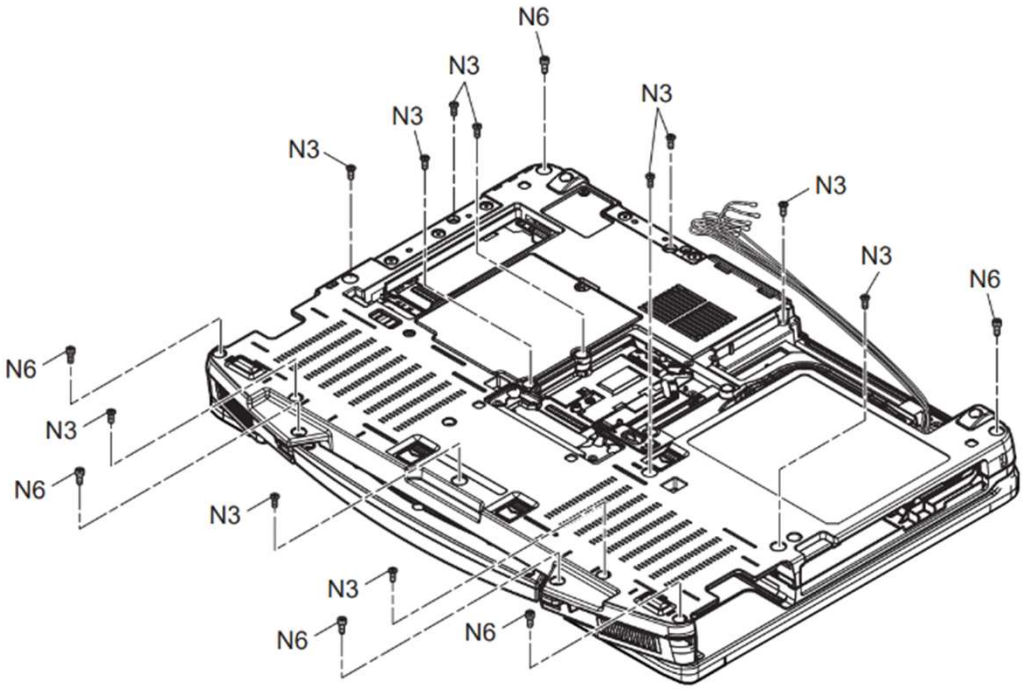
1. Remove 1 screw(N2) and remove the CONFIG COVER ASSY.
2. Peel off the ANT CABLE BLIND SHEET.
3. Remove 1 screw(N1) and remove the ANTENNA CABLE COVER.



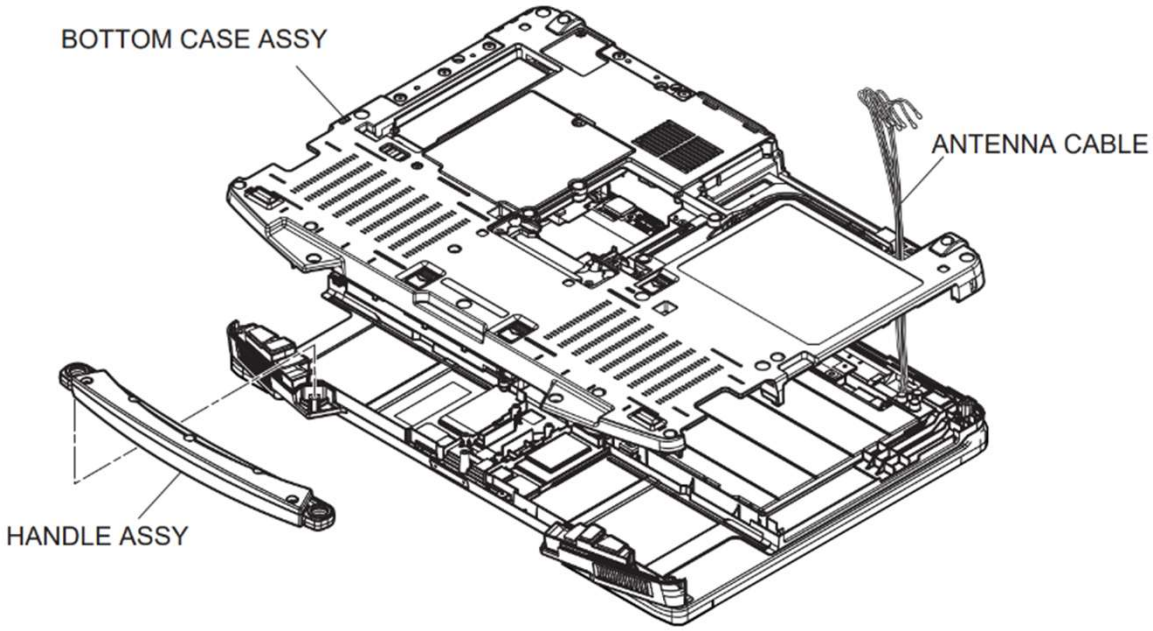

4. Remove 6 ANTENNA CABLEs from the DUALPASS PCB SUB UNIT, and pull them out as shown below.
5. Remove the FPC of the DUALPASS PCB SUB UNIT from the connector.
6. Remove 1 screw(N7) and remove the DUALPASS PCB SUB UNIT.
7. Remove 2 screws(N2) and remove the DOCKING CN COVER.
8. Remove the FPC of the DOCK FPC UNIT from the connector, and remove the DOCK FPC UNIT.



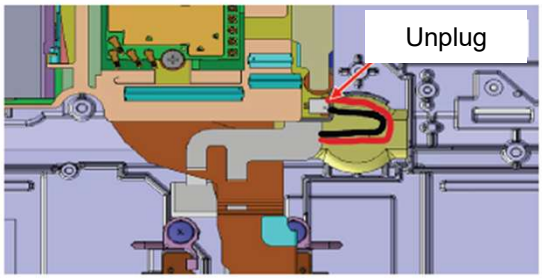
9. Remove 6 screws(N6) and 11 screws(N3).



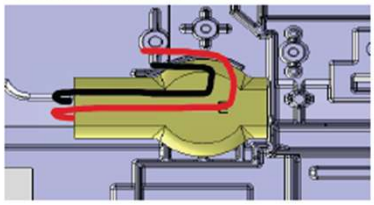

10. Remove the BOTTOM CASE ASSY while paying attention to the ANTENNA CABLEs.
11. Remove the HANDLE ASSY.



12. Unplug coin battery’s connector from main PCB

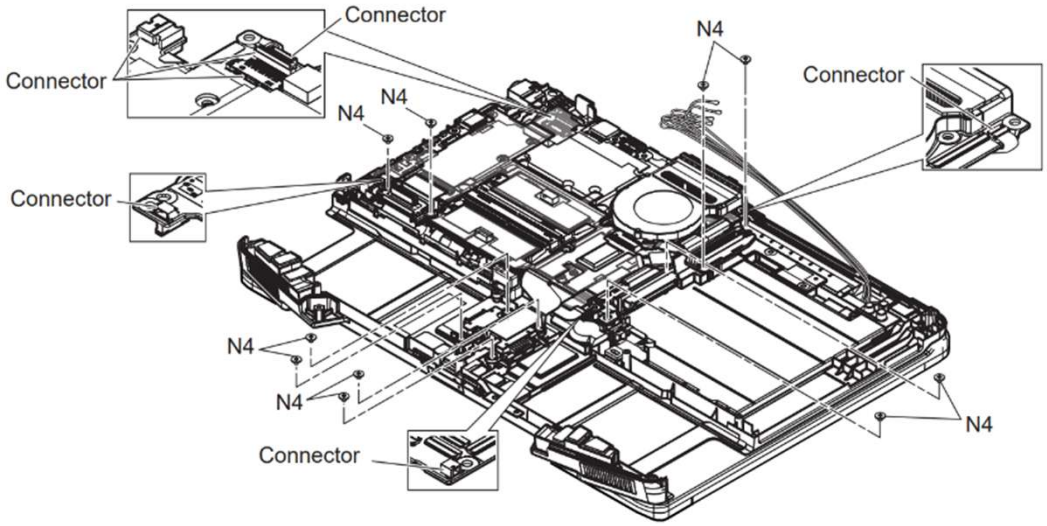



Reference view of affixed state



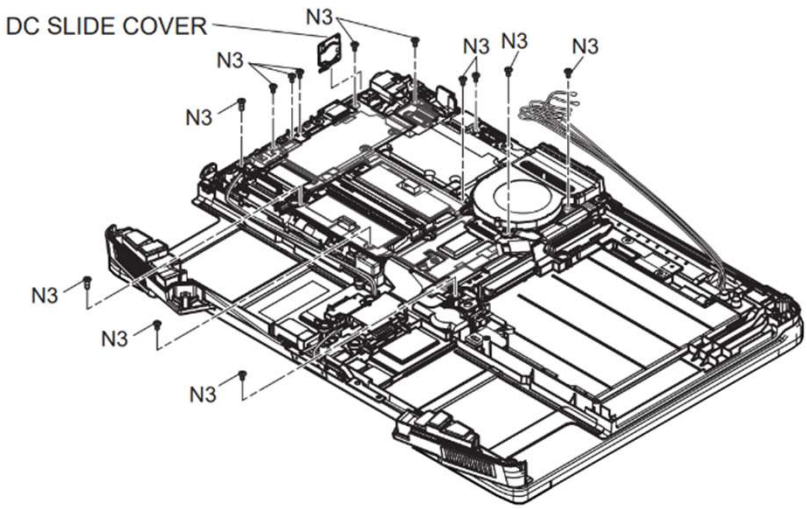
Remove 10 screws(N4) and disconnect 7 connectors.
Remove the tapes from the connectors to be disconnected.

Remove 10 screws(N4) and disconnect 7 connectors

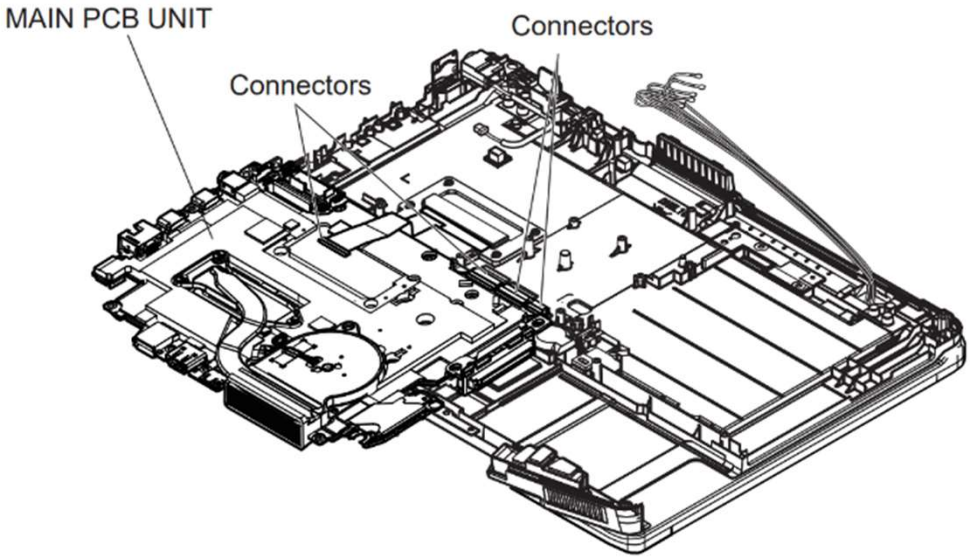



Remove the DC SLIDE COVER.

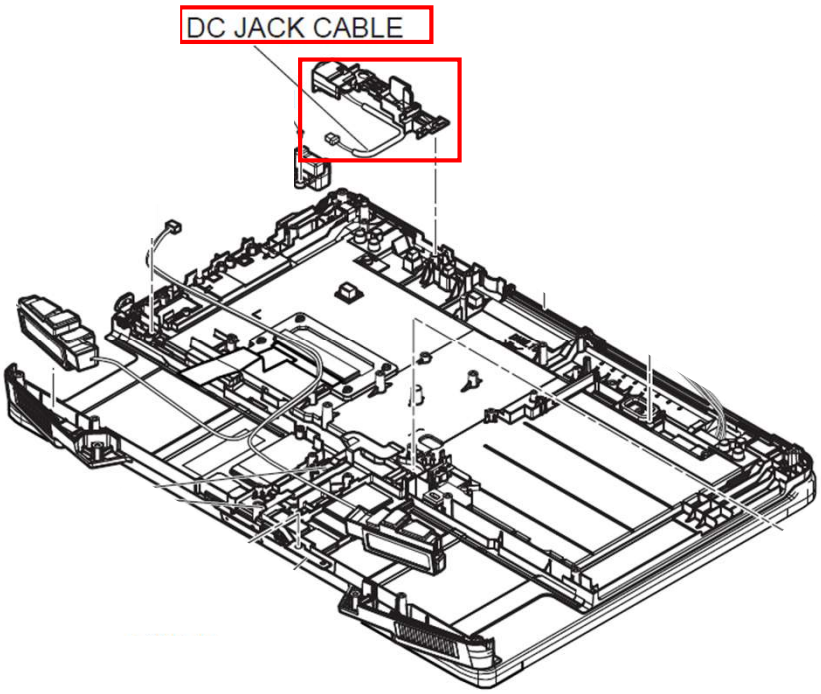
Remove 13 screws(N3).



Turn over the MAIN PCB UNIT as shown below, and remove 4 connectors.



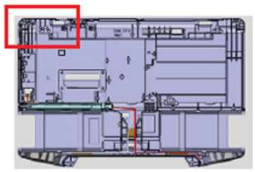

Remove DC JACK CABLE

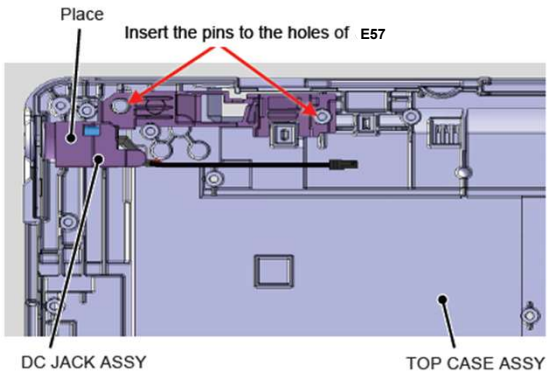


# External power connector

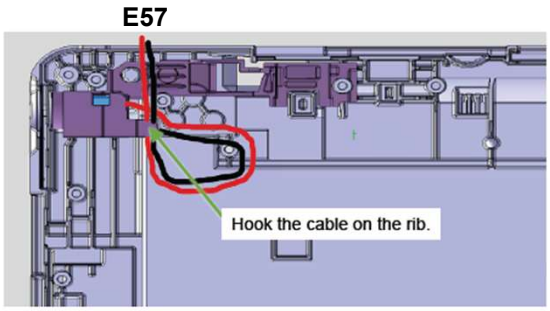
## Assembly procedure

| Parts Name |
| --- |
| DC JACK CABLE **(E57)** |



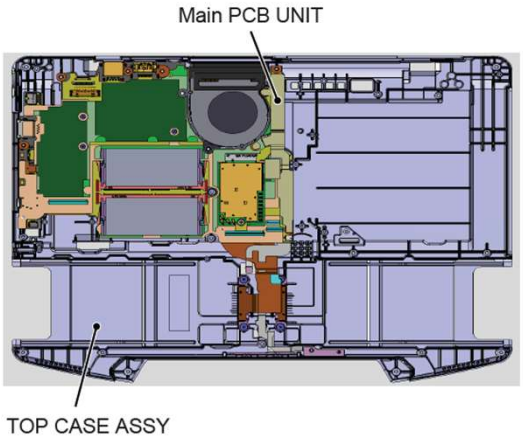


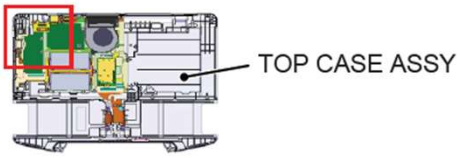

Note:
Both the DC Jack and the Top Case chassis (MG alloy) have convex-concave grooves.
Make sure that there is no slackness in the engagement.

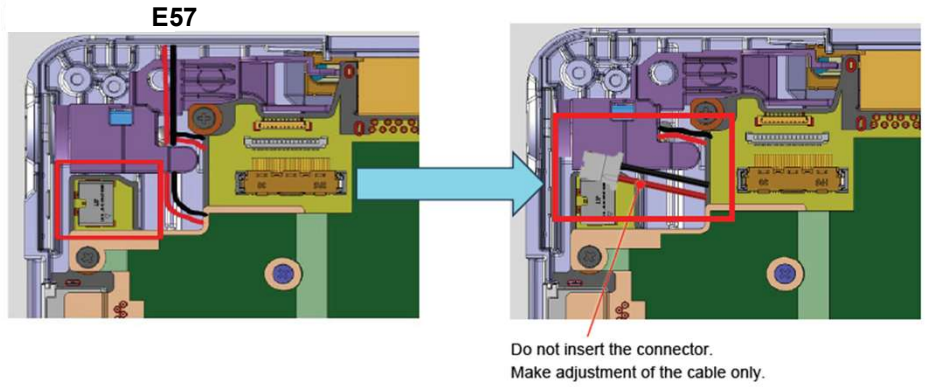


Reattach the Main PCB UNIT

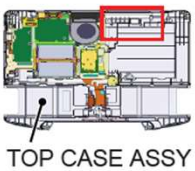
| Parts Name |
| --- |
| DC JACK CABLE **(E57)** |

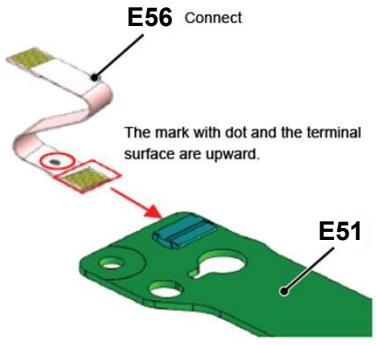


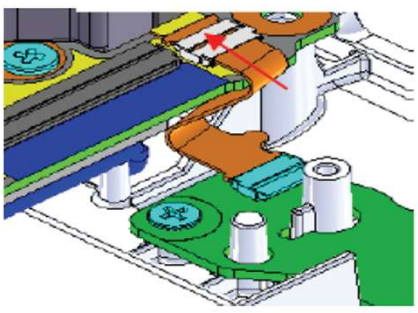



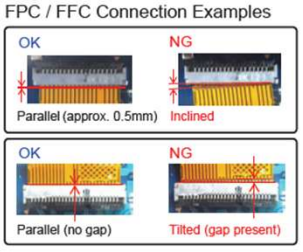



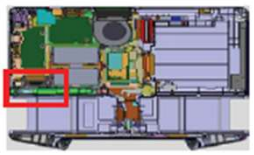

| Parts Name | |
| --- | --- |
| POWER SW PCB SUB UNIT | **(E51)** |
| POWER SW FFC | **(E56)** |

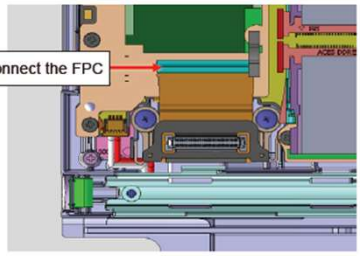


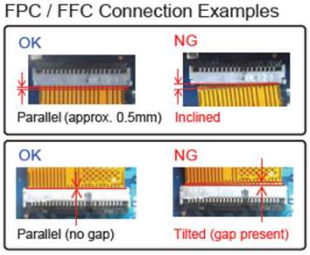



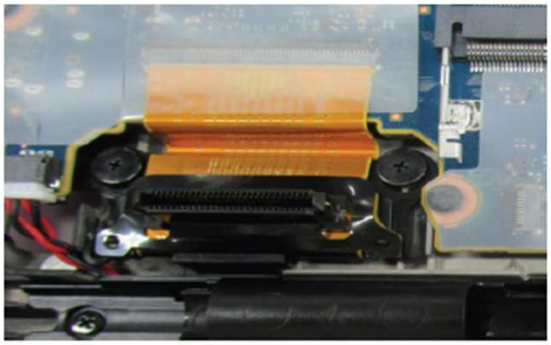


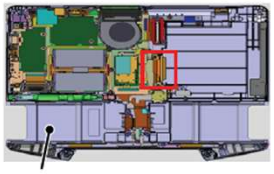




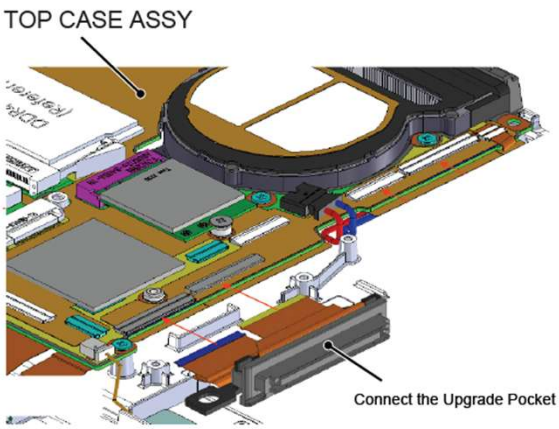

FPC / FFC Connection Examples



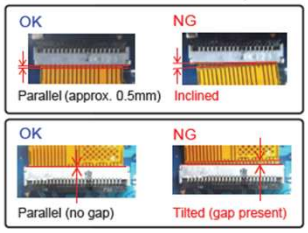





TOP CASE ASSY

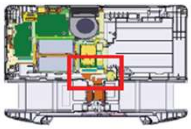


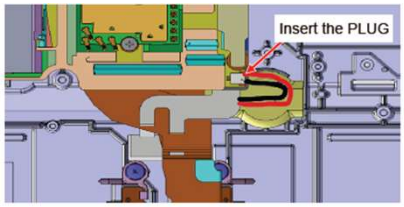

FPC / FFC Connection Examples

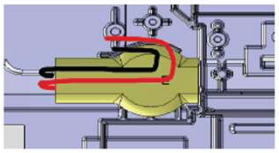



Insert battery’s connector to the Main PCB Unit

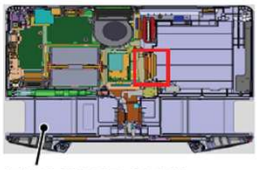
| Parts Name |
| --- |
| BATTERY **(E55)** |



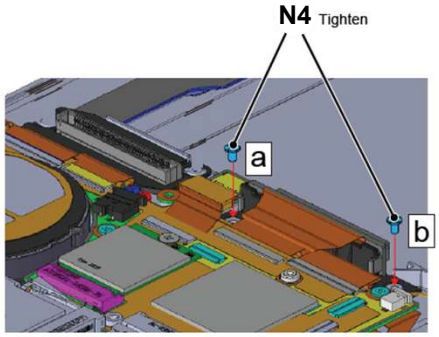


| Parts Name |
| --- |
| SCREW M2 NYLOK **(N4)** |



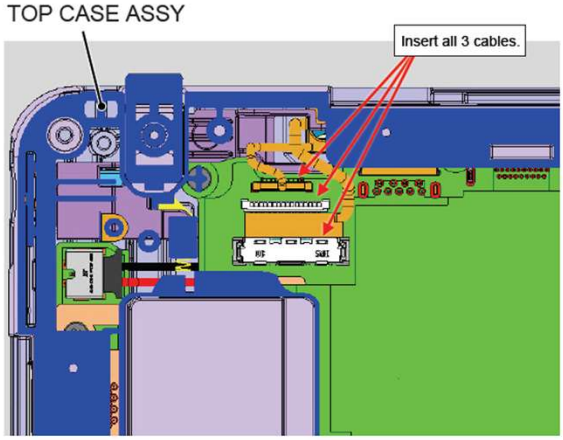
TOP CASE ASSY



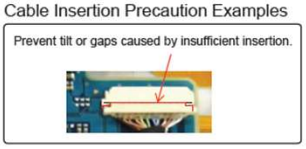

Screw tightening torque
0.20 N•m ± 0.02 N•m (2.0 ± 0.2 kgf•cm)

Screw tightening order
a to b

TOP CASE ASSY

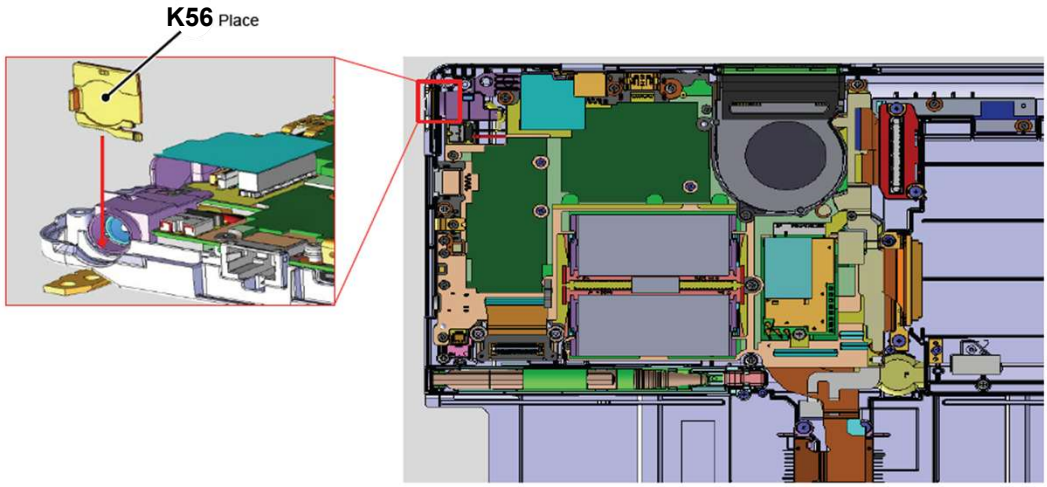



Cable Insertion Precaution Examples

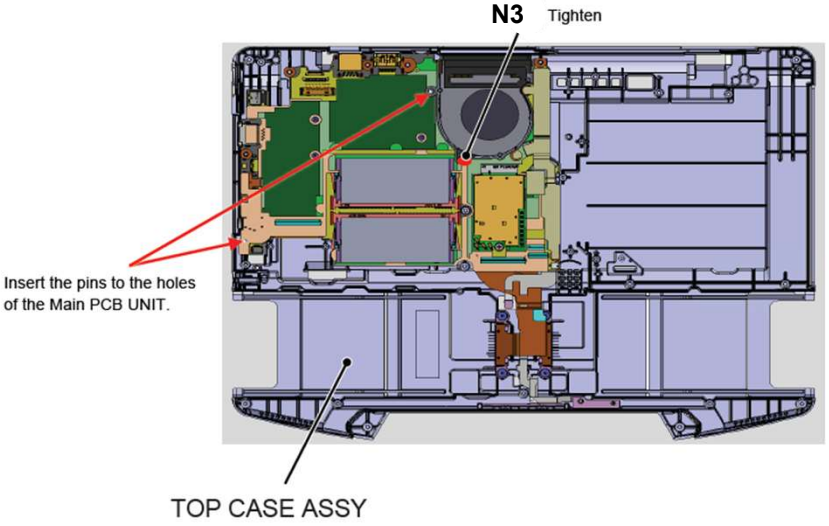



After affixing the BOTTOM CASE with chain, work inside the hole.

| Parts Name |
| --- |
| DC SLIDE COVER **(K56)** |



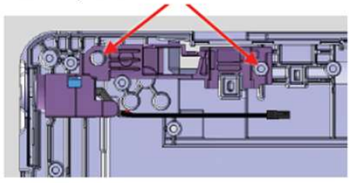
| Parts Name |
| --- |
| SCREW M2.6 NYLOK **(N3)** |



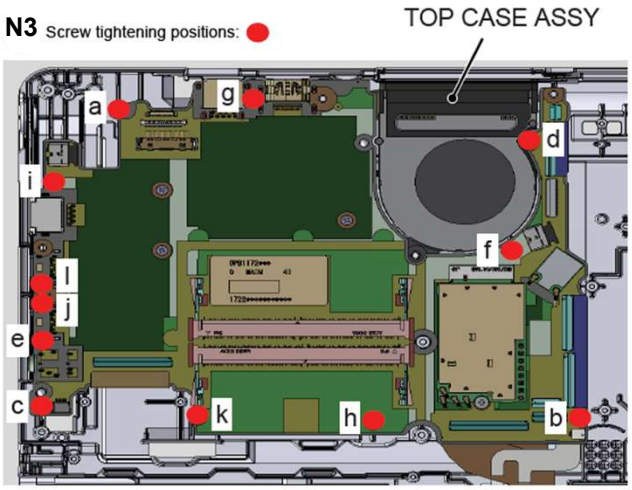

Screw tightening torque
0.37 N•m ± 0.02 N•m (3.7 ± 0.2 kgf•cm)

Note:
Both the DC Jack and the Top Case chassis (MG alloy) have convex-concave grooves.
Make sure that there is no slackness in the engagement.

Insert the pins to the holes of the DC JACK HOLDER.

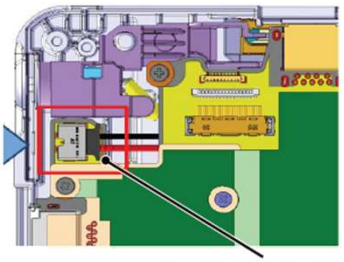


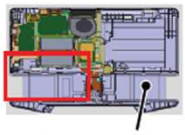
| Parts Name |
| --- |
| SCREW M2.6 NYLOK **(N3)** |



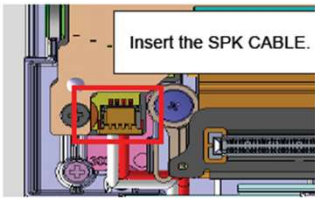

Screw tightening torque
0.45 N•m ± 0.05 N•m (4.5 ± 0.5 kgf•cm)

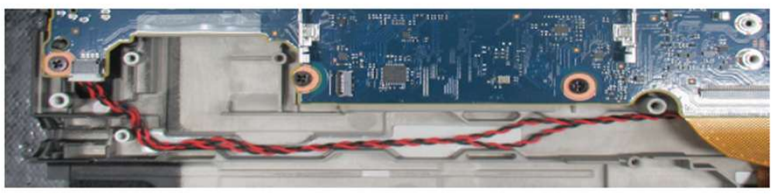
Screw tightening order
a to l





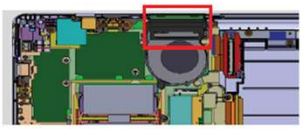
TOP CASE ASSY

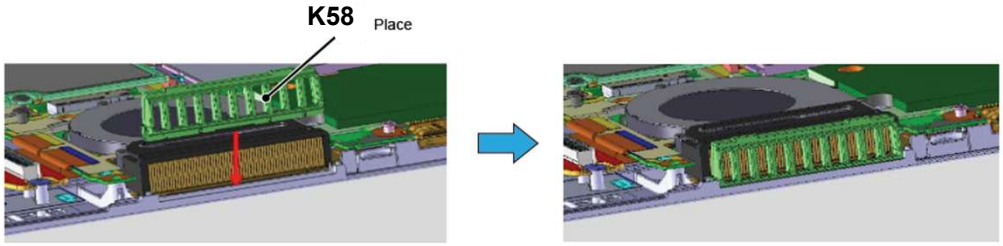


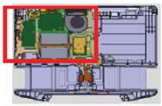
Confirm the SPK CABLE routing.

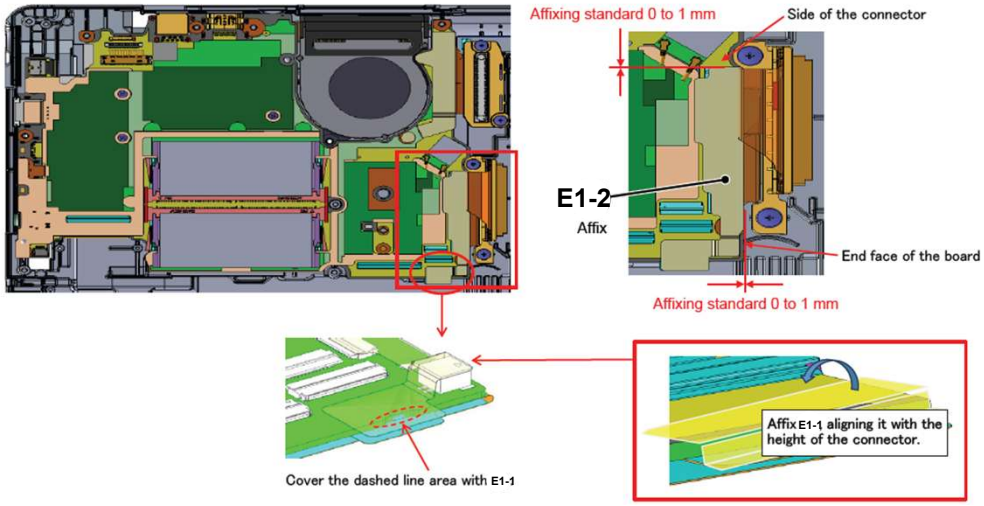
| Parts Name |
| --- |
| FAN LOUVER **(K58)** |



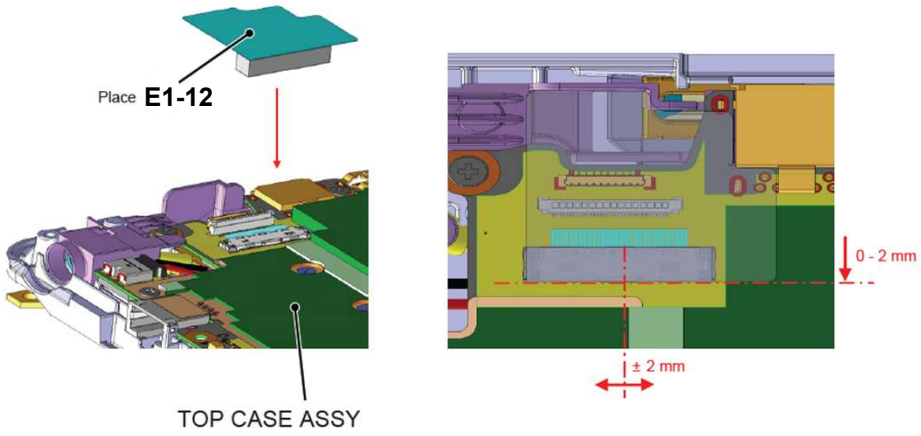


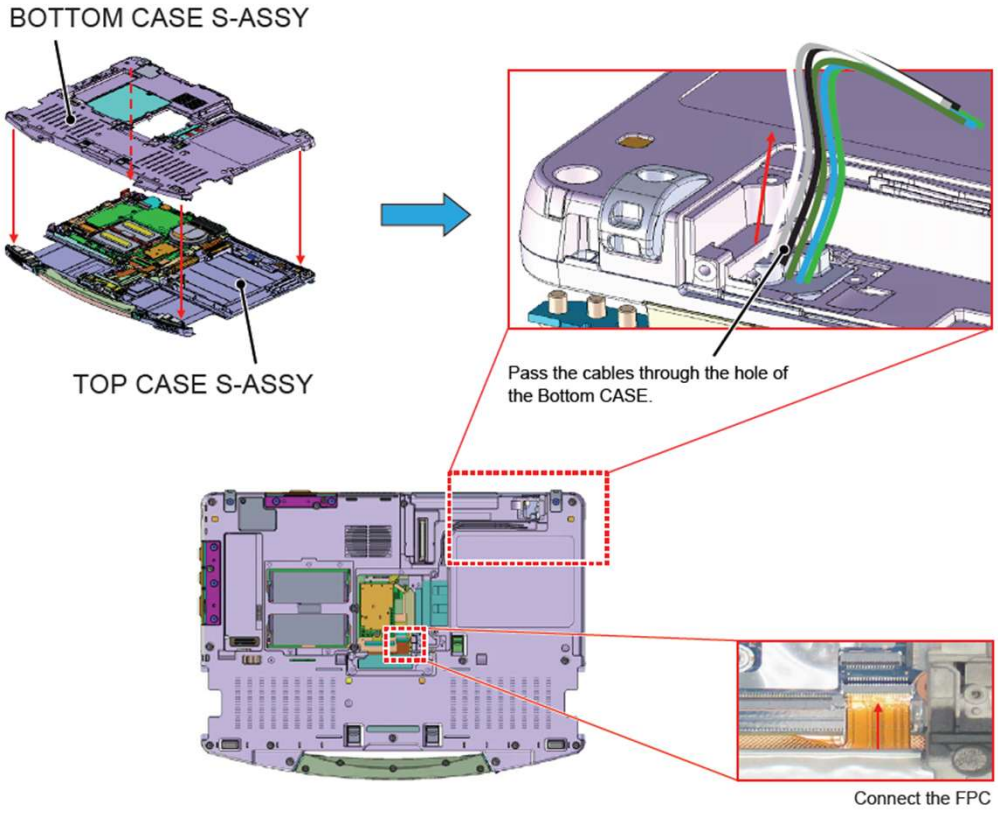

| Parts Name |
| --- |
| LEFT EX FPC FIX SHEET **(E1-2)** |



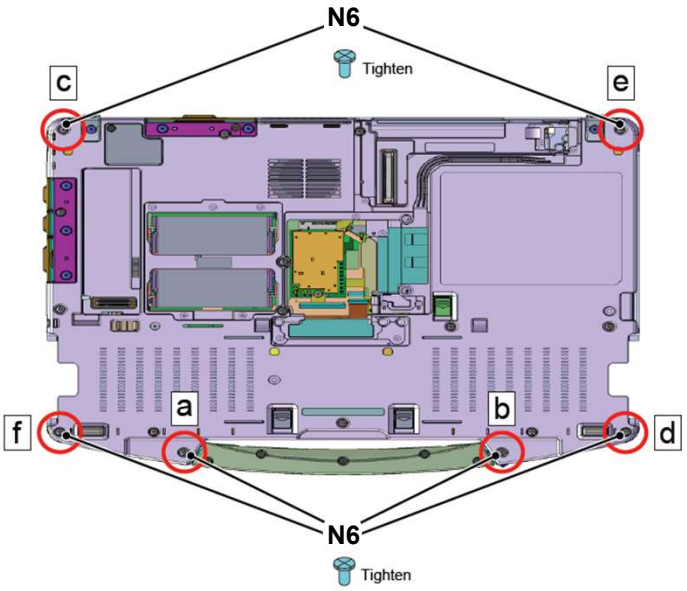


| Parts Name |
| --- |
| LCD CABLE CN FIX CUSHION **(E1-12)** |



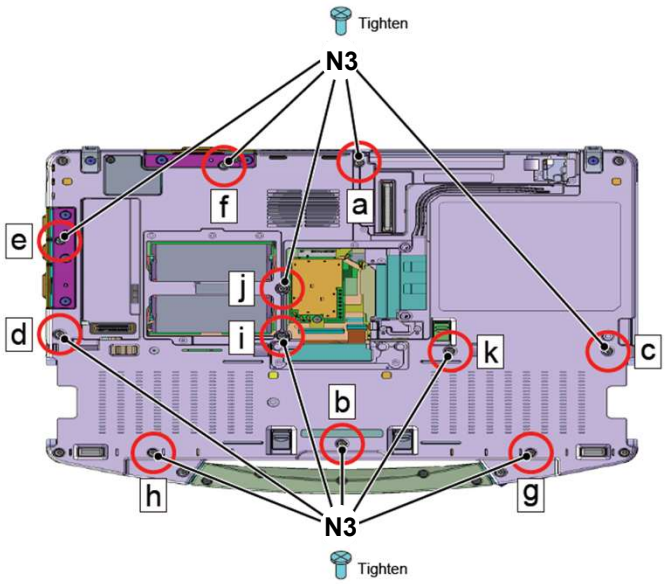
| Parts Name |
| --- |
| SCREW M2.6 NYLOK **(N6)** |




Screw tightening torque
0.60 N•m ± 0.05 N•m (6.0 ± 0.5 kgf•cm)

Screw tightening order
a to f

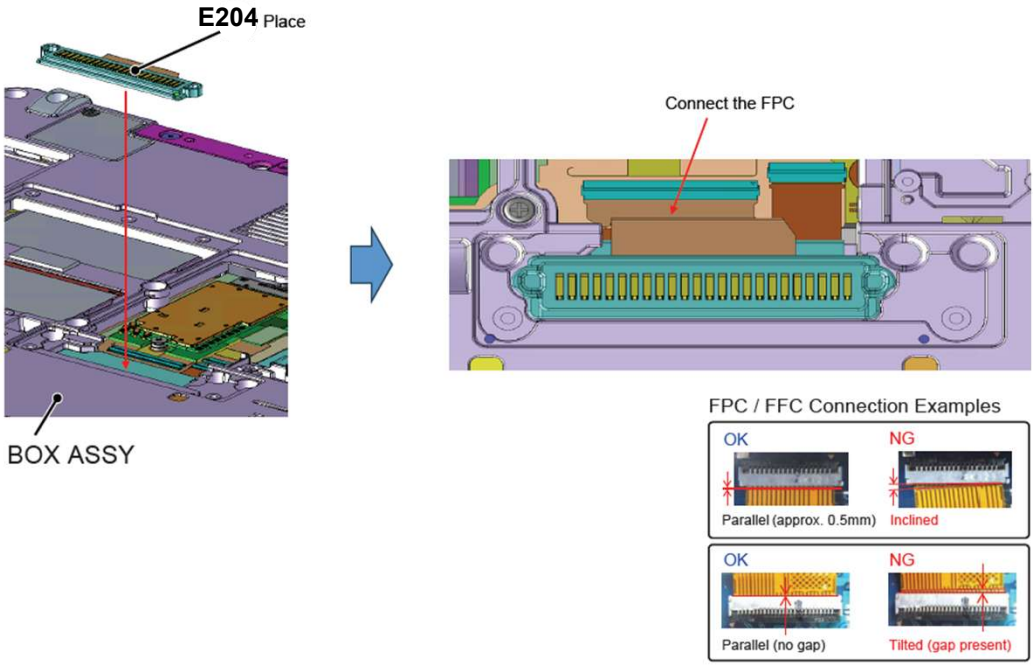
| Parts Name |
| --- |
| SCREW M2.6 NYLOK **(N3)** |



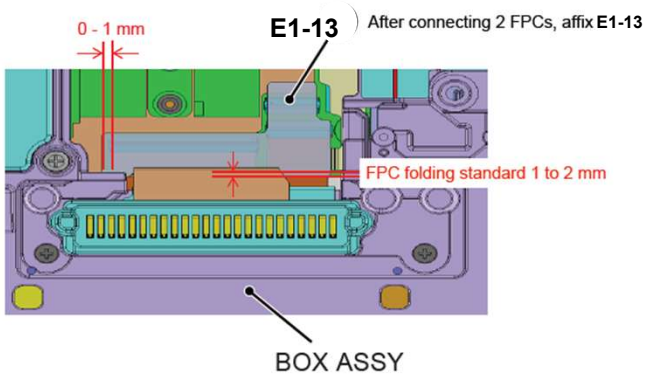

Screw tightening torque
0.60 N•m ± 0.05 N•m (6.0 ± 0.5 kgf•cm)

Screw tightening order
a to k

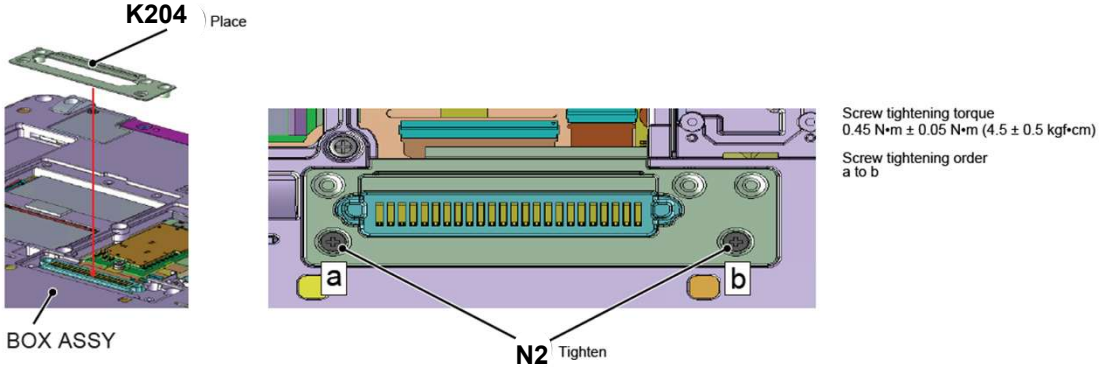
| Parts Name |
| --- |
| DOCK FPC UNIT **(E204)** |



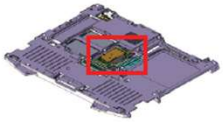

| Parts Name |
| --- |
| BOTTOM FPC CN FIX SHEET **(E1-13)** |



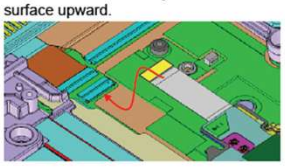

| Parts Name |
| --- |
| DOCKING CN COVER **(K204)** |
| SCREW M2.6 NYLOK **(N2)** |

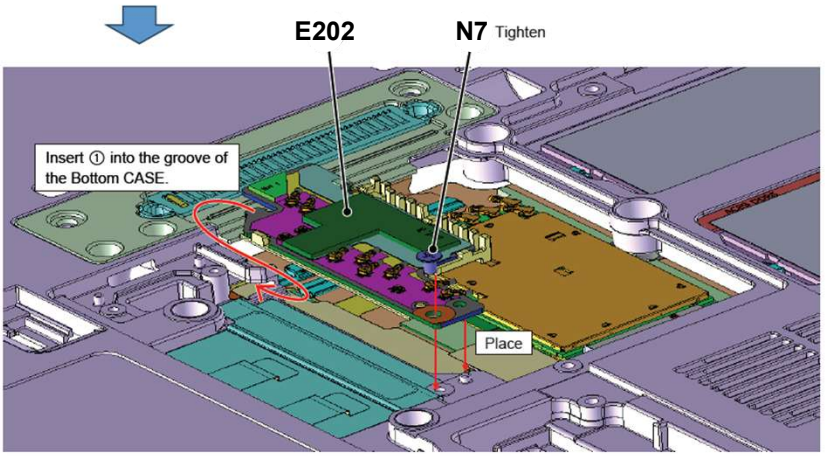


| Parts Name |
| --- |
| DUAL PASS PCB SUB UNIT (E202) |
| SCREW (N7) |



Insert the FFC with the yellow terminal surface upward.

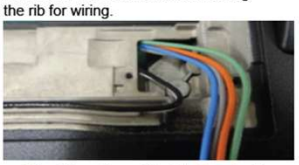




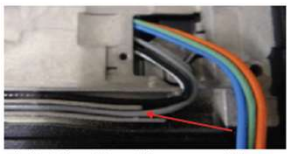

Screw tightening torque
0.20 N•m ± 0.02 N•m (2.0 ± 0.2 kgf•cm)

| Parts Name |
|---|
| ANTENNA CABLE COVER **(K213)** |
| SCREW M2 NYLOK **(N1)** |

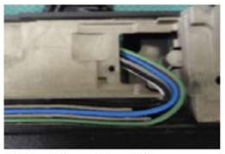
Wire the antenna cables in turn along the rib for wiring.



Adjust the wiring of the black and white cables. Make sure that the other cables are not entangled inside.



Adjust the wiring of the gray and blue cables. Make sure that the other cables are not entangled inside.



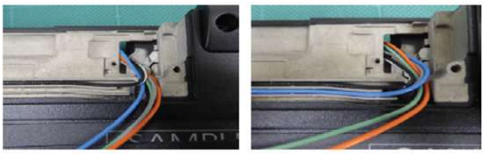
Adjust the wiring of the orange and green cables.

Wiring configuration



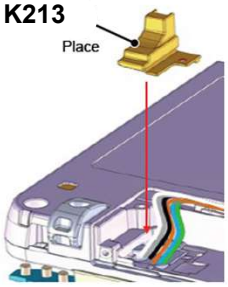
Note: Make sure that the cables are completely set in the L-shaped groove.

Failure examples

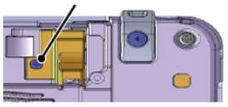


**K213**

Place

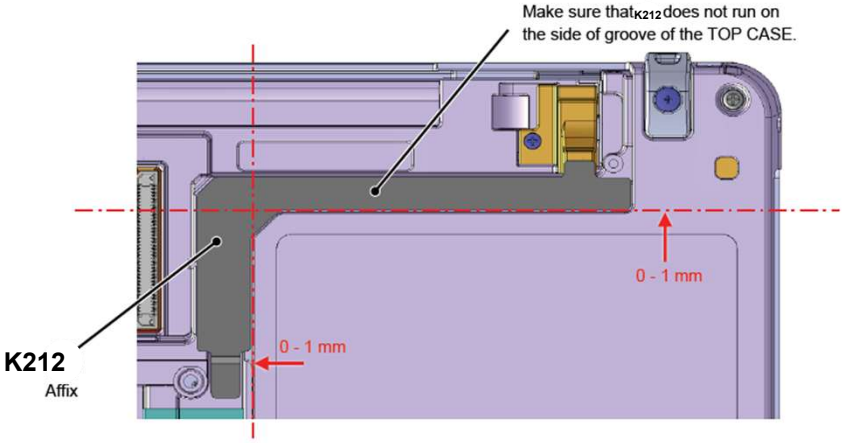


**N1** Tighten

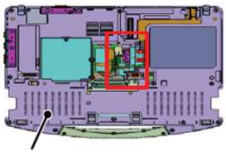


Screw tightening torque
2.0 N•m ± 0.02 N•m (2.0 ± 0.2 kgf•cm)

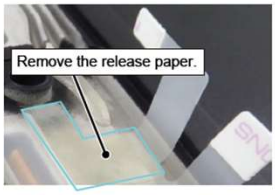
| Parts Name |
|---|
| ANT CABLE BLIND SHEET **(K212)** |

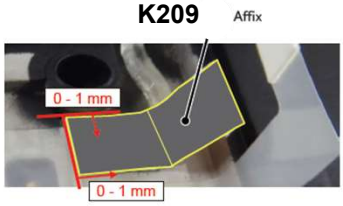


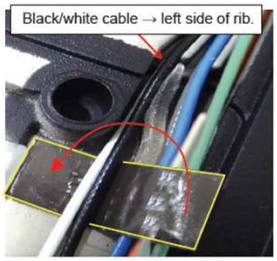
| Parts Name |
| --- |
| WIFI NOISE REDUCTION SHEET A **(K209)** |



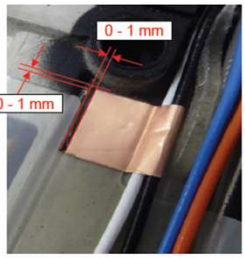
BOX ASSY

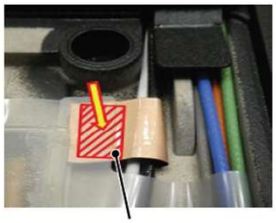


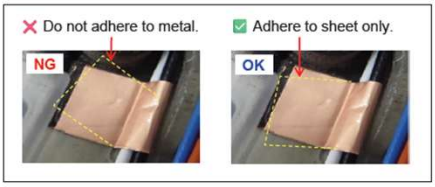




Place the cables on K209 fixed with a double-sided tape. Wrap K209 around the cables, and affix and secure it.

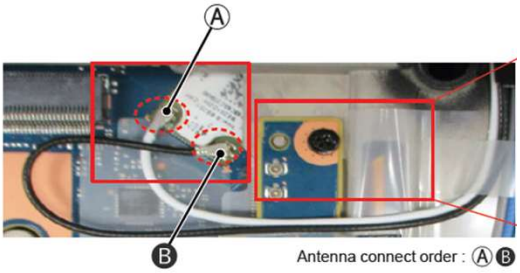


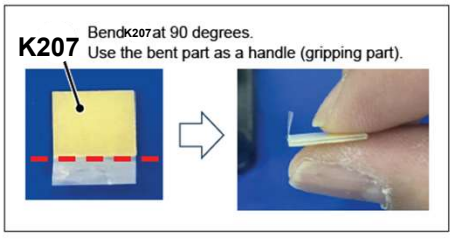
Press firmly with your finger, and bond it securely.



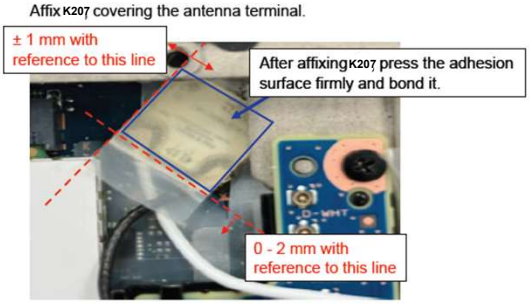

| Parts Name |
| --- |
| WLAN CN FIX SHEET **(K207)** |



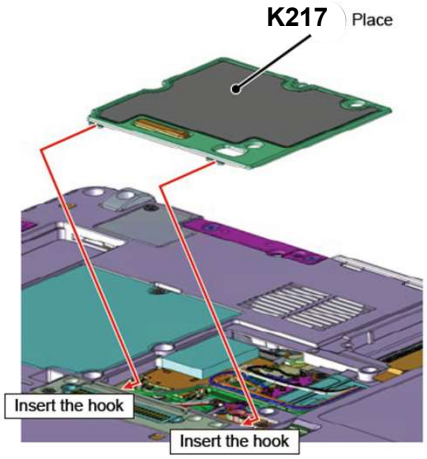

Antenna connect order : Ⓐ Ⓑ



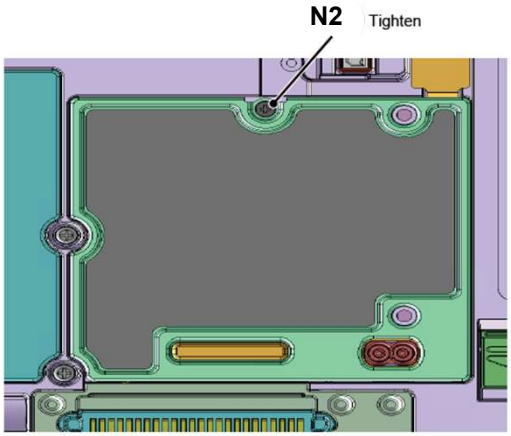

Affix K207 covering the antenna terminal.



| Parts Name |
| --- |
| CONFIG COVER ASSY **(K217)** |

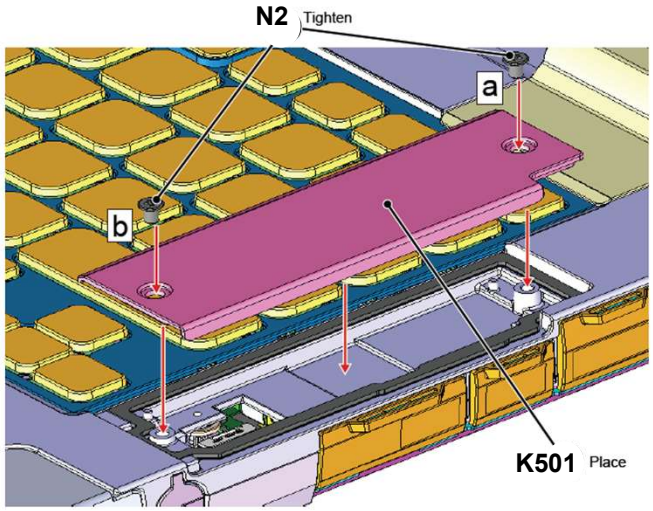



| Parts Name |
| --- |
| SCREW M2.6 NYLOK **(N2)** |




Screw tightening torque
0.45 N•m ± 0.05 N•m (4.5 ± 0.5 kgf•cm)

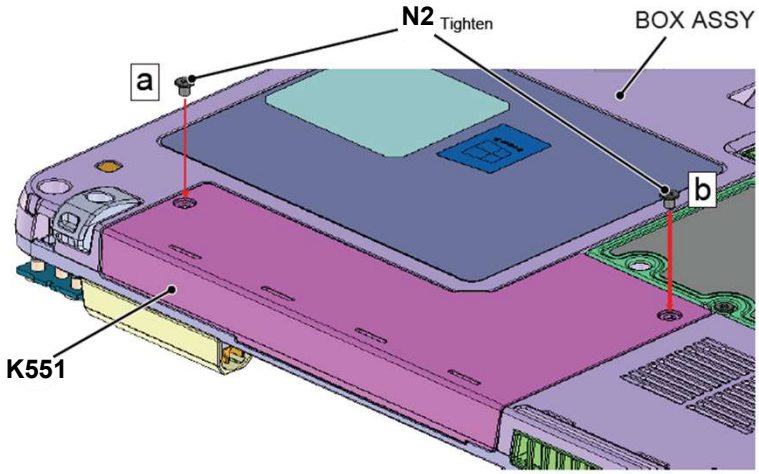
| Parts Name |
| --- |
| RIGHT SECURITY CASE BLANK **(K501)** |
| SCREW M2.6 NYLOK **(N2)** |




Screw tightening torque
0.45 N•m ± 0.05 N•m (4.5 ± 0.5 kgf•cm)

Screw tightening order
a to b

| Parts Name | |
|---|---|
| IO BLANK COVER | **(K551)** |
| SCREW M2.6 NYLOK | **(N2)** |

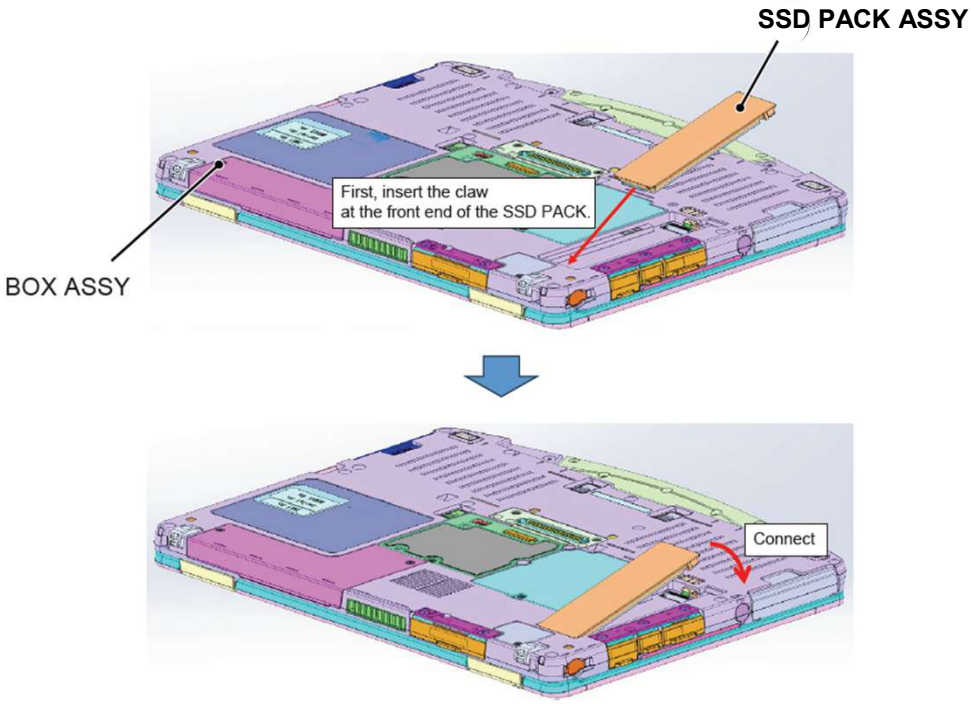



Screw tightening torque
0.45 N•m ± 0.05 N•m (4.5 ± 0.5 kgf•cm)

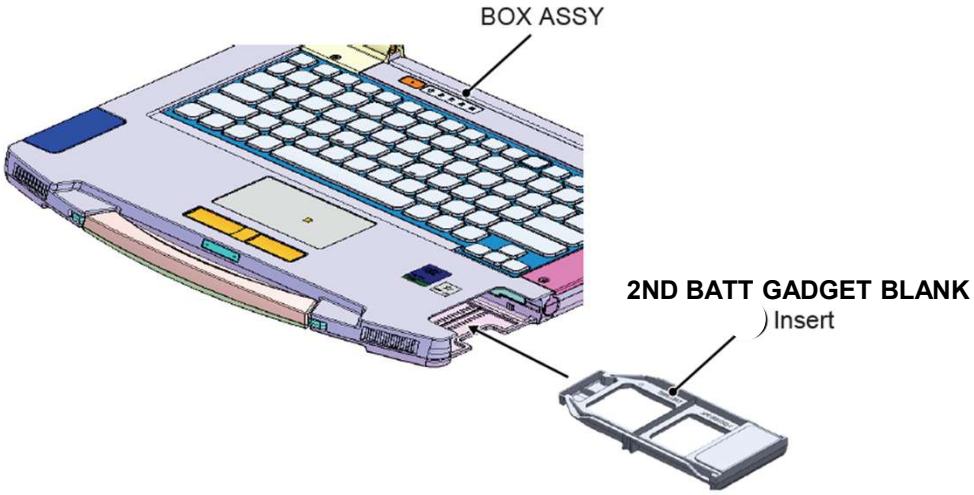
Screw tightening order
a to b

<Note for assembly order>
Insert K551 while sliding it from the side. Align K551 with the screw holes (a/b) of the BOX ASSY, and affix it securely.

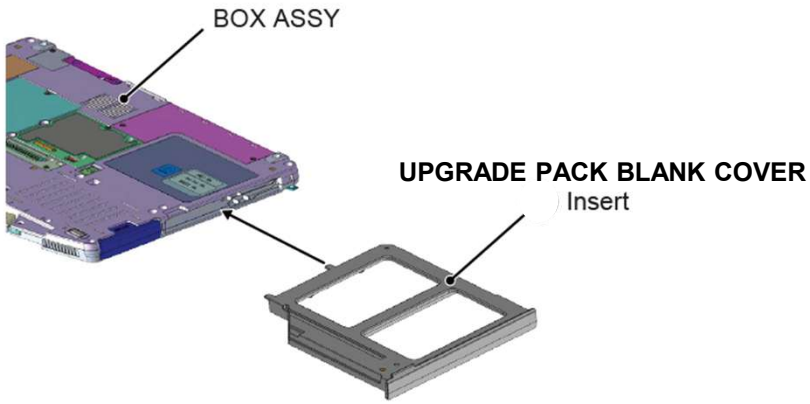
| Parts Name |
|---|
| SSD PACK ASSY |



| Parts Name |
| --- |
| 2ND BATT GADGET BLANK |




| Parts Name |
| --- |
| UPGRADE PACK BLANK COVER |




| Parts Name |
| --- |
| BATTERY PACK |

