

TravelMate P215-52/P215-52G

RECYCLE GUIDE

Revision History

Refer to the table below for the updates made to this service guide.

| Date | Version | Chapter | Updates |
|------------|---------|---------|-------------------|
| 11-01-2019 | V 1.00 | 3 | |
| 11-14-2019 | V 1.01 | 3 | Update screw list |
| | | | |

Service guide files and updates are available on the ACER/CSD Website. For more information, go to <http://csd.acer.com.tw>. The information in this guide is subject to change without notice.

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Conventions

The following conventions are used in this manual:

⚠ WARNING:

Indicates a potential for personal injury.

⚠ CAUTION:

Indicates a potential loss of data or damage to equipment.

+ IMPORTANT:

Indicates information that is important to know for the proper completion of a procedure, choice of an option, or completing a task.

The following typographical conventions are used in this document:

- Book titles, directory names, file names, path names, and program/process names are shown in *italics*.

Example:

the DRS5 User's Guide

/usr/local/bin/fd

the /TPH15spool_M program

- Computer output (text that represents information displayed on a computer screen, such as menus, prompts, responses to input, and error messages) are shown in constant width.

Example:

[01] The server has been stopped

- User input (text that represents information entered by a computer user, such as command names, option letters, and words) are shown in constant width bold.

Variables contained within user input are shown in angle brackets (< >).

Example:

At the prompt, type run **<file name> -m**

- Keyboard keys are shown in ***bold italics***.

Example:

After entering data, press ***Enter***.

General Information

This service guide provides all technical information relating to the basic configuration for Acer's global product offering. To better fit local market requirements and enhance product competitiveness, the regional office may have decided to extend the functionality of a machine (such as add-on cards, modems, or extra memory capabilities). These localized features are not covered in this generic service guide. In such cases, contact the regional offices or the responsible personnel/channel to provide further technical details.

When ordering FRU parts: Check the most up-to-date information available on the Website. If, for whatever reason, a part number change is made, it may not be noted in this printed service guide.

Acer-authorized Service Providers: The Acer office may have a different part number code than those given in the FRU list in this service guide. A list must be provided by the regional Acer office to order FRU parts for repair and service of customer machines.

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Machine Maintenance Procedures

Introduction

This chapter contains general information about the computer, a list of tools needed to do the required maintenance and step by step procedures on how to remove and install components from the computer.

General Information

The product previews seen in the following procedures may not represent the final product color or configuration. Cable paths and positioning may also differ from the actual model. During the removal and installation of components, make sure all available cable channels and clips are used and that the cables are installed in the same position.

All prerequisites must be completed prior to starting maintenance.

Recommended Equipment

The following equipment are recommended to do the following maintenance procedures:

- Wrist grounding strap and conductive mat
- Philips screwdriver
- Plastic tweezers
- Flat plastic pry

Pre-disassembly Instructions

Do the following prior to starting any maintenance procedures:

1. Place the system on a stable work surface.
2. Remove AC adapter (A) from the system and peripherals ([Figure 1-1](#)).
3. Remove all cables from system.



Figure 1-1. AC Adapter Outlet

4. Remove the SD card from the SD card slot (B) ([Figure 1-2](#)).



Figure 1-2. SD Card Removal

⇒ NOTE:

Make sure the system is completely powered off.

Disassembly Process

The disassembly process is divided into the following sections:

- Main unit disassembly
- LCD module disassembly

The flowcharts provided in the succeeding disassembly sections illustrate the entire disassembly sequence. Observe the order of the sequence to avoid damage to any of the hardware components. For example, when removing the heatsink, remove first the base cover and battery in that order.

Table 3-1. Main Screw List

| Size | Quantity | Acer Part No. |
|---|----------|---------------|
| ST6 SCREW M2.5*5.0-I(NI)(NYLOK)IRON SP - Quanta description | 6 | TBD |
| SCREW M2.0*3.0-I(BZN)(NYLOK)IRON | 21 | 86.GDEN7.001 |
| SCREW M3*0.5+3.5I | 4 | 86.TDY07.003 |
| ST7 SCREW M2.5*3.0-IZNNYLOK IRONT=0.5 SP - Quanta description | 8 | TBD |
| ZAI SCREW W/WASHER KIT S.P - Quanta description | 12 | TBD |

Main Unit Disassembly Process

Main Unit Disassembly Flowchart

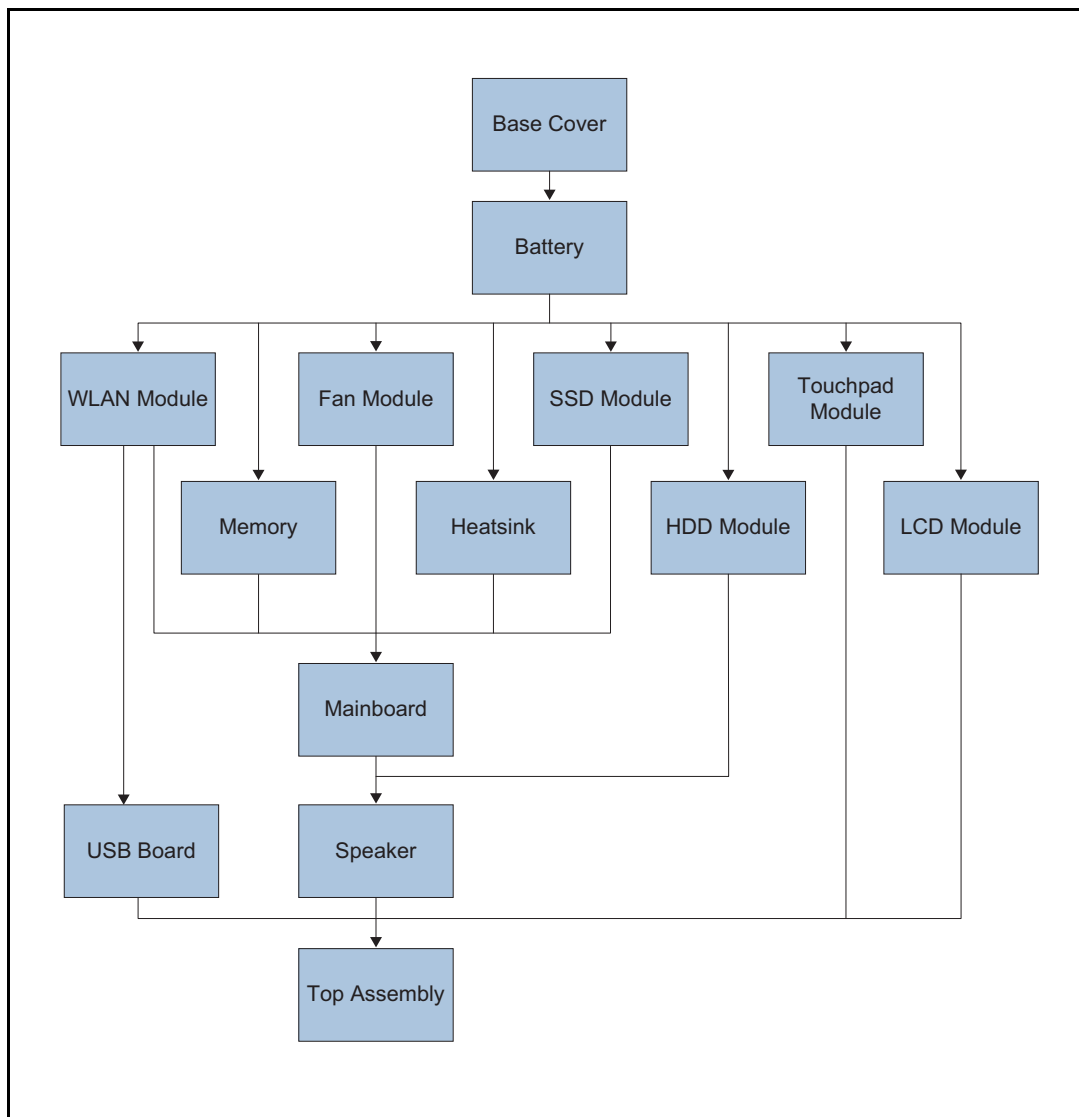


Table 3-2. Main Unit Screw List

| Step | Size | Quantity | Acer Part No. |
|---------------------|------------|----------|---------------|
| Base Cover Removal | M2.5 x 7.0 | 12 | TBD |
| WLAN Module Removal | M2.0 x 3.0 | 1 | 86.GDEN7.001 |
| Fan Removal | M2.5 x 5.0 | 2 | TBD |
| Heatsink Removal | M2.0 x 3.0 | 5 | 86.GDEN7.001 |
| SSD Module Removal | M2.0 x 3.0 | 1 | 86.GDEN7.001 |

| Step | Size | Quantity | Acer Part No. |
|------------------------|------------|----------|---------------|
| HDD Module Removal | M2.0 x 3.0 | 4 | 86.GDEN7.001 |
| | M3.0 x 3.5 | 4 | 86.TDY07.003 |
| Touchpad Board Removal | M2.0 x 3.0 | 2 | 86.GDEN7.001 |
| LCD Module Removal | M2.5 x 5.0 | 4 | TBD |
| USB Board Removal | M2.0 x 3.0 | 1 | 86.GDEN7.001 |
| Mainboard Removal | M2.0 x 3.0 | 7 | 86.GDEN7.001 |

⇒ **NOTE:**

The keyboard is included as part of the top assembly and can not be disassembled. In the event that the keyboard is damaged, replace the entire top assembly.

Base Cover Removal

1. Remove twelve (12) screws from the base cover (Figure 1-3).



Figure 1-3. Base Cover Removal

2. Carefully pry up the base cover starting from the upper side to release the latches. Then continue releasing the remaining latches on the left, right, and bottom sides (Figure 1-4).




Figure 1-4. Base Cover Removal

3. Grasp and remove the base cover from the system (Figure 1-5).



Figure 1-5. Base Cover Removal

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|--|
| Red Call out | M2.5*7.0 | 3.0±0.15KGF/CM | 12 |  |

Battery Pack Removal

Prerequisite:

[Base Cover Removal](#)

1. Find the battery pack (A) in the system ([Figure 1-6](#)).
2. Detach the tape (B) securing the battery cable to the mainboard connector ([Figure 1-6](#)).

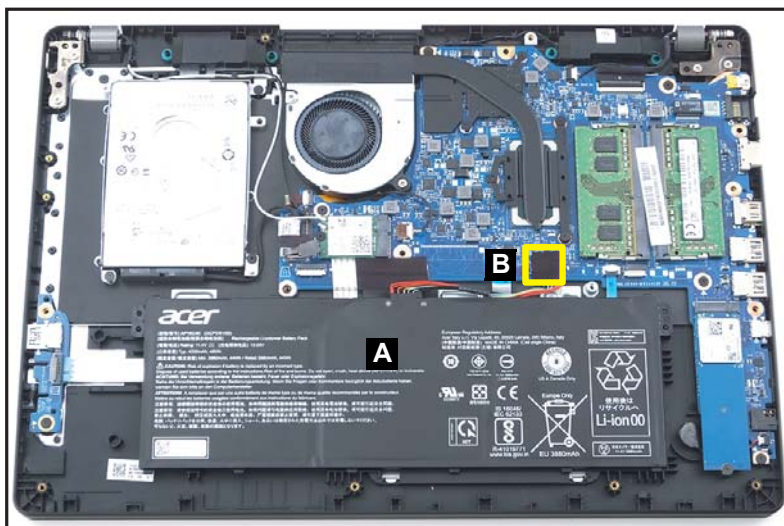


Figure 1-6. Battery Pack Removal

3. Disconnect the battery cable from the mainboard connector (C) ([Figure 1-7](#)).

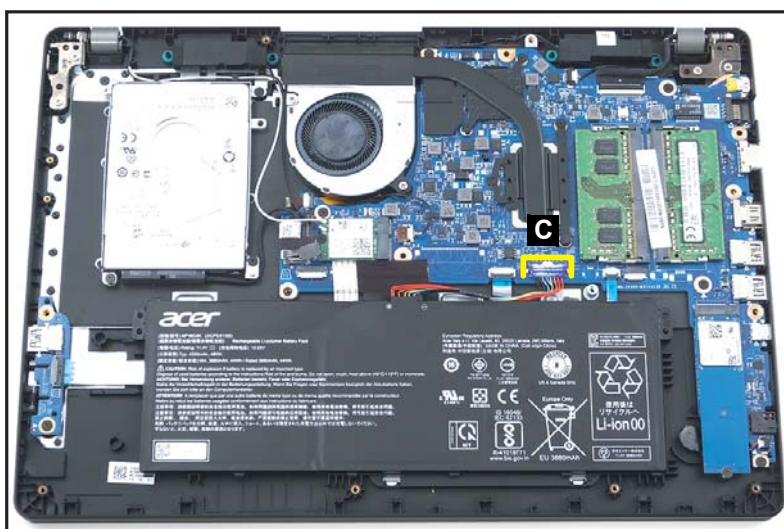


Figure 1-7. Battery Pack Removal

4. Release the battery pack from the guide pins (D) and remove the battery pack (A) from the system (Figure 1-8).

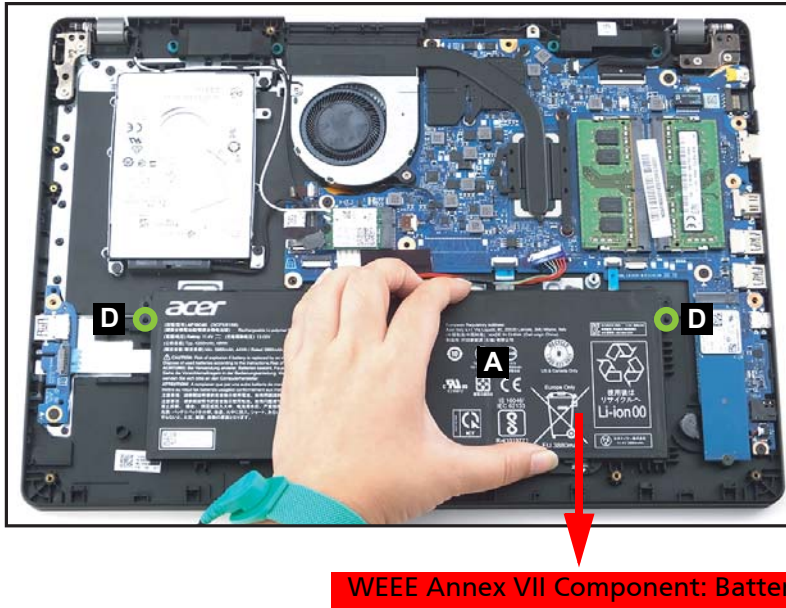


Figure 1-8. Battery Pack Removal

- + **IMPORTANT:**
Follow local regulations for battery disposal.

WLAN (Wireless Local Area Network) Module Removal

Prerequisite:

Battery Pack Removal

1. Find the WLAN module (A) on the top assembly (Figure 1-9).

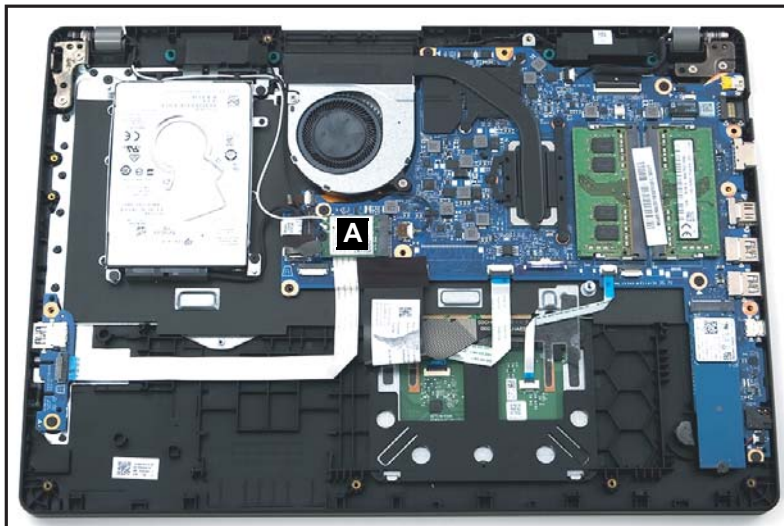


Figure 1-9. WLAN Module Location

2. Disconnect WLAN antennas connected to the WLAN module connectors (B) (Figure 1-10). Then remove the WLAN antennas (C) from the cable guides as shown in Figure 1-10.
3. Remove one (1) screw securing the WLAN module in place (Figure 1-10).

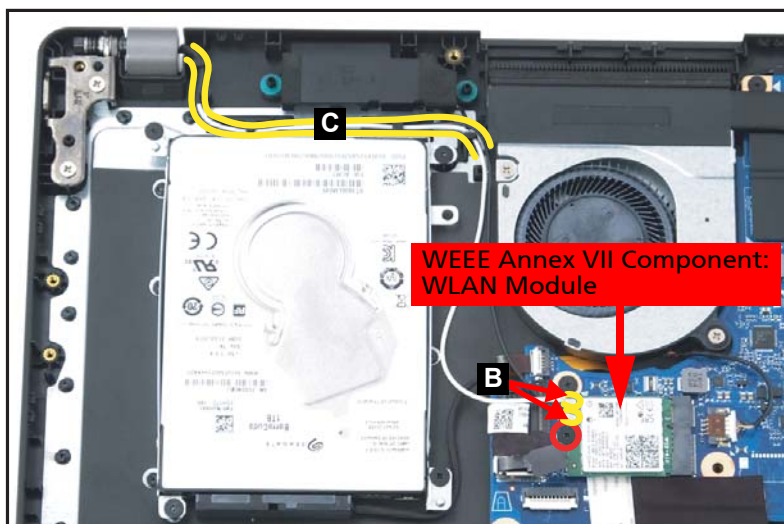


Figure 1-10. WLAN Module Removal

4. Remove the WLAN module from the mainboard connector (D) (Figure 1-11).

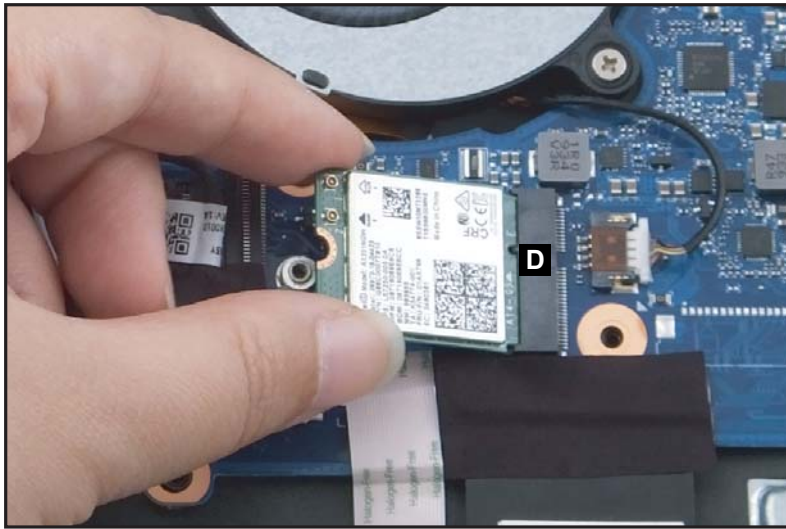



Figure 1-11. WLAN Module Removal

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|--|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 1 |  |

DIMM (Dual In-line Memory Module) Removal

Prerequisite:

Battery Pack Removal

1. Find the DIMM module (A) in the system (Figure 1-12).
2. Push the DIMM module clips (B) outwards (Figure 1-12).

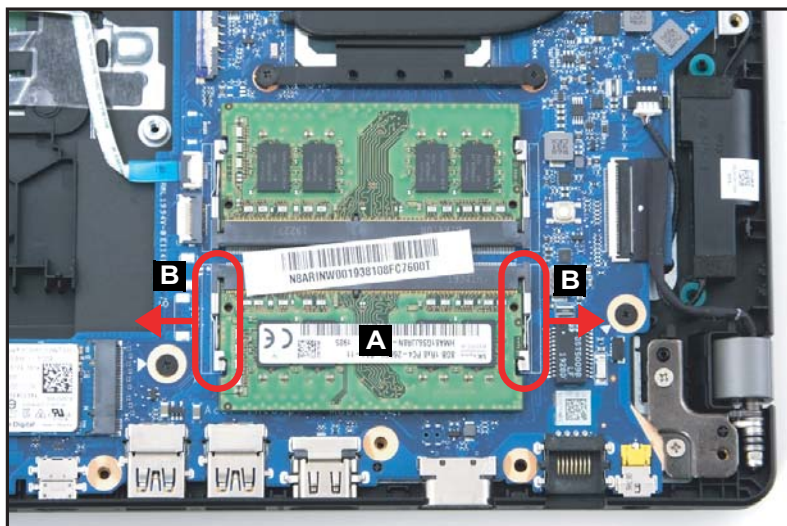


Figure 1-12. DIMM Module Removal

3. Remove the DIMM module from the mainboard connector (C) (Figure 1-13).

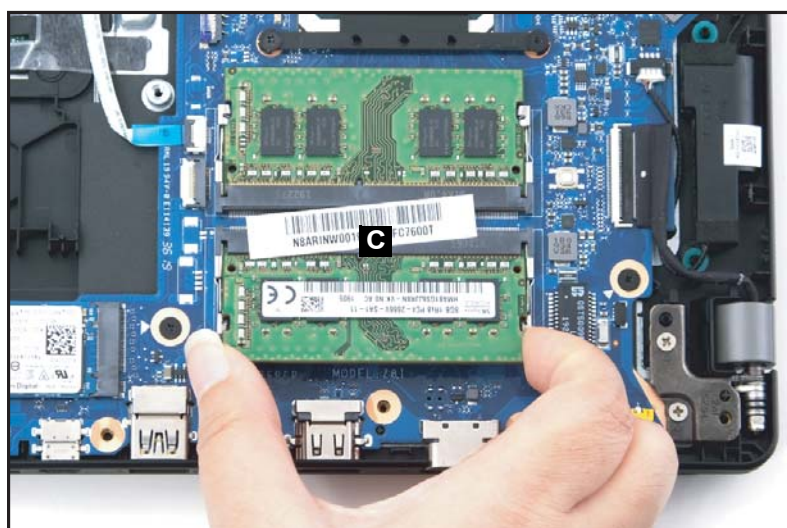


Figure 1-13. DIMM Module Removal

4. Repeat steps 1~3 to remove another DIMM module.

Fan Removal

Prerequisite:

Battery Pack Removal

1. Find the fan (A) on the top assembly (Figure 1-14).
2. Disconnect the fan cable from the mainboard connector (B) (Figure 1-14).
3. Remove two (2) screws securing the fan in place (Figure 1-14).

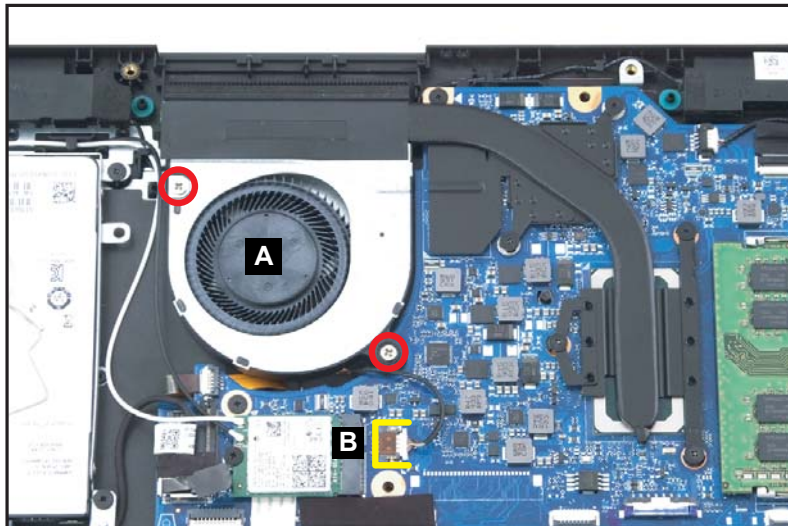


Figure 1-14. Fan Removal

4. Remove the fan from the top assembly (refer to Figure 1-15).

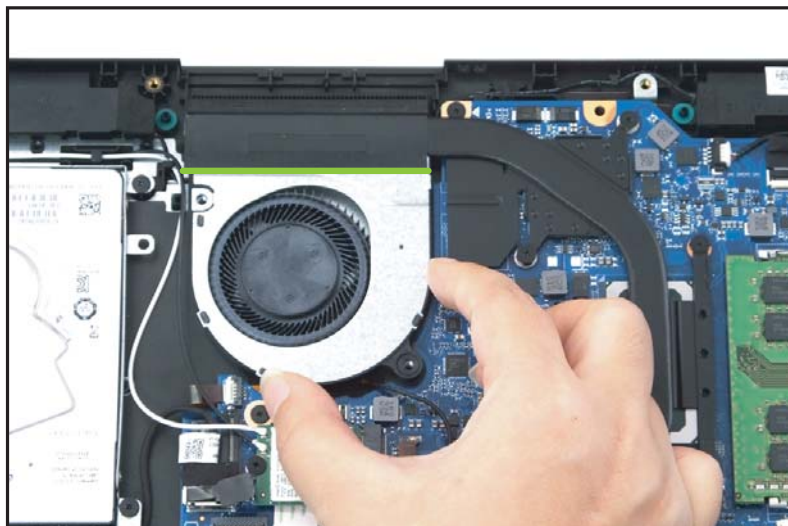



Figure 1-15. Fan Removal

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.5*5.0 | 3.0±0.15KGF/CM | 2 |  |

Heatsink Removal

Prerequisite:

Battery Pack Removal

1. Remove five (5) screws securing the CPU heatsink in place (Figure 1-16).

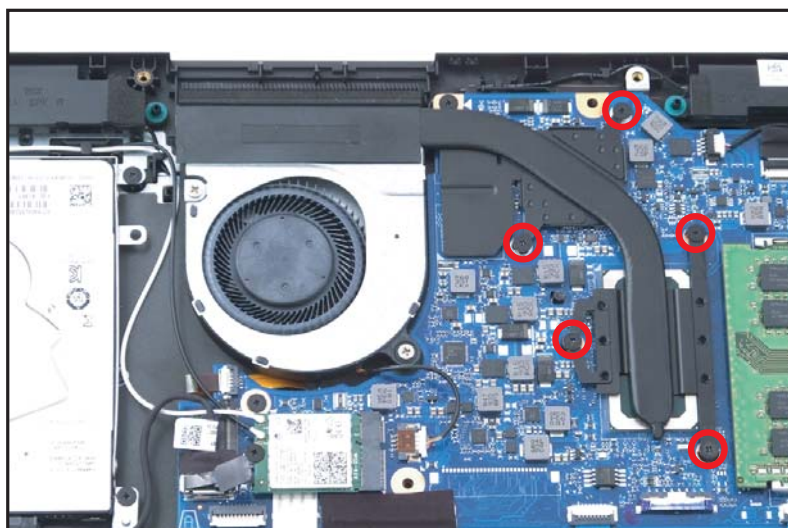


Figure 1-16. Heatsink Removal

2. Remove the heatsink (A) from the mainboard and top assembly (Figure 1-17).

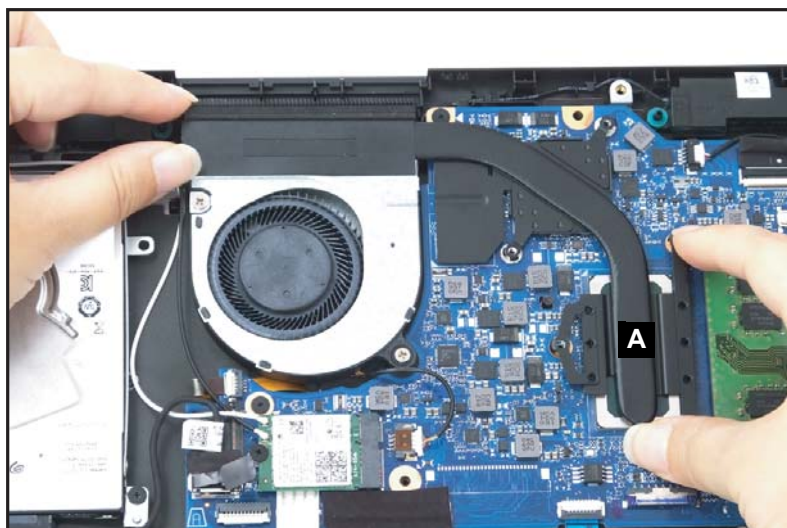



Figure 1-17. Heatsink Removal

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 5 |  |

SSD (Solid State Drive) Module Removal

Prerequisite:

Battery Pack Removal

1. Remove one (1) screw securing the SSD module in place (Figure 1-18).



Figure 1-18. SSD Module Removal

2. Remove the SSD module (A) from the mainboard connector (B) (Figure 1-19).

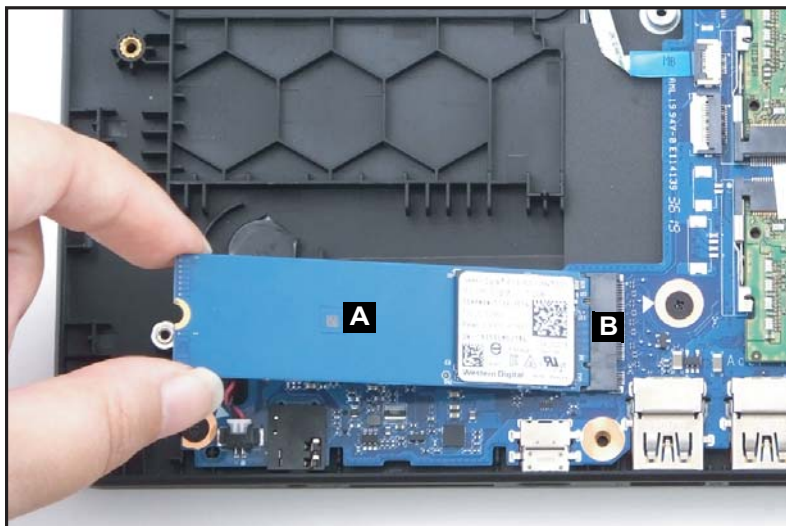



Figure 1-19. SSD Module Removal

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 1 |  |

HDD (Hard Disk Drive) Module Removal

Prerequisite:

Battery Pack Removal

1. Disconnect the HDD cable from the mainboard connector (A) (Figure 1-20).
2. Remove four (4) screws (B) securing the HDD bracket (Figure 1-20).

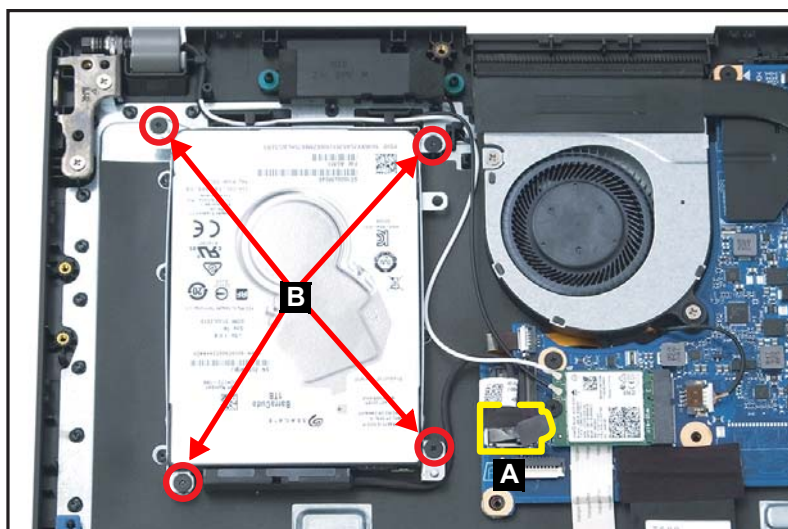


Figure 1-20. HDD Module Removal

3. Remove the HDD module assembly (C) from its compartment (Figure 1-21).



Figure 1-21. HDD Module Removal

4. Disconnect the HDD cable from the HDD module connector (D) (Figure 1-22).

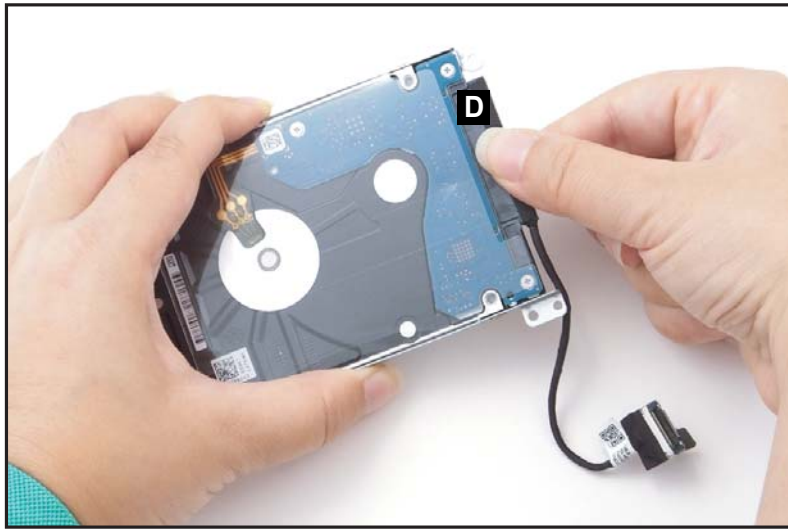


Figure 1-22. HDD Module Removal

5. Remove four (4) screws (E) from the HDD bracket (Figure 1-23).

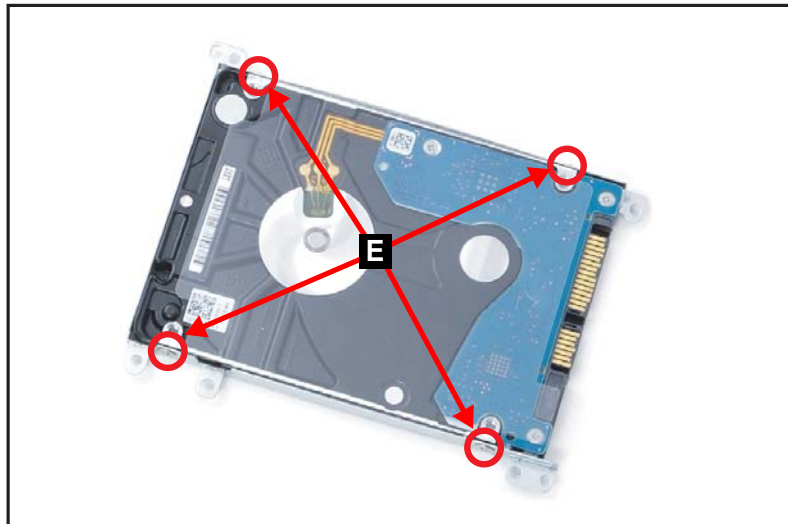




Figure 1-23. HDD Module Removal

6. Remove the HDD module from its bracket.

| ID | Size | Torque | Quantity | Screw Type |
|----|----------|----------------|----------|---|
| B | M2.0*3.0 | 2.0±0.10KGF/CM | 4 |  |
| E | M3.0*3.5 | 3.0±0.15KGF/CM | 4 |  |

Touchpad Module Removal

Prerequisite:

Battery Pack Removal

1. Slightly lift the keyboard FPC, and then disconnect the touchpad FFC (A) from the touchpad module and mainboard connectors (Figure 1-24).
2. Disconnect the fingerprint FFC (B) from the touchpad module and mainboard connectors (Figure 1-24).

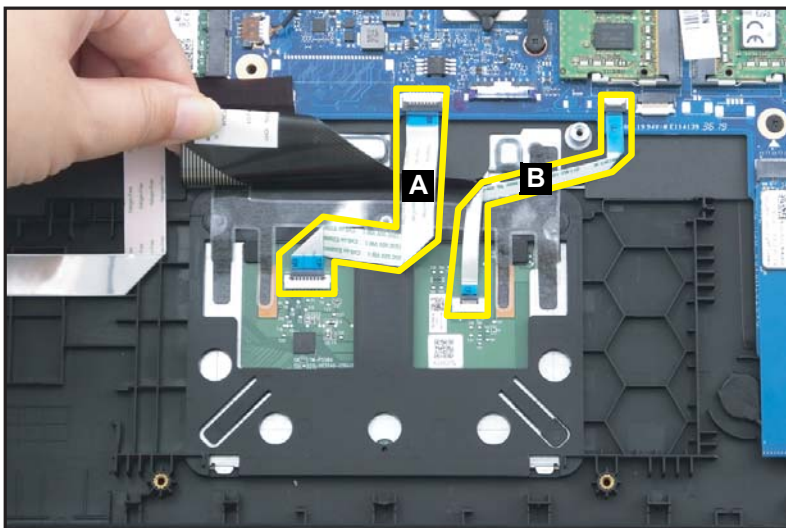


Figure 1-24. Touchpad Module Removal

⚠ CAUTION:

Touchpad FFC (Flexible Flat Circuit) and fingerprint FFC can be damaged if removed while the mainboard connectors are locked.

3. Peel off and remove the touchpad conductive tape (C) from the touchpad module and top assembly (Figure 1-25).

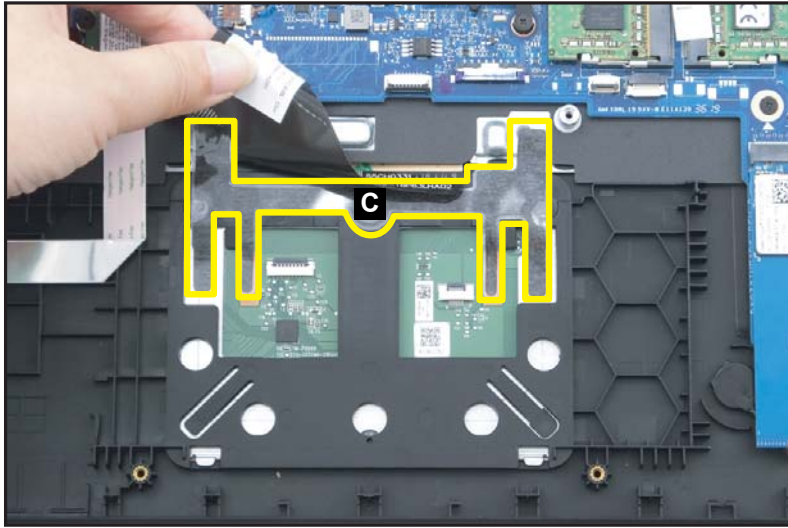


Figure 1-25. Touchpad Board Removal

4. Remove two (2) screws securing the touchpad module in place (Figure 1-26).

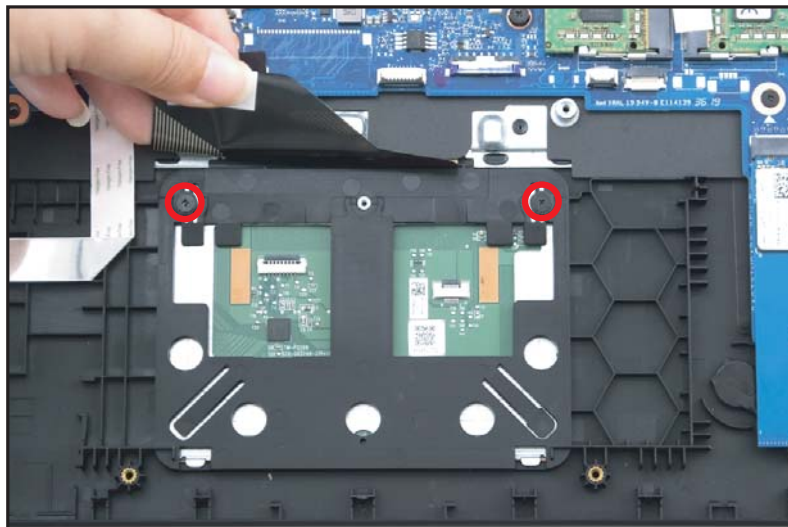
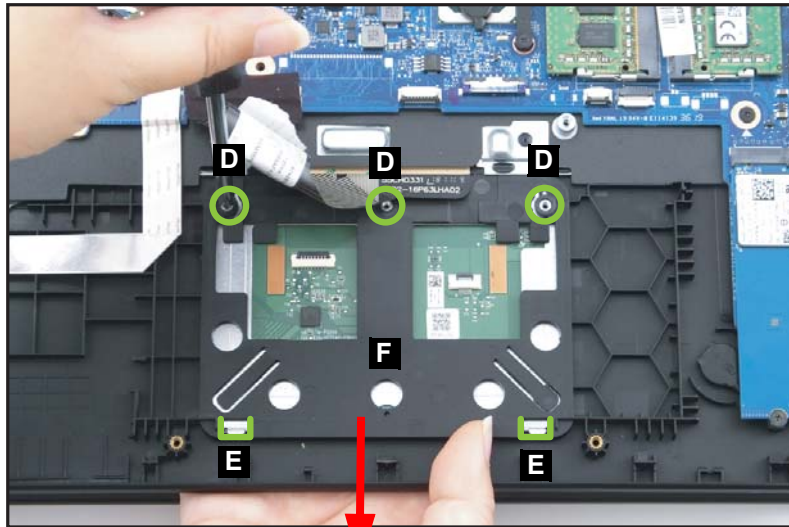



Figure 1-26. Touchpad Board Removal

5. Using the screwdriver, push the guide pins (D) firmly to release them from the top assembly (Figure 1-27).
6. With one hand is placed underneath the touchpad module, push the touchpad module slightly to disengage it from the bottom latches (E), and then remove the touchpad module (F) from the top assembly (Figure 1-27).



WEEE Annex VII Component: Touchpad

Figure 1-27. Touchpad Board Removal

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|---|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 2 |  |

LCD Module Removal

Prerequisite:

Battery Pack Removal

1. Disconnect the WLAN antennas from the WLAN module connectors (A) (Figure 1-28).
2. Remove the WLAN antennas (B) from the cable guides as shown in Figure 1-28.
3. Disconnect the eDP cable from the mainboard connector (C) (Figure 1-28).
4. Remove the eDP cable (D) from the cable guides as shown in Figure 1-28.

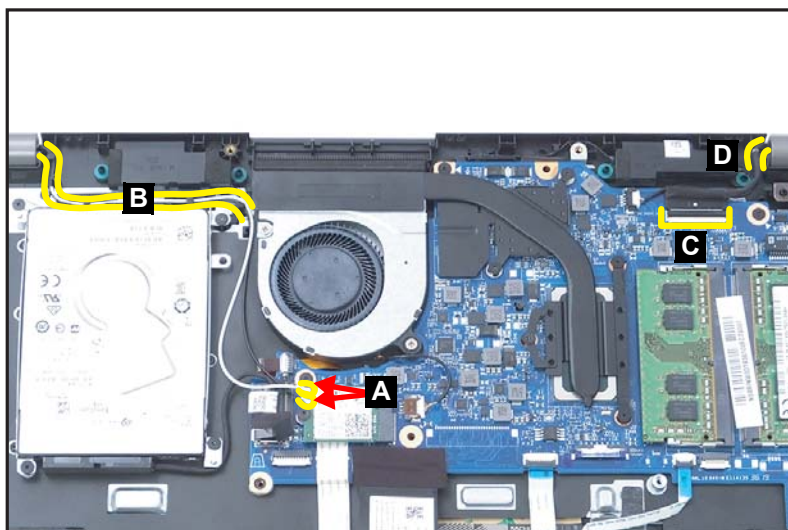


Figure 1-28. LCD Module Removal

5. Remove four (4) screws securing the LCD hinges in place (Figure 1-29).

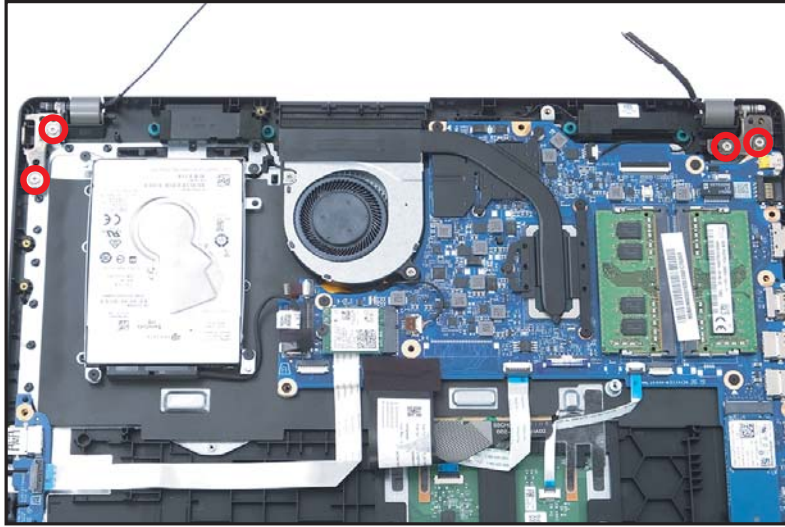


Figure 1-29. LCD Module Removal

6. Lift the top assembly until it is fully open (Figure 1-30).



Figure 1-30. LCD Module Removal

7. Close the top assembly and lift both LCD hinges until they are fully extended (Figure 1-31).

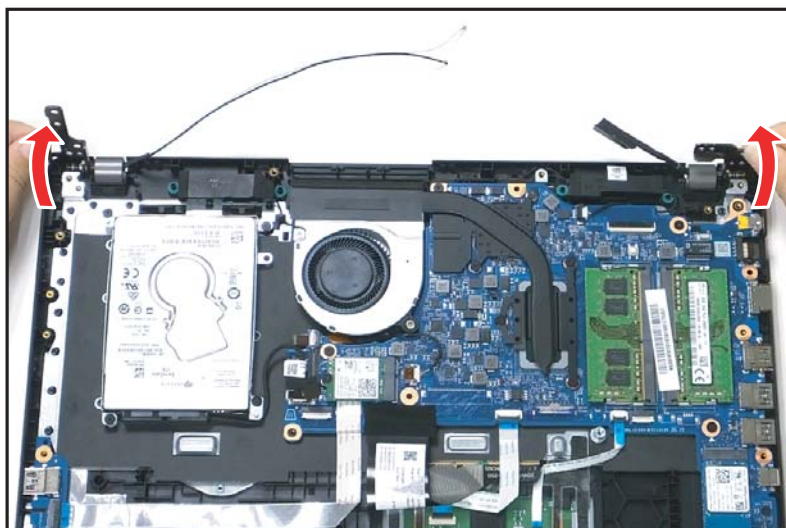


Figure 1-31. LCD Module Removal


8. Open the top assembly again, and then pull it backwards to remove the top assembly away from the LCD module (Figure 1-32).

⚠ CAUTION:

Make sure all cables and antennas are moved away from the device to avoid damage during removal.



Figure 1-32. LCD Module Removal

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|---|
| Red Call out | M2.5*5.0 | 3.0±0.15KGF/CM | 4 |  |

USB Board Removal

Prerequisite:

WLAN (Wireless Local Area Network) Module Removal

1. Disconnect the USB board FFC (A) from the mainboard and USB board connectors (Figure 1-33).
2. Remove one (1) screw securing the USB board in place (Figure 1-33).

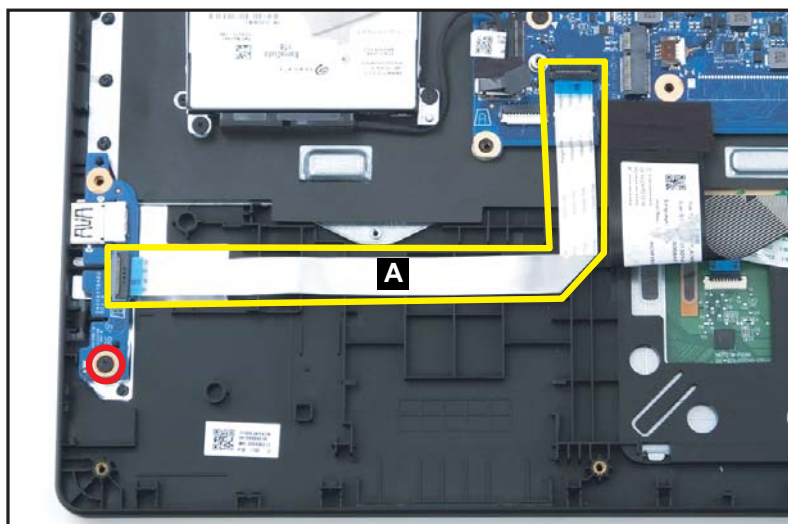


Figure 1-33. USB Board Removal


⚠ CAUTION:

USB board FFC (Flexible Flat Circuit) can be damaged if removed while the mainboard connector and the USB board connector are locked.

3. Remove the USB board (B) from the top assembly (Figure 1-34).



Figure 1-34. USB Board Removal

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|--|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 1 |  |

Mainboard Removal

Prerequisite:

WLAN (Wireless Local Area Network) Module Removal,
DIMM (Dual In-line Memory Module) Removal,
Fan Removal, Heatsink Removal,
and SSD (Solid State Drive) Module Removal

1. Remove two (2) screws (A) securing the right side of LCD hinge in place (Figure 1-35).

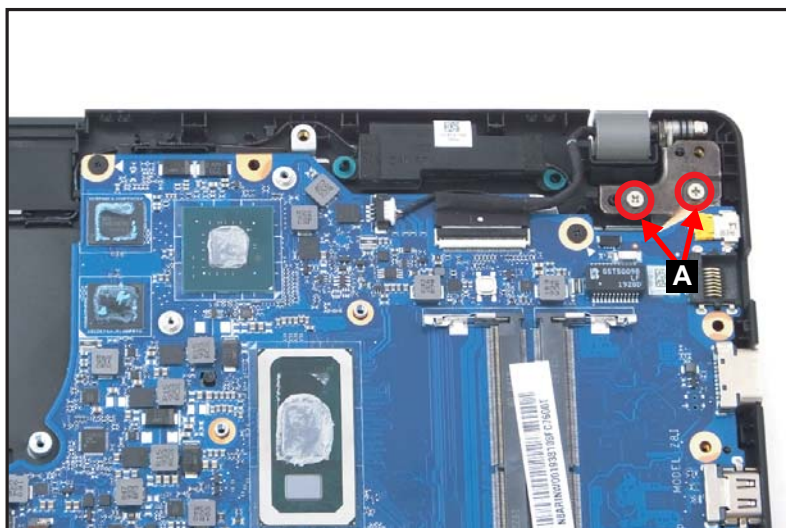


Figure 1-35. Mainboard Removal

2. Lift the top assembly until it is fully open (Figure 1-36).

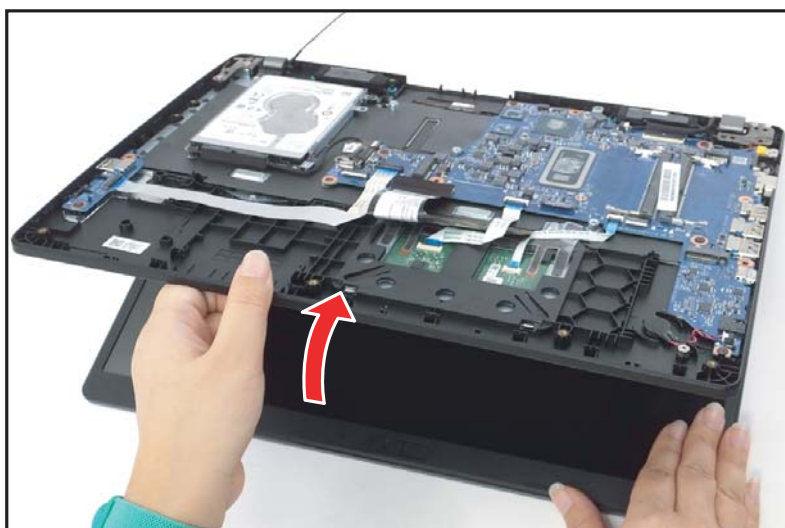


Figure 1-36. Mainboard Removal

3. Close the top assembly and lift the right side of LCD hinge until it is fully extended (Figure 1-37).

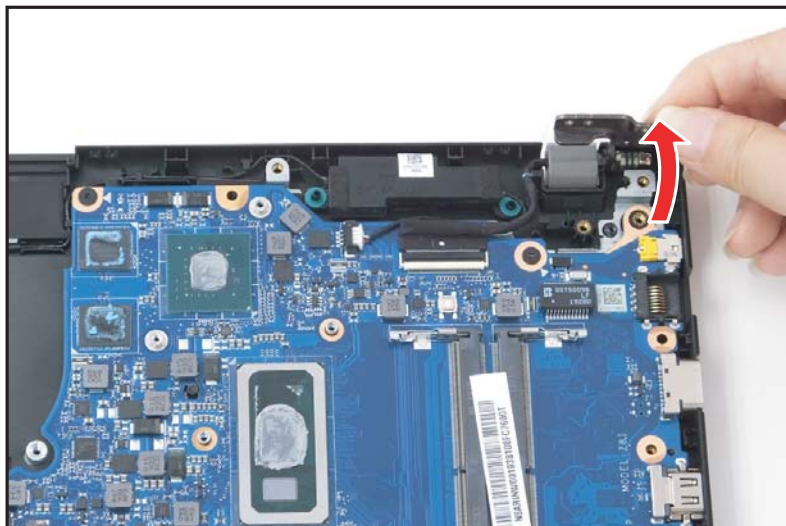


Figure 1-37. Mainboard Removal

4. Peel off and remove the tape (B) securing the keyboard FPC (Figure 1-38).

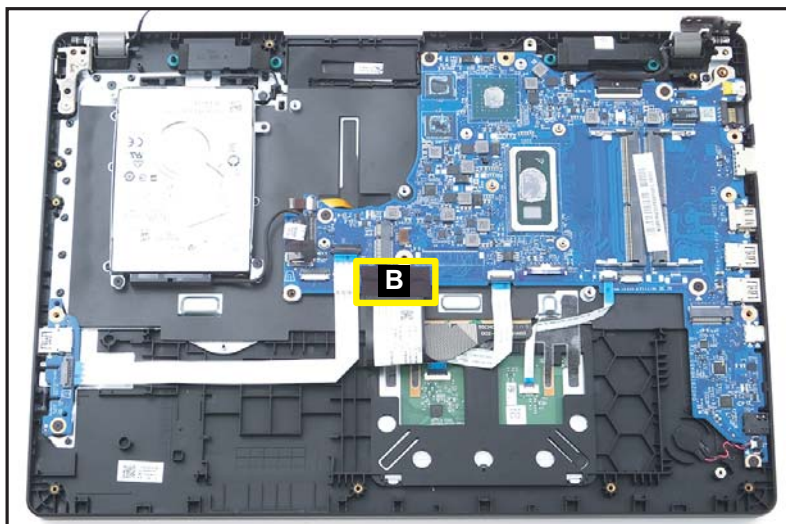


Figure 1-38. Mainboard Removal

5. Disconnect the HDD cable from the mainboard connector (C) (Figure 1-39).
6. Disconnect the USB board FFC from the mainboard connector (D) (Figure 1-39).
7. Disconnect the keyboard FPC from the mainboard connector (E) (Figure 1-39).
8. Disconnect the touchpad FFC from the mainboard connector (F) (Figure 1-39).
9. Disconnect the fingerprint FFC from the mainboard connector (G) (Figure 1-39).
10. Pry to detach the adhesive tape underneath the RTC battery. Then remove the RTC battery (H) (Figure 1-39).

11. Disconnect the eDP cable from the mainboard connector (I) (Figure 1-39).
12. Disconnect the speaker cable from the mainboard connector (J) (Figure 1-39)
13. Remove seven (7) screws (K) securing the mainboard in place (Figure 1-39).

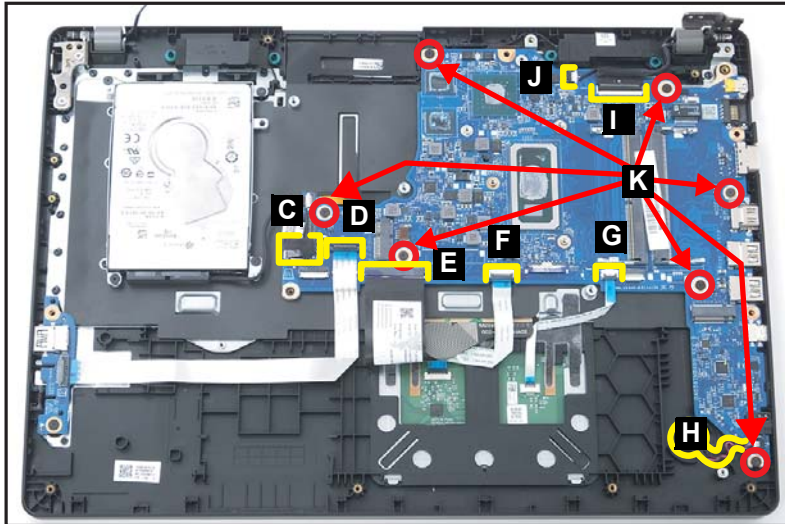


Figure 1-39. Mainboard Removal

14. Remove the mainboard (L) from the top assembly (Figure 1-40).

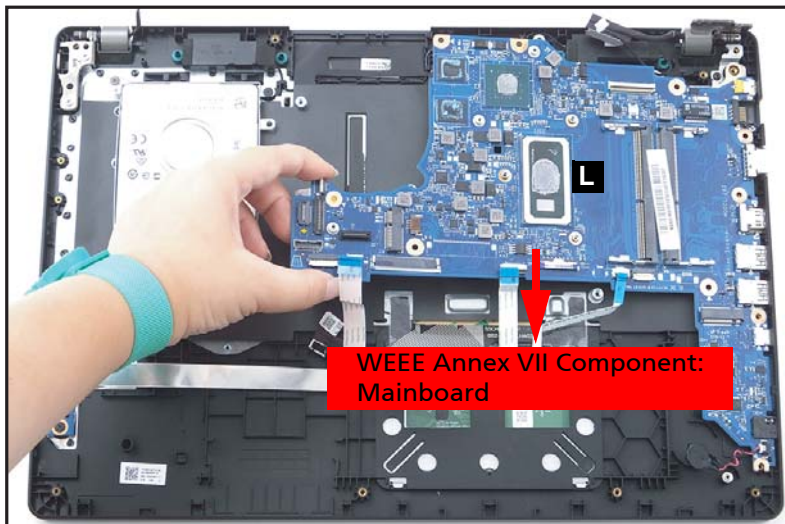


Figure 1-40. Mainboard Removal

⚠ CAUTION:

USB board FFC (Flexible Flat Circuit), touchpad FFC, fingerprint FFC, and keyboard FPC (Flexible Printed Circuit), can be damaged if removed while the mainboard connectors are locked.

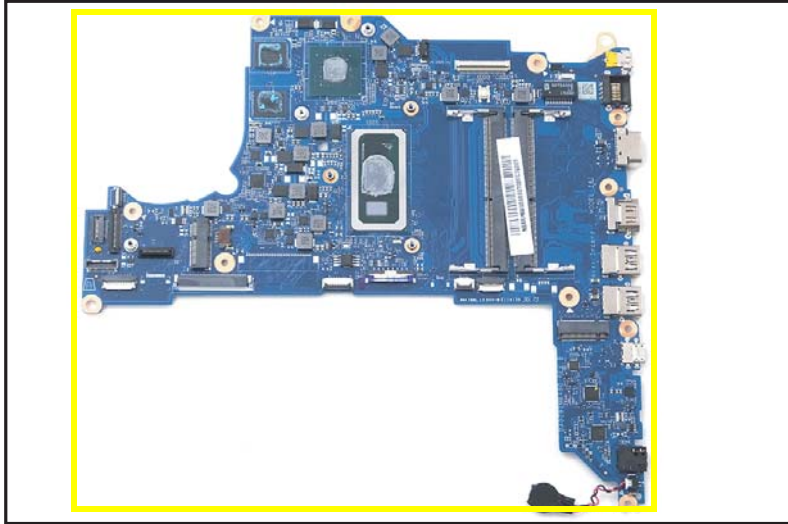




Figure 1-41. Mainboard

+ IMPORTANT:

Circuit boards >10 cm² have been highlighted with a yellow rectangle as shown in [Figure 1-41](#). Remove the circuit board and follow local regulations for disposal.

| ID | Size | Torque | Quantity | Screw Type |
|----|----------|----------------|----------|---|
| A | M2.5*5.0 | 3.0±0.15KGF/CM | 2 |  |
| K | M2.0*3.0 | 2.0±0.10KGF/CM | 7 |  |

Speaker Module Removal

Prerequisite:

[Mainboard Removal](#) and [HDD \(Hard Disk Drive\) Module Removal](#)

1. Peel off and remove the mylar (A) securing the keyboard. When detaching the mylar, pay attention to the guide pins (B) locations on the top assembly ([Figure 1-42](#)).

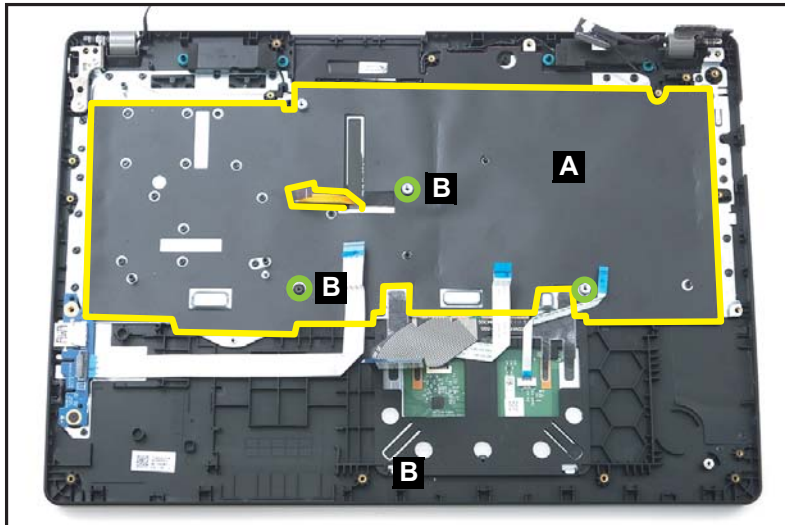


Figure 1-42. Speaker Module Removal

2. Peel off and remove the copper mylar (C) securing the keyboard and speaker cable. When detaching the copper mylar, pay attention to the guide pins (D) locations on the top assembly ([Figure 1-43](#)).



Figure 1-43. Speaker Module Removal

⇒ **NOTE:**

If the mylars (A and C) are deformed during the removal procedure, replace them with the new ones.

3. Remove the speaker cable (E) from the cable guides (Figure 1-44).

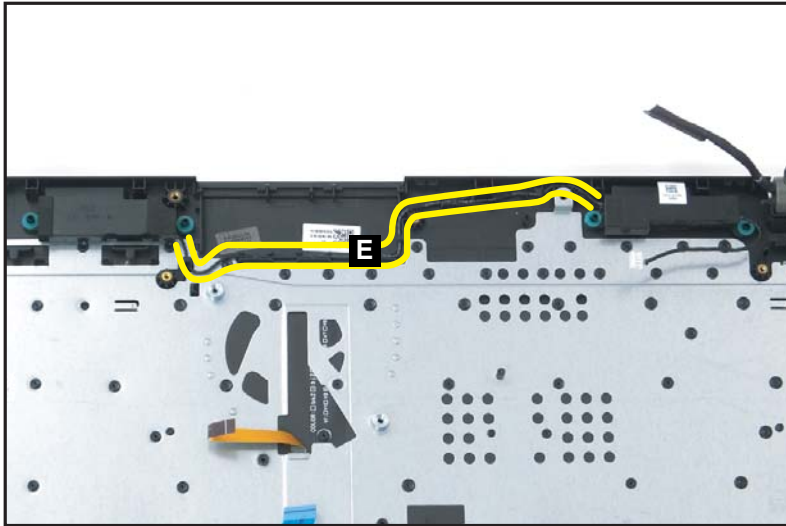


Figure 1-44. Speaker Module Removal

4. Release both speakers (F) from the guide pins (G), and then remove the speakers from the top assembly (Figure 1-45).

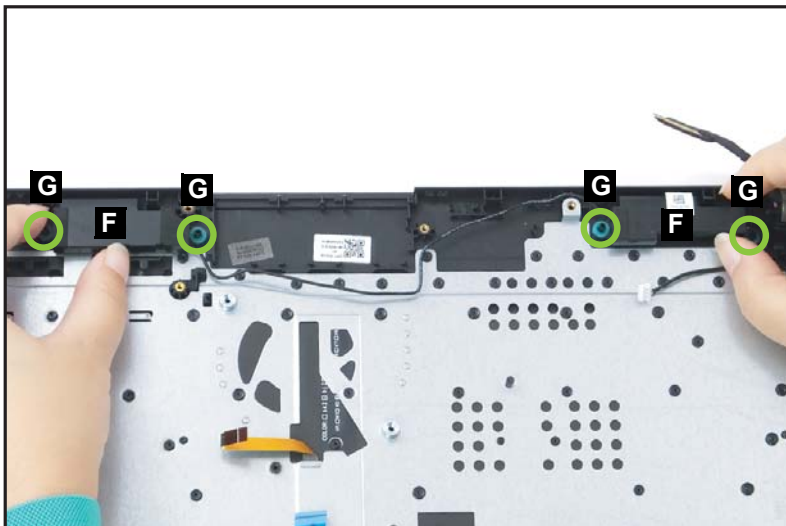


Figure 1-45. Speaker Module Removal

Top Assembly Removal

Prerequisite:

[USB Board Removal](#),
[Speaker Module Removal](#),
[Touchpad Module Removal](#),
and [LCD Module Removal](#)

⇒ NOTE:

The keyboard is included as part of the top assembly and can not be disassembled. In the event that the keyboard can no longer be used, replace the entire top assembly.



Figure 1-46. Top Assembly

LCD Module Disassembly Process

LCD Module Disassembly Flowchart

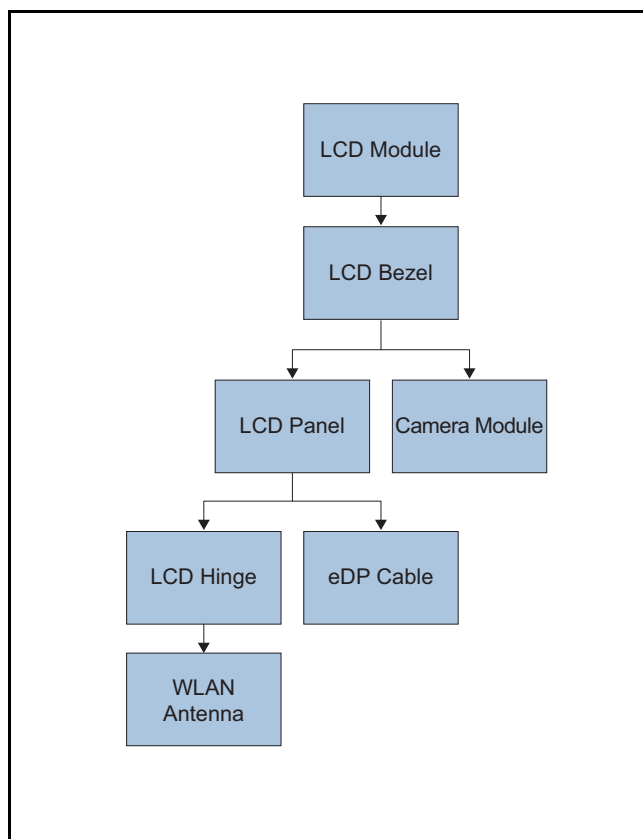


Table 3-3. LCD Module Screw List

| Step | Size | Quantity | Acer Part No. |
|-------------------|------------|----------|---------------|
| LCD Hinge Removal | M2.5 x 3.0 | 8 | TBD |

LCD Bezel Removal

Prerequisite:

[LCD Module Removal](#)

1. Pry the LCD bezel from the bottom side to release latches ([Figure 1-47](#)).



Figure 1-47. LCD Bezel Removal

2. Continue along the left side of the bezel ([Figure 1-48](#)).



Figure 1-48. LCD Bezel Removal

3. Continue along the upper side of the bezel (Figure 1-49).



Figure 1-49. LCD Bezel Removal

4. Continue along the right side of the bezel until all the latches have been released (Figure 1-50). Then lift and remove the bezel from LCD module.



Figure 1-50. LCD Bezel Removal

LCD Panel Removal

Prerequisite:

LCD Bezel Removal

1. Pry slightly to access the double-sided mounting tape (A) underneath the LCD panel (B). Then pull to detach the double-sided mounting tape from the LCD cover. Repeat the same procedure to remove the double-sided mounting tape on another side of the LCD panel (Figure 1-51).

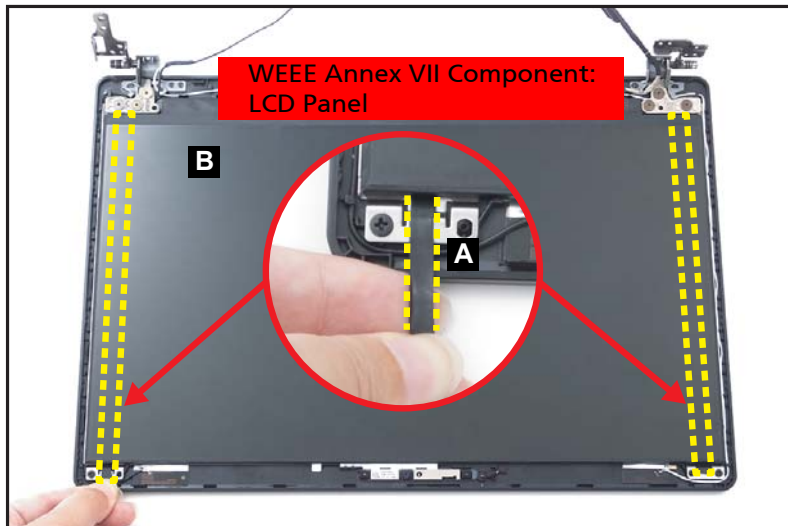


Figure 1-51. LCD Panel Removal

- Carefully turn the LCD panel over so that the display panel is facing down on a flat surface. Then detach the mylar tape (C) securing the eDP cable to the LCD panel (Figure 1-52).

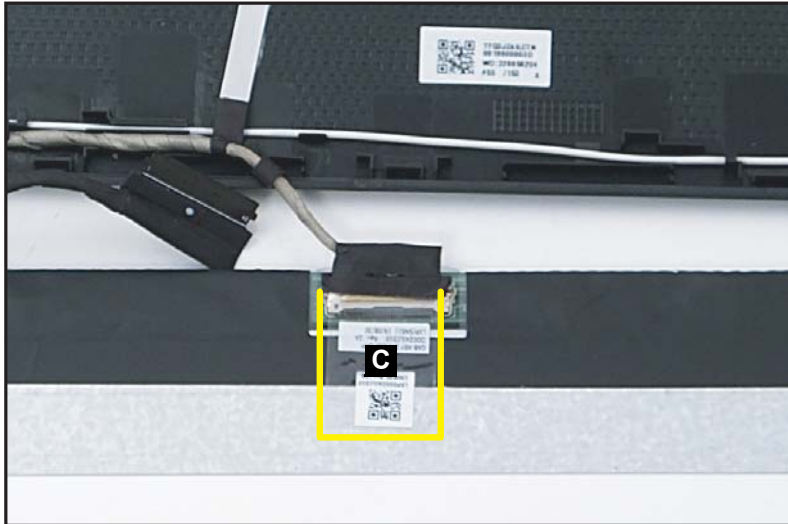


Figure 1-52. LCD Panel Removal

- Lift the latch (D) securing the eDP cable (Figure 1-53).

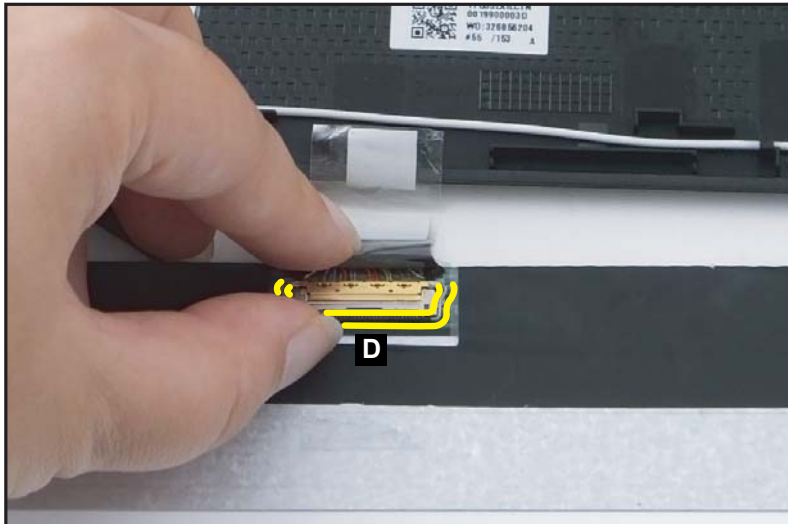


Figure 1-53. LCD Panel Removal

4. Disconnect the eDP cable from the LCD panel connector (E) (Figure 1-54).

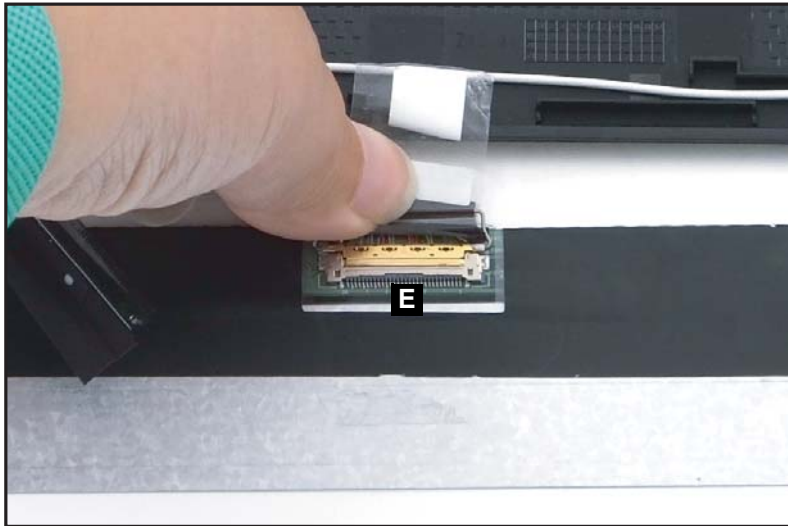


Figure 1-54. LCD Panel Removal

5. Remove the LCD panel.

⚠ CAUTION:

Make sure the eDP cable is moved away from the device to avoid damage during LCD Panel removal.

Camera Module Removal

Prerequisite:

[LCD Bezel Removal](#)

1. Find the camera module (A) on the LCD cover ([Figure 1-55](#)).

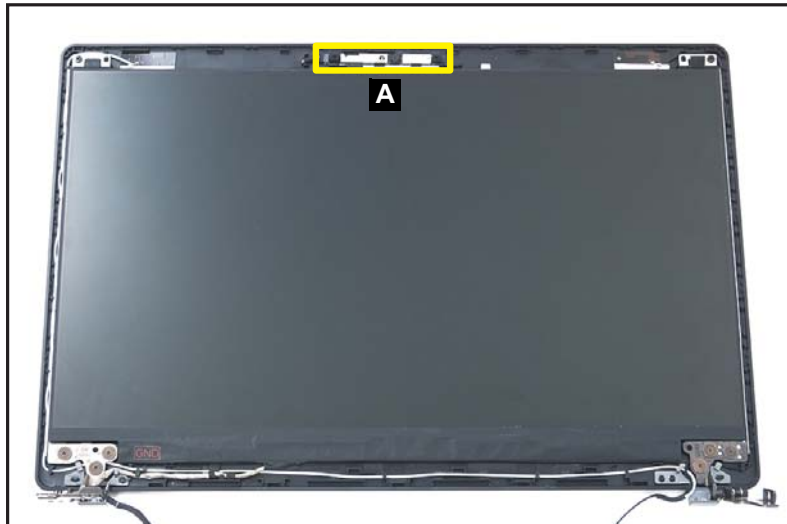


Figure 1-55. Camera Connector Location

2. Disconnect the eDP cable (B) from the camera module connector (C) ([Figure 1-56](#)).

⇒ **NOTE:**

Use care not to damage the cable. Please take note that the eDP cable includes the camera cable and the LCD panel cable.

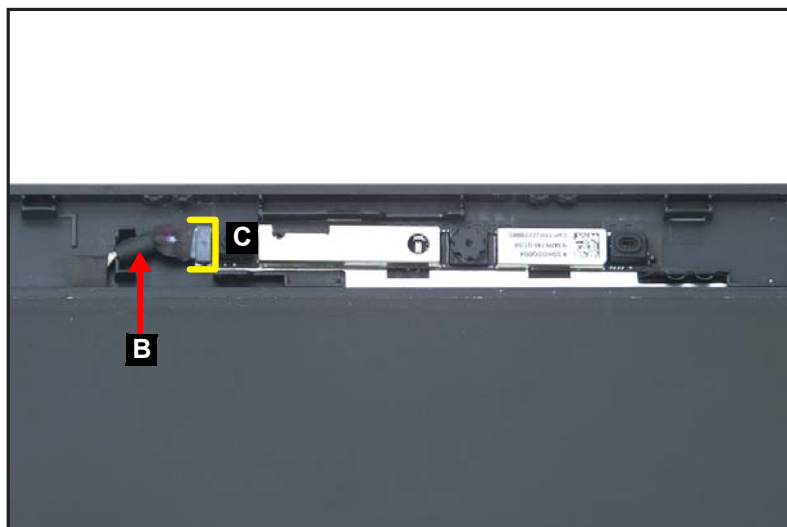


Figure 1-56. Camera Module Removal

- Carefully remove the camera module from the LCD cover ([Figure 1-57](#)).



Figure 1-57. Camera Module Removal

LCD Hinge Removal

Prerequisite:

[LCD Panel Removal](#)

1. Remove eight (8) screws securing the LCD hinges in place ([Figure 1-58](#)).



Figure 1-58. LCD Hinge Removal

2. Remove the LCD hinges (A) from the LCD cover ([Figure 1-59](#)).

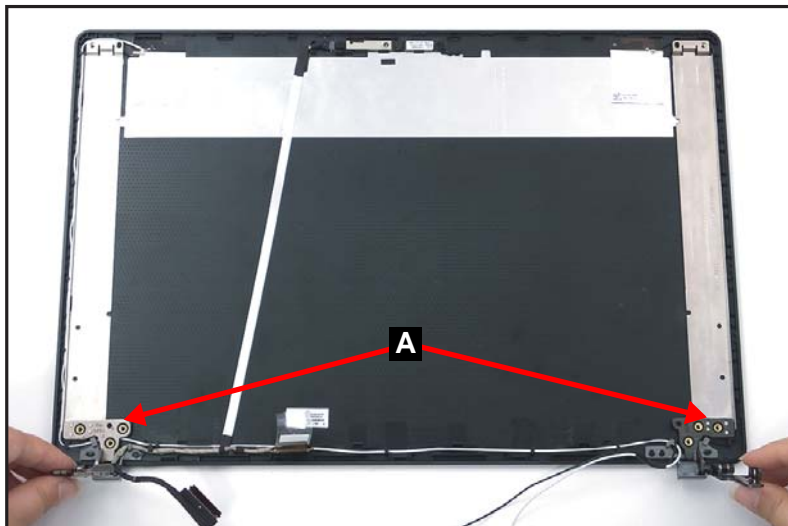



Figure 1-59. LCD Hinge Removal

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.5*3.0 | 3.0±0.15KGF/CM | 8 |  |

eDP Cable Removal

Prerequisite:

[LCD Panel Removal](#)

⇒ NOTE:

The eDP cable includes the LCD panel cable and the camera cable.

1. Disconnect the eDP cable (A) from the camera module connector (B) ([Figure 1-60](#)).

⇒ NOTE:

Use care not to damage the cable.

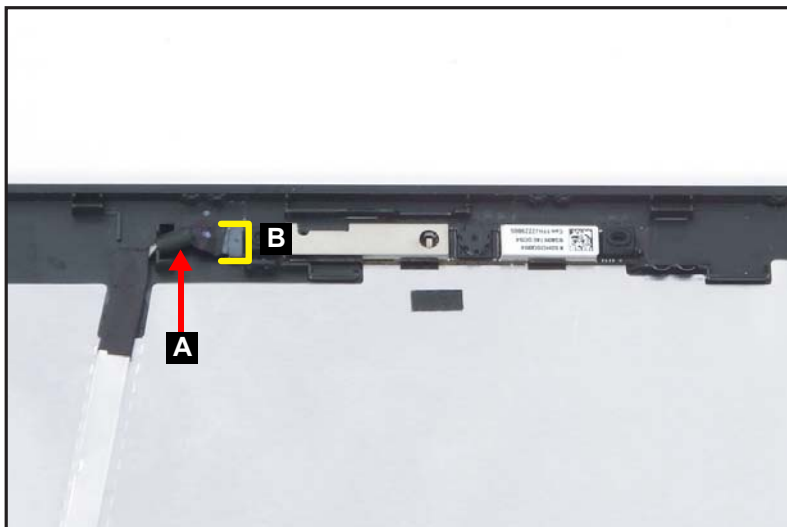


Figure 1-60. Camera Connector Location

2. Unroute the eDP cable from the cable guides and remove it from the LCD cover (Figure 1-61).

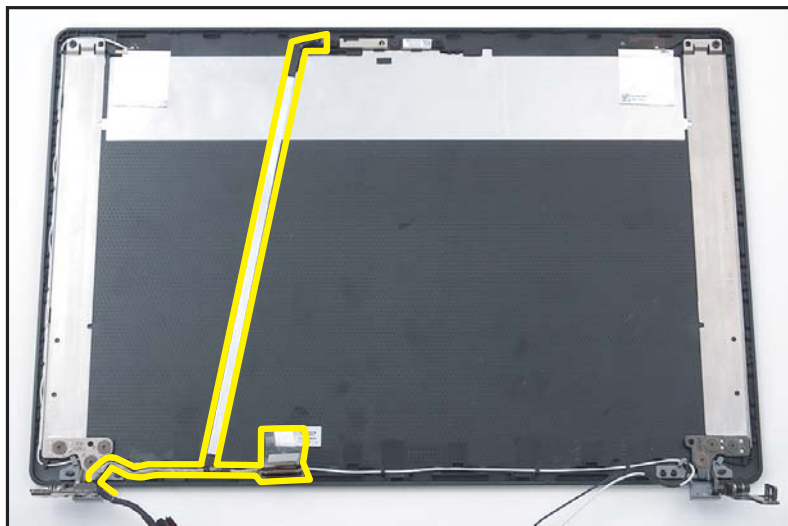


Figure 1-61. eDP Cable Removal

WLAN Antenna Removal

Prerequisite:

[LCD Hinge Removal](#)

1. Unroute the WLAN antennas cables from the cable guides ([Figure 1-62](#)).

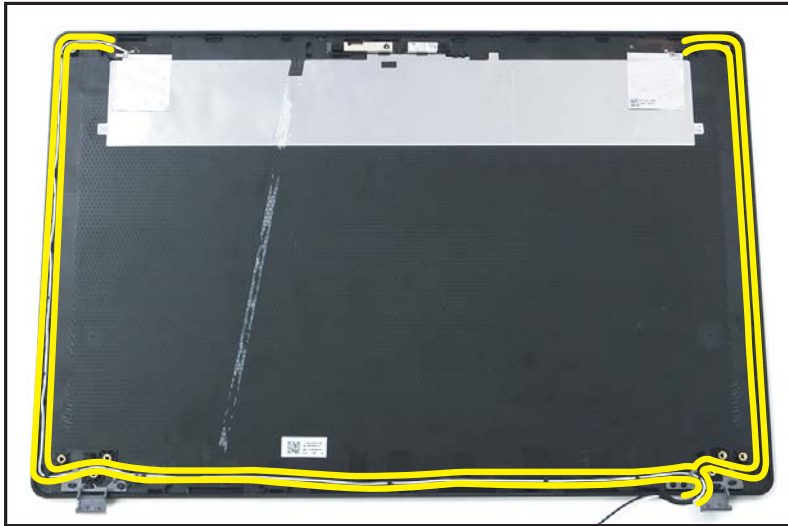


Figure 1-62. WLAN Antenna Removal

2. Gently peel off the AUX antenna and its grounding foil ([Figure 1-63](#)).
3. Remove the AUX antenna from the LCD cover ([Figure 1-63](#)).

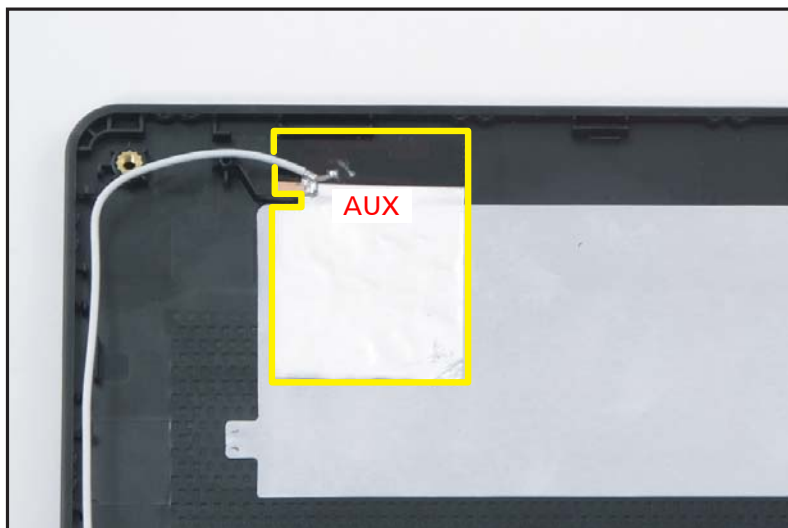


Figure 1-63. WLAN Antenna Removal

4. Gently peel off the MAIN antenna and its grounding foil (Figure 1-64).
5. Remove the MAIN antenna from the LCD cover (Figure 1-64).

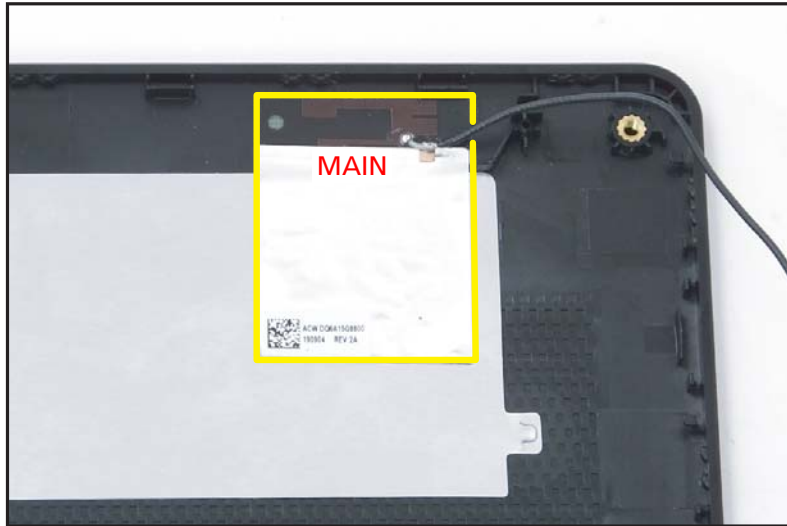


Figure 1-64. WLAN Antenna Removal

⚠ CAUTION:

Use care not to damage the antenna PCB circuit area when the grounding foil is removed.

LCD Module Reassembly Process

Replacing the WLAN Antenna

1. Place the MAIN antenna (black-color) to the right side of the LCD cover. Make sure the antenna PCB circuit area is properly seated and placed onto its compartment highlighted by a green rectangle as shown in [Figure 1-65](#).
2. Adhere the grounding foil of the MAIN antenna as marked in yellow ([Figure 1-65](#)).

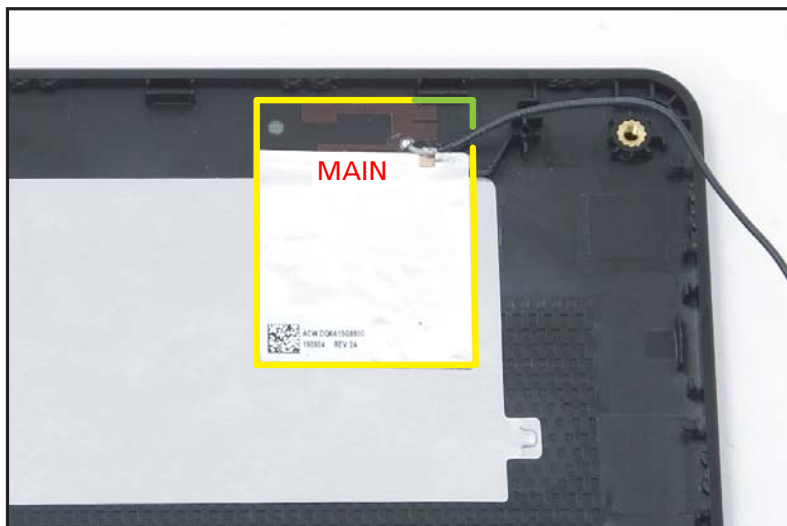


Figure 1-65. Replacing the WLAN Antenna

3. Place the AUX antenna (white-color) to the left side of the LCD cover. Make sure the antenna PCB circuit area is properly seated and placed onto its compartment highlighted by a green rectangle as shown in [Figure 1-66](#).
4. Adhere the grounding foil of the AUX antenna as marked in yellow ([Figure 1-66](#)).

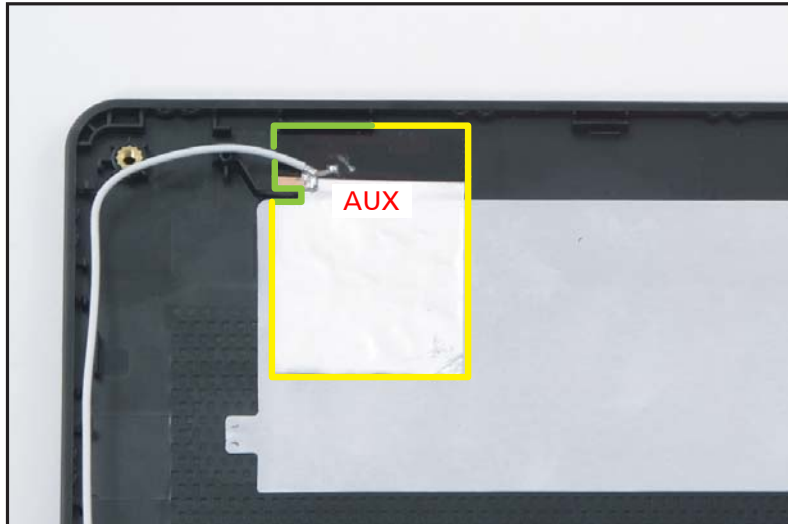


Figure 1-66. Replacing the WLAN Antenna

5. Route the WLAN antenna cables through the cable guides on the LCD cover as shown in [Figure 1-67](#).

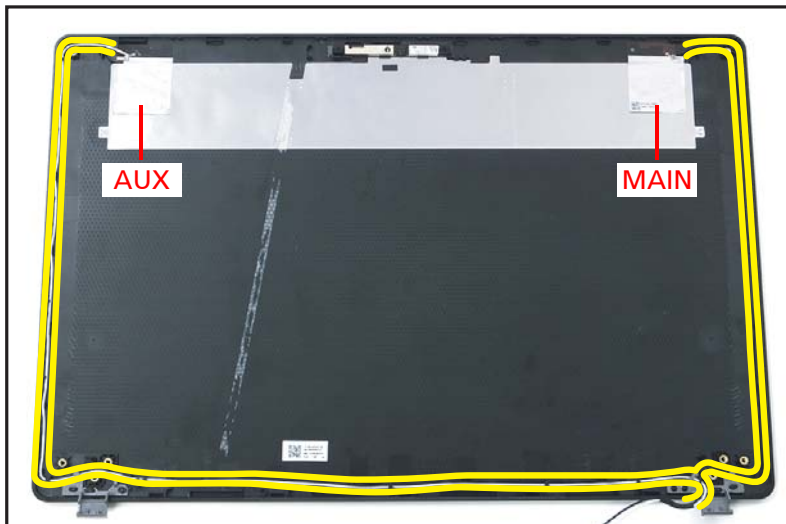


Figure 1-67. Replacing the WLAN Antenna

Replacing the eDP Cable

⇒ **NOTE:**

The eDP cable includes the LCD panel cable and the camera cable.

1. Route the eDP cable to the cable guides on the bottom side of the LCD cover first. Then continue to route and secure the eDP cable through the cable guides on the center of the LCD cover as shown in [Figure 1-68](#).

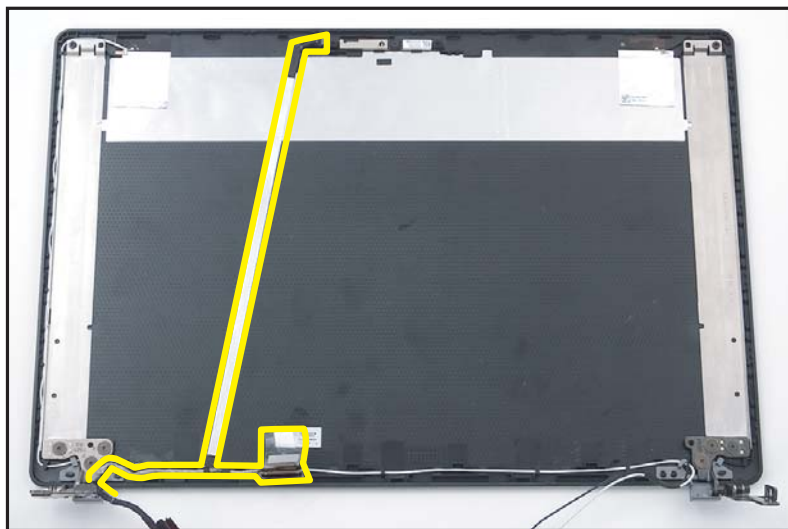


Figure 1-68. Replacing the eDP Cable

⚠ CAUTION:

Make sure the eDP cable is secured in the cable guides to avoid damage to the cable.

2. Connect the eDP cable (A) to the camera module connector (B) (Figure 1-69).

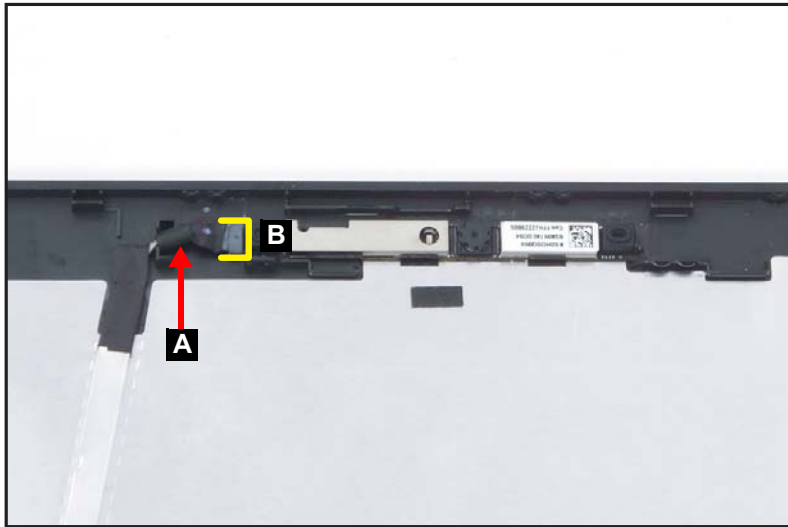


Figure 1-69. Camera Connector Location

Replacing the LCD Hinges

1. Place the left and right LCD hinges (A) on the LCD cover ([Figure 1-70](#)).

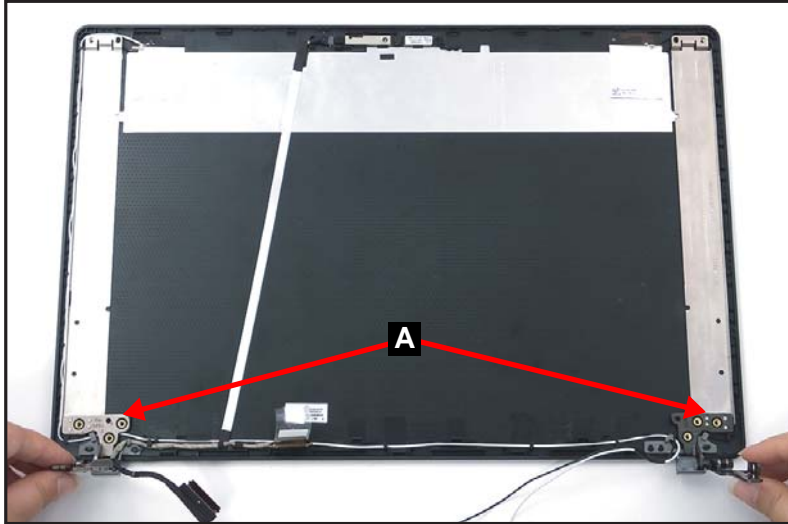



Figure 1-70. Replacing the LCD Hinges

2. Install and secure eight (8) screws to the LCD hinges ([Figure 1-71](#)).



Figure 1-71. Replacing the LCD Hinges

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.5*3.0 | 3.0±0.15KGF/CM | 8 |  |

Replacing the Camera Module

1. Connect the eDP cable (A) to the camera module connector (B) (Figure 1-72).

⇒ **NOTE:**

Use care not to damage the cable. Please take note that the eDP cable includes the camera cable and the LCD panel cable.

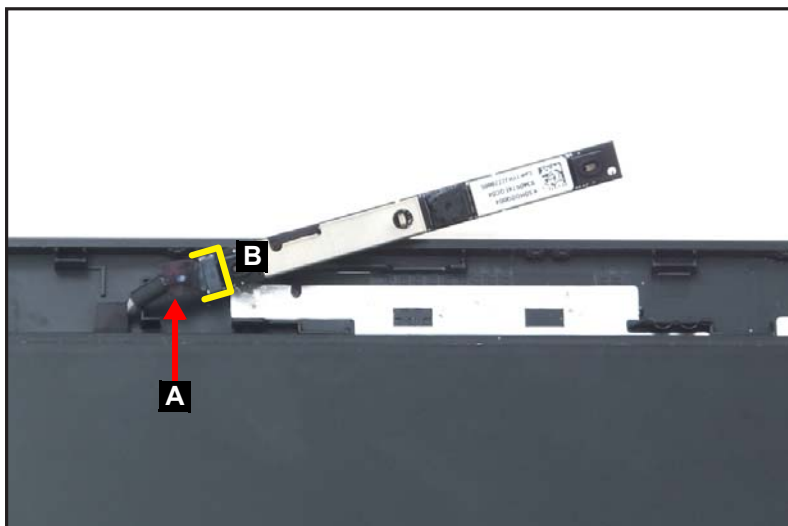


Figure 1-72. Replacing the Camera Module

2. Align and install the camera module (C) to its compartment on the LCD cover (Figure 1-73).

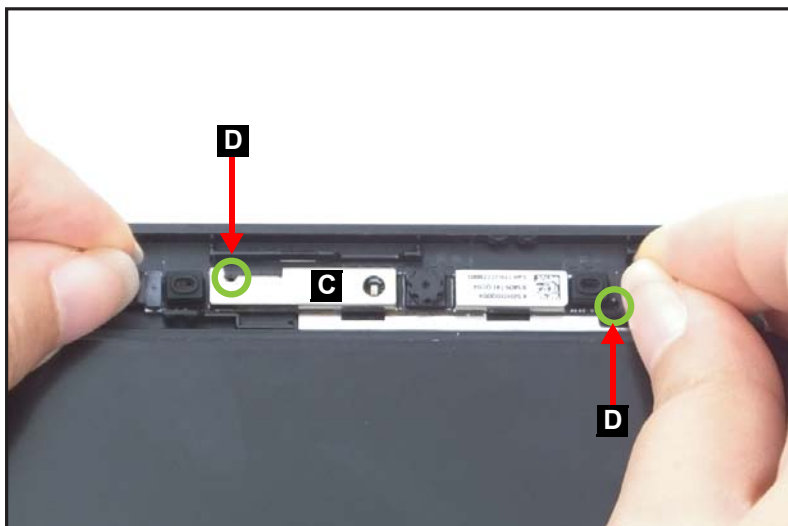


Figure 1-73. Replacing the Camera Module

+ **IMPORTANT:**

When installing the camera module, make sure it is properly aligned with the guide pins (D) and placed onto its designated location as shown in [Figure 1-73](#).

Replacing the LCD Panel

1. Place the LCD panel on a flat surface with the back side facing up and aligned properly to the bottom of the LCD cover as shown in [Figure 1-74](#).
2. Connect the eDP cable to the LCD panel connector (A) ([Figure 1-74](#)).



Figure 1-74. Replacing the LCD Panel

3. Push the latch (B) down to secure the eDP cable in place ([Figure 1-75](#)).

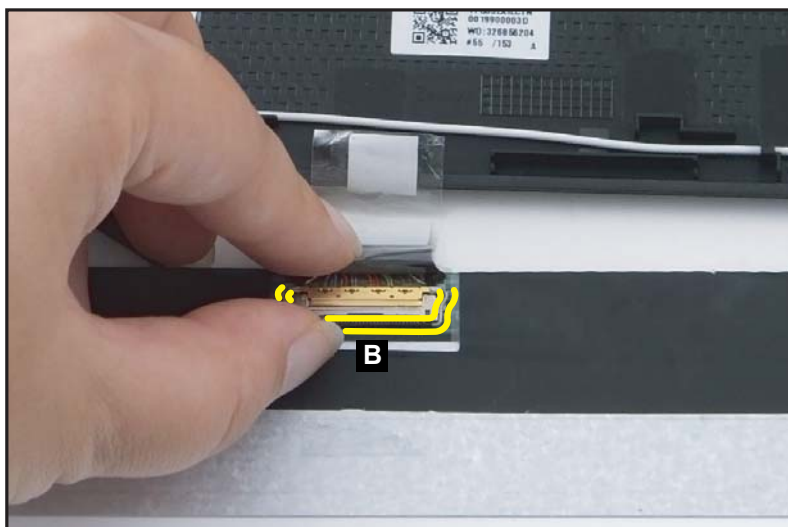


Figure 1-75. Replacing the LCD Panel

4. Adhere the mylar tape (C) to secure the eDP cable to the LCD panel (Figure 1-76).

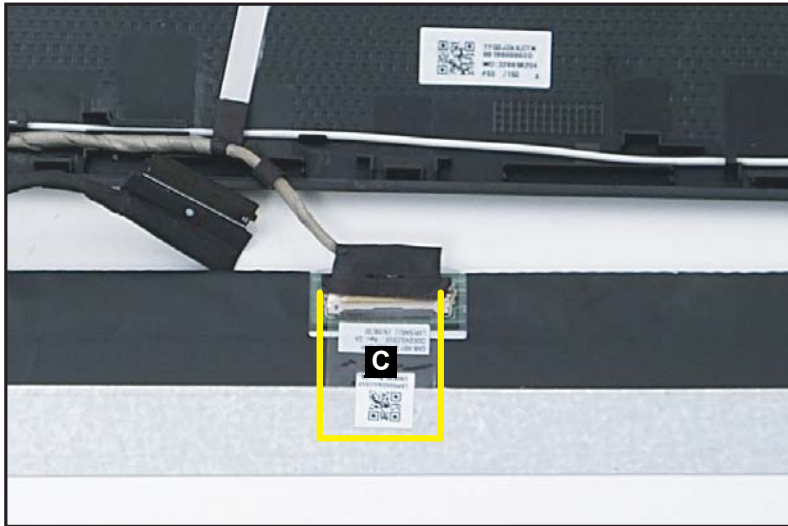


Figure 1-76. Replacing the LCD Panel

5. Adhere the double-sided adhesive mounting tapes (D) on both sides of the LCD hinges and press each tape for about 30 seconds. Then peel off the protective film from the double-sided adhesive mounting tapes (Figure 1-77).

⇒ **NOTE:**

Before applying the new double-sided adhesive mounting tapes, make sure to clean the surface properly with the rubbing alcohol. Then attach the adhesive mounting tapes onto the designated slots as shown in the below illustration (Figure 1-77).

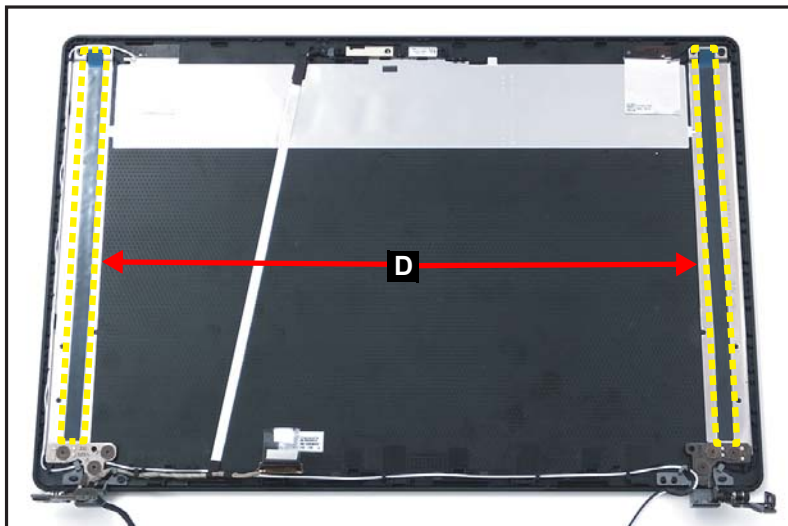


Figure 1-77. Replacing the LCD Panel

6. Place two (2) 0.5mm LCD alignment mylars (E) on the upper part of the LCD cover as shown in [Figure 1-78](#).
7. Starting from the left edge and upper side, carefully place the LCD panel (F) on the LCD cover. Then press the LCD panel down until it is firmly seated on the LCD cover ([Figure 1-78](#)).

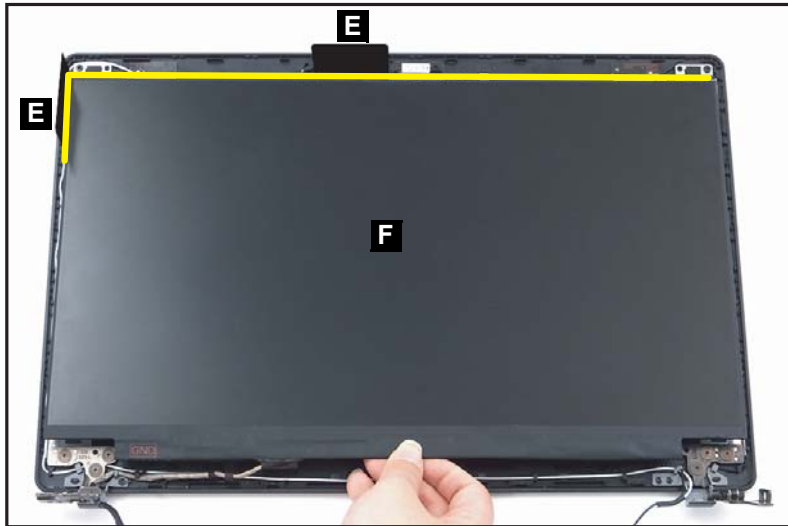


Figure 1-78. Replacing the LCD Panel

8. Remove the LCD alignment mylars (E) from the LCD cover.
9. Route the eDP cable to the cable guides on the bottom side of the LCD cover first. Then continue to route and secure the eDP cable through the cable guides on the left side of the LCD hinge as shown in [Figure 1-79](#).



Figure 1-79. Replacing the LCD Panel

Replacing the LCD Bezel

1. Install the bezel cap onto its slot on the bottom side of the LCD cover, and then press the cap firmly to secure the latches to the LCD cover (Figure 1-80).



Figure 1-80. Replacing the LCD Bezel

2. Start pressing along the bottom side (A) of the LCD bezel to secure the latches to the LCD cover (Figure 1-81).
3. Continue pressing upward along the left and right sides (B) of the LCD bezel to engage the latches (Figure 1-81).
4. Finally, press along the upper side (C) of the LCD bezel to fully secure the bezel to the LCD cover (Figure 1-81).

⇒ **NOTE:**

When pressing on the latches, make sure to follow the direction of the arrows (Figure 1-81).

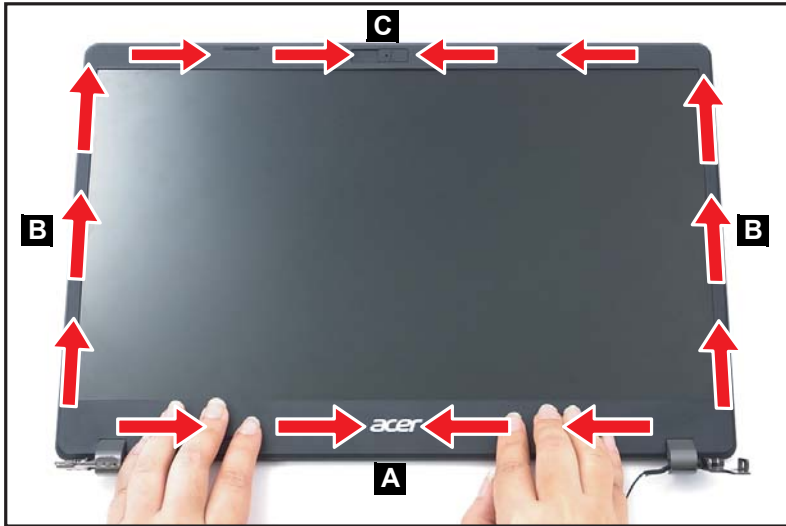


Figure 1-81. Replacing the LCD Bezel

⚠ **CAUTION:**

Use care not to damage all cables during LCD bezel installation.

Main Unit Reassembly Process

Replacing the Top Assembly

⇒ **NOTE:**

The keyboard is included as part of the top assembly and can not be disassembled. In the event that the keyboard can no longer be used, replace the entire top assembly.



Figure 1-82. Top Assembly

Replacing the Speaker Module

1. Place the speakers (A) to their respective compartments on the top assembly (Figure 1-83).

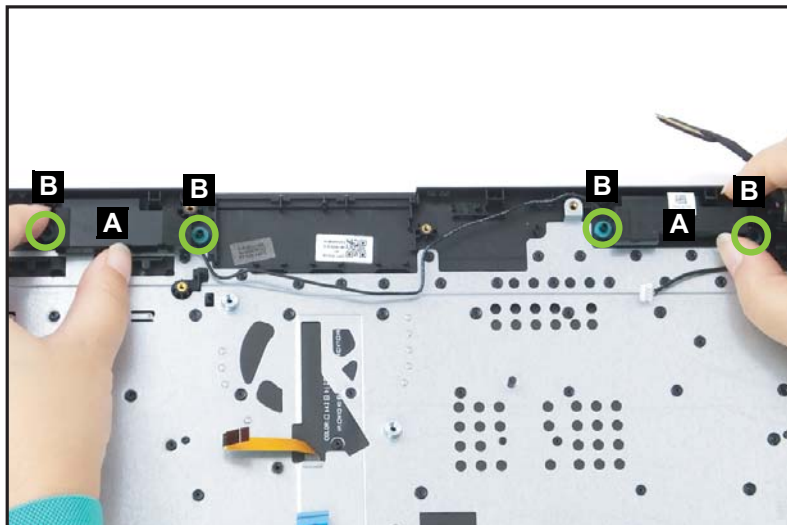


Figure 1-83. Replacing the Speaker Module

+ **IMPORTANT:**

When installing the speaker module, make sure it is properly aligned with the guide pins (B) and placed onto its designated location as shown in Figure 1-83.

2. Route the speaker cable (C) along the cable guides on the upper part of top assembly (Figure 1-84).

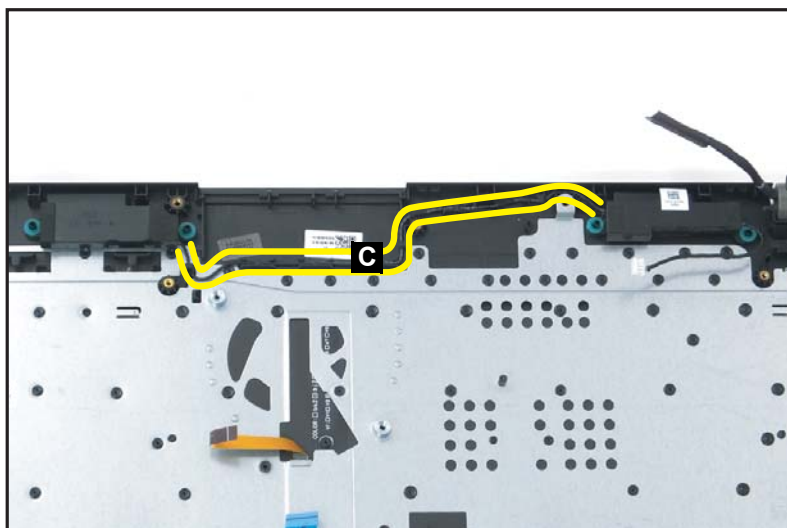


Figure 1-84. Replacing the Speaker Module

3. Attach the copper mylar (D) onto the keyboard and speaker cable as shown in [Figure 1-85](#).

⇒ **NOTE:**

If the mylars (D and F) are deformed during the removal procedure, replace them with the new ones.

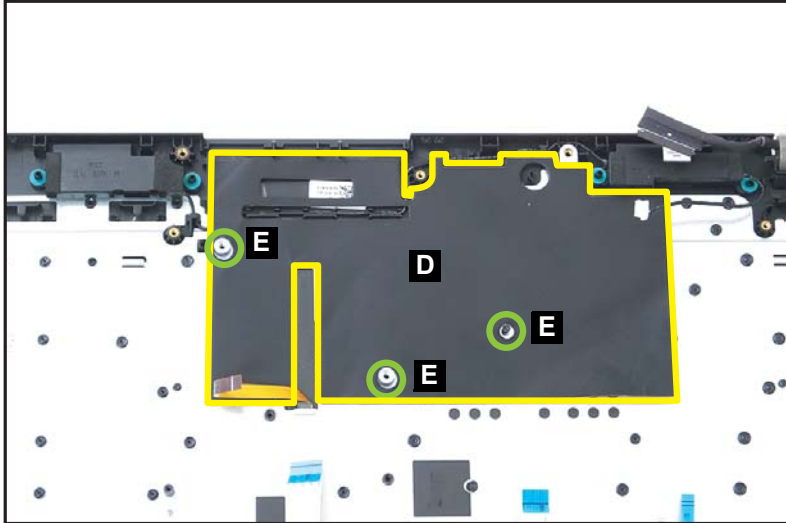


Figure 1-85. Replacing the Speaker Module

4. Attach the mylar (F) onto the keyboard as shown in [Figure 1-86](#).

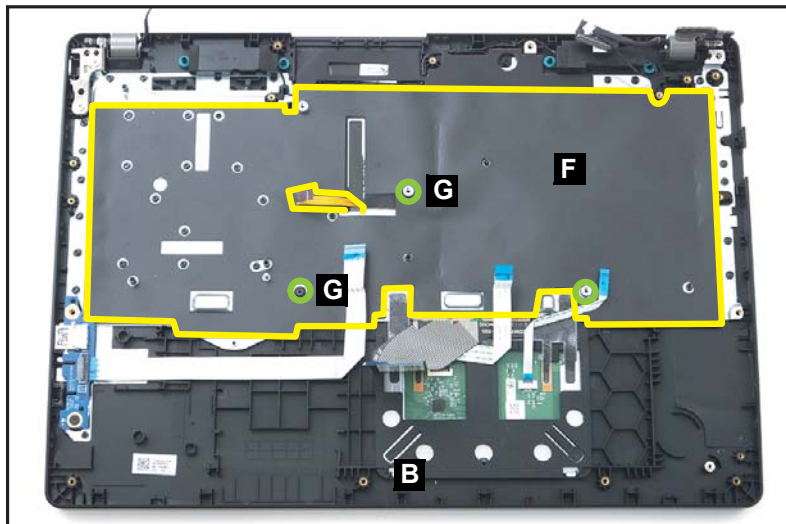


Figure 1-86. Replacing the Speaker Module

+ **IMPORTANT:**

When attaching the mylars, make sure there are properly aligned with the guide pins (E and G), and placed onto their designated locations as shown in [Figure 1-85](#) and [Figure 1-86](#).

Replacing the Mainboard

1. Place the mainboard (A) onto the top assembly (Figure 1-87).

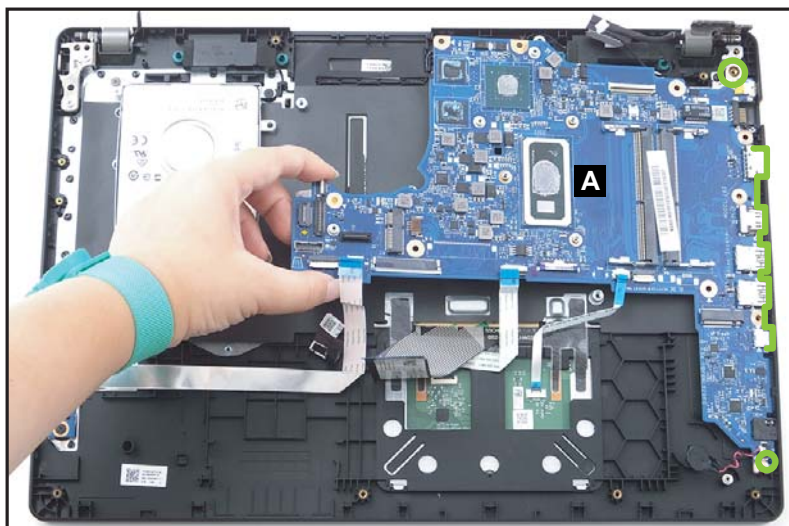


Figure 1-87. Replacing the Mainboard

⚠ CAUTION:

Make sure all FFCs and FPCs are moved away from the mainboard during installation.

2. Install and secure seven (7) screws (B) to the mainboard (Figure 1-88).
3. Connect the HDD cable to the mainboard connector (C) (Figure 1-88).
4. Connect the USB board FFC to the mainboard connector (D) (Figure 1-88).
5. Connect the keyboard FPC to the mainboard connector (E) (Figure 1-88).
6. Connect the touchpad FFC to the mainboard connector (F) (Figure 1-88).
7. Connect the fingerprint FFC to the mainboard connector (G) (Figure 1-88).
8. Install the RTC battery onto its slot on the top assembly (H) (Figure 1-88)
9. Connect the eDP cable to the mainboard connector (I) (Figure 1-88).

10. Connect the speaker cable to the mainboard connector (J) (Figure 1-88).

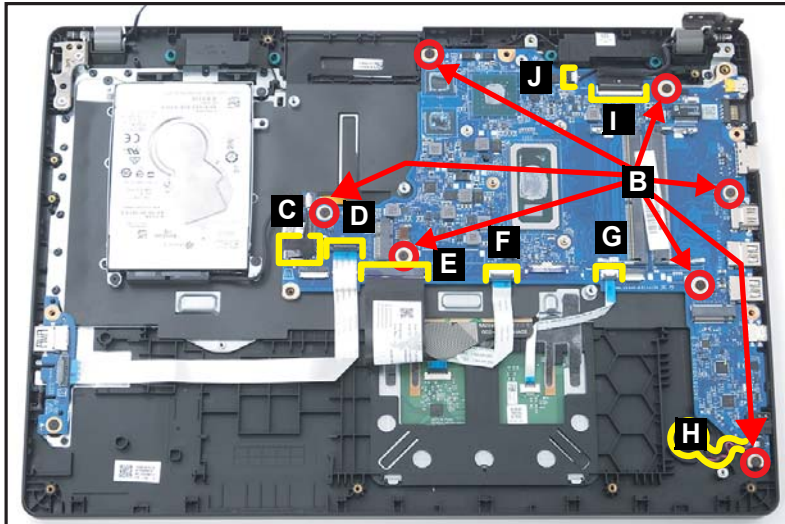


Figure 1-88. Replacing the Mainboard

⇒ **NOTE:**

Make sure that the USB board, touchpad, and fingerprint FFCs, and the keyboard FPC, are firmly secured to the mainboard connectors.

11. Attach the tape (K) securing the keyboard FPC (Figure 1-89).

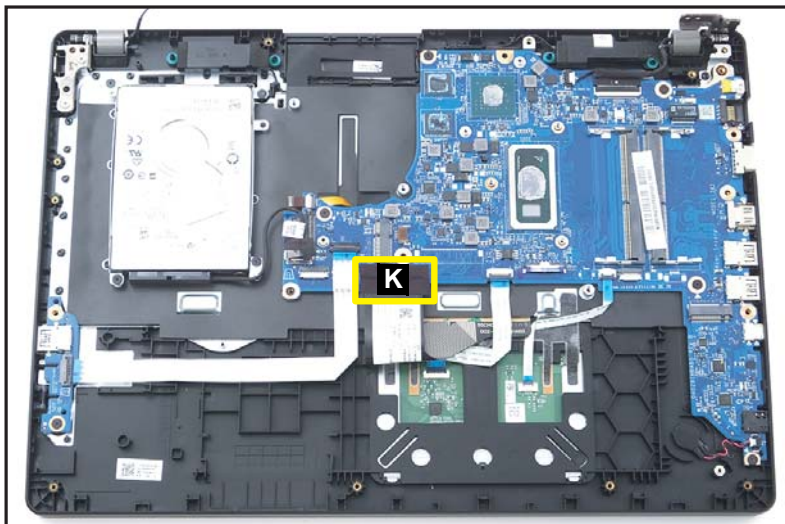


Figure 1-89. Replacing the Mainboard

12. Close the right side of LCD hinge until it is fully seated in place (Figure 1-90).

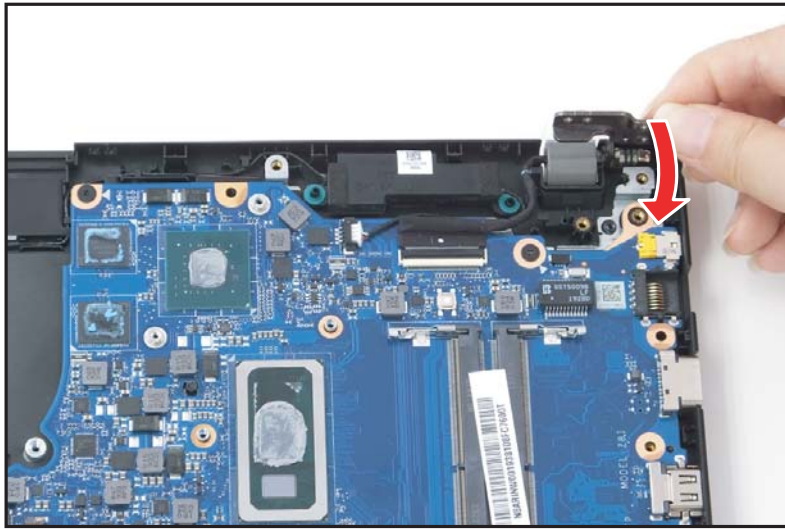


Figure 1-90. Replacing the Mainboard

13. Install and secure two (2) screws (L) to the right side of LCD hinge (Figure 1-91).

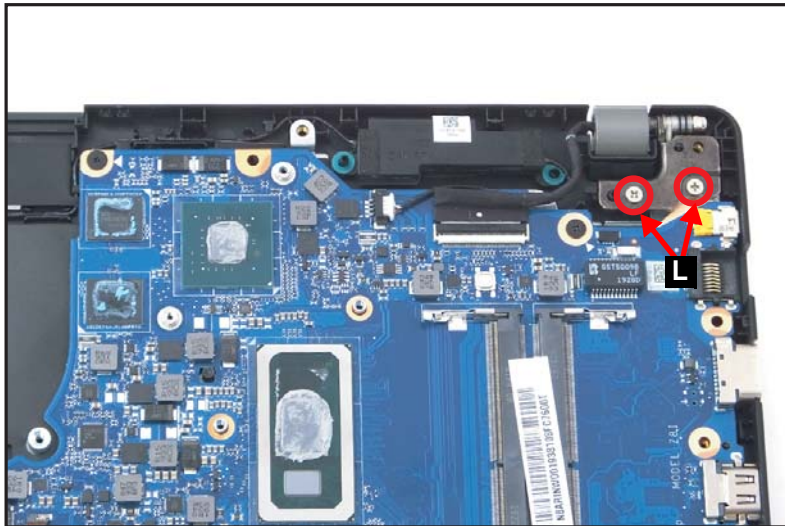




Figure 1-91. Replacing the Mainboard

| ID | Size | Torque | Quantity | Screw Type |
|----|----------|----------------|----------|---|
| B | M2.0*3.0 | 2.0±0.10KGF/CM | 7 |  |
| L | M2.5*5.0 | 3.0±0.15KGF/CM | 2 |  |

Replacing the USB Board

1. Place the USB board (A) to its compartment on the top assembly. Make sure the guide pins (B) and USB board screw hole are properly aligned (Figure 1-92).

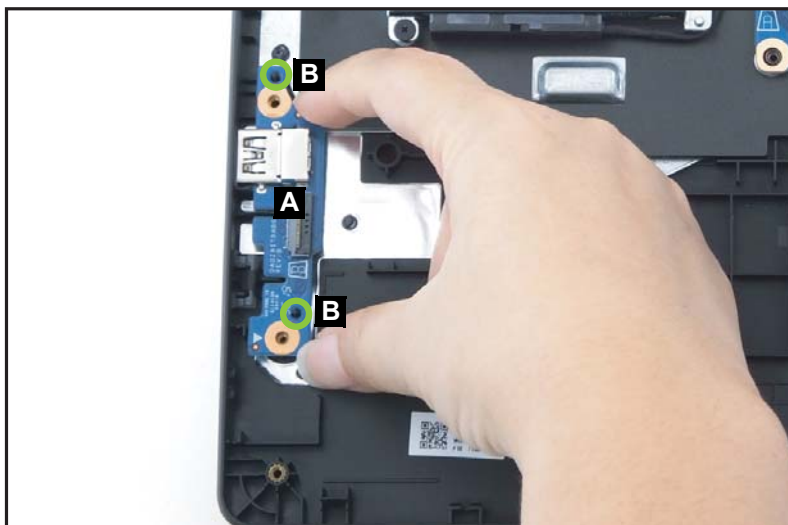


Figure 1-92. Replacing the USB Board

2. Install and secure one (1) screw to the USB board (Figure 1-93).
3. Connect the USB board FFC (C) to the mainboard and USB board connectors (Figure 1-93).

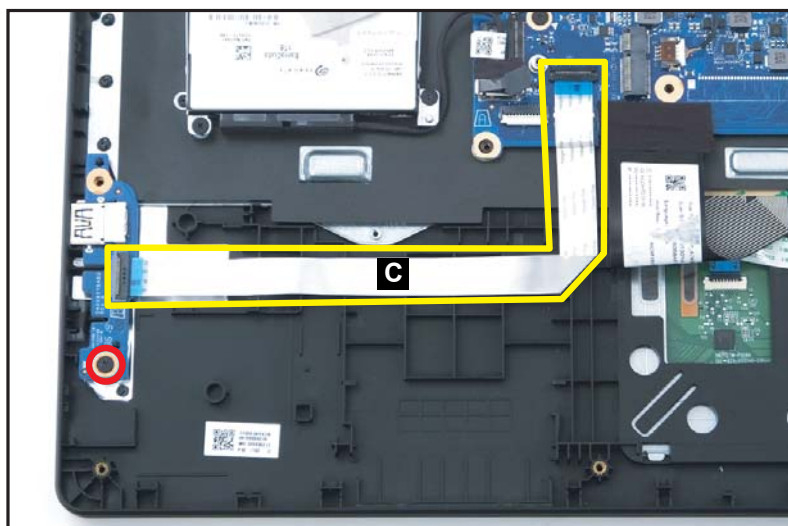



Figure 1-93. Replacing the USB Board

⇒ **NOTE:**

Make sure that the USB board FFC is firmly secured to the mainboard connector and the USB board connector.

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 1 |  |

Replacing the LCD Module

1. By holding the top assembly upright and the keyboard is facing you, align the top assembly with the LCD hinges slots on the LCD module as shown in [Figure 1-94](#). Then close the top assembly ([Figure 1-94](#)).



Figure 1-94. Replacing the LCD Module

2. Close both LCD hinges until they are fully seated in place ([Figure 1-95](#)).

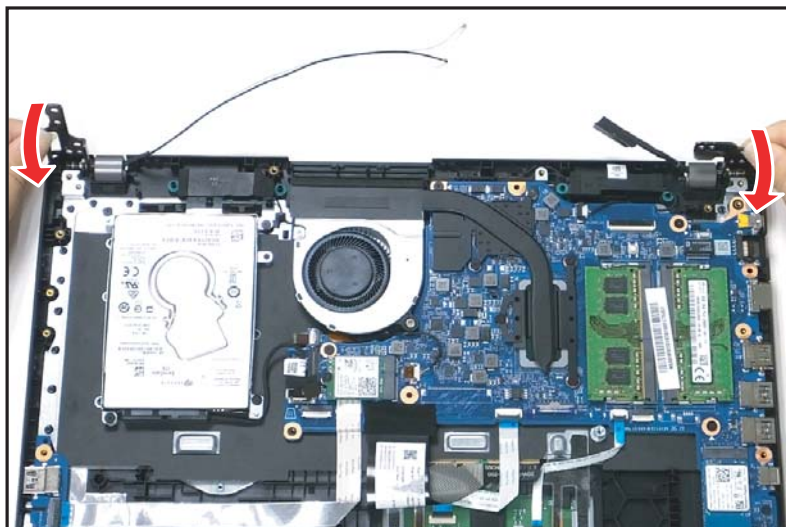


Figure 1-95. Replacing the LCD Module

3. Install and secure four (4) screws to the LCD hinges ([Figure 1-96](#)).

⚠ CAUTION:

Make sure all cables and antennas are moved away from the device to avoid damage during installation.

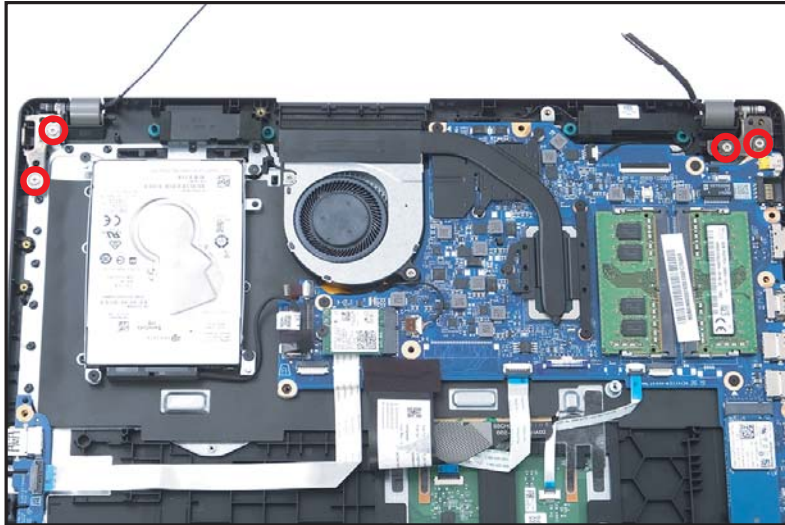


Figure 1-96. Replacing the LCD Module

4. Connect the eDP cable to the mainboard connector (A) and route it through the cable guides (B) ([Figure 1-97](#)).

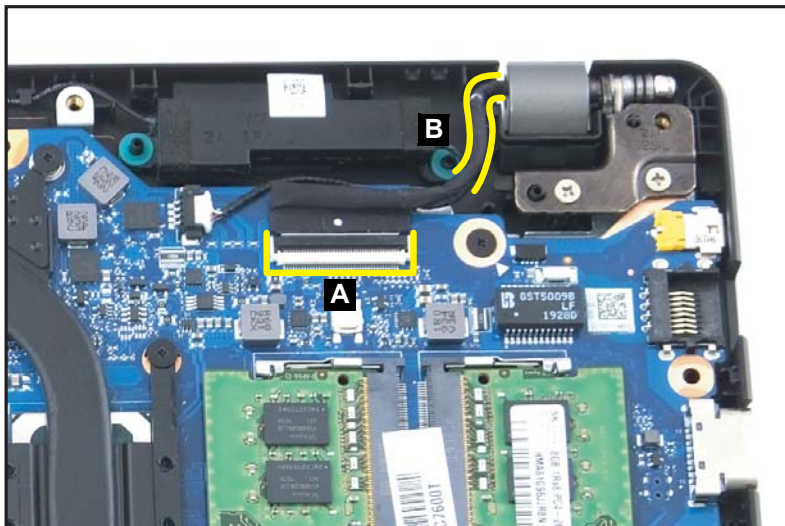


Figure 1-97. Replacing the LCD Module

5. Route the WLAN antennas through the cable guides (C) (Figure 1-98).
6. Connect the AUX antenna (white-color) to the WLAN AUX pin as shown in Figure 1-98.
7. Connect the MAIN antenna (black-color) to the WLAN MAIN pin as shown in Figure 1-98.

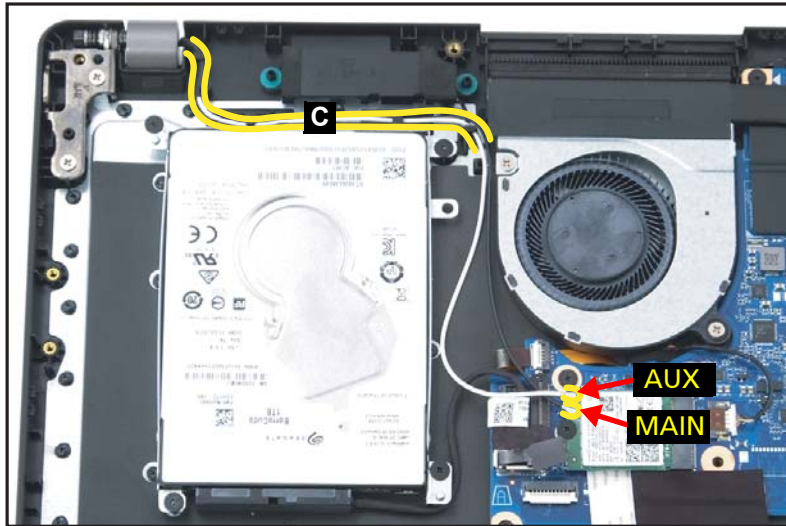



Figure 1-98. Replacing the LCD Module

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|---|
| Red Call out | M2.5*5.0 | 3.0±0.15KGF/CM | 4 |  |

Replacing the Touchpad Module

1. Slightly lift the keyboard FPC and slide the touchpad module (A) into the bottom latches (B) until those are fully engaged (Figure 1-99).
2. Ensure that the touchpad module (A) is properly aligned with the guide pins (C), push the touchpad module firmly onto its slot until it is fully seated in place (Figure 1-99).

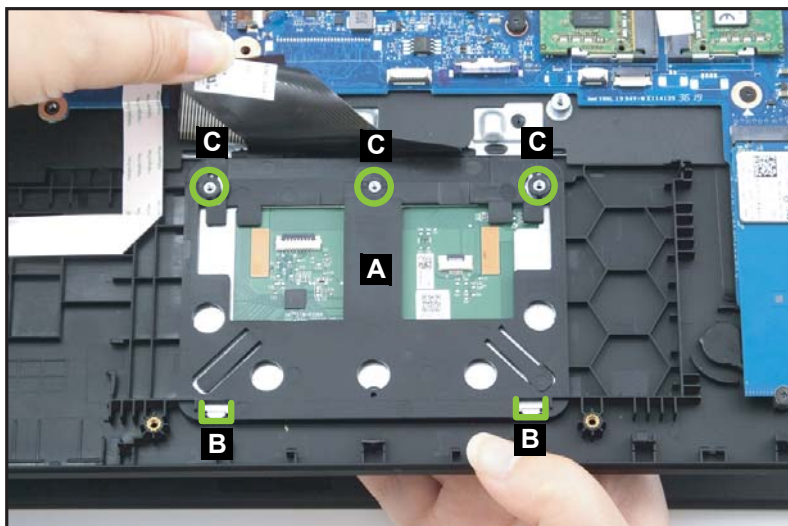


Figure 1-99. Replacing the Touchpad Module

3. Install and secure two (2) screws to the touchpad module (Figure 1-100).

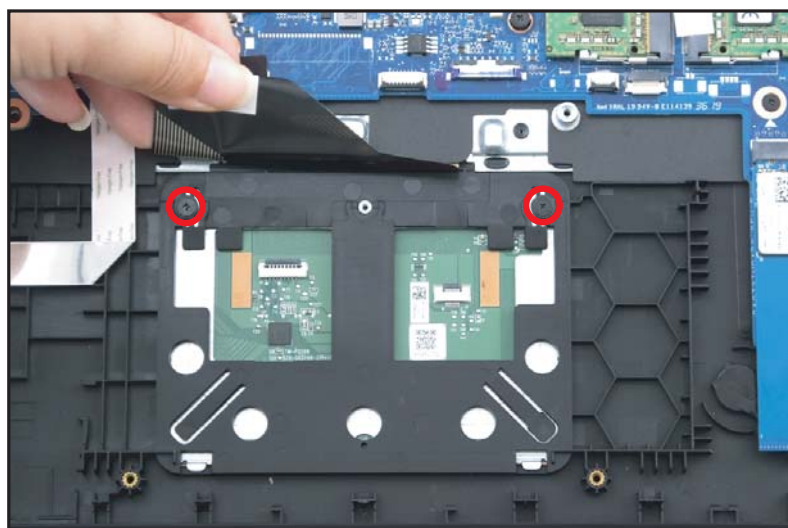


Figure 1-100. Replacing the Touchpad Module

4. Attach the touchpad conductive tape (D) onto the touchpad module and top assembly (Figure 1-101).

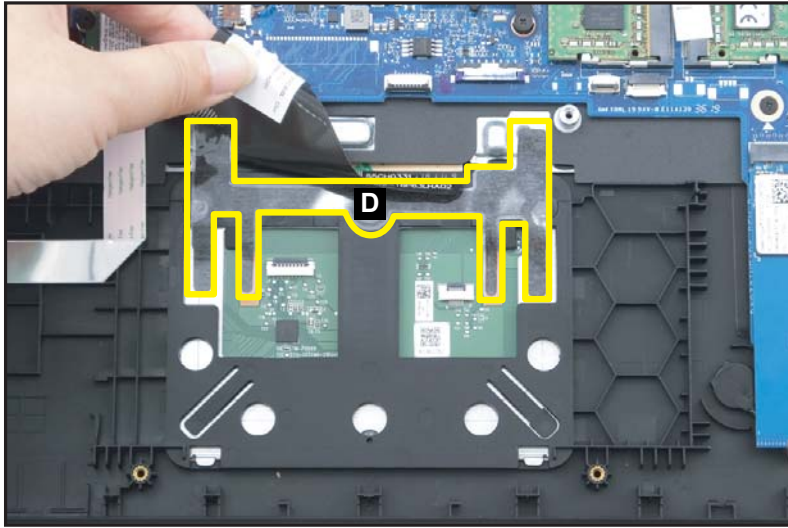


Figure 1-101. Replacing the Touchpad Module

5. Connect the touchpad FFC (E) to the touchpad module and mainboard connectors (Figure 1-102).
6. Connect the fingerprint FFC (F) to the touchpad module and mainboard connectors (Figure 1-102). Then put down the keyboard FPC.

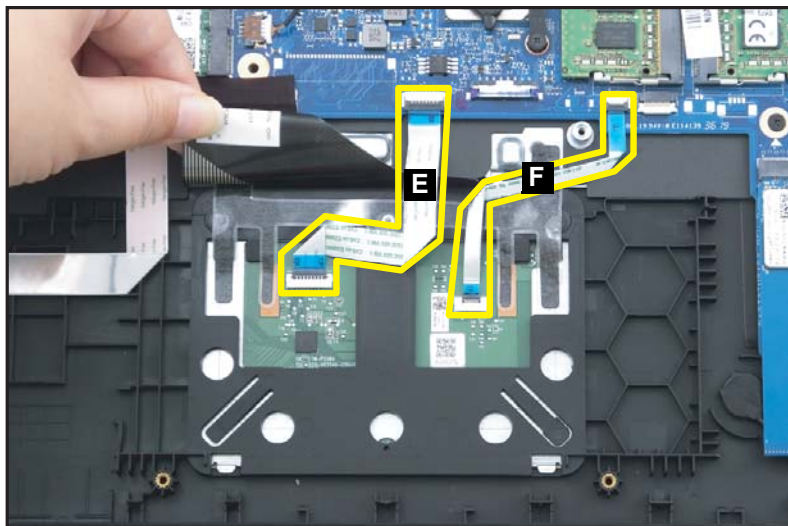



Figure 1-102. Replacing the Touchpad Module

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 2 |  |

Replacing the HDD (Hard Disk Drive) Module

1. Install the HDD module (A) into its bracket (Figure 1-103).

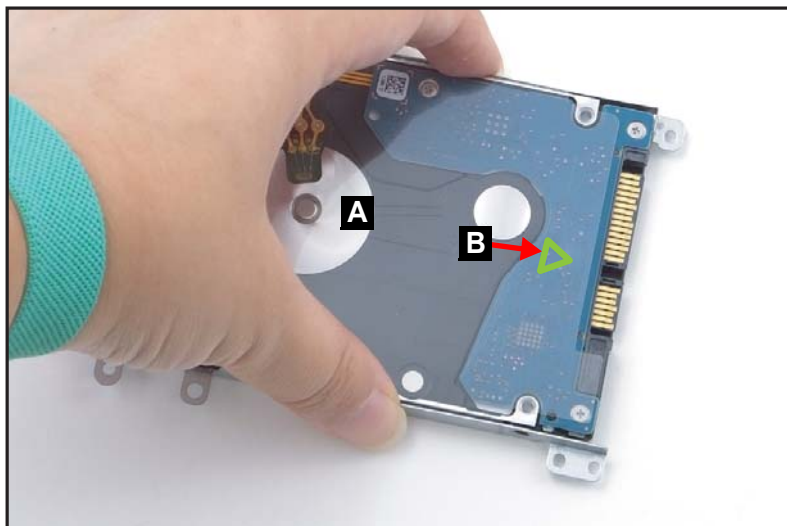


Figure 1-103. Replacing the HDD Module

+ **IMPORTANT:**

When installing the HDD module, make sure the marked arrow (B) is facing the correct direction shown in Figure 1-103.

2. Install and secure four (4) screws (C) to the HDD bracket (Figure 1-104).

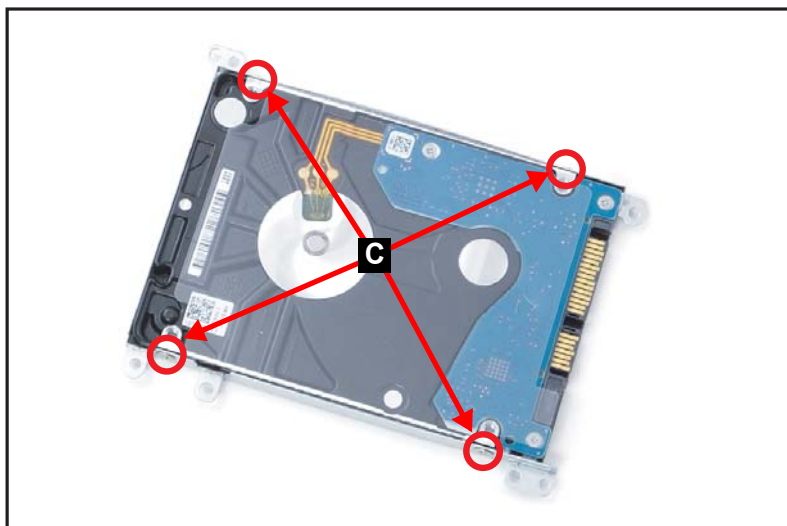


Figure 1-104. Replacing the HDD Module

3. Connect the HDD FFC to the HDD module connector (D) (Figure 1-105).

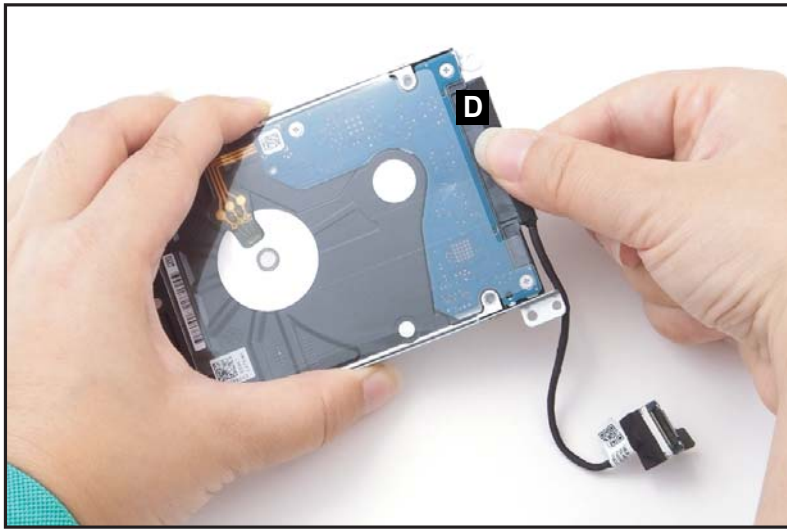


Figure 1-105. Replacing the HDD Module

4. Install the HDD module assembly (E) onto its compartment. Make sure the guide pins (F) and HDD bracket screw holes are properly aligned (Figure 1-106).

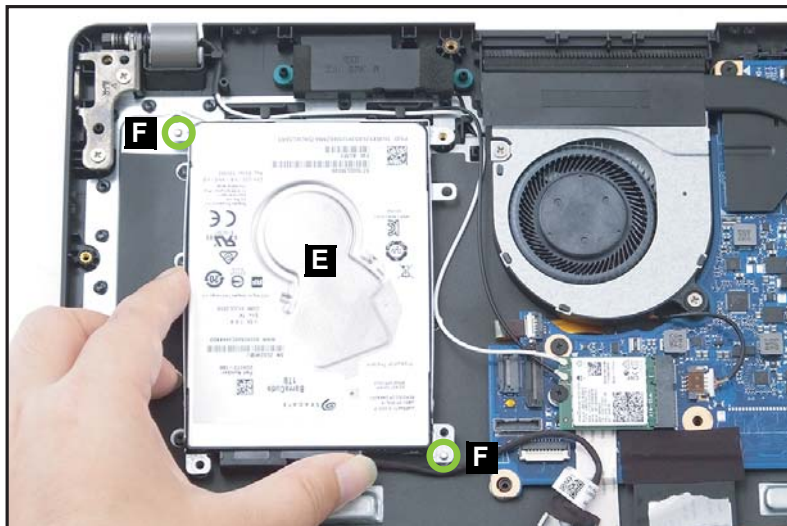


Figure 1-106. Replacing the HDD Module

5. Install and secure four (4) screws (G) to the HDD bracket (Figure 1-107).
6. Connect the HDD cable to the mainboard connector (H) (Figure 1-107).

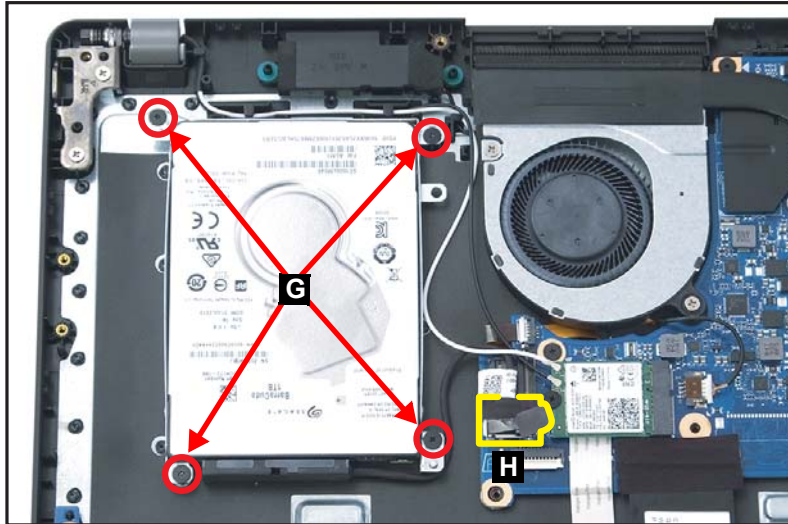




Figure 1-107. Replacing the HDD Module

| ID | Size | Torque | Quantity | Screw Type |
|----|----------|----------------|----------|---|
| C | M3.0*3.5 | 3.0±0.15KGF/CM | 4 |  |
| G | M2.0*3.0 | 2.0±0.10KGF/CM | 4 |  |

Replacing the SSD (Solid State Drive) Module

1. Insert the SSD module (A) to the mainboard connector (B) (Figure 1-108).

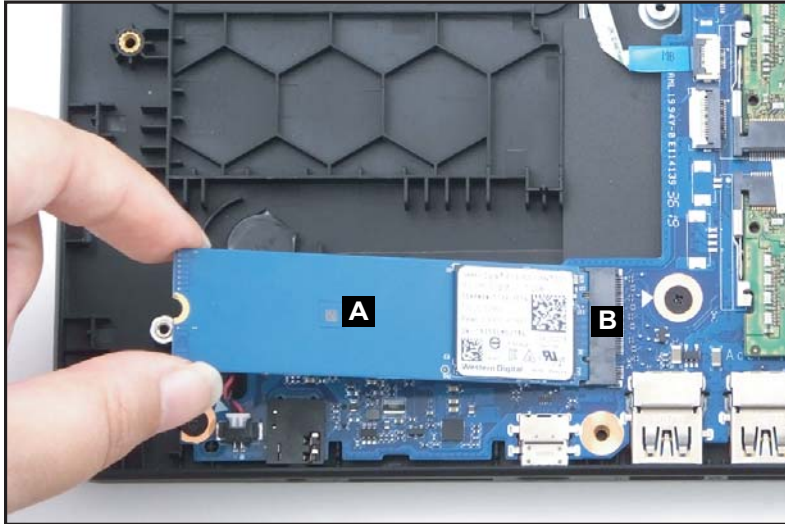



Figure 1-108. Replacing the SSD Module

2. Install and secure one (1) screw to the SSD module (Figure 1-109).



Figure 1-109. Replacing the SSD Module

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|---|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 1 |  |

Replacing the Heatsink

+ **IMPORTANT:**

Apply approved thermal grease and ensure all heat pads are in position before replacing the module.

⚠ **CAUTION:**

Use caution when applying thermal grease. Thermal grease may cause damage to the mainboard.

The following thermal grease types are approved for use:

- Silmore GP50
- Honeywell
- Jet Motor 7762

The following thermal pads are approved for use:

- Eapus XR-PE
1. Remove all traces of thermal grease from CPU (or GPU) using a lint-free cloth or cotton swab and Isopropyl Alcohol, Acetone, or other approved cleaning agent.
 2. Apply small amount of thermal grease to center of CPU.

⇒ **NOTE:**

Force used during installation of heatsink is sufficient to spread grease evenly over CPU top.

3. Place the heatsink (A) on the mainboard ([Figure 1-110](#)).

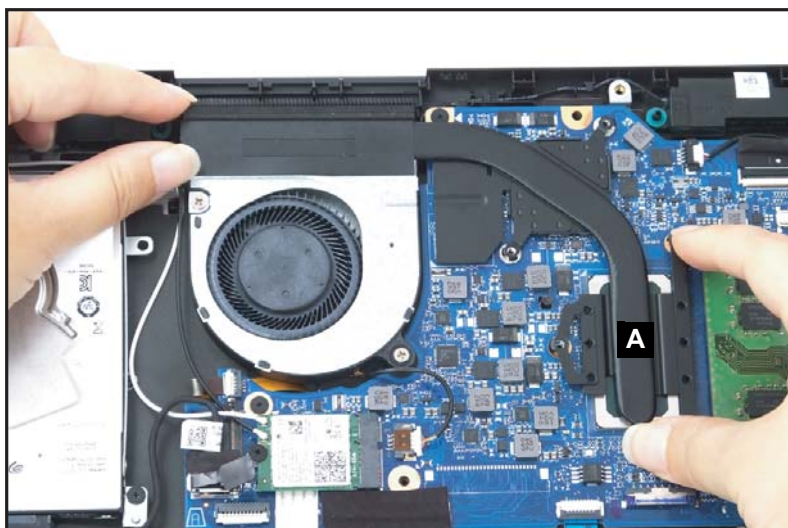


Figure 1-110. Replacing the Heatsink

4. Install and secure five (5) screws to the heatsink (Figure 1-111). Ensure the heatsink is properly aligned and seated.

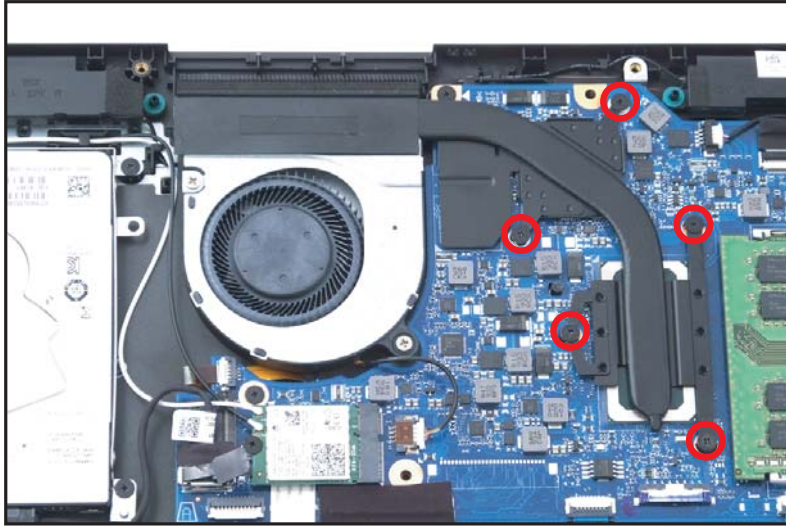



Figure 1-111. Replacing the Heatsink

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|---|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 5 |  |

Replacing the Fan

1. Slide the upper side of the fan (A) under the mylar of the heatsink (highlighted by a green line) first, and then place the fan onto its slot until it is fully seated (Figure 1-112).

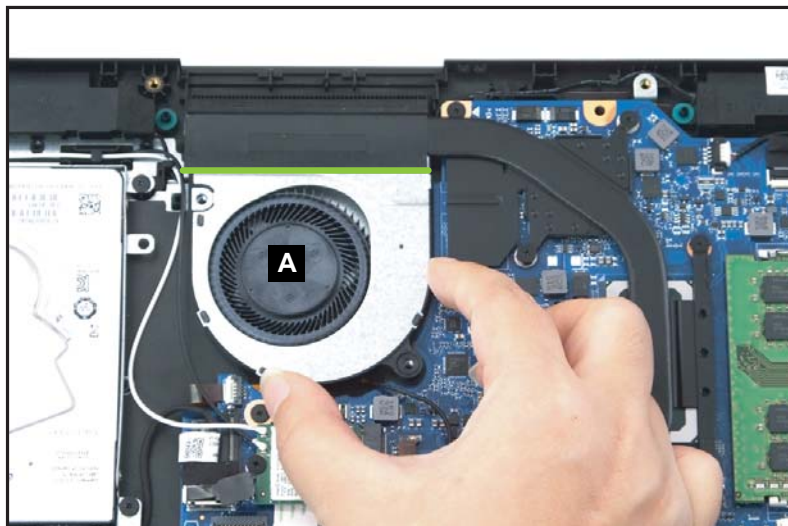


Figure 1-112. Replacing the Fan

2. Install and secure two (2) screws to the fan (Figure 1-113).
3. Connect the fan cable to the mainboard connector (B) (Figure 1-113).

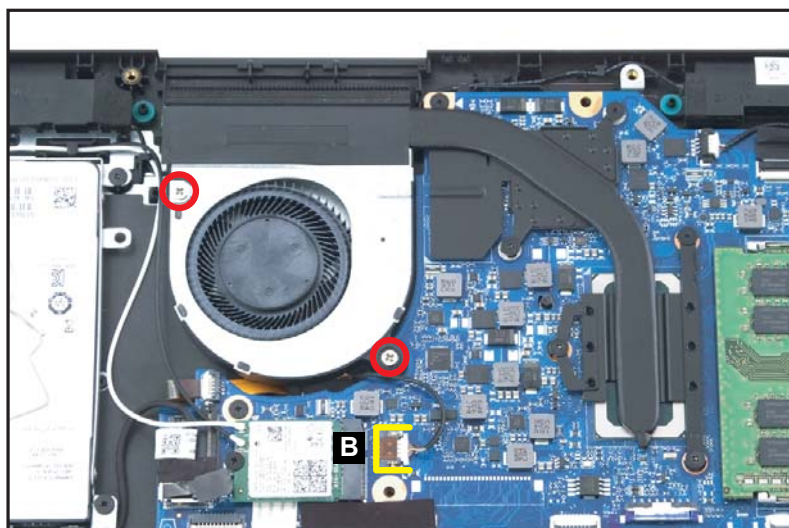



Figure 1-113. Replacing the Fan

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.5*5.0 | 3.0±0.15KGF/CM | 2 |  |

Replacing the DIMM (Dual In-line Memory) Module

1. Insert the DIMM module (A) to the mainboard connector (B) (Figure 1-114).
2. Press down on the DIMM module until the module clips (C) lock into position as shown in Figure 1-114.

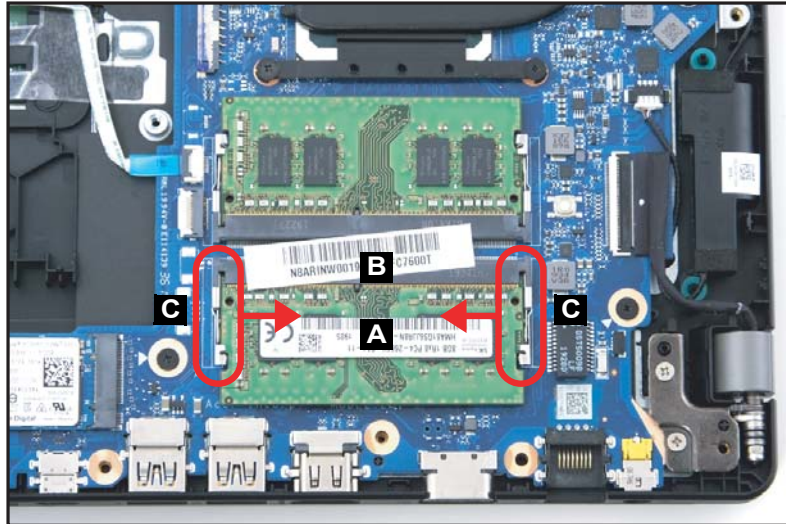


Figure 1-114. Replacing the DIMM Module

3. Repeat steps 1~2 to install another DIMM module.

Replacing the WLAN (Wireless Local Area Network) Module

1. Place and insert the WLAN module (A) into the mainboard connector (B) (Figure 1-115).

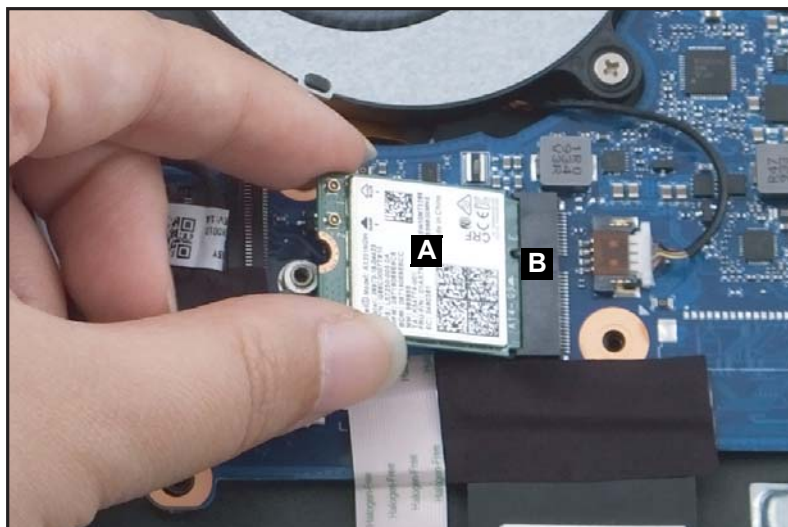


Figure 1-115. Replacing the WLAN Module

2. Route the WLAN antennas through the cable guides (C) (Figure 1-116).
3. Install and secure one (1) screw to the WLAN module (Figure 1-116).
4. Connect the AUX antenna (white-color) to the WLAN AUX pin (Figure 1-116).
5. Connect the MAIN antenna (black-color) to the WLAN MAIN pin (Figure 1-116).

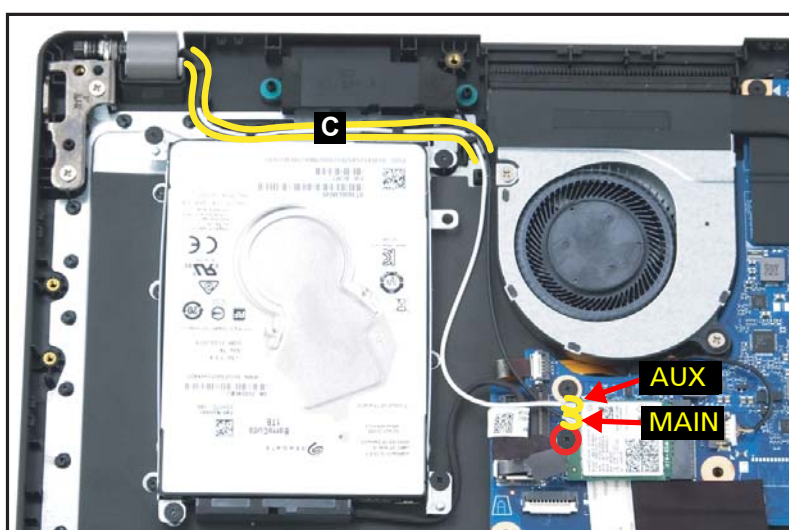



Figure 1-116. Replacing the WLAN Module

| ID | Size | Torque | Quantity | Screw Type |
|-----------------|----------|----------------|----------|---|
| Red Call out | M2.0*3.0 | 2.0±0.10KGF/CM | 1 |  |

Replacing the Battery Pack

1. Place the battery pack (A) to its compartment on the system. Then connect the battery cable to the mainboard connector (B) (Figure 1-117).

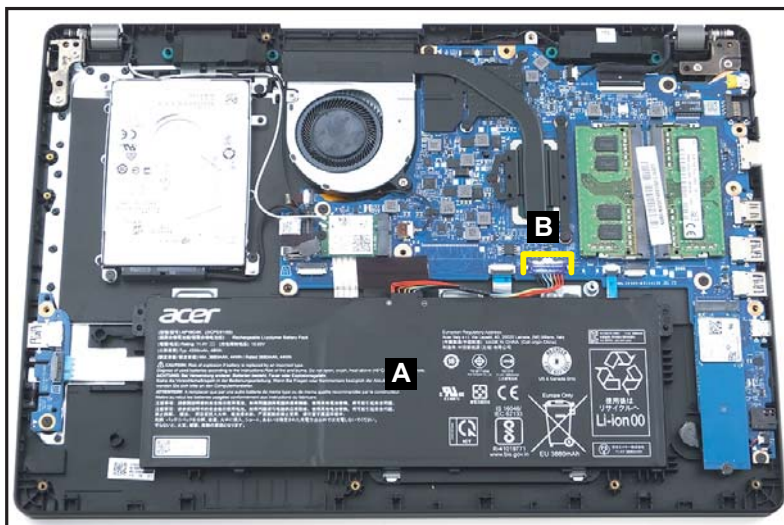


Figure 1-117. Replacing the Battery Pack

2. Attach the tape (C) to secure the battery cable connection (Figure 1-118).



Figure 1-118. Replacing the Battery Pack

Replacing the Base Cover

1. Carefully place the base cover onto the top assembly. Make sure that the edges of the base cover are aligned properly to those of the top assembly ([Figure 1-119](#)).



Figure 1-119. Replacing the Base Cover

2. Press downward on the system to engage the tabs. Make sure all the tabs are fully engaged ([Figure 1-120](#)).




Figure 1-120. Replacing the Base Cover

3. Install and secure twelve (12) screws to the base cover (Figure 1-121).



Figure 1-121. Replacing the Base Cover

| ID | Size | Torque | Quantity | Screw Type |
|--------------|----------|----------------|----------|--|
| Red Call out | M2.5*7.0 | 3.0±0.15KGF/CM | 12 |  |