

Acer Chromebook Spin 511/ R752T/ R752TN

# **LIFECYCLE EXTENSION GUIDE**

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# Self-Repair

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This chapter highlights the limited self-repair capabilities of the product.

Prior performing self-repair, familiarize yourself with the Safety Guidelines and Recommended Equipment sections first as described in the chapter "[Disassembly Procedures](#)".

Depending on model, the following key components are eligible for self-repair (if applicable);

- Battery pack
- HDD / SSD module
- DIMM module(s)
- WLAN module
- LTE module

If a particular key component is listed and thus would be eligible for self-repair, but is not described in the "[Disassembly Procedures](#)" section, then this component is either not present on the respective model, or it is present but embedded on the motherboard and therefore not eligible for self-repair.

⇒ **NOTE:**

Do not attempt to replace other components than those listed above.

⇒ **NOTE:**

For replacement parts, always use only Acer certified components in order to safeguard quality, optimum system performance, stability and reliability of the product.

⇒ **NOTE:**

Any damage to the product that occur during self-repair, or which has occurred as a result of a careless or unsuccessful self-repair attempt, is not covered by the standard product warranty.

## Software Recovery

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This product has embedded software recovery tools which can be used to either perform a partial or full software recovery, but also to create a Factory Default recovery media.

For more information about the software recovery options, how to perform a software recovery or creating a Factory Default recovery media, please refer to the chapter "Recovery" which is available in the User Manual of the product.

⇒ **NOTE:**

In the event of not being able to create a Factory Default recovery media, it is possible to obtain a copy of the recovery media through Acer Customer Service (<http://www.acer.com/support>)

This is not a free of charge service.

# Disassembly Procedures

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## Safety Guidelines

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This chapter contains step by step procedures on how to remove and de-install components from the computer. Use the following safety guidelines to ensure your personal safety. Each procedure included in this chapter assumes that you are preparing your computer for recycling and disposal. **By performing any of these procedures you acknowledge that any remaining warranty applicable to your computer will be voided. Before you start any of the procedures in this chapter, make sure to read the following safety guidelines and the respective instructions within the chapter.**

### CAUTION!

- Turn off your computer and disconnect all power sources before opening the computer cover or panels.
- To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface at the same time as touching a connector on the back of the computer.
- Take off any metal objects on your arms or fingers such as bracelets, rings or watches and make sure your hands are completely dry. Even if your unit is unplugged, there may still be some remaining electric charge.
- If a component does not come out easily, do not forcefully remove it. Instead, check that you are removing it correctly and that no wires or other parts are in the way.
- When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable.

## Recommended Equipment

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

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

# WEEE Annex VII Component

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These components are classified as requiring selective treatment:

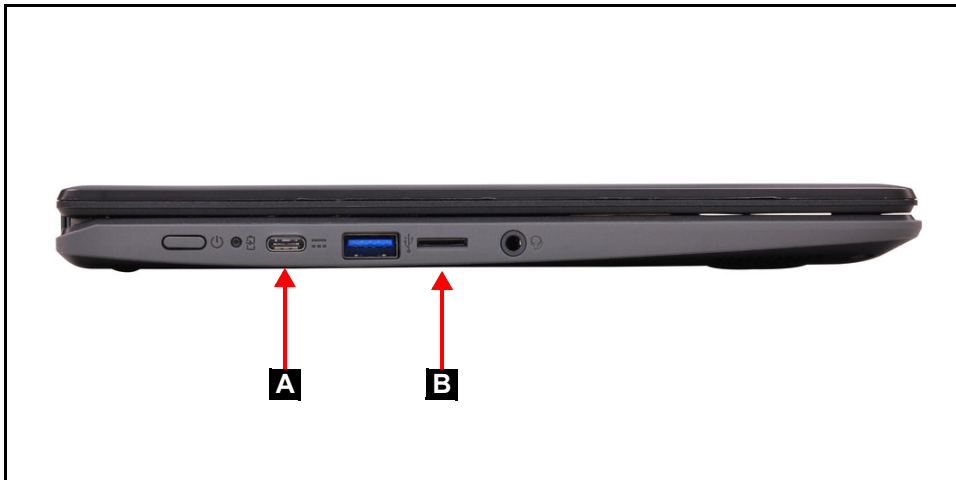
- Battery pack
- WLAN module
- Touchpad module
- USB board
- Mainboard
- LCD panel

# Pre-disassembly Instructions

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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 the SD card from the SD card slot (B) (Figure 1-1).
4. Remove all cables from the system.



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Figure 1-1. AC Adapter Outlet & SD Card Removal

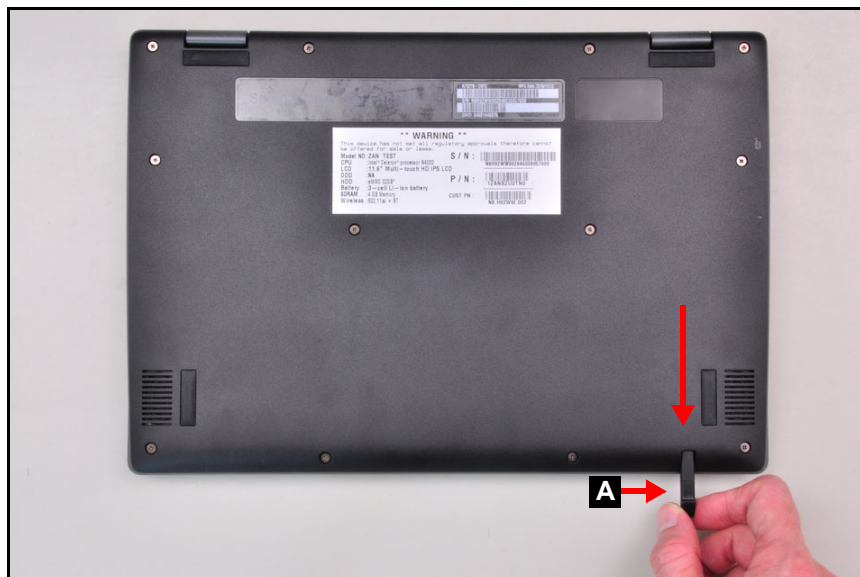
⇒ **NOTE:**

Make sure the system is completely powered off.

# Stylus Removal

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1. Slide the stylus (A) out from its compartment in the palm rest (Figure 1-2).



**Figure 1-2. Stylus Removal**





3. Work your way around the left, right and bottom sides of the base cover (Figure 1-5).



Figure 1-5. Base Cover Removal

4. Slide the base cover in the indicated direction and remove the base cover from the system (Figure 1-6).



Figure 1-6. Base Cover Removal

# Battery Pack Removal

## Prerequisite:

### Base Cover Removal

1. Locate the battery (B) on the top assembly (Figure 1-7).
2. Disconnect the battery cable (C) from the mainboard connector (D) (Figure 1-7).

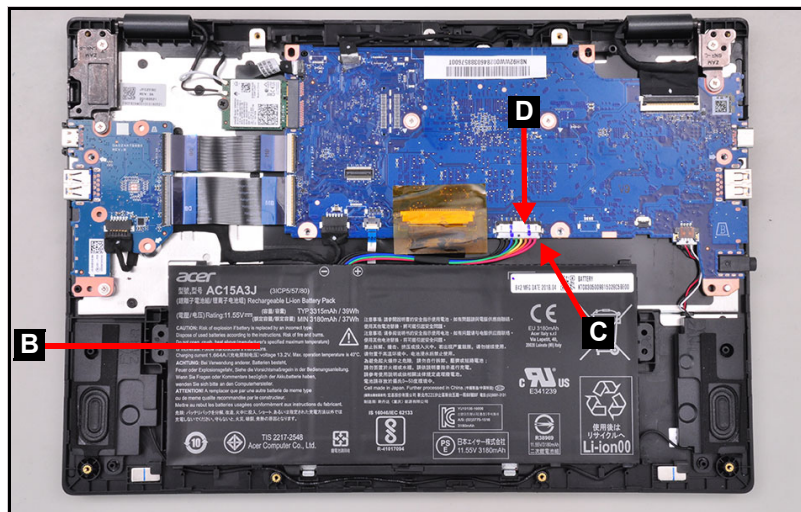


Figure 1-7. Battery Pack Removal

3. Remove the battery pack 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

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## Prerequisite:

### Battery Pack Removal

1. Locate the WLAN module (B) on the top assembly (Figure 1-9).

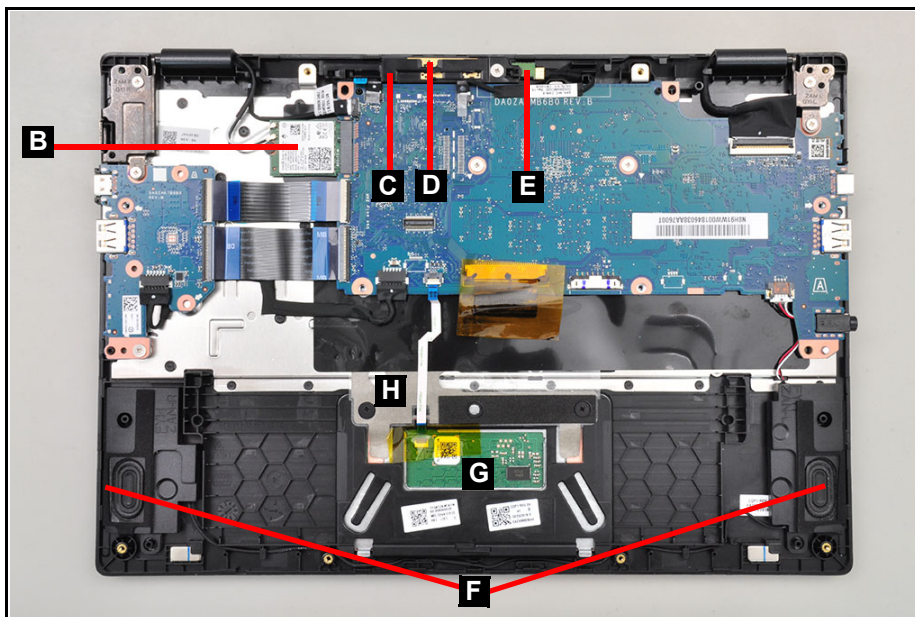


Figure 1-9. Component Location

2. Disconnect WLAN antennas cables (J) from the WLAN module connectors (Figure 1-10).
3. Remove one (1) screw (K) securing the WLAN module in place (Figure 1-10).

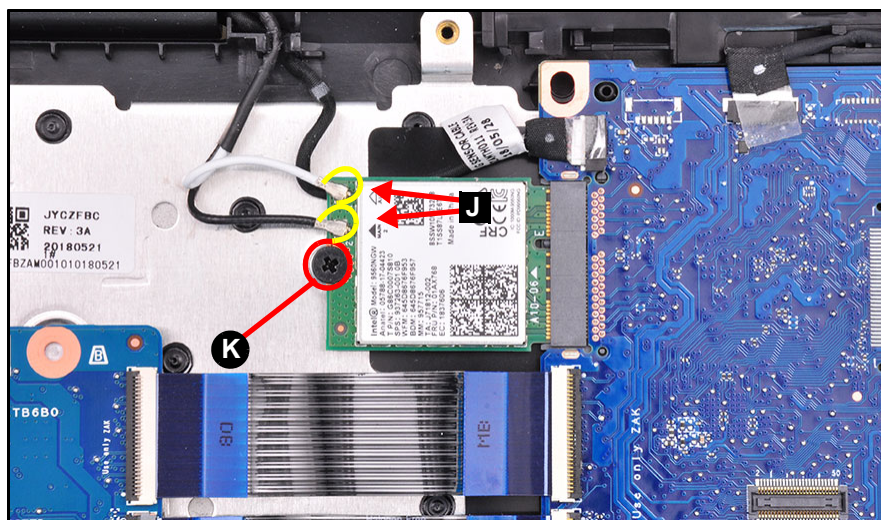


Figure 1-10. WLAN Module Removal



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

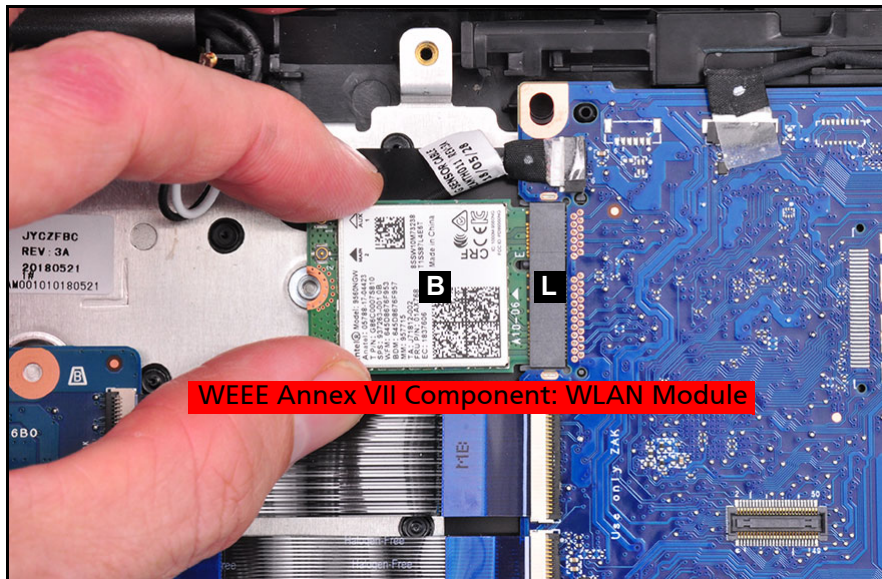


Figure 1-11. WLAN Module Removal

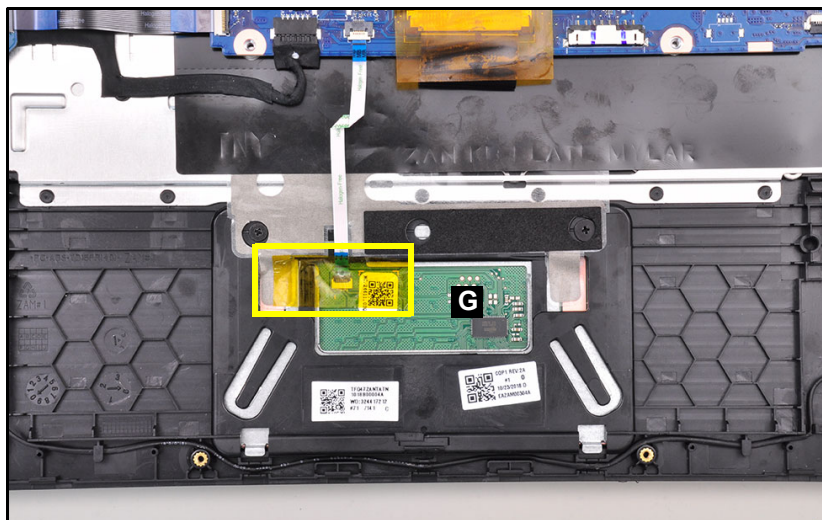
# Touchpad Module Removal

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## Prerequisite:

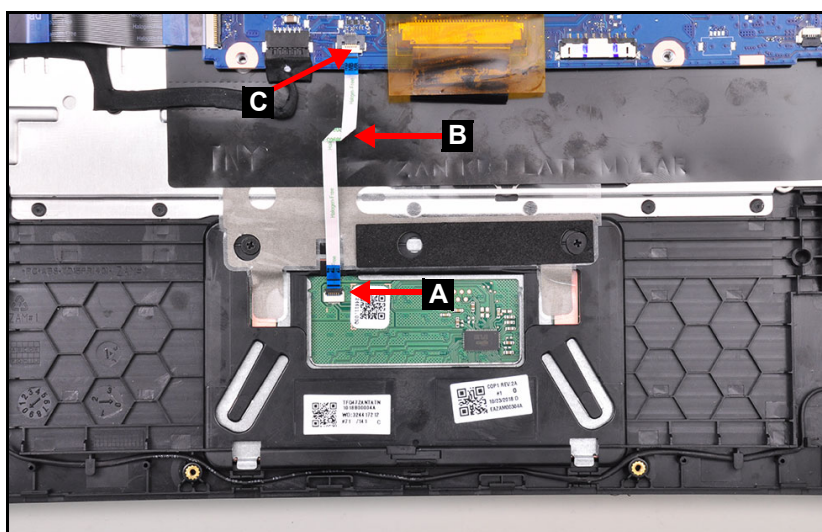
### Battery Pack Removal

1. Locate the touchpad module (G) on the top assembly. Refer to [Figure 1-9](#).
2. Peel off the adhesive tape from the touchpad connector ([Figure 1-12](#)).



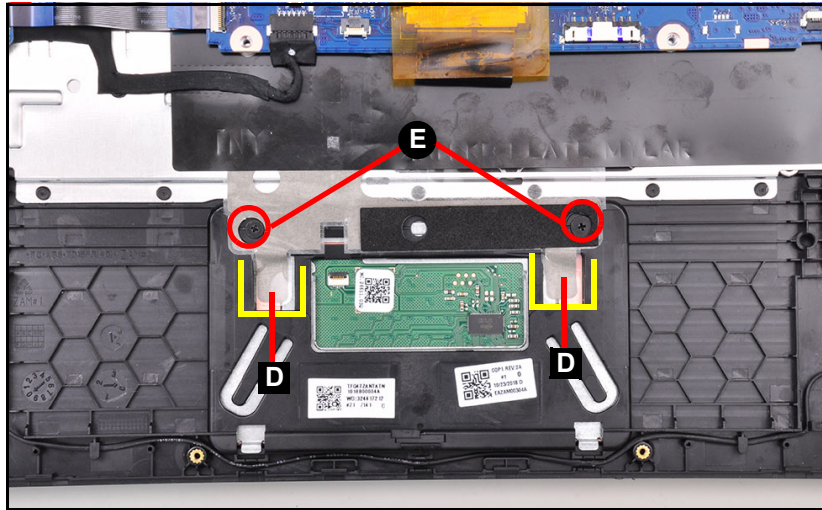
**Figure 1-12. Touchpad Tape Removal**

3. Disconnect the touchpad FFC (B) from the touchpad connector (A) and the mainboard connector (C) then remove the touchpad FFC from the top assembly ([Figure 1-13](#)).



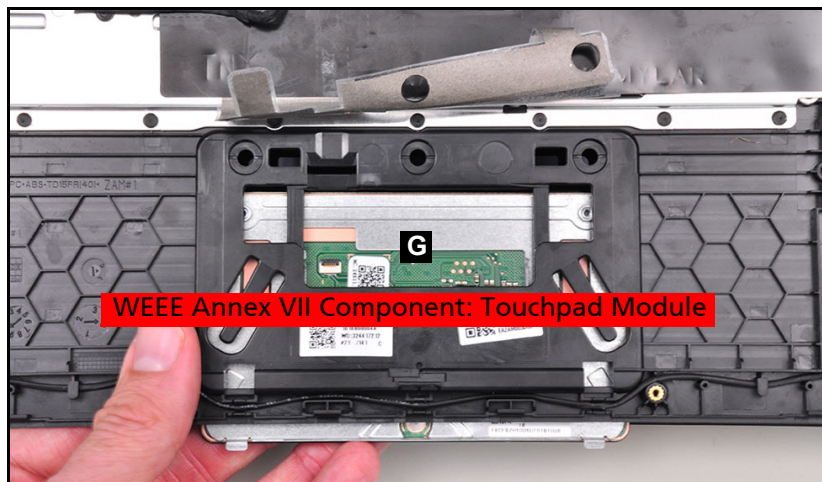
**Figure 1-13. Touchpad FFC Removal**

4. Peel back the two tabs of the conductive tape (D) covering the touchpad module (Figure 1-14).
5. Remove two (2) screws (E) securing the touchpad module in place (Figure 1-14).



**Figure 1-14. Touchpad Module Removal**

6. Carefully open the top assembly with one hand and remove the touchpad module (G) from the top assembly (Figure 1-15).



**Figure 1-15. Touchpad Module Removal**

**⚠ CAUTION:**

Touchpad FFC (Flexible Flat Cable) can be damaged if removed while the mainboard connector and the touchpad connector are locked.



# LCD Module Removal

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## Prerequisite:

### Battery Pack Removal

1. Disconnect the WLAN antennas cables from the WLAN module connectors (A) (Figure 1-16).
2. Disconnect the G-sensor cable from the mainboard connector (B) (Figure 1-16).
3. *[For models with a Digitizer board.]* Disconnect the Digitizer cable from the mainboard connector (C) (Figure 1-16).
4. Disconnect the eDP cable from the mainboard connector (D) (Figure 1-16).
5. Unroute all cables from the cable guides (Figure 1-16).

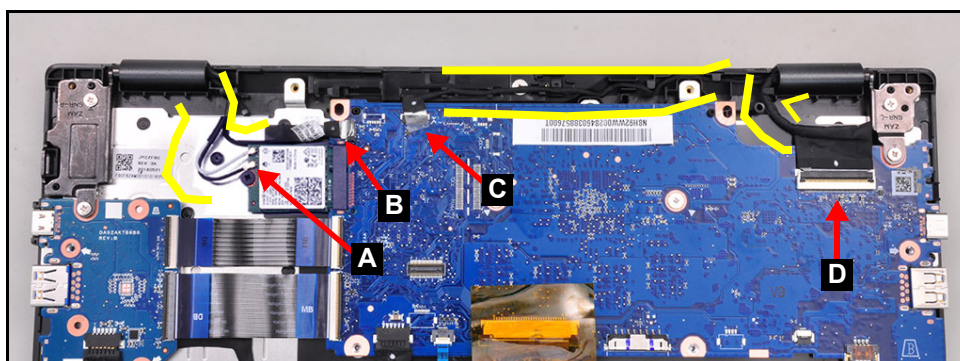


Figure 1-16. LCD Module Removal

6. Place the system on a flat surface and open the LCD module (G) as shown in Figure 1-17.
7. Remove four (4) screws securing the LCD module in place (Figure 1-17).

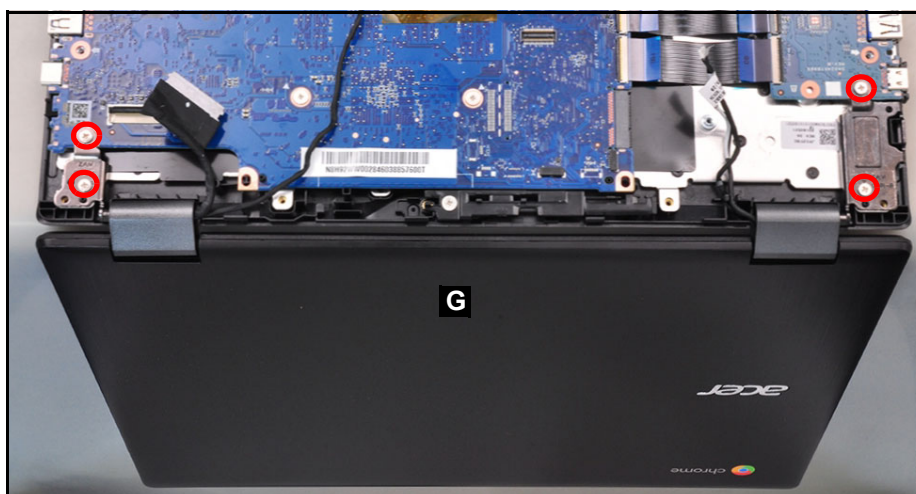


Figure 1-17. LCD Module Removal

8. Lift and remove the LCD module away from the top assembly (Figure 1-18).



Figure 1-18. LCD Module Removal

**⚠ CAUTION:**

Make sure all cables and antennas are unthreaded from the cable guides to avoid damage during the removal process.



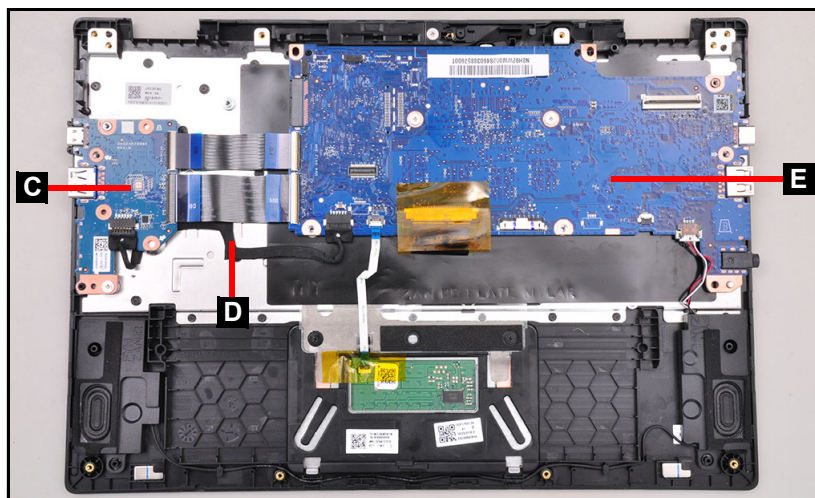
# USB Board Removal

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## Prerequisite:

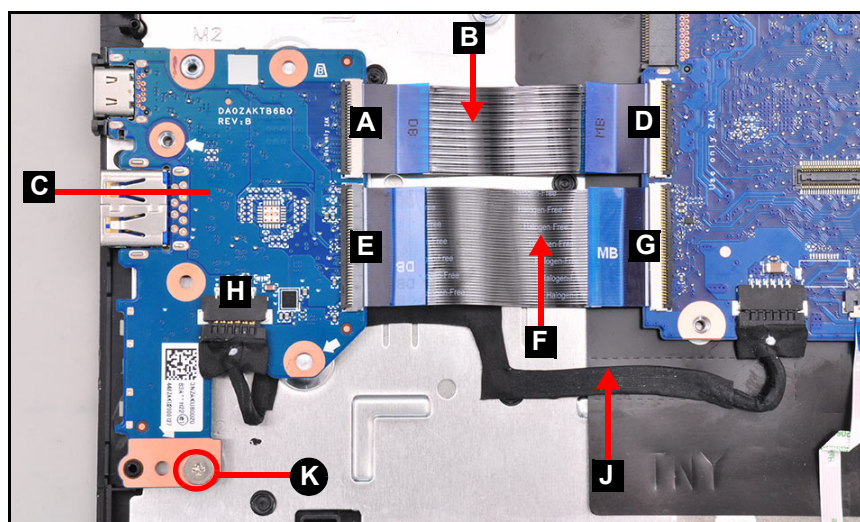
### LCD Module Removal

1. Locate the USB board (C) on the top assembly (Figure 1-19).



**Figure 1-19. Component Location**

2. Disconnect the 30-pin USB board FPC (B) from the mainboard connector (D) and the USB board connector (A) and remove the 30-pin USB board FPC (Figure 1-20).
3. Disconnect the 40-pin USB board FPC (F) from the mainboard connector (G) and the USB board connector (E) and remove the 40-pin USB board FPC (Figure 1-20).
4. Disconnect the USB board cable (J) from the USB board connector (H) (Figure 1-20).
5. Remove one (1) screw (K) securing the USB board in place (Figure 1-20).



**Figure 1-20. USB Board Removal**

6. Remove the USB board from the top assembly (Figure 1-21).

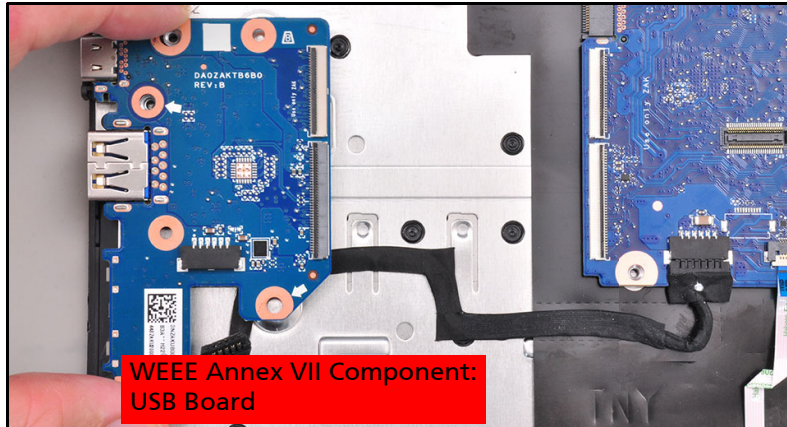


Figure 1-21. USB Board Removal

**⚠ CAUTION:**

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

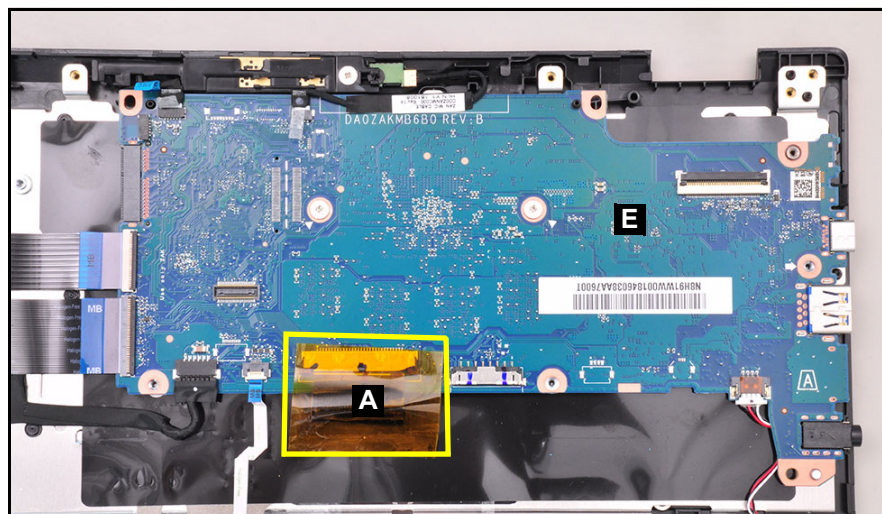
# Mainboard Removal

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## Prerequisite:

### LCD Module Removal

1. Locate the mainboard (E) on the top assembly. Refer to [Figure 1-22](#).
2. Peel off and remove the adhesive tape (A) covering the keyboard connector ([Figure 1-22](#)).



**Figure 1-22. Mainboard Removal**

3. *[For models with a Second Microphone Board:]* Disconnect the second microphone board cable from the mainboard connector (B) ([Figure 1-23](#)).
4. *[For models with a Second Camera Module:]* Disconnect the second camera module cable from the mainboard connector (C) ([Figure 1-23](#)).
5. Disconnect the 30-pin USB board FPC from the mainboard connector (D) ([Figure 1-23](#)).
6. Disconnect the 40-pin USB board FPC from the mainboard connector (F) ([Figure 1-23](#)).
7. Disconnect the USB board cable from the mainboard connector (G) ([Figure 1-23](#)).
8. Disconnect the touchpad FFC from the mainboard connector (J) ([Figure 1-23](#)).
9. Disconnect the keyboard FPC from the mainboard connector (K) ([Figure 1-23](#)).
10. Disconnect the speaker cable from the mainboard connector (L) ([Figure 1-23](#)).
11. Remove two (2) screws (H) securing the mainboard in place ([Figure 1-23](#)).



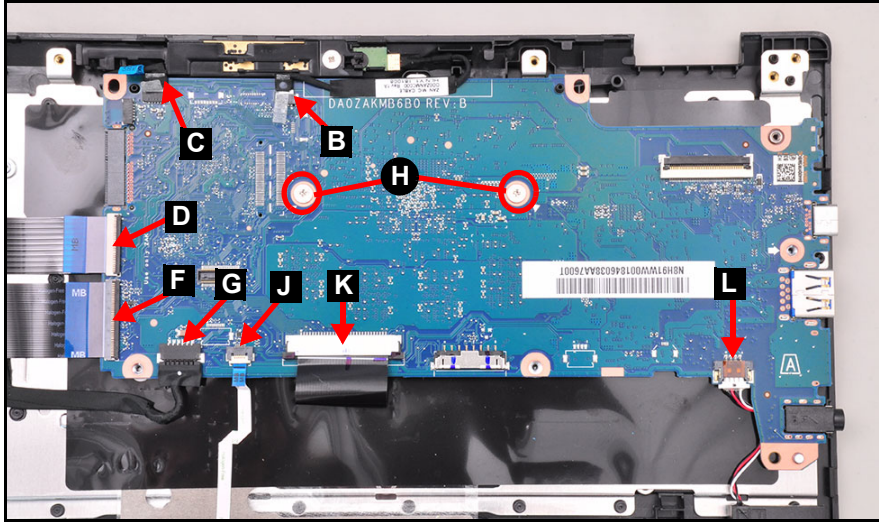


Figure 1-23. Mainboard Removal

**⚠ CAUTION:**

Make sure all cables, FFCs and FPCs are disconnected from the connectors on the mainboard to avoid damage during the mainboard removal.

12. Lift up and remove the mainboard from the top assembly from the left side to prevent the mainboard from being damaged by the metal stud (M) (Figure 1-24).

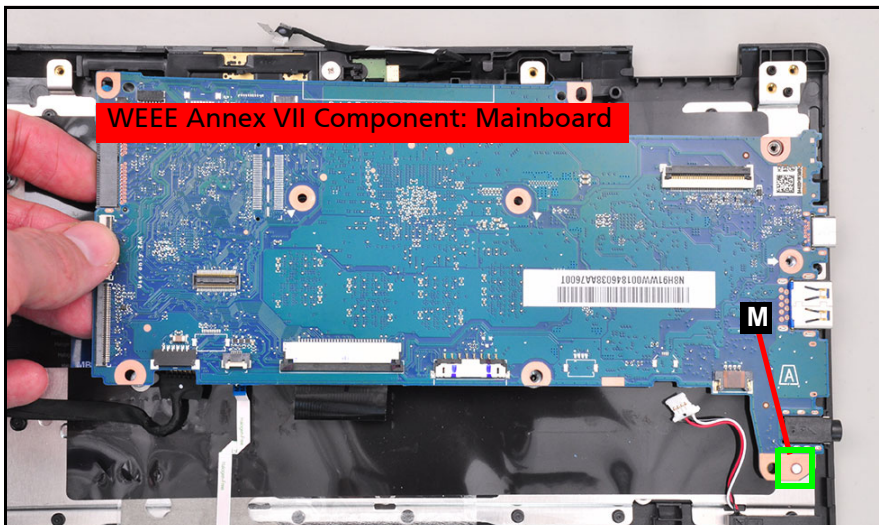


Figure 1-24. Mainboard Removal

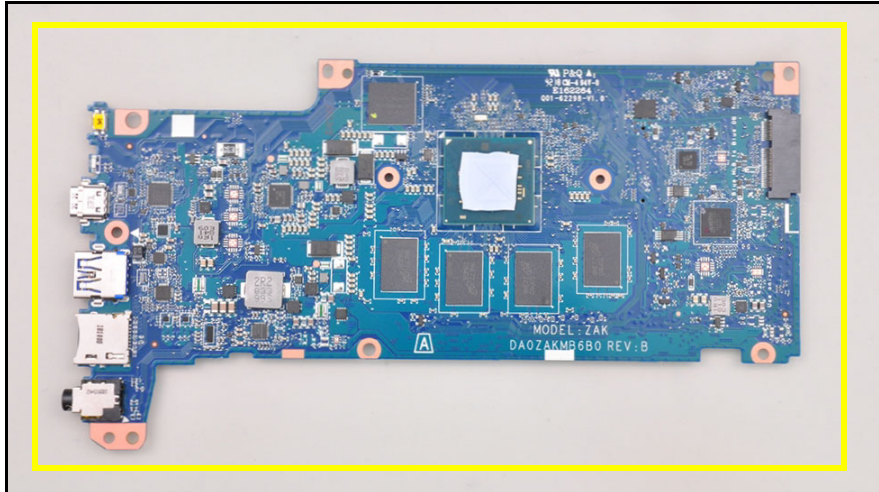


Figure 1-25. Mainboard

+ **IMPORTANT:**

Circuit boards  $>10 \text{ cm}^2$  have been highlighted with a yellow rectangle as shown in [Figure 1-25](#). Remove the circuit board and follow local regulations for disposal.

## LCD Panel Removal

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### Prerequisite:

#### LCD Module Removal

1. Carefully pull out the eDP cable and Digitizer cable from the left LCD hinge compartment (A) (Figure 1-26).

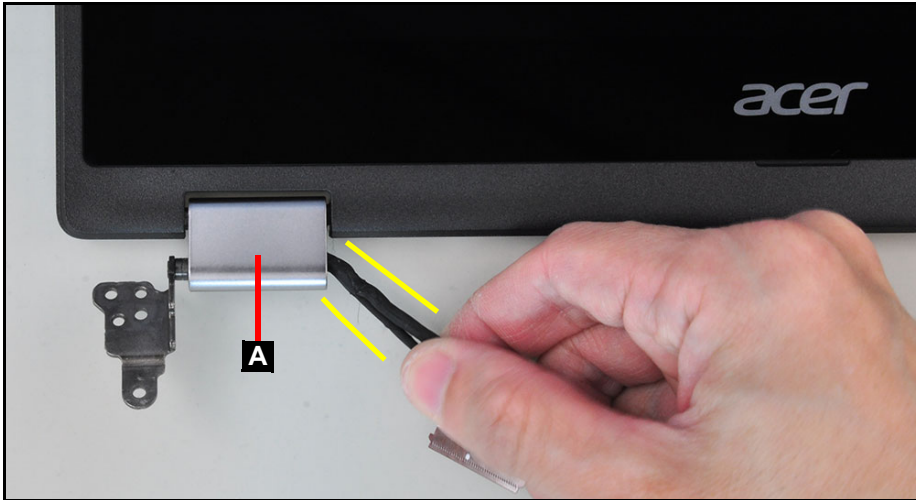


Figure 1-26. LCD Panel Removal

2. Using a flat headed tool, pry open from the gap near the left hinge compartment at the bottom side of the LCD module then slide the tool through to release the LCD panel from the latches (Figure 1-27).



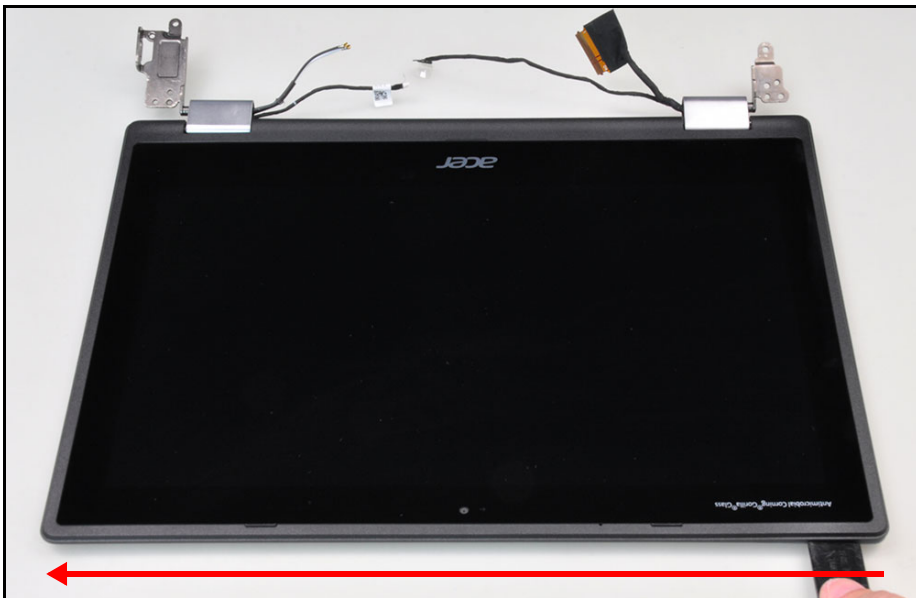
Figure 1-27. LCD Panel Removal

3. Continue along the left side of the LCD module starting from the bottom side of the left corner (Figure 1-28).



**Figure 1-28. LCD Panel Removal**

4. Continue along the top side of the LCD module (Figure 1-29).



**Figure 1-29. LCD Panel Removal**

5. Continue along the right side of the LCD module (Figure 1-30).



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**Figure 1-30. LCD Panel Removal**

6. Lift and remove the LCD panel from the LCD cover (Figure 1-31).



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**Figure 1-31. LCD Panel Removal**



## Top Assembly Removal (Keyboard Removal)

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### Prerequisite:

Ensure that the **WLAN Module**, **Speakers**, **Touchpad Module**, **Conductive Tape**, **Second Camera Module**, **Second Microphone Board Module**, **Mainboard**, and **USB Board Cable** have been disassembled prior removing 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.



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Figure 1-32. Top Assembly (Keyboard)

# Troubleshooting

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This chapter shows you how to deal with common system problems. Read it before calling a technician if a problem occurs. Solutions to more serious problems require opening up the computer. Do not attempt to open the computer yourself; contact your dealer or authorized service center for assistance.

## Recover your Chromebook

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When your Chromebook's operating system (OS) isn't working properly, you can recover it. Recovery is removing and reinstalling the OS.

### ⇒ NOTE:

If you're using your Chromebook at work or school, ask [your administrator](#) for help.

Administrators: For more help, contact Google support.

## When to recover

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You might want to recover if:

- You see this error message: "Chrome OS is missing or damaged".
- You've tried [other troubleshooting steps](#) and nothing has fixed your issue.
- You've asked the experts in our [help forum](#) for help fixing your issue, and they recommend recovery.

## What you need to get started

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- The Chromebook with the "Chrome OS is missing or damaged" error.
- Another Chromebook, or a Windows or Mac computer with Chrome installed.
- A USB flash drive that can hold at least 8 GB, and that you don't mind erasing. If your Chromebook has an SD card slot, you can use an SD card instead.

### + IMPORTANT:

Recovery permanently erases everything on your Chromebook's hard drive, including your downloaded files. If possible, [back up your files](#) before you recover your Chromebook.

# What you need to do

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## Step 1: Try less invasive steps



If you can sign in to your Chromebook, try these steps first:

1. Turn your Chromebook off, then back on again.
2. If your Chromebook still has an error, [reset to factory settings](#).

If neither of those steps fix the error, continue to Step 2.



## Step 2: Download a new copy of the OS

On the working computer (not the Chromebook with the error):

1. If you're using a Mac or Windows computer:
  - a. If you haven't yet, [install Chrome](#).
  - b. Open **Chrome** .
  - c. Install the [recovery extension](#).
2. To open the recovery extension:
  - a. At the top right of your browser window, click **Extensions** .
  - b. To launch the extension popup, click on the "**Chromebook Recovery Utility**" extension. If the extension popup doesn't automatically appear on your screen, [make sure it's turned on](#).
3. Click **Get started**.
4. Click **Select** a model from a list, or type in the model number of the Chromebook you want to recover. To find this number, look at the bottom of the error message on your Chromebook screen.
5. Click **Continue**.
6. Insert your USB flash drive or SD card into the computer.
7. In the dropdown menu, choose the USB flash drive or SD card you inserted.
8. Click **Continue**.
9. Click **Create now**.
10. When you see a message saying that your recovery media is ready, remove the USB flash drive or SD card from the computer.




## Step 3: Enter recovery mode

On the Chromebook with the error:

1. If you have anything connected to this Chromebook (such as a mouse or external hard drive), remove it.
2. Enter recovery mode:
  - Chromebook: Press and hold **Esc + Refresh** , then press **Power** . Let go of **Power**. When a message shows on the screen, let go of the other keys.
  - Chromebox: First, turn it off. Using a paper clip or similar object, press and hold the [recovery button](#). Press the **Power** button to turn the Chromebox back on. When you see a message on screen, release the recovery button.
  - Chromebit: First, unplug it from power. Using a paper clip or similar object, press and hold the [recovery button](#). Plug the Chromebit back in to power. When you see a message on screen, release the recovery button.

- Chromebook tablet: Press and hold the **Volume Up**, **Volume Down**, and **Power** buttons for at least 10 seconds, then release them.
3. You'll see one of these messages:
    - "Chrome OS is missing or damaged. Please insert a recovery USB stick or SD card."
    - "Please insert a recovery USB stick or SD card."
  4. Insert the USB flash drive or SD card that you used to create recovery media.
  5. Follow the on-screen instructions.




#### **Make sure the recovery extension is turned on**

1. On your computer, open **Chrome** .
2. At the top right, click **Extensions**  > **Manage extensions**.
3. Next to "Chromebook Recovery," toggle the switch to the right.
4. Optional: You can also click **Details** and toggle the switch to the right.
5. Once the extension is on, in the extension panel in your browser, click on the extension to open the popup.
6. Optional: If you use the extension frequently, you can pin it .

#### **Optional: Reuse your USB flash drive or SD card**

After recovering your Chromebook, you'll need to erase the recovery media if you want to reuse your USB flash drive or SD card to store other files.

To erase the recovery media:

1. On your computer, open **Chrome** .
2. At the top right, click **Extensions** .
3. To launch the extension popup, click on the "**Chromebook Recovery Utility**" extension.
4. In the extension popup, click **Settings** .
5. Click **Erase recovery media**.
6. From the dropdown menu, select the USB drive or SD card you'd like to erase.
7. Click **Continue**.
8. Make sure the storage device you used for recovery is listed.
9. Click **Erase now**.
10. The tool will erase everything on your USB drive or SD card. When you see the message "Your recovery media has been erased," click **Done**.
11. Remove the USB flash drive or SD card from the computer.
12. Format the storage device using a tool provided by your operating system.

## Fix problems with recovery

*"An unexpected error has occurred".*

1. [Erase the storage device](#), then [try recovery again](#).
2. Try using a different USB flash drive or SD card to recover. Some USB flash drives and SD cards don't work well with recovery.

If you're still having problems, contact your Chromebook manufacturer for help. [Learn how to contact your manufacturer](#).

*"Please remove all connected devices and start recovery".*

First, remove anything that's connected to your Chromebook, such as a mouse, SD card or external hard drive. Then follow the steps to [enter recovery mode](#).

*"The device you inserted does not contain Chrome OS".*

First, make sure that you inserted the USB drive or SD card that you used to create recovery media.

If you're using the correct storage device, but still see this error, the storage device might not be working properly.

1. [Erase the storage device](#), then [try recovery again](#).
2. Try using a different USB flash drive or SD card to recover. Some USB flash drives and SD cards don't work well with recovery.

If you're still having problems, contact your Chromebook manufacturer for help. [Learn how to contact your manufacturer](#).

*"The security module on this device is not working".*

First, ask our experts for help:

- "If you use your Chromebook at work or school, contact your administrator. Administrators: contact Google support.
- "Chat with experts on the [Chromebook help forum](#).

If you're still having problems, contact your manufacturer to repair your Chromebook. [Learn how to contact your manufacturer](#).

# FRU (Field Replaceable Unit) List

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Please contact your local service center to find out how to obtain the part or replace your device.

# Exploded Diagrams

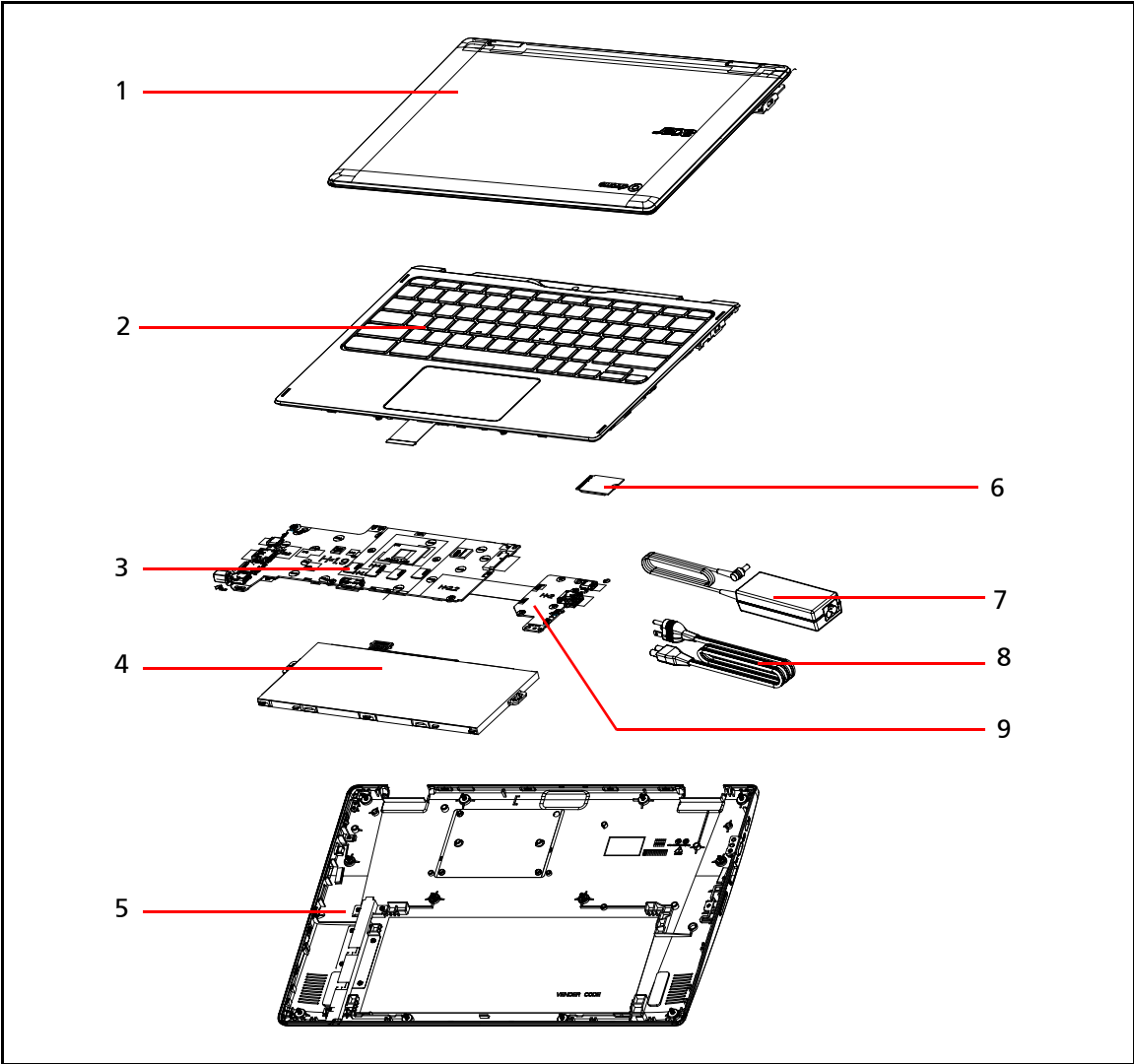


Figure 1-33. System Exploded Diagram

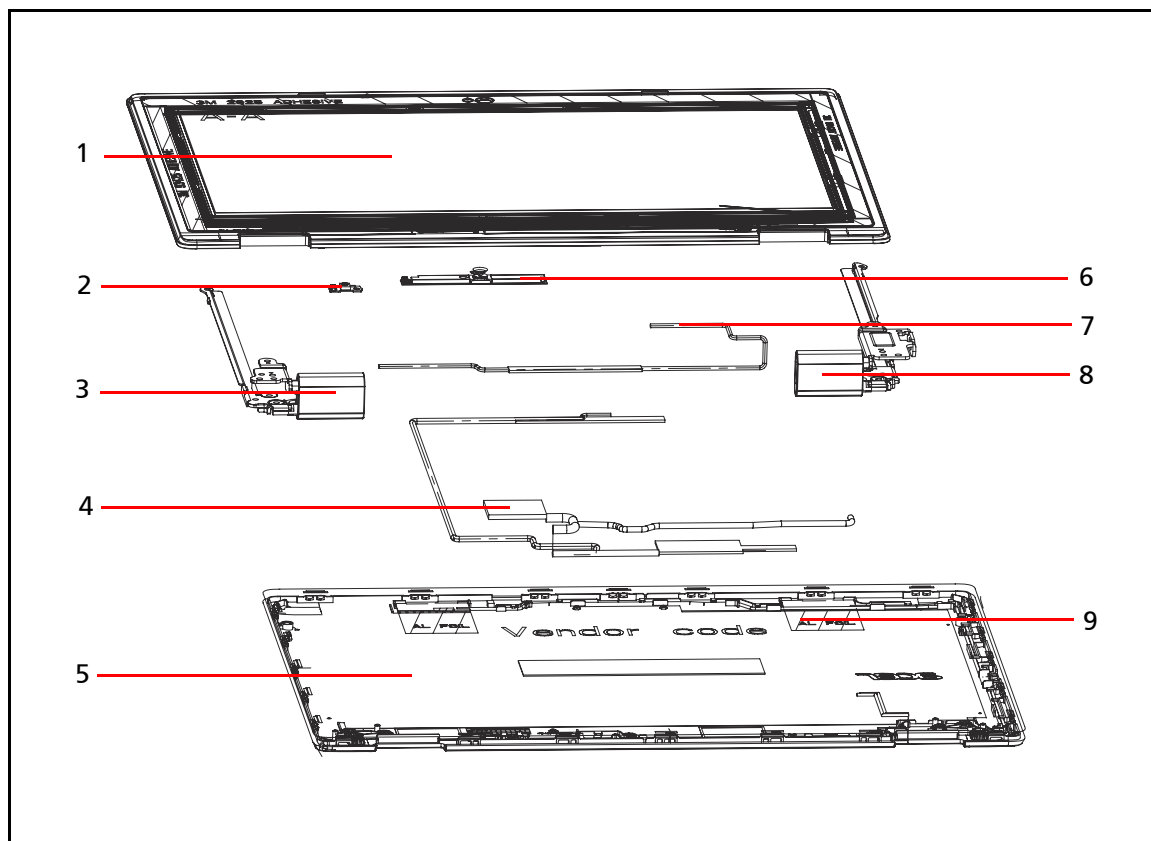
Table 1-1. System Exploded Diagram

No.	Description
1	LCD Module
2	Top Assembly
3	Mainboard
4	Battery Pack
5	Base Cover

**Table 1-1. System Exploded Diagram (Continued)**

No.	Description
6	WLAN Module
7	Adapter
8	Power Cable
9	USB Board






**Figure 1-34. LCD Assembly Exploded Diagram**

**Table 1-2. LCD Assembly Exploded Diagram**

No.	Description
1	LCD Panel with LCD Bezel
2	Microphone Board
3	LCD Hinge L
4	eDP Cable
5	LCD Cover
6	Camera Module
7	G-Sensor Cable
8	LCD Hinge R
9	WLAN Antenna (MAIN+AUX)

# Check for updates yourself

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1. Turn on your Chromebook.
2. Connect your Chromebook to Wi-Fi.
3. At the bottom right, select the time.
4. Select **Settings** .
5. At the bottom of the left panel, select **About Chrome OS**.
6. Under "Google Chrome OS", you'll find which version of the Chrome operating system your Chromebook uses.
7. Select **Check for updates**.
8. If your Chromebook finds a software update, it will start to download automatically.

# Factory reset your Chromebook

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1. Sign out of your Chromebook.
2. Press and hold **Ctrl + Alt + Shift + r**.
3. Select **Restart**.
4. In the box that appears, select **Powerwash > Continue**.
5. Follow the steps that appear and sign in with your Google Account.

⇒ **NOTE:**

The account you sign in with after you reset your Chromebook will be the owner account.