



# Lenovo X1 Carbon Laptop Keyboard Replacement

This guide outlines how to replace a keyboard...

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## INTRODUCTION

This guide outlines how to replace a keyboard on a 2nd generation Lenovo X1 Carbon laptop. These laptops are quite compact, which results in a keyboard replacement being a very involved process. This process includes removing almost every other part of the laptop first.



### TOOLS:

- [Spudger](#) (1)
- [Arctic Silver Thermal Paste](#) (1)
- [Phillips #000 Screwdriver](#) (1)
- [Phillips #0 Screwdriver](#) (1)




### PARTS:

- [Lenovo ThinkPad X1 Carbon Gen 2 Upper Case](#) (1)

## Step 1 — Keyboard



 These screws can't be fully removed; they will stay attached to the back cover.

- Loosen the seven screws from the back cover.

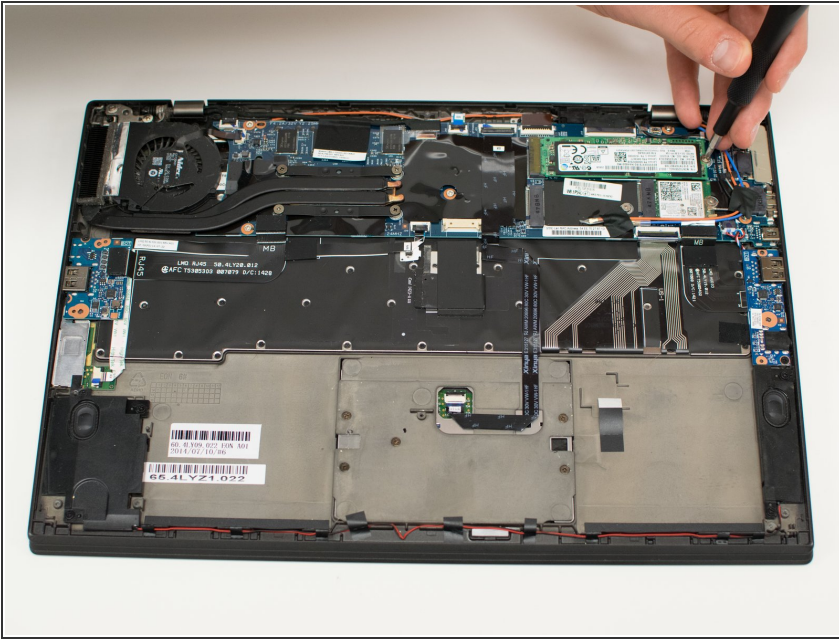
## Step 2



- Unplug the bundled cable connector attached to the battery by pulling evenly from each side of the plug.
- Remove the four 4mm screws from the corners of the battery.
- Remove the 2.5mm screw from the center of the battery.
- Remove the battery by lifting from the bottom edge and pulling towards the front edge.

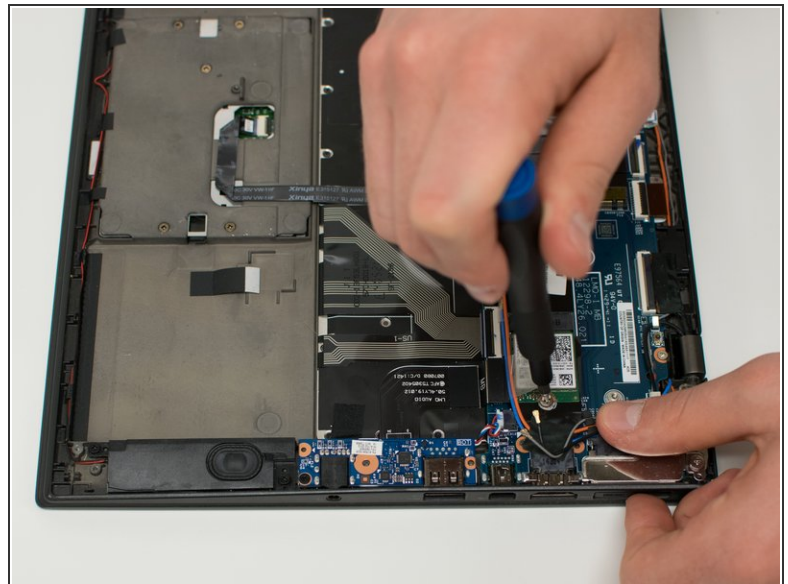
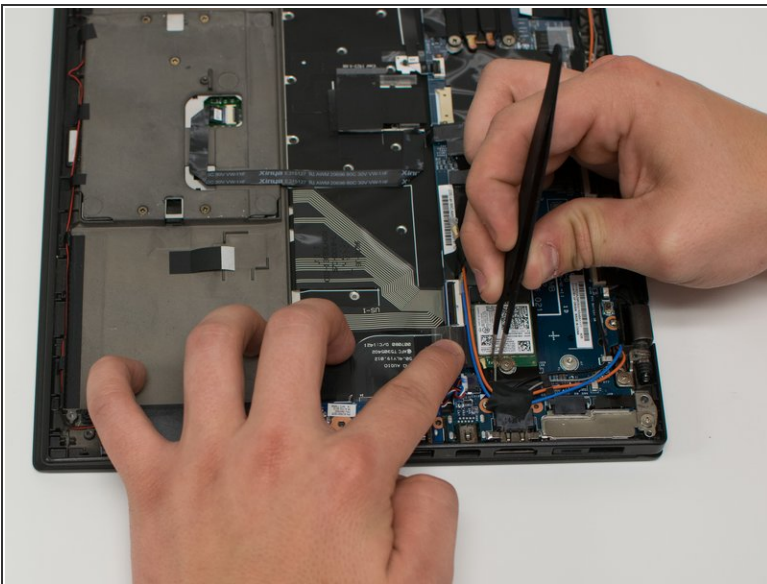


## Step 3



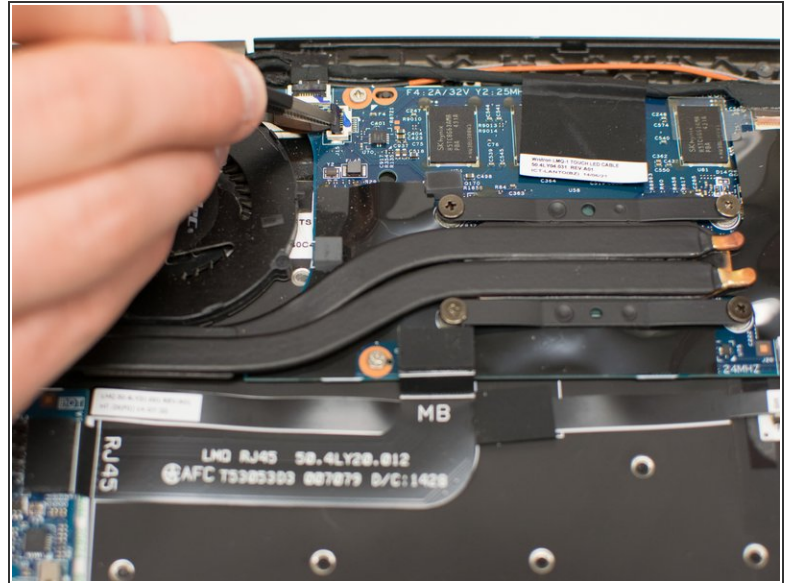
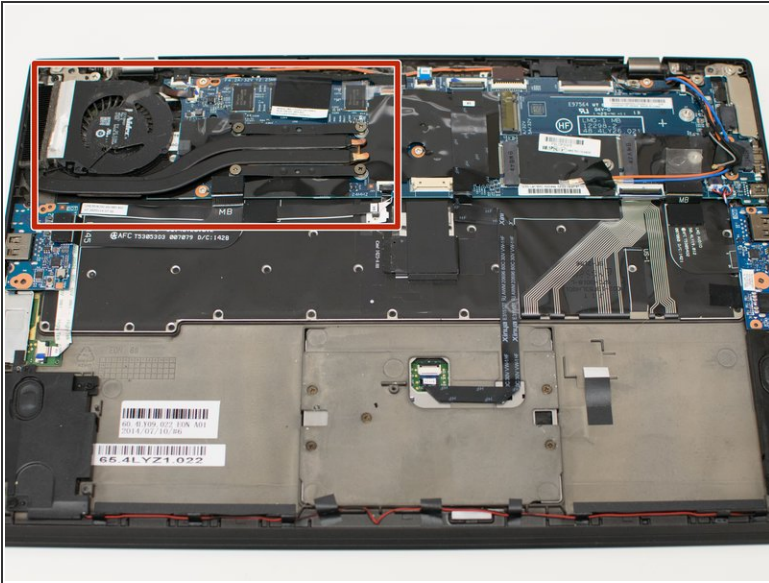
- Remove the 3mm screw from the solid state drive.
- Pull the solid state drive straight out from its connector to remove it.

## Step 4



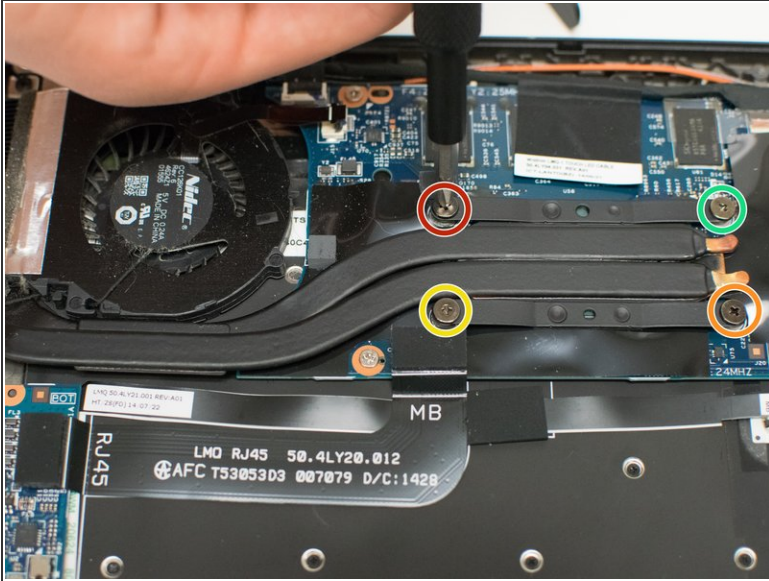
- Unplug the Local Area Network Card by prying the coaxial connectors straight up from the board.
- Unscrew the 3mm screw from the LAN card.
- Pull the LAN card straight out from its connector to remove it.

## Step 5



- Unplug the CPU heatsink fan by flipping up the small locking flap on the ZIF connector and gently removing the cable.

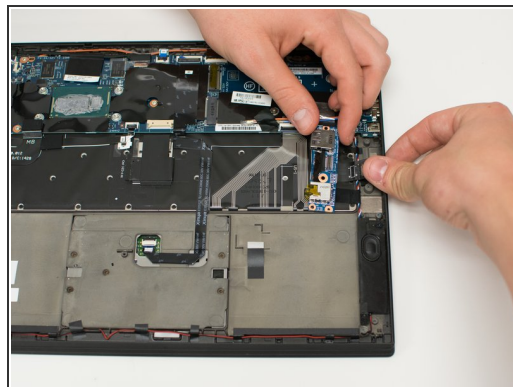
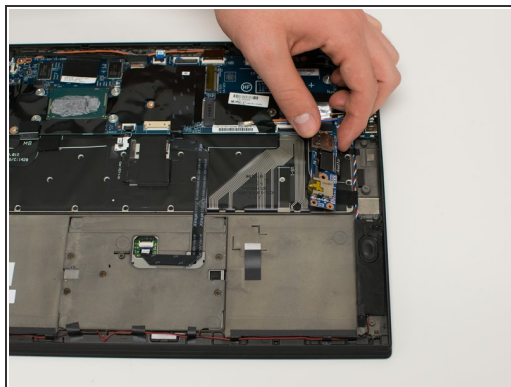
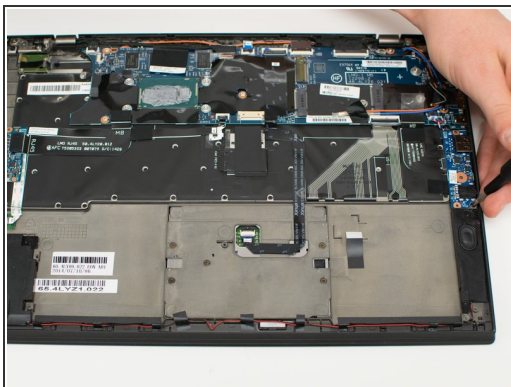
## Step 6



- Loosen the upper-left heat pipe screw.
- Loosen the lower-right heat pipe screw.
- Loosen the lower-left heat pipe screw.
- Loosen the upper-right heat pipe screw.
- Lift the CPU cooler straight up to remove it.
- ☑ Thermal paste will need to be applied during reassembly.
  - Apply a small amount of thermal paste across the processor case.

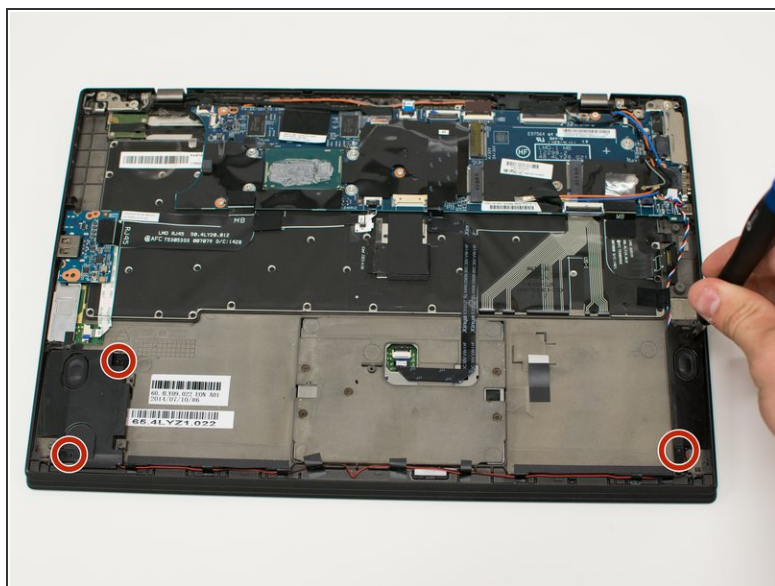
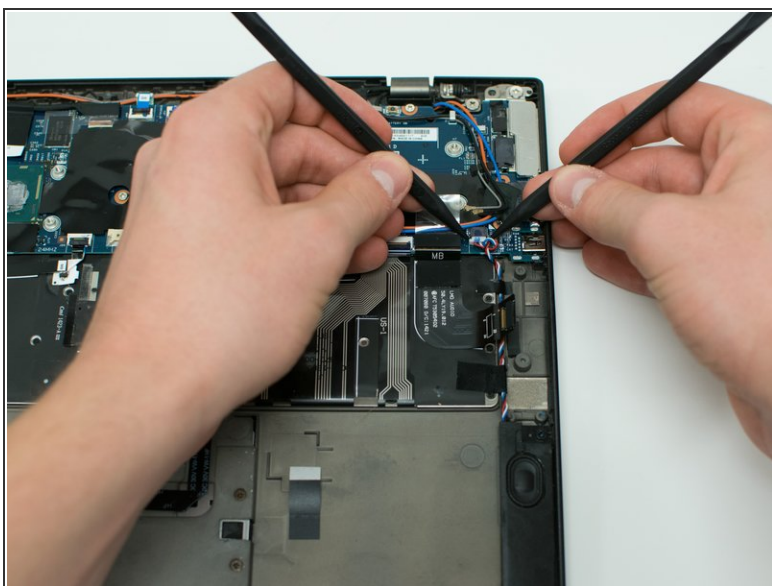


## Step 7



- Unscrew the 4mm screw from the audio card.
- Pull the audio card straight back from the side of the laptop and flip it over, exposing the flat topped connector.
- Disconnect the flat topped connector by pulling straight up from its socket.
- Remove the audio card.

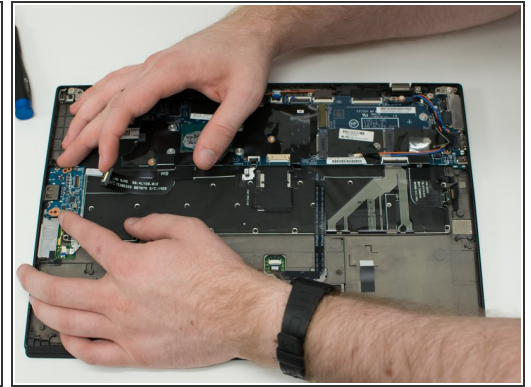
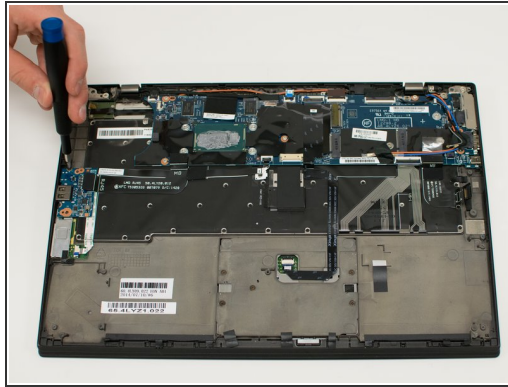
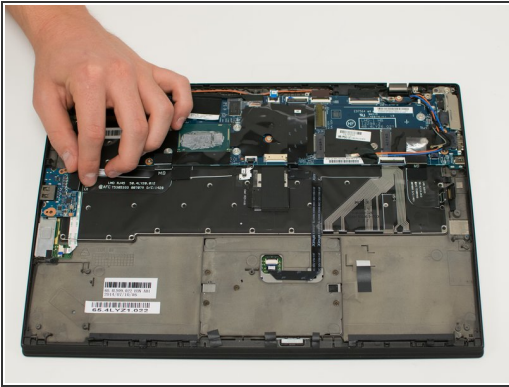
## Step 8



- Unplug the laptop speakers by pulling evenly on each side of the bundled cable connector.
- Remove the four 4mm screws from the speakers.
- Remove the speaker wires from under the tape loops along the front of the laptop.
- Lift the speakers and speaker wires straight up to remove them.

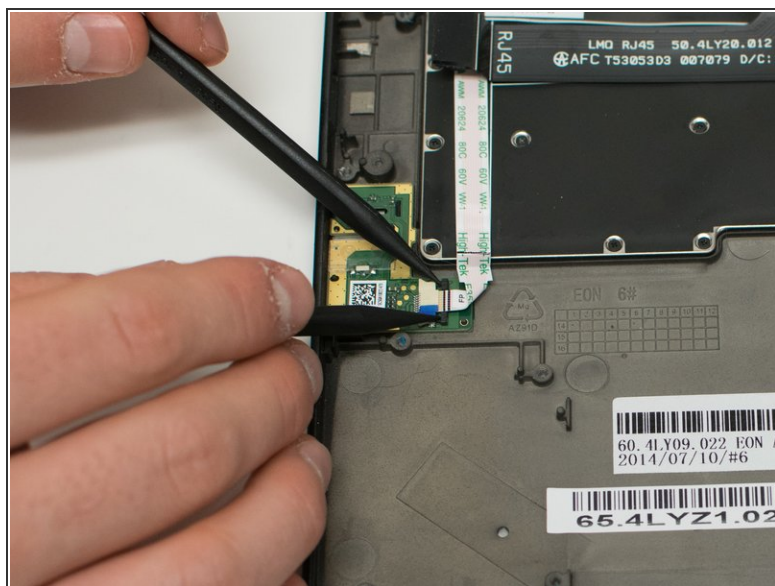
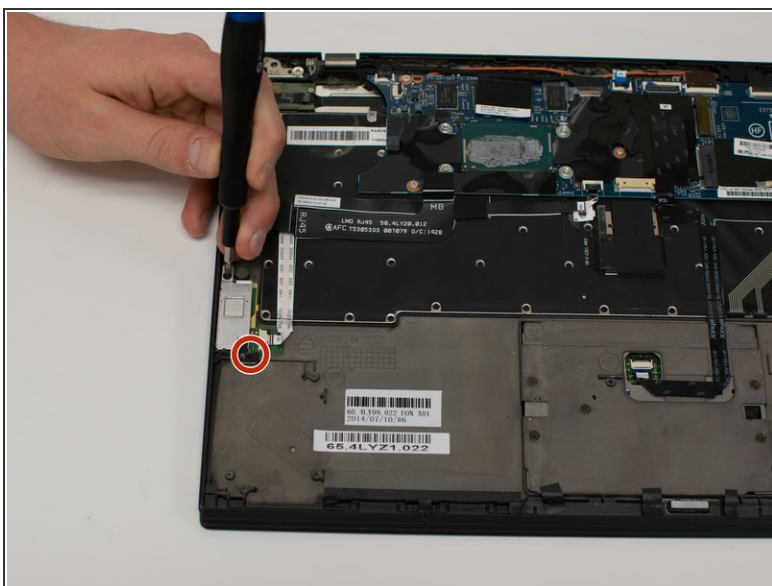


## Step 9



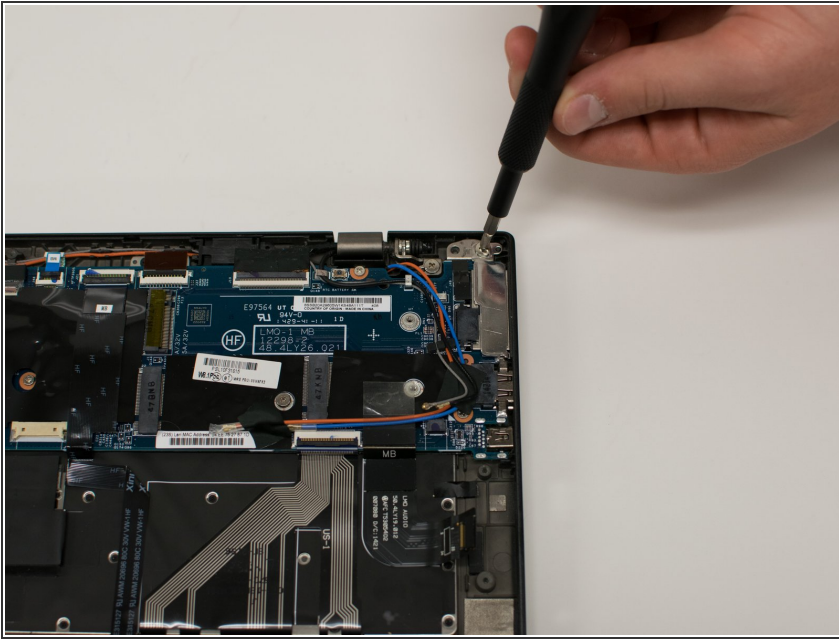
- Disconnect the RJ45 ribbon cable by pulling straight up.
- Remove the 4mm screw from the RJ45 card.
- Move the RJ45 card slightly to the right and pull up to remove it.

## Step 10



- Remove the two 2.5mm screws from the guard.
- Pull the guard straight up to remove it.
- Slide the bottom plastic part of the ribbon cable socket forward.
- Disconnect the ribbon cable.
- Lift the fingerprint reader assembly straight up to remove it.

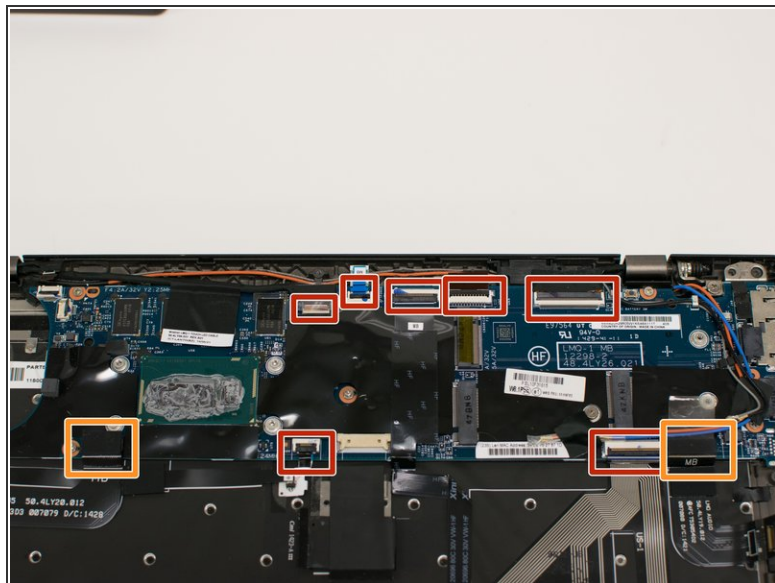
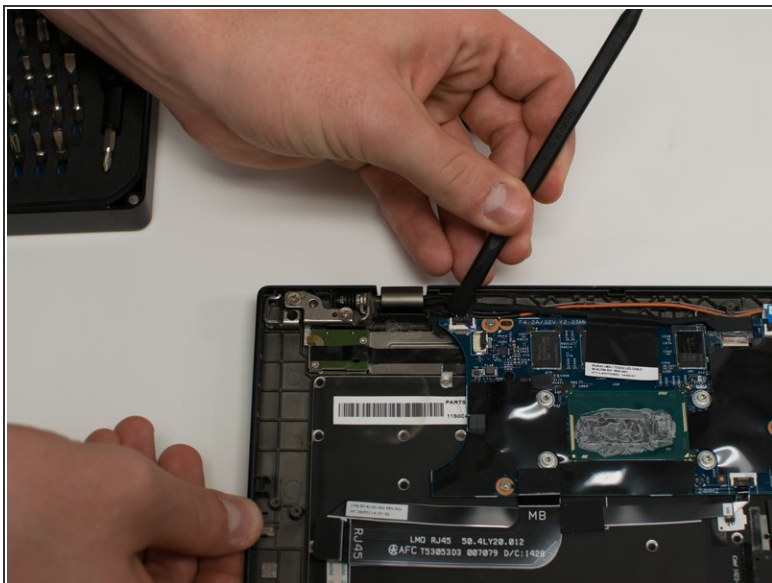
## Step 11



**⚠ Do not subject the system board to excessive shock or electrostatic discharge of any sort.**

- Remove the 4mm screw from the guard in the upper-right corner of the laptop.

## Step 12

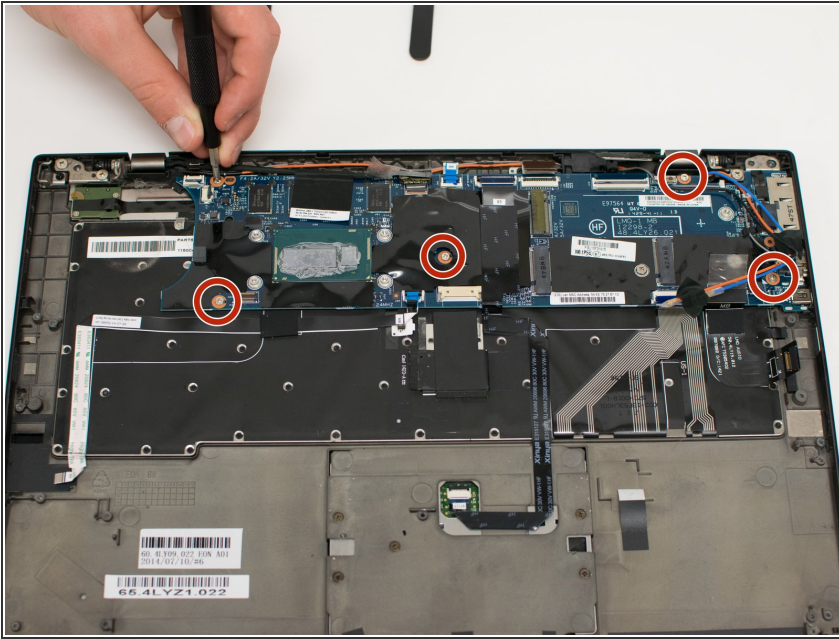


**⚠ Do not subject the system board to excessive shock or electrostatic discharge of any sort.**

- Lift the ribbon cable locking mechanism.
- Disconnect the ribbon cables by pulling straight out from the socket.
- Disconnect the ribbon cables by pulling straight up.



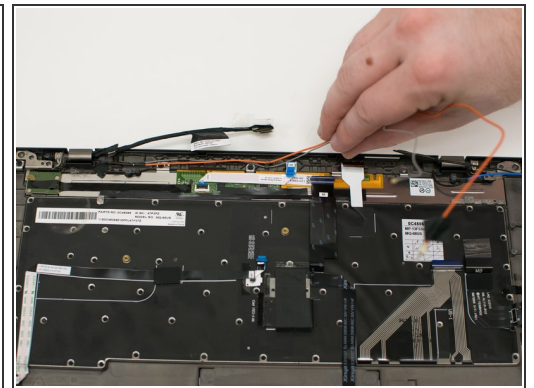
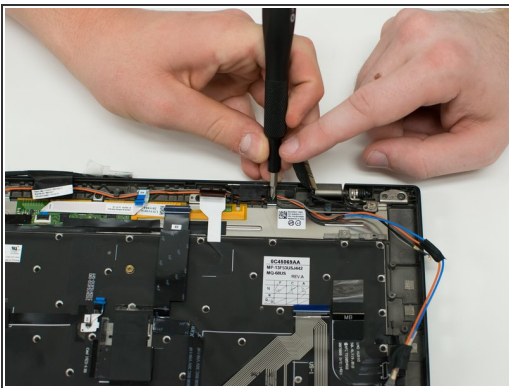
## Step 13



**⚠ Do not subject the system board to excessive shock or electrostatic discharge of any sort.**

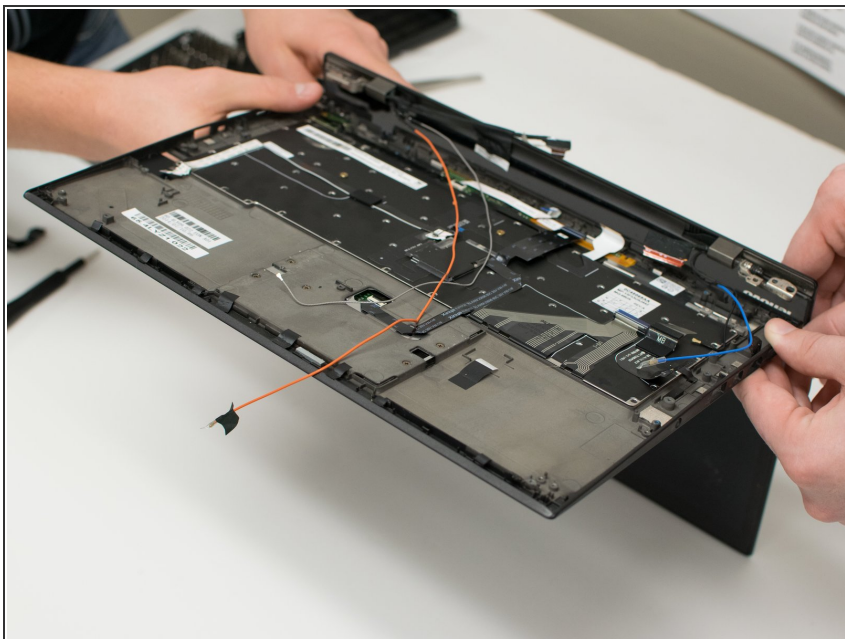
- Remove the five 3mm screws from the system board.
- Move the system board slightly to the left and pull up to remove it.

## Step 14



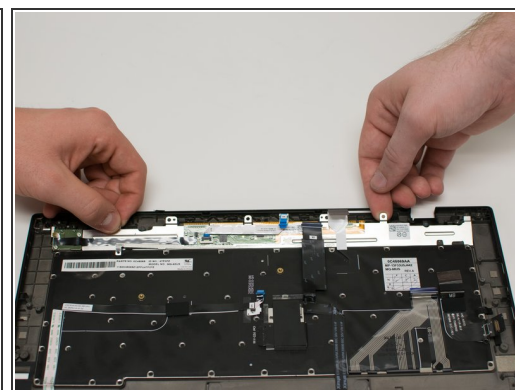
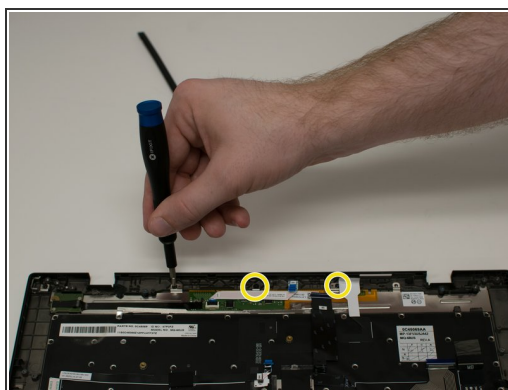
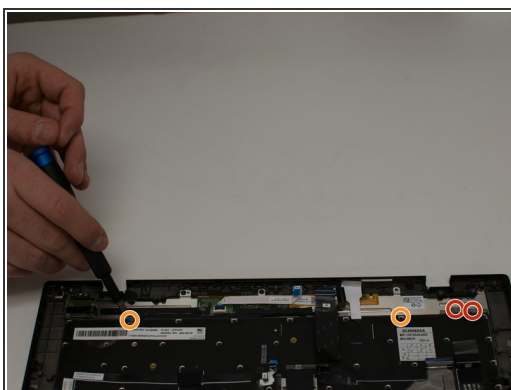
- Remove the 4mm screw from the guard.
- Pull the guard straight up to remove it.
- Remove the three 4mm screws from the LCD hinges.
- Pull the antenna wires away from the hinges.

## Step 15



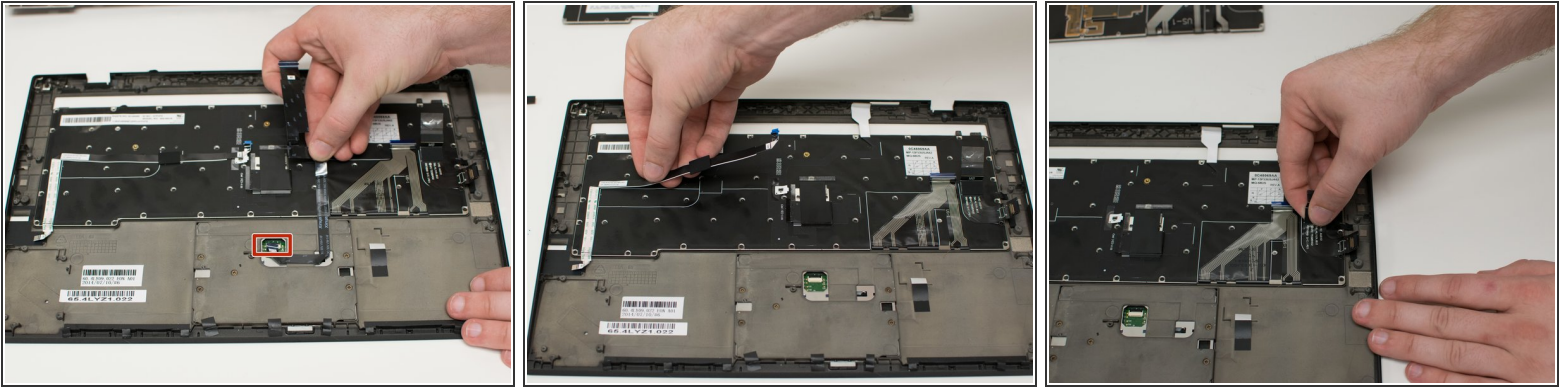
- Lift the laptop and open the screen 90 degrees.
- Lift the LCD unit straight up to remove it.

## Step 16



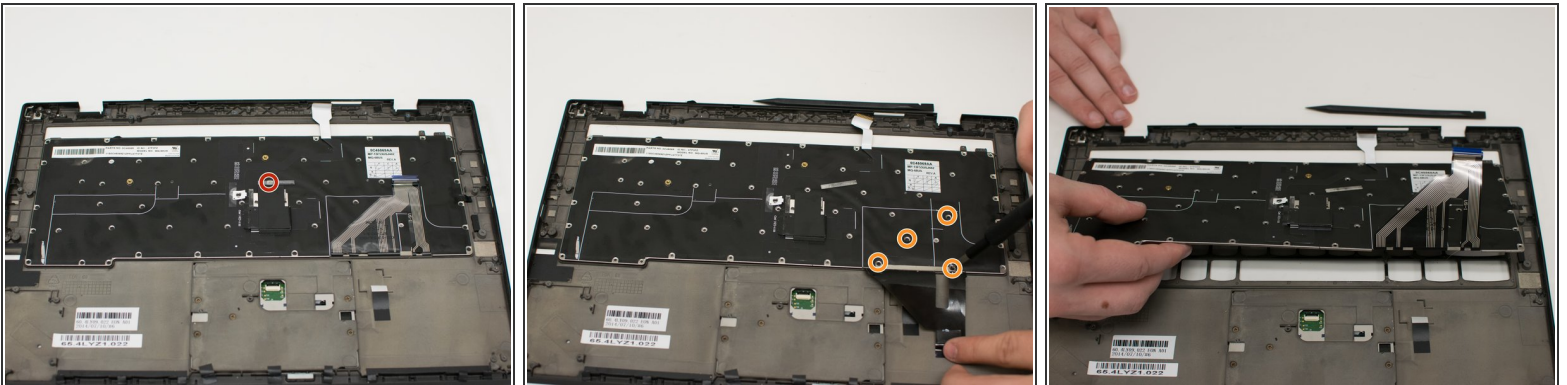
- Remove the two 1.7mm screws from the bracket.
- Pull the guard straight up to remove it.
- Remove the two 1.7mm screws from the adaptive keys panel.
- Remove the three 2.5mm screws from the adaptive keys panel.
- Lift the adaptive keys panel from the rear of the laptop and pull to remove it.

## Step 17



- Lift the ribbon cable locking mechanism.
- Disconnect the ribbon cable.
- Remove the remaining ribbon cables from the back of the keyboard.

## Step 18



- Remove the 45 Xmm screws from the back of the keyboard that are visible.
- Remove the tape covering one of the Xmm screws and remove that screw.
- Peel back the large ribbon cable and remove the four Xmm screws underneath it.
- Lift the keyboard straight up to remove it.

To reassemble your device, follow these instructions in reverse order.