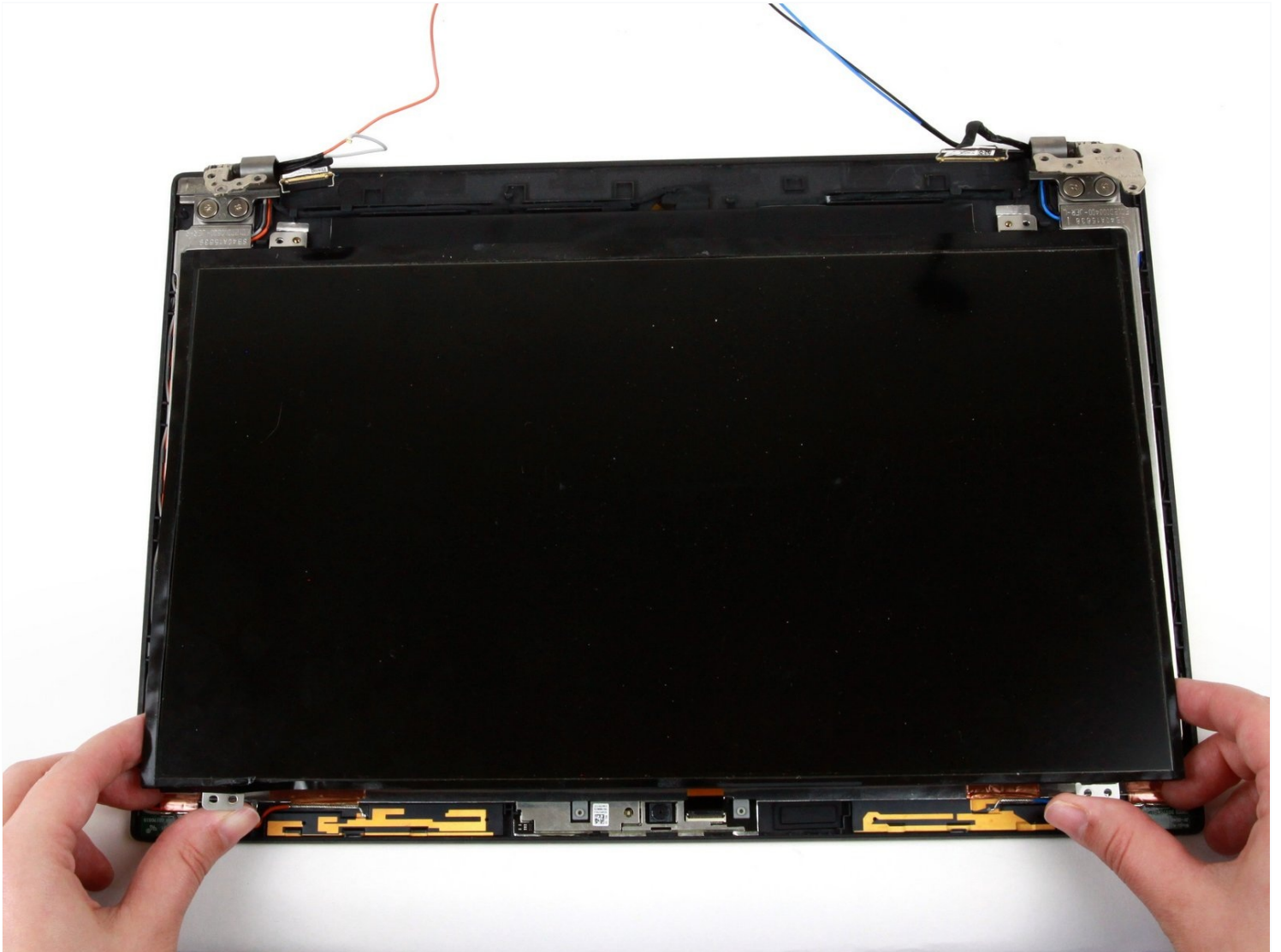




Lenovo ThinkPad T470 Display Panel Replacement

Use this guide to replace the display panel on...

Written By: Kristen Gismondi



INTRODUCTION

Use this guide to replace the display panel on your Lenovo ThinkPad T470.

The display panel, also known as a screen, is the component that outputs visual information from a computer.

Some signs your display panel may be faulty include a blank or black screen, [flickering](#), no backlight, or horizontal or vertical lines. A display panel replacement may be needed if it is cracked or physically damaged. Before attempting a display panel replacement, you may be able to resolve the issue using Lenovo's [troubleshooting guide](#).

Before replacing your display panel, make sure to [disable the internal battery](#), power down your device, and disconnect from any external power sources.

TOOLS:

[ESD Safe Blunt Nose Tweezers](#) (1)


[Spudger](#) (1)

[iFixit Opening Tool](#) (1)

[Phillips #1 Screwdriver](#) (1)

Step 1 — External Battery



 Before you begin this guide, make sure to [disable the internal battery](#), power down your device, and disconnect from any external power sources.

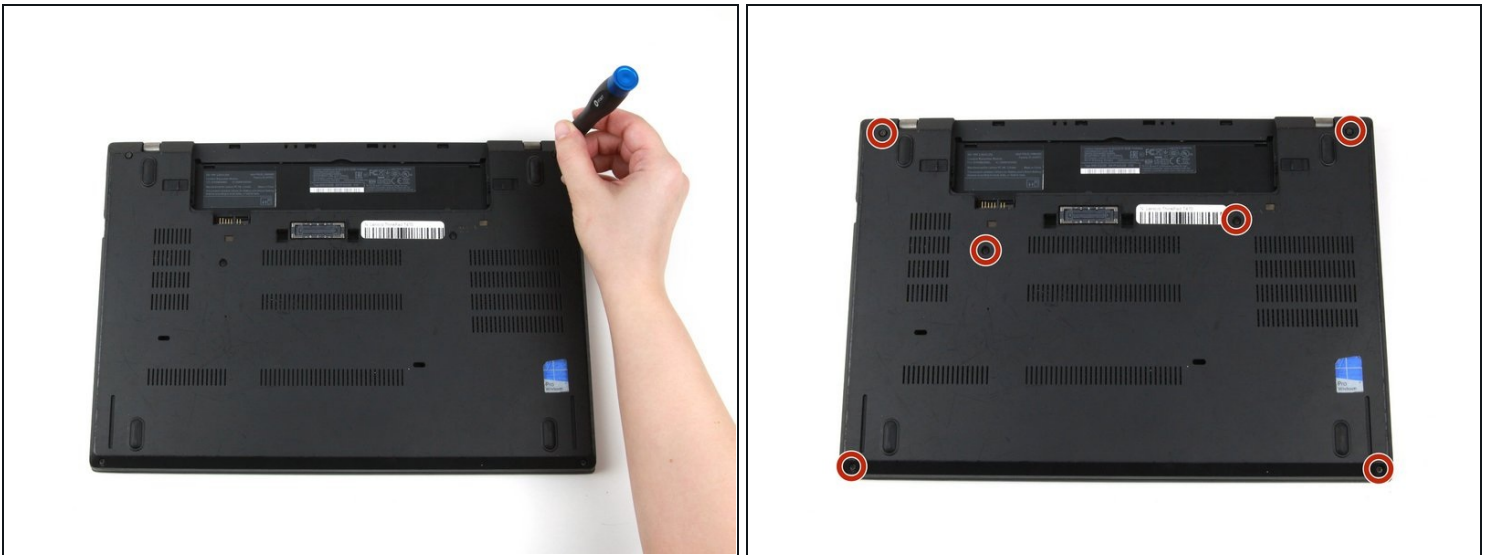
- Place the laptop so that the bottom is facing upwards.
- Slide the latch on the left side of the battery to the left until it clicks in place.

Step 2



- Slide the latch on the right side of the battery to the right and hold it in place with your thumb.
- Use your other hand to slide the battery towards the back of the laptop.
- Lift the battery up and away from the laptop.

Step 3 — Internal Components



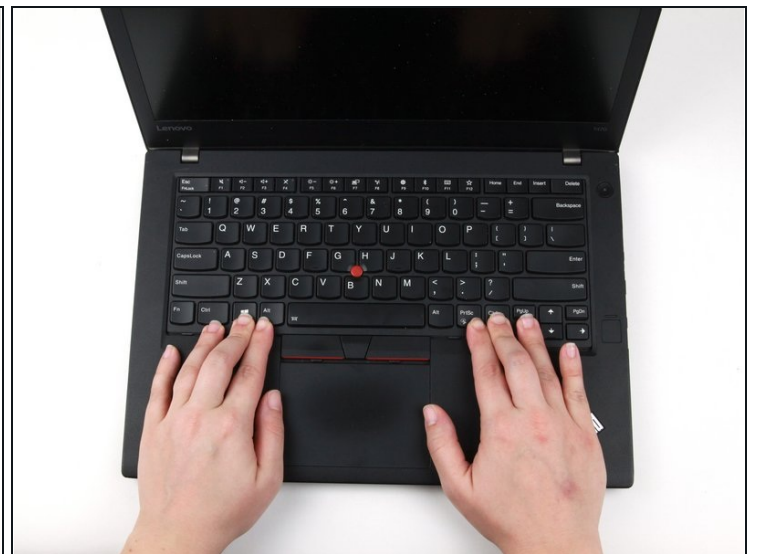
- Use a Phillips #1 screwdriver to loosen the six captive screws on the bottom cover of the laptop.

Step 4



- Place the laptop so that the top is facing upwards.
- Open the lid of the laptop.

Step 5



- Place your fingers on the bottom edge of the keyboard.
- Use a small amount of pressure to push the keyboard towards the screen.

Step 6



- Grab the bottom edge of the keyboard with your hands, and flip the keyboard upside-down, so it rests on the bottom of the laptop.

⚠ Potential for device damage: The keyboard is still attached to the rest of the laptop, so be gentle when flipping it over.

Step 7



- Use the flat end of a spudger to flip up the locking flaps securing each of the two ribbon cables.

Step 8



- Use your hands to lift the keyboard up and away from the laptop.

Step 9



- Close the laptop's lid and flip the laptop over so that the bottom is facing upwards.

Step 10



- Use your hands to pull up on the back cover and release the plastic clips starting on the bottom side of the battery compartment.

⚠ Potential for device damage: Be sure to detach the plastic clips in this area first. You risk cracking the bottom cover if you attempt to detach it from around the edges of the laptop first.

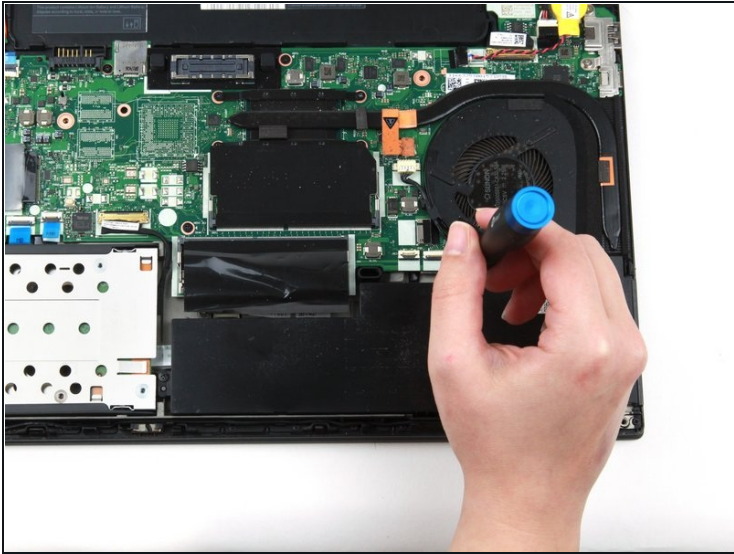
- Use your hands to pull up on the right side of the bottom cover to release the plastic clips.
- Use your hands to pull up on the left side of the bottom cover to release the plastic clips.

Step 11



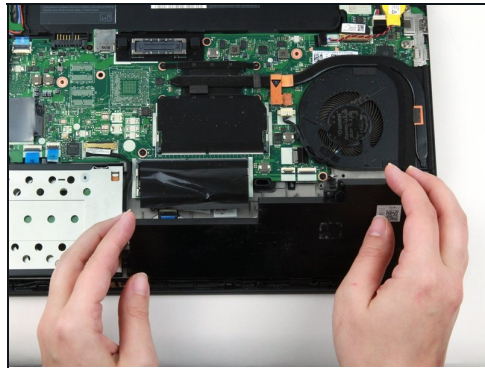
- Remove the bottom cover from the laptop.

Step 12



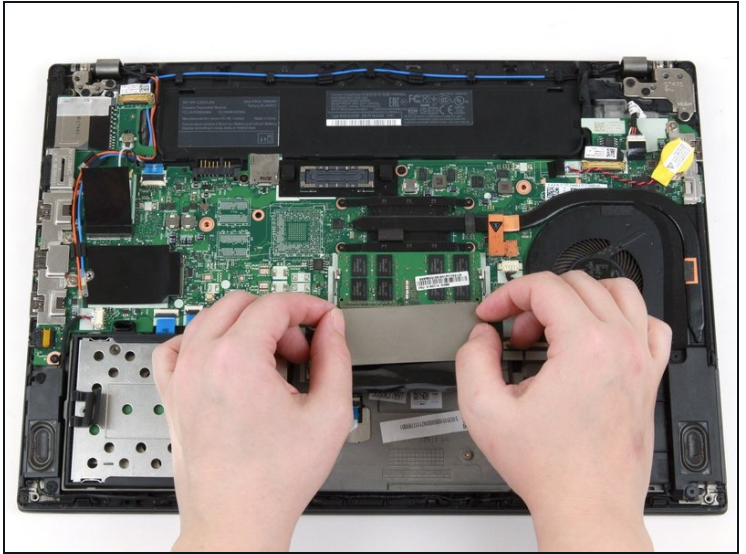
- Use a Phillips #1 screwdriver to remove two 5 mm screws from the internal battery.

Step 13



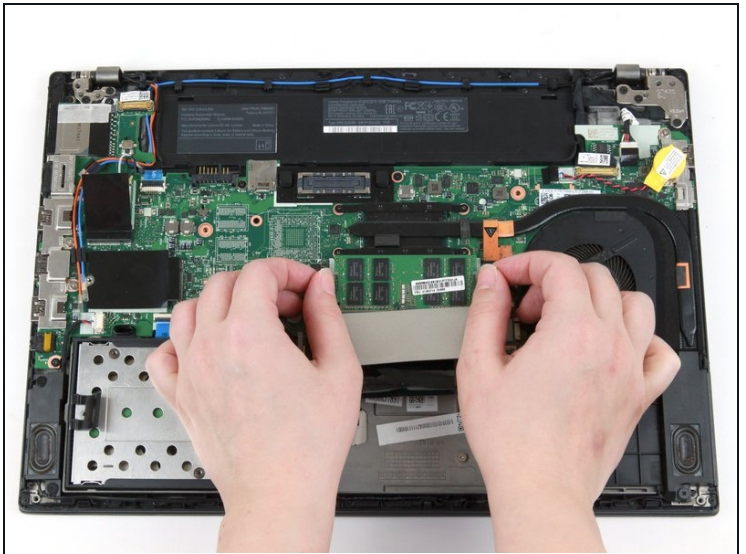
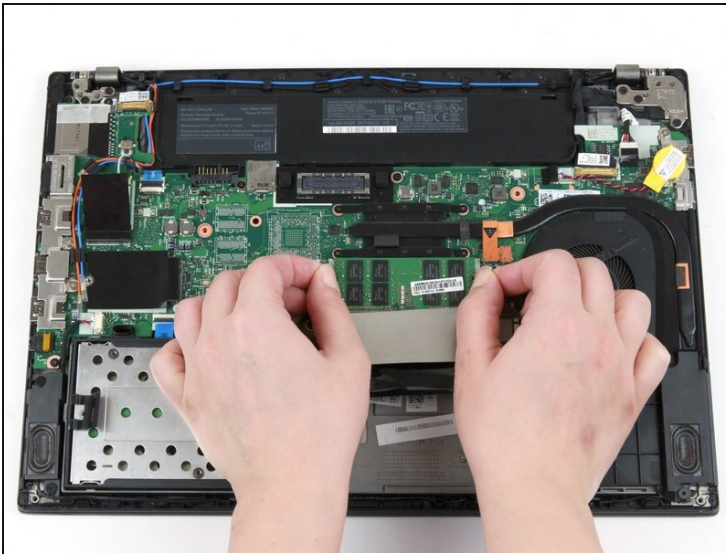
- Use your hands to lift the battery up and away from the laptop.

Step 14



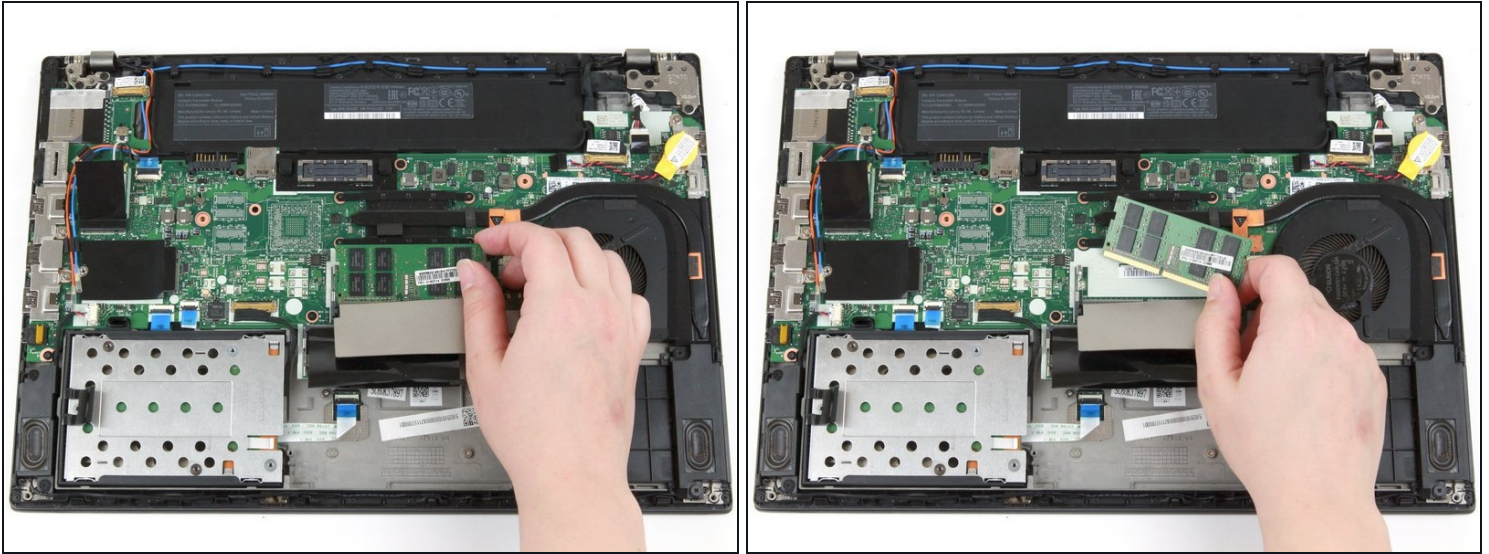
- Use your fingers to flip the black flap covering the top stick of RAM down.

Step 15



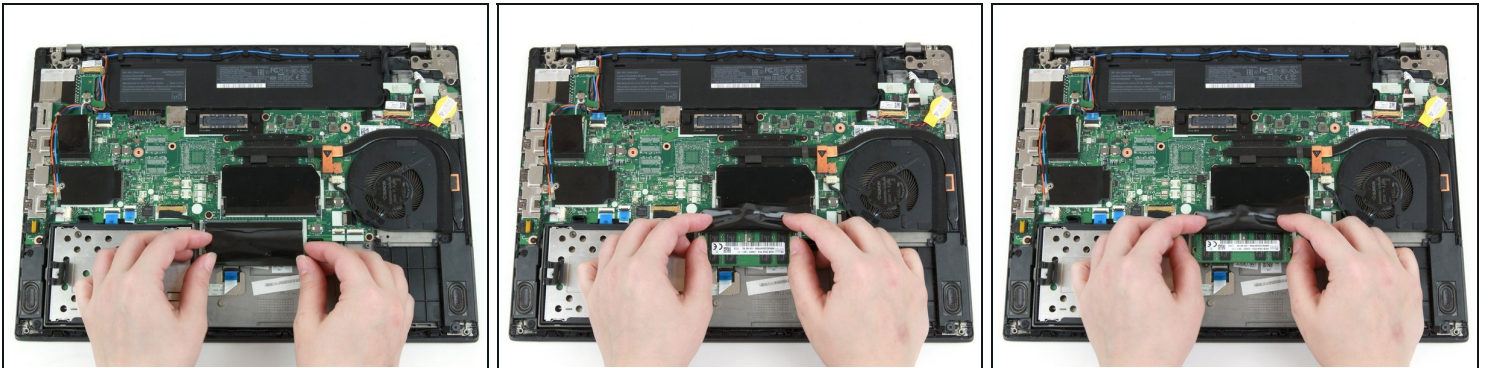
- Use your thumbs to push the metal clips on either end of the RAM outwards.
- ① The RAM will pop up by a few millimeters.

Step 16



- Use your fingers to lift the RAM out of its socket and away from the laptop to remove it.

Step 17



- Use your fingers to flip the black flap covering the bottom stick of RAM up.
 - Use your thumbs to push the metal clips on either end of the RAM outwards.
- ❶ The RAM will pop up by a few millimeters.

Step 18



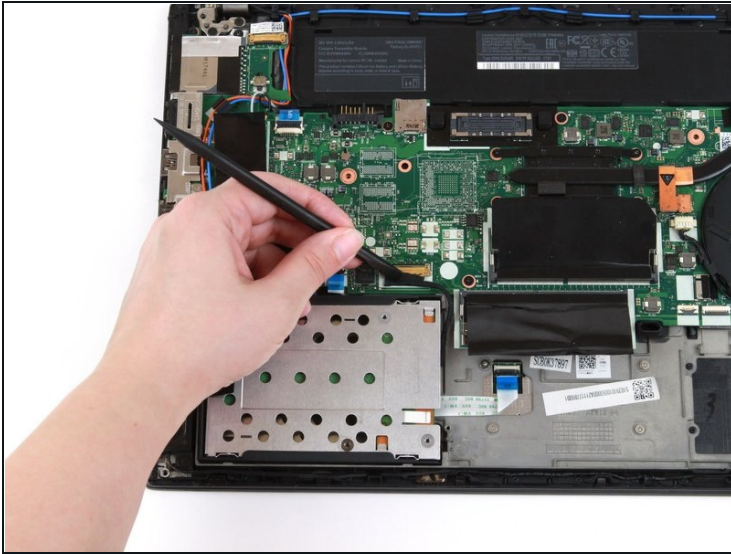
- Use your fingers to lift the RAM out of its socket and away from the laptop to remove it.

Step 19



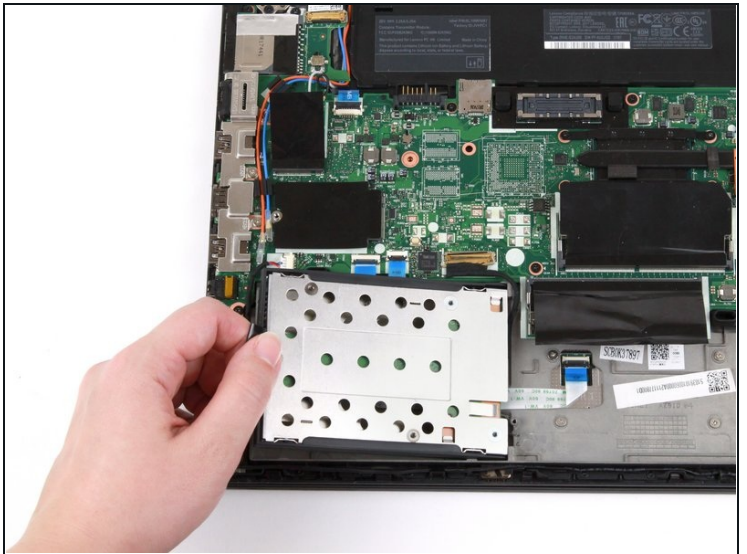
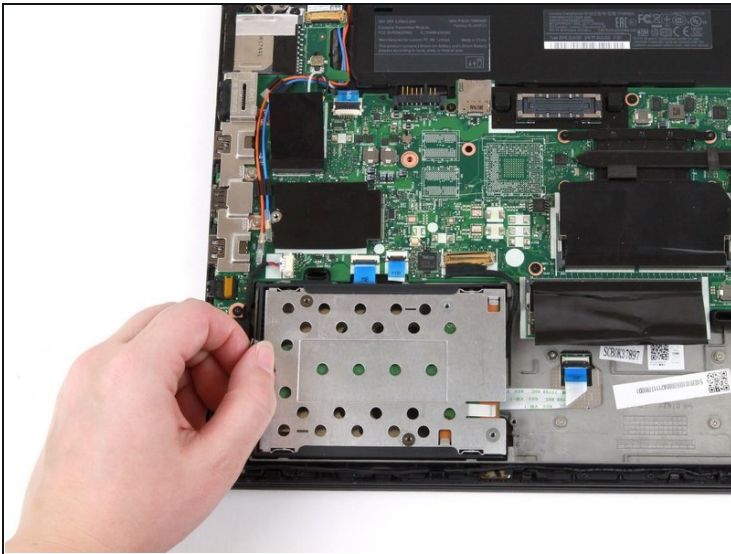
- Use the flat end of a spudger to flip up the metal clip securing the SSD connector to the motherboard.

Step 20



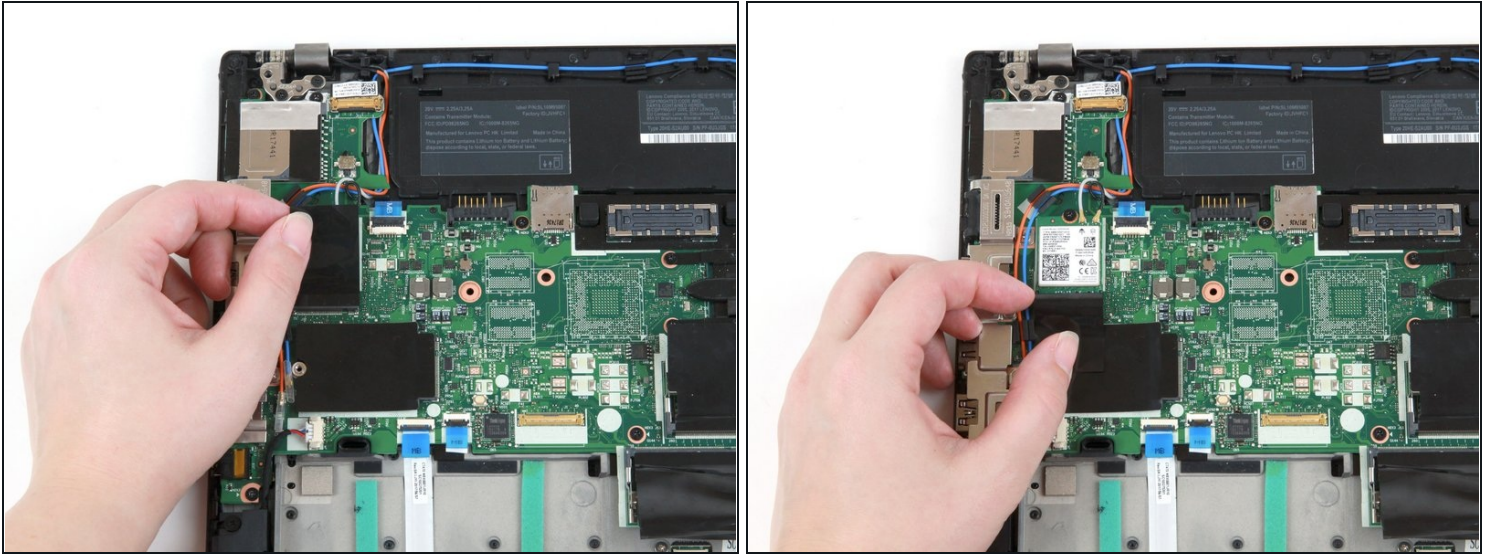
- Use the flat end of a spudger to separate the connector from its socket.

Step 21



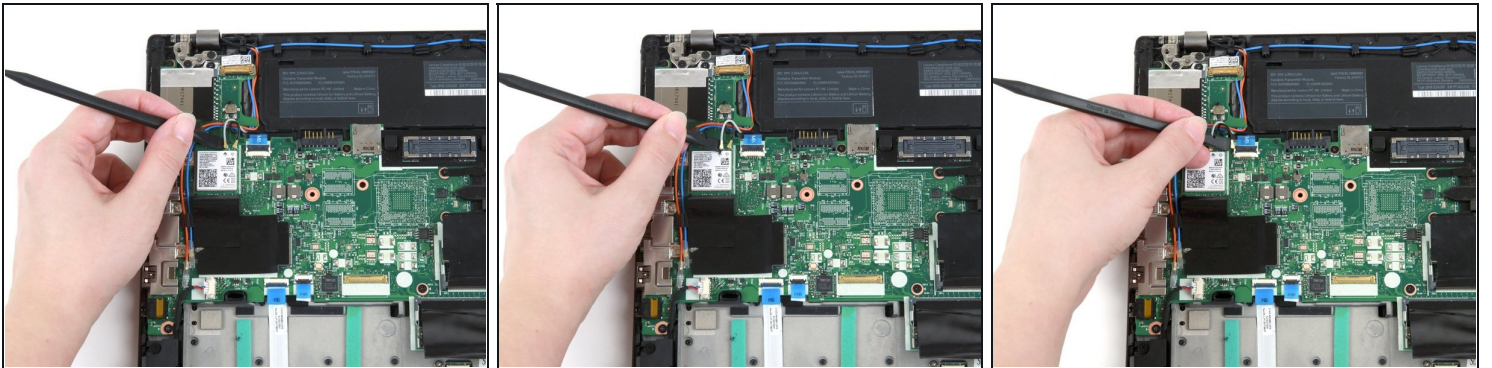
- Grab the tab on the left side of the hard drive, and pull up to remove it from the laptop.

Step 22



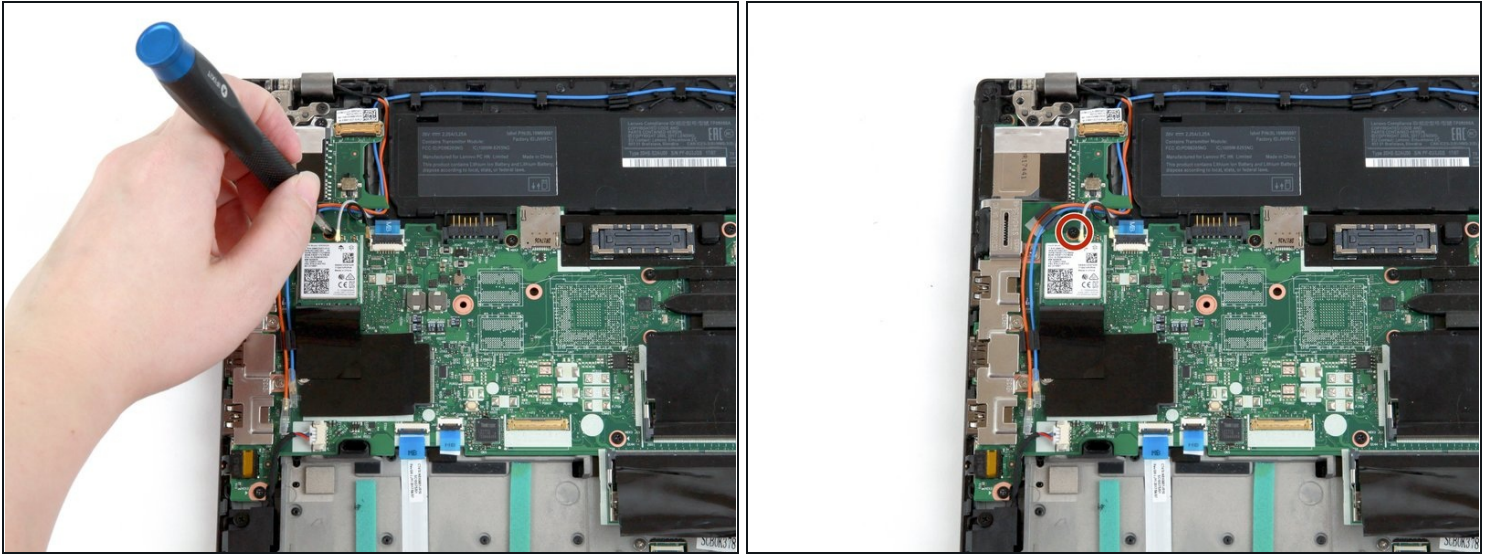
- Use a finger to press the black flap covering the Wi-Fi card down.

Step 23



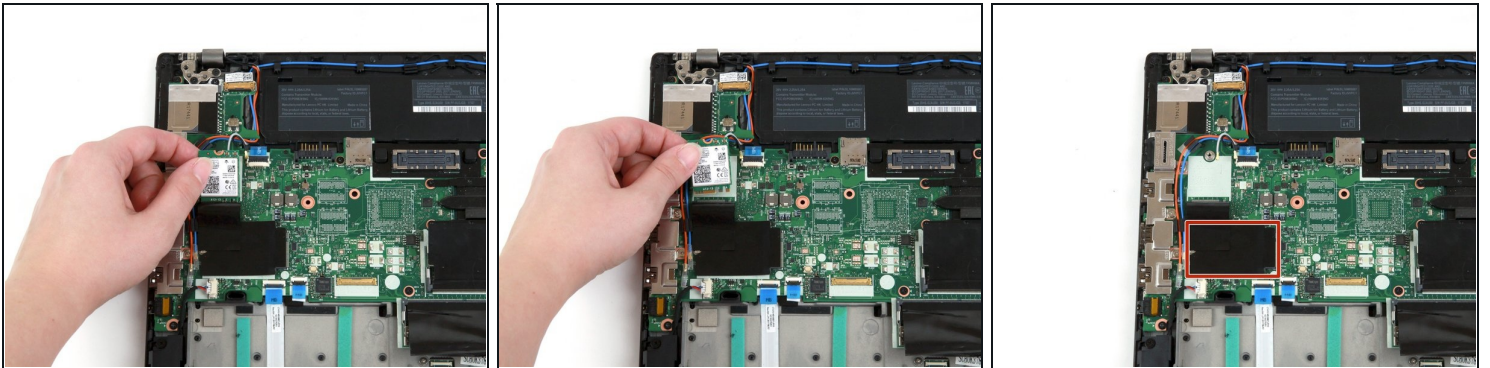
- Use the flat end of a spudger to disconnect the two coaxial wires from the Wi-Fi card.
- ☒ When reassembling, reattach the gray wire on the left and the black wire on the right.

Step 24



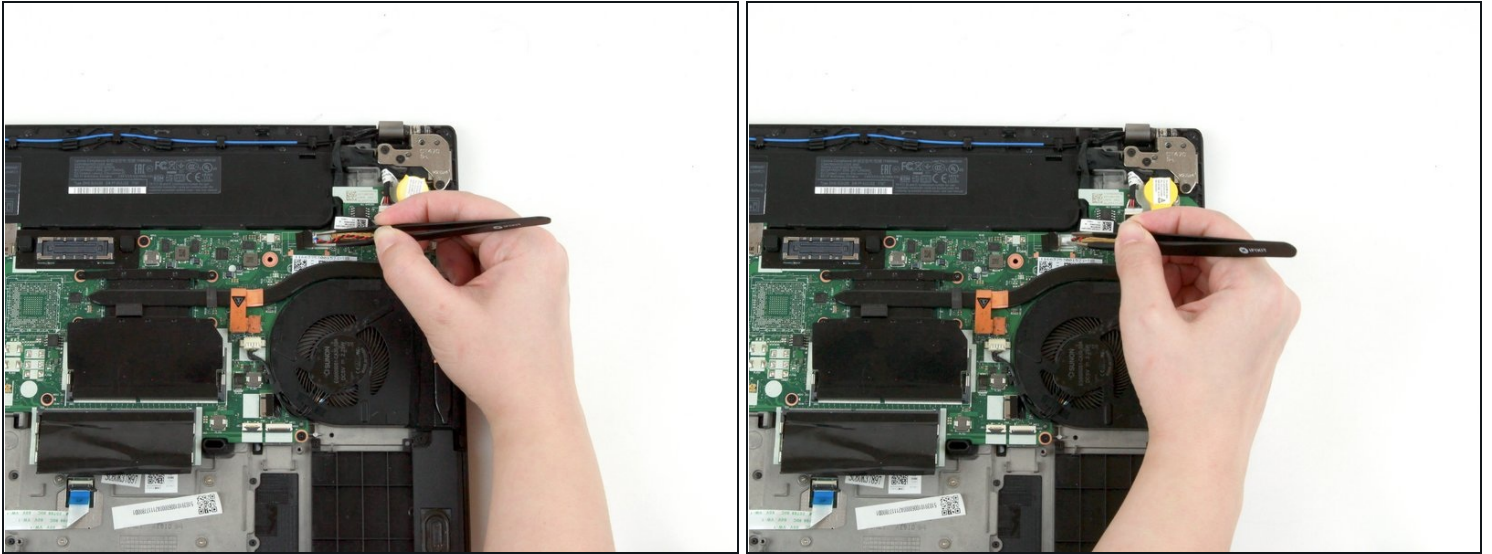
- Use a Phillips #1 screwdriver to remove the single 4 mm screw from the Wi-Fi card.

Step 25



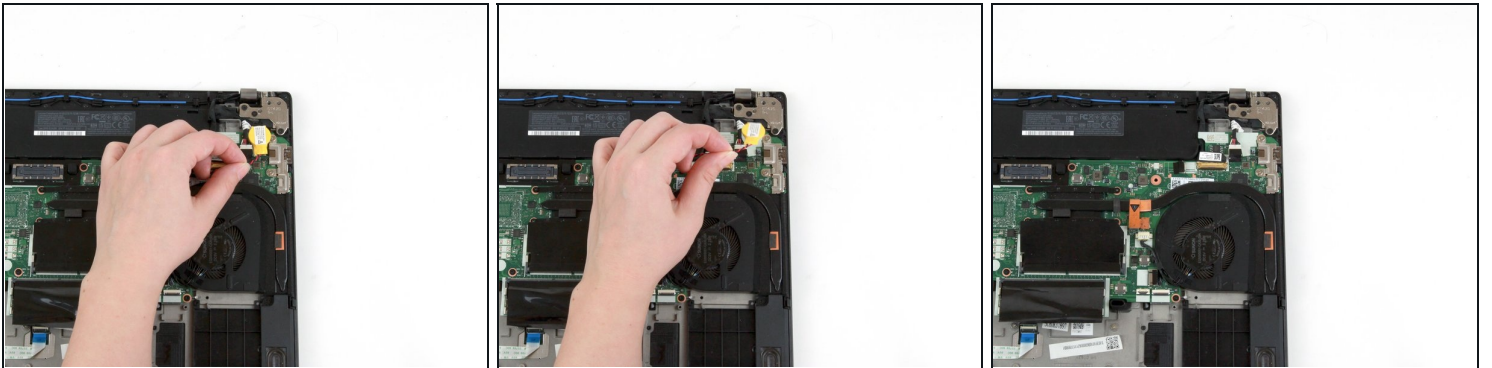
- Use your fingers to lift the Wi-Fi card up and out of its slot.
- This laptop does not include a WWAN card, but if yours does, follow the same procedure as Steps 9-12 to remove it.

Step 26



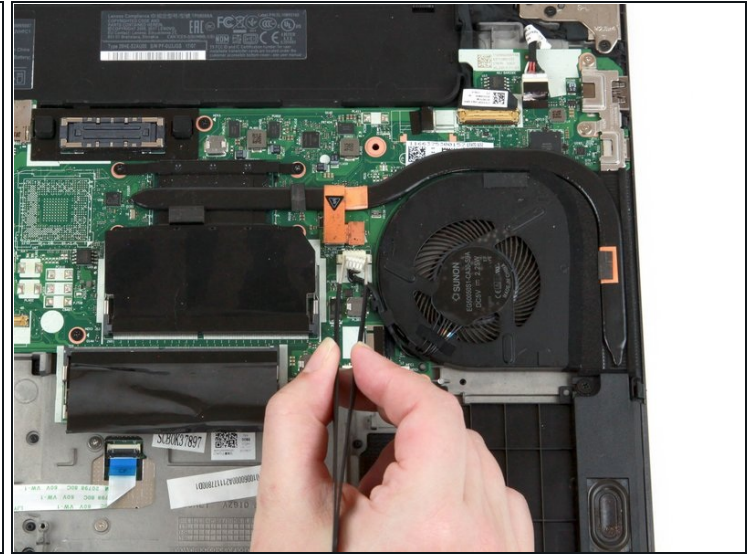
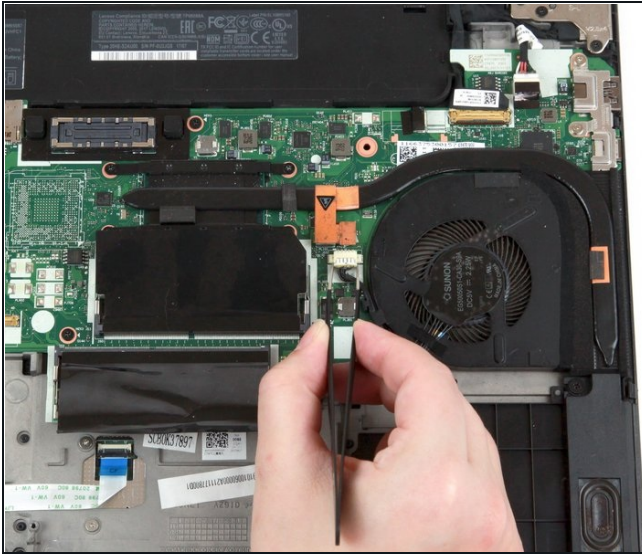
- Use a pair of blunt nose tweezers to pull the white connector out of its socket.

Step 27



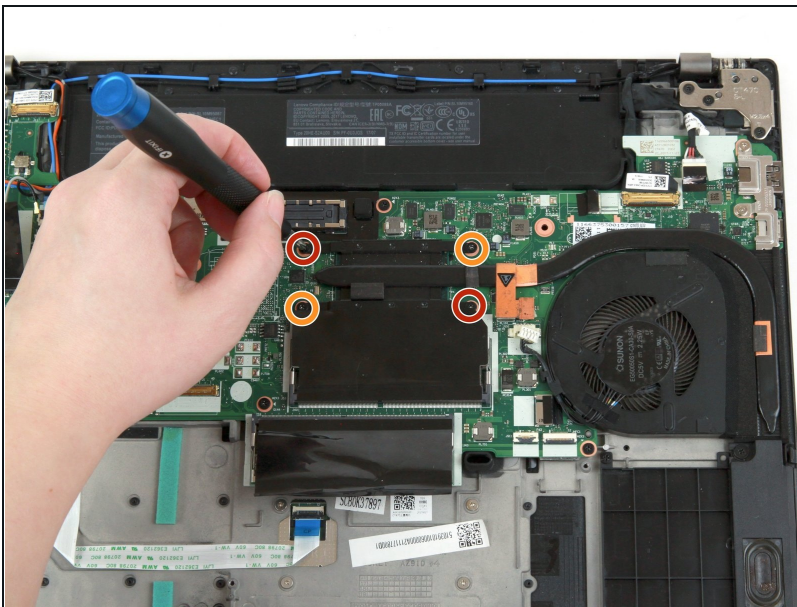
- Grab the wire attached to the coin cell battery, and lift it up and out of the laptop.

Step 28



- Use a pair of blunt nose tweezers to pull the white fan connector out of its socket on the motherboard.

Step 29



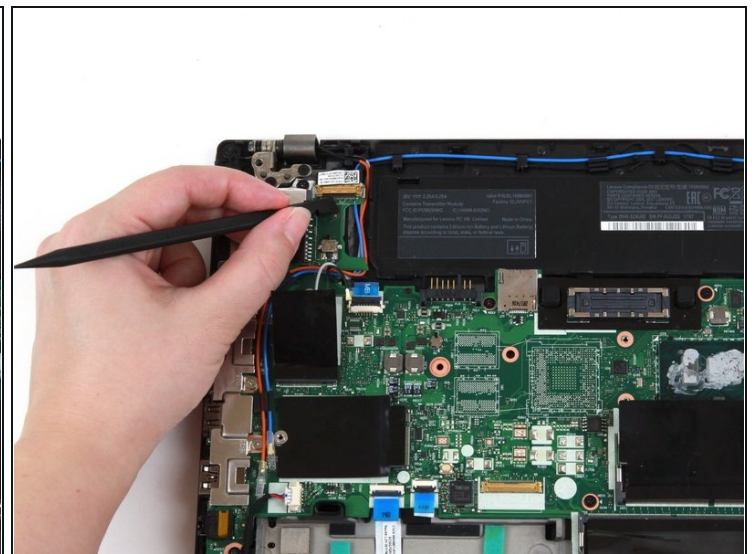
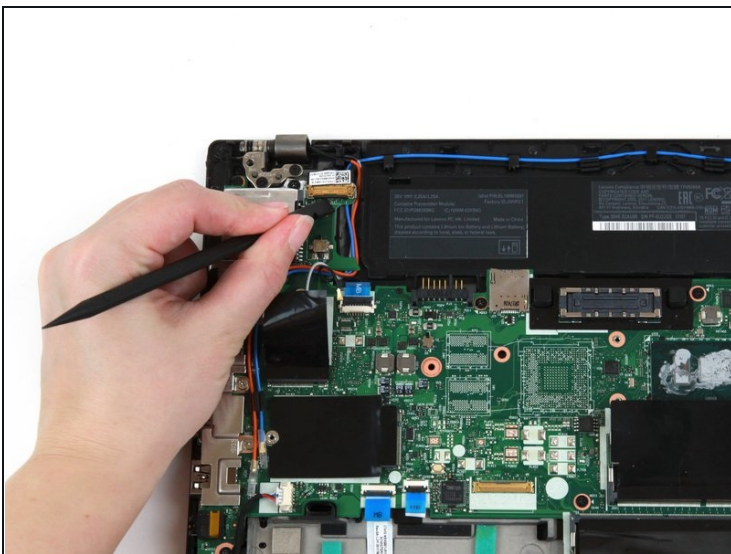
- Use a Phillips #1 screwdriver to loosen the first pair of captive screws on the fan and heat sink assembly in a crosswise pattern.
- Use a Phillips #1 screwdriver to loosen the second pair of captive screws on the fan and heat sink assembly in a crosswise pattern.

Step 30



- Use your hand to pull the fan and heat sink assembly up and away from the laptop.
- ☑ Clean the thermal paste from the heatsink and CPU and [reapply fresh paste](#) before reassembling.

Step 31 — Motherboard



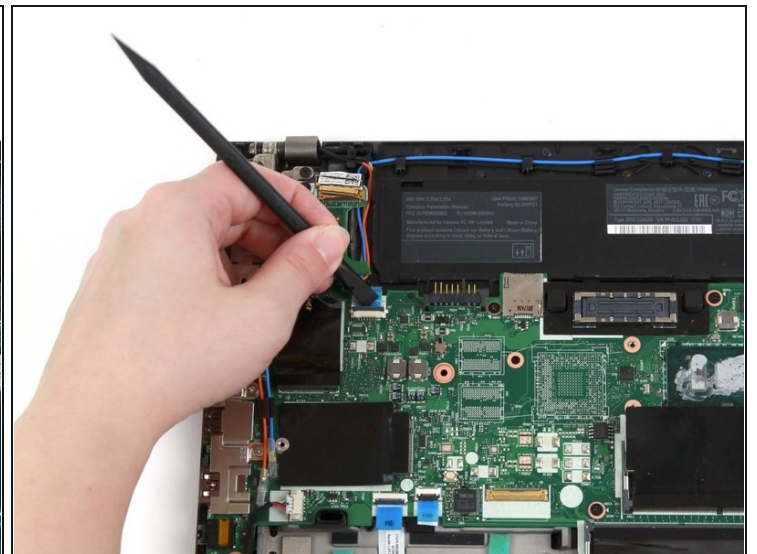
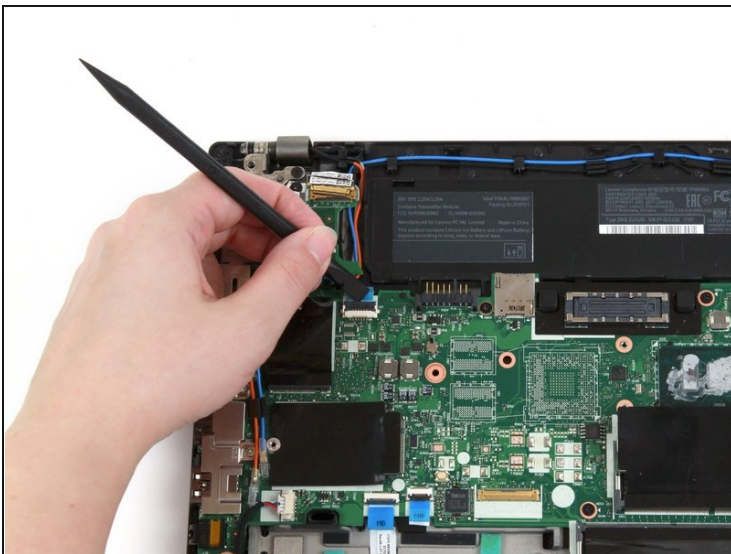
- Use the flat end of a spudger to flip up the metal clip securing the LCD cable to the motherboard.

Step 32



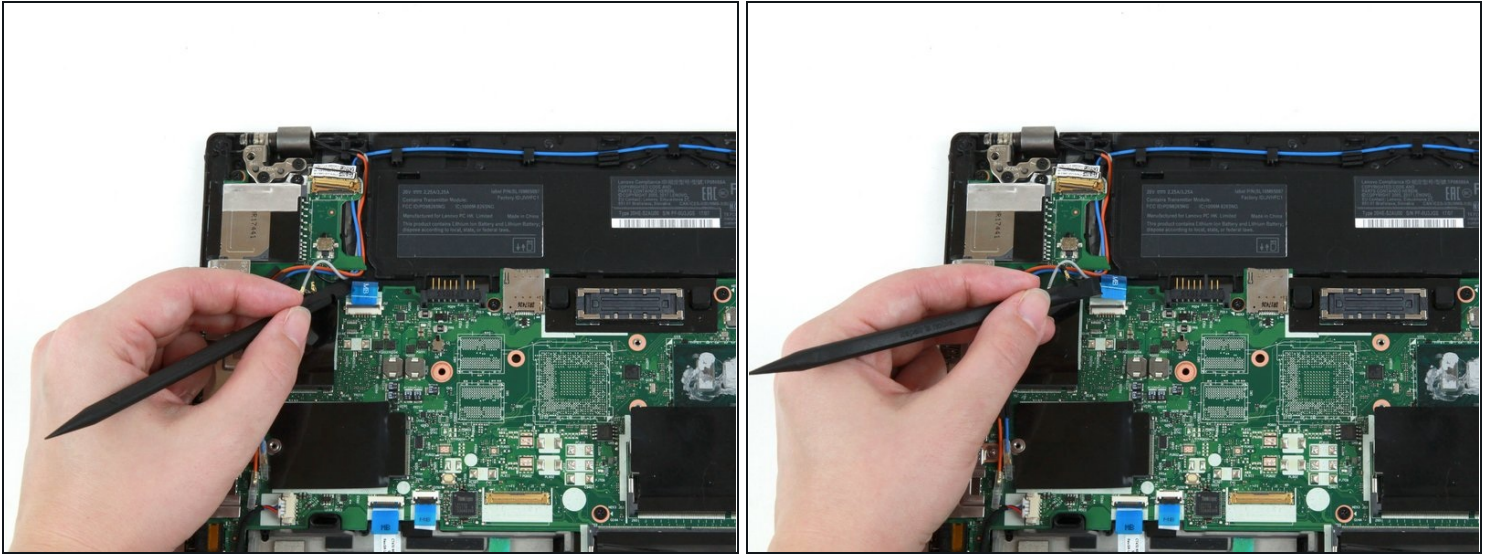
- Use the flat end of a spudger to disconnect the LCD cable from its socket on the motherboard.

Step 33



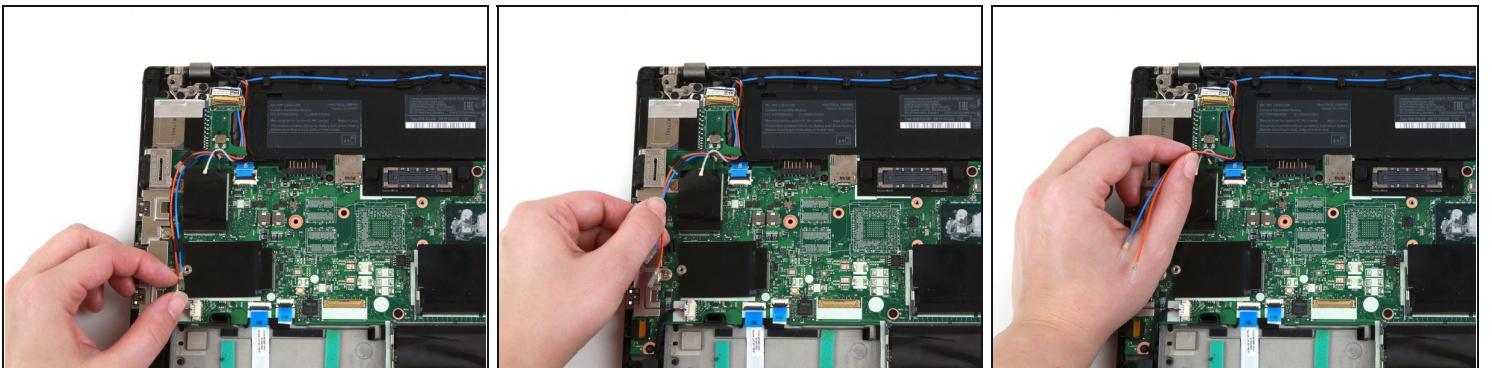
- Use the flat end of a spudger to flip the power button cable's black tab up.

Step 34



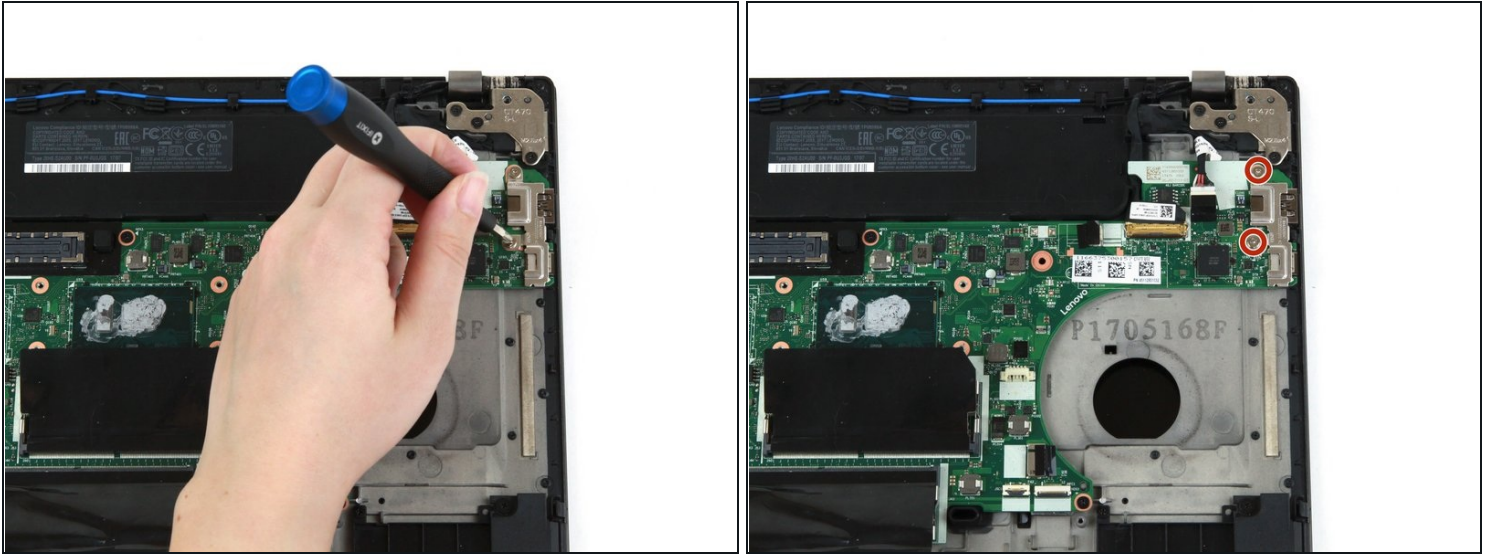
- Use the flat end of a spudger to slide the power button cable out of its connector on the motherboard.

Step 35



- Use your fingers to detach the red and blue antenna cables from their slots.

Step 36



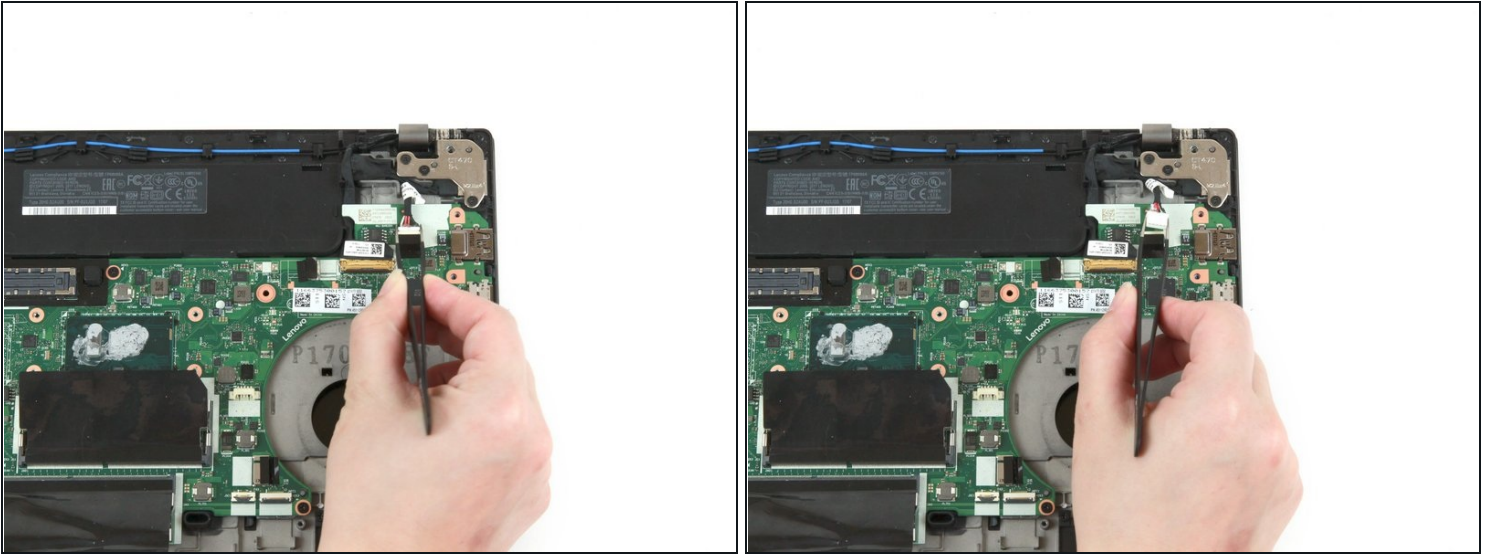
- Use a Phillips #1 screwdriver to remove the two 4 mm screws from the USB bracket.

Step 37



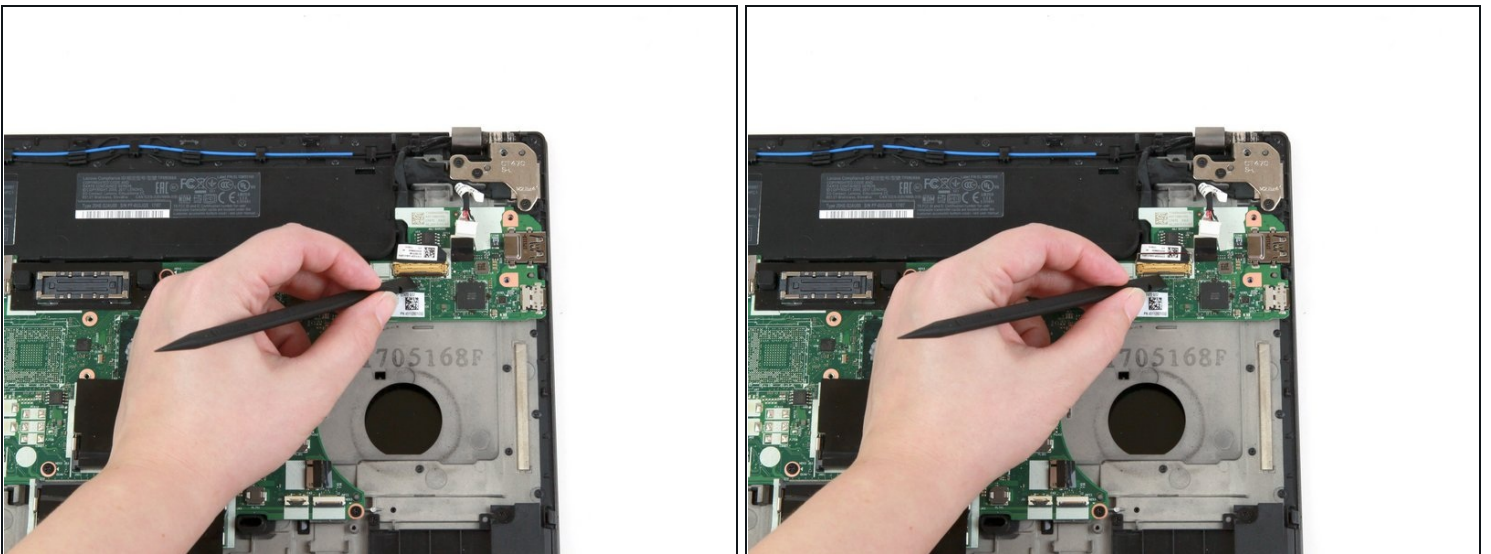
- Use your fingers to lift the USB bracket up and away from the laptop.

Step 38



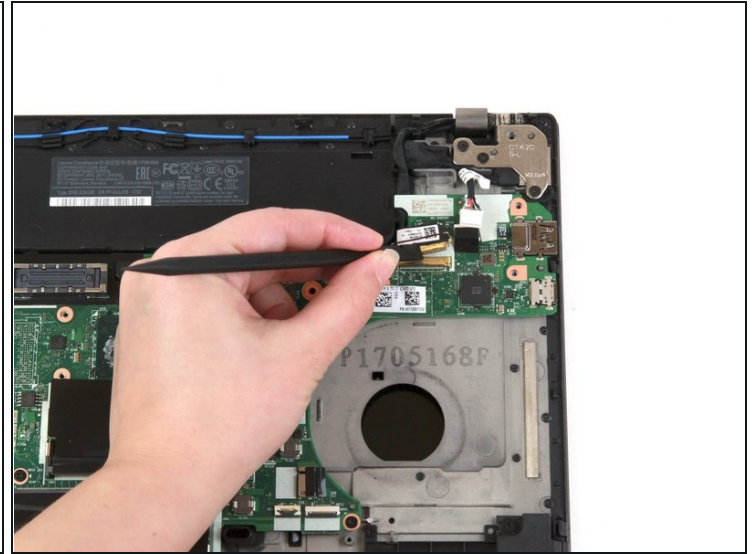
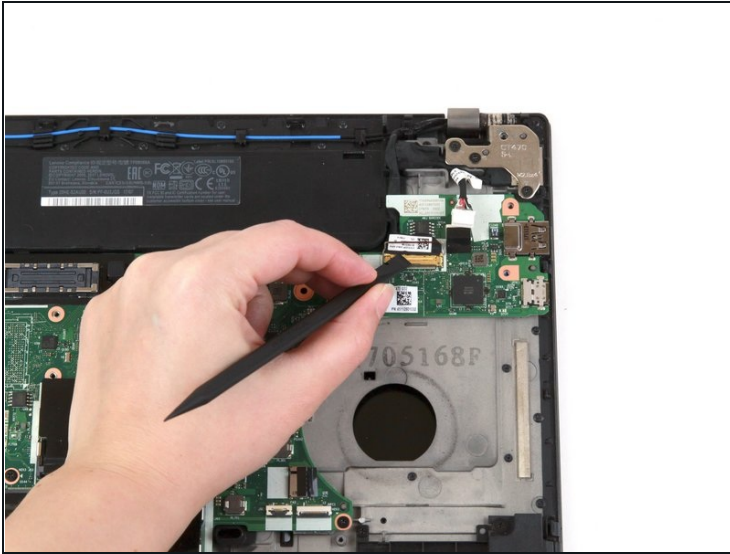
- Use a pair of blunt nose tweezers to disconnect the DC-in cable from its socket on the motherboard.

Step 39



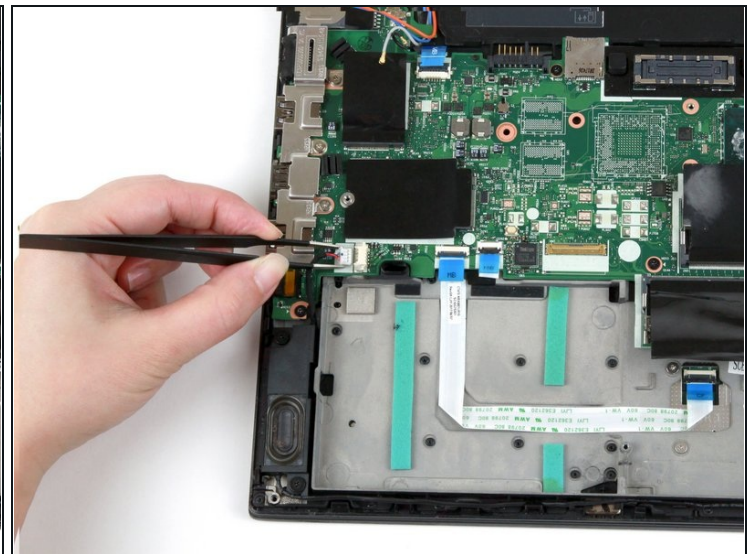
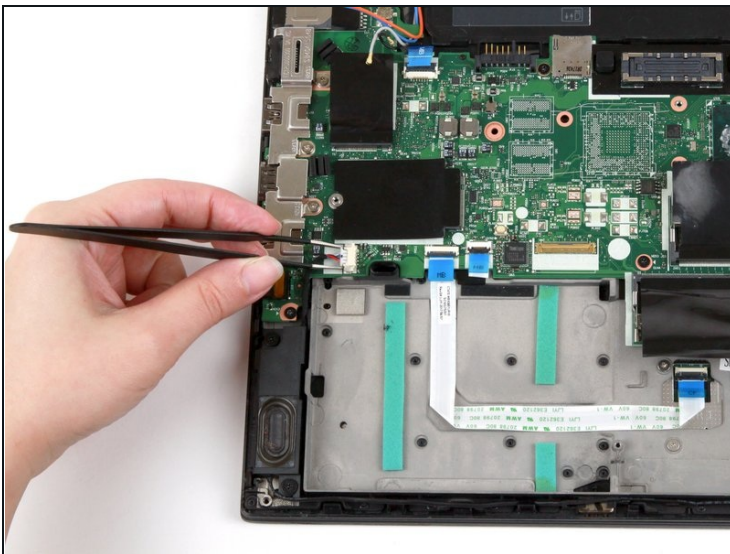
- Use the flat end of a spudger to flip up the metal bracket securing the camera cable to the motherboard.

Step 40



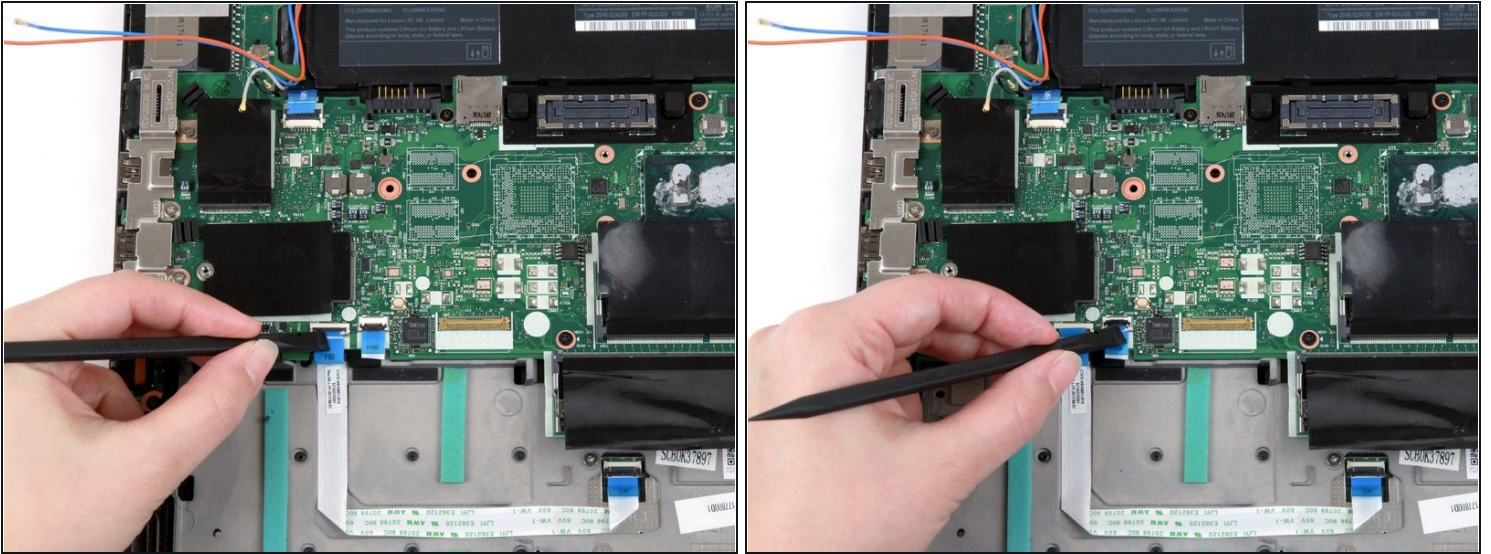
- Use the flat end of a spudger to disconnect the camera cable from its socket on the motherboard.

Step 41



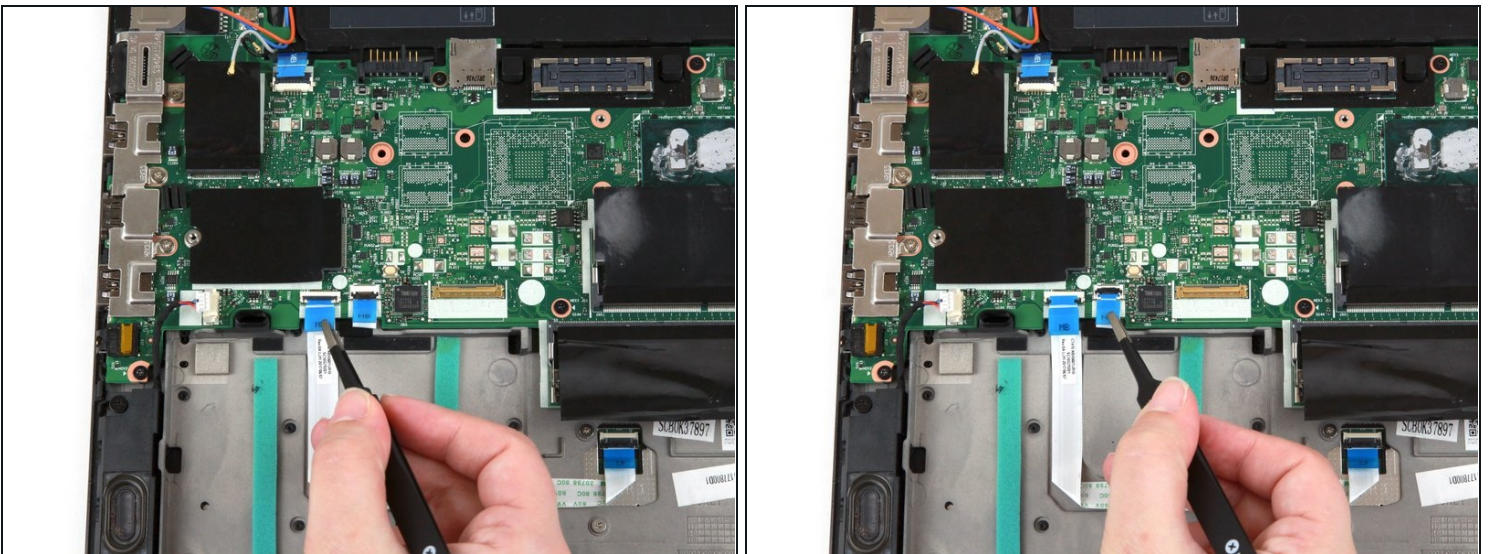
- Use a pair of blunt nose tweezers to disconnect the speaker cable from its socket on the motherboard.

Step 42



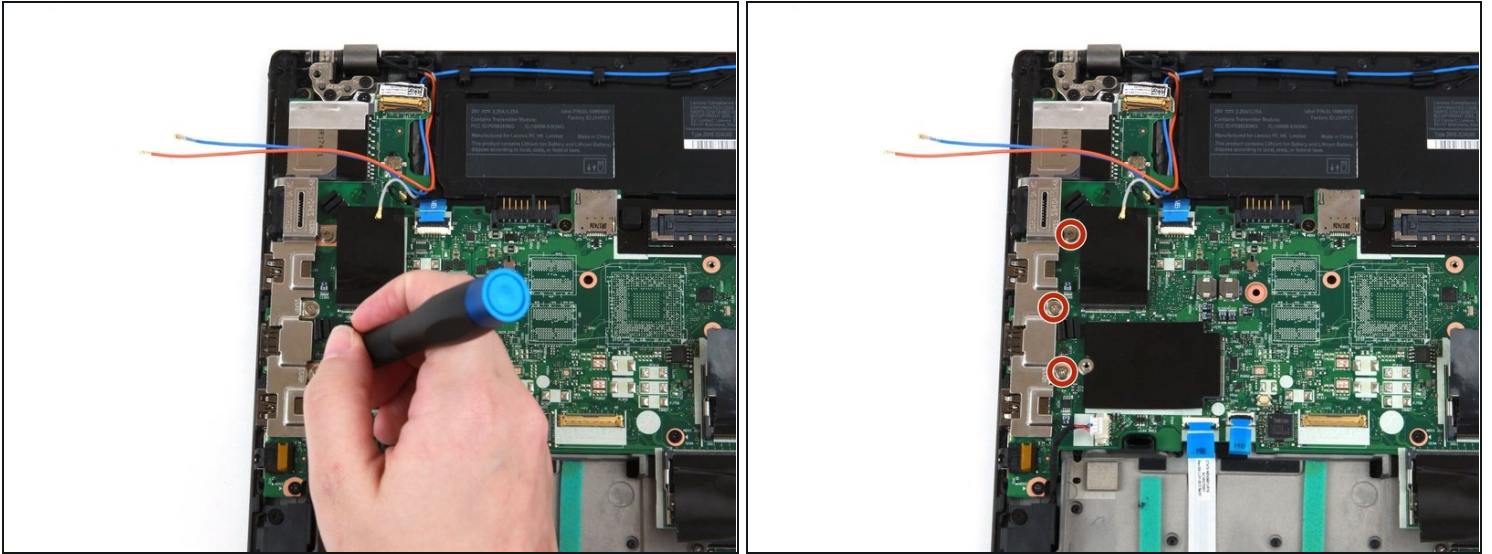
- Use the flat end of a spudger to flip up the black tabs on the trackpad and fingerprint reader cables.

Step 43



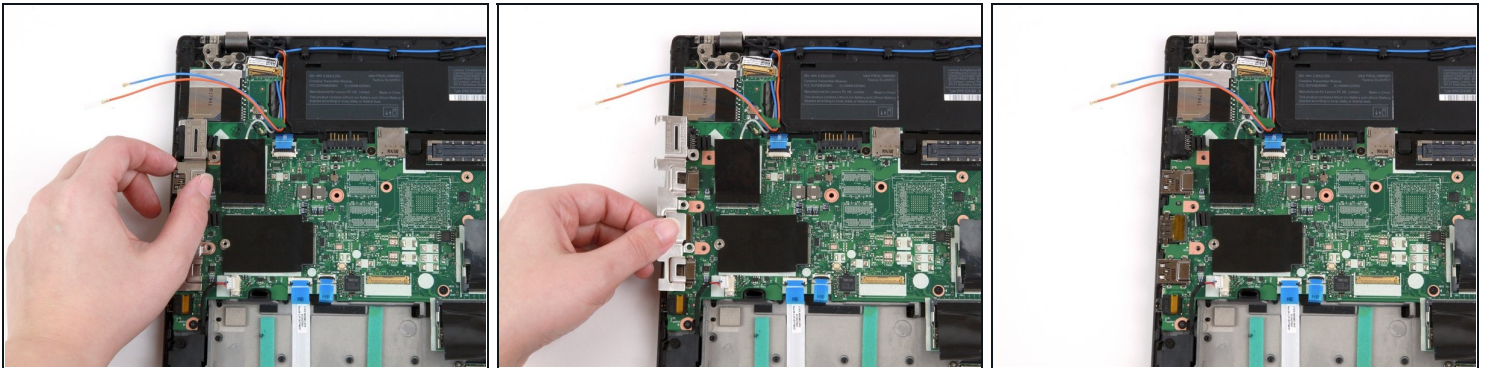
- Use a pair of blunt nose tweezers to slide the trackpad and fingerprint reader cables out of their connectors on the motherboard.

Step 44



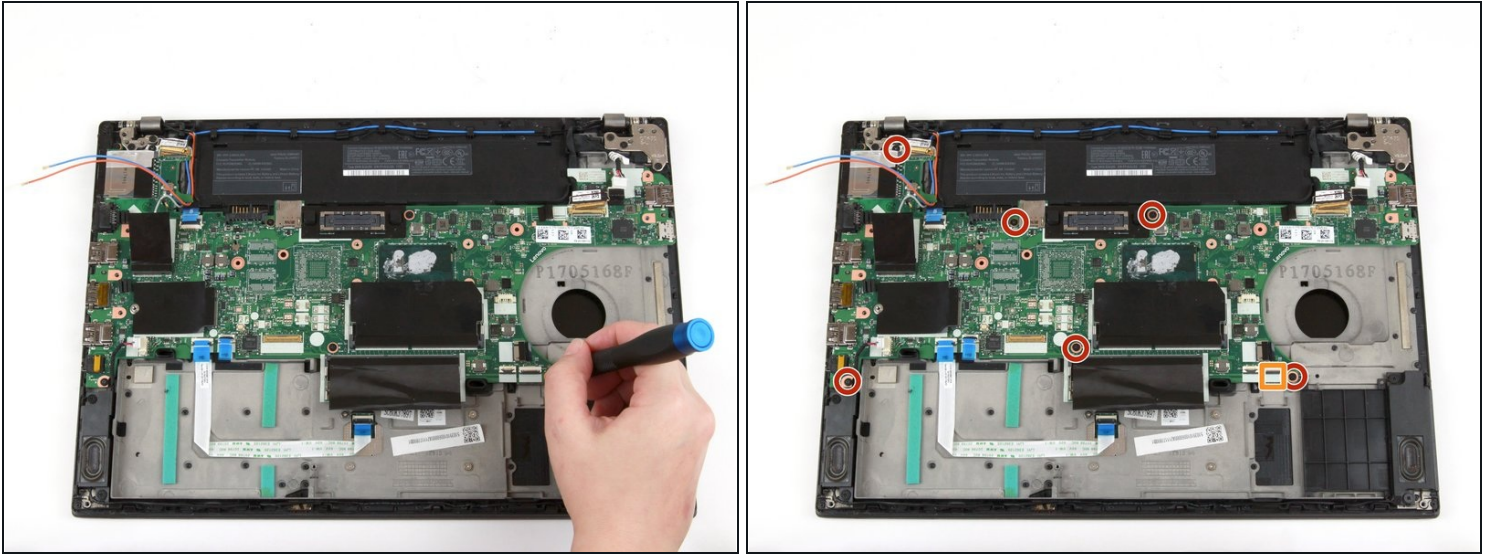
- Use a Phillips #1 screwdriver to remove the three 4 mm screws from the I/O bracket.

Step 45



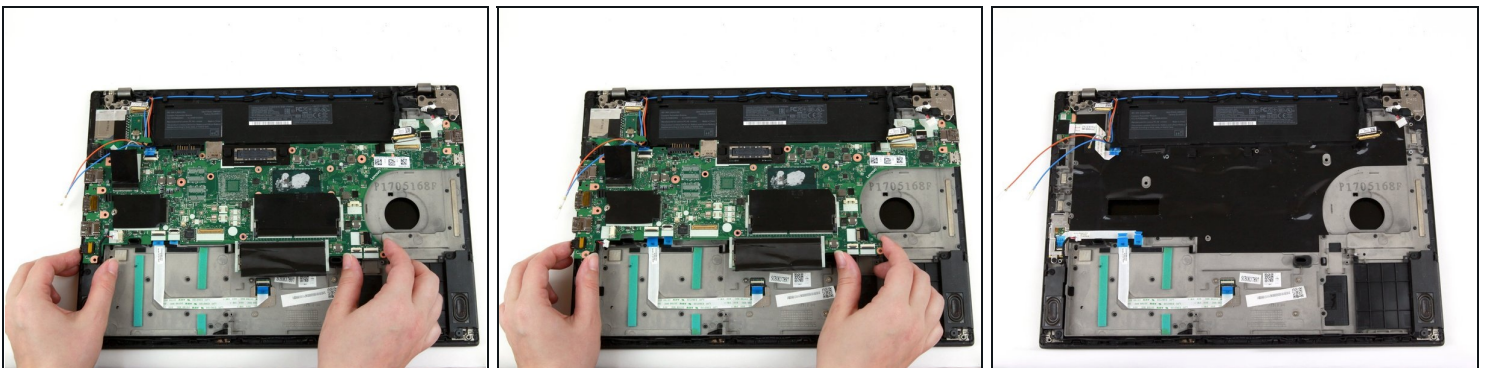
- Use your fingers to slide the I/O bracket to the left.
- Lift the I/O bracket up and away from the laptop.

Step 46



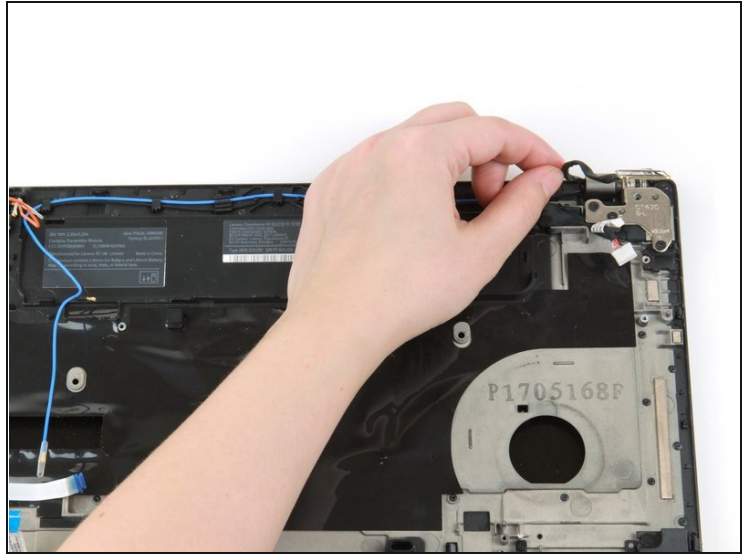
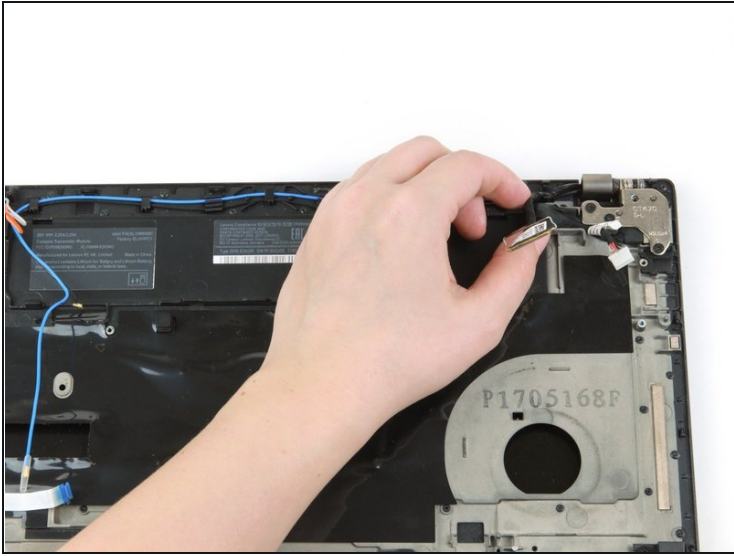
- Use a Phillips #1 screwdriver to remove the six 4 mm screws from the motherboard.
- This laptop does not have an NFC cable, but if yours does, use the flat end of a spudger to flip up the tab and slide the cable out of its connector.

Step 47



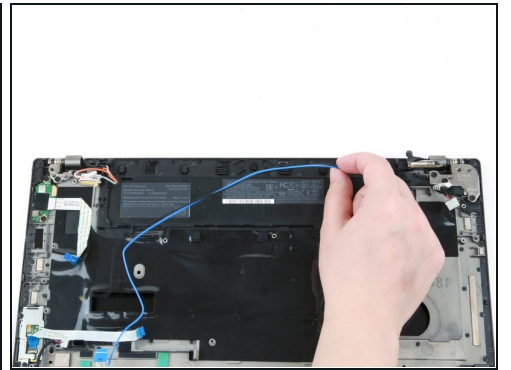
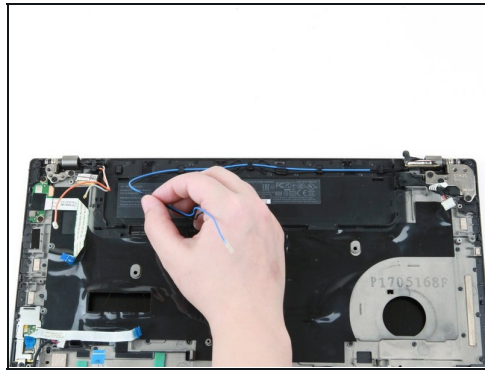
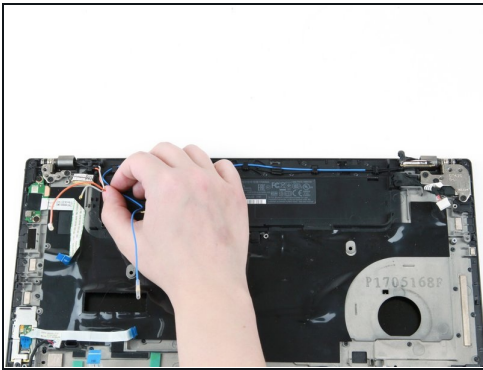
- Use both hands to lift the motherboard up and away from the laptop.

Step 48 — Display Assembly



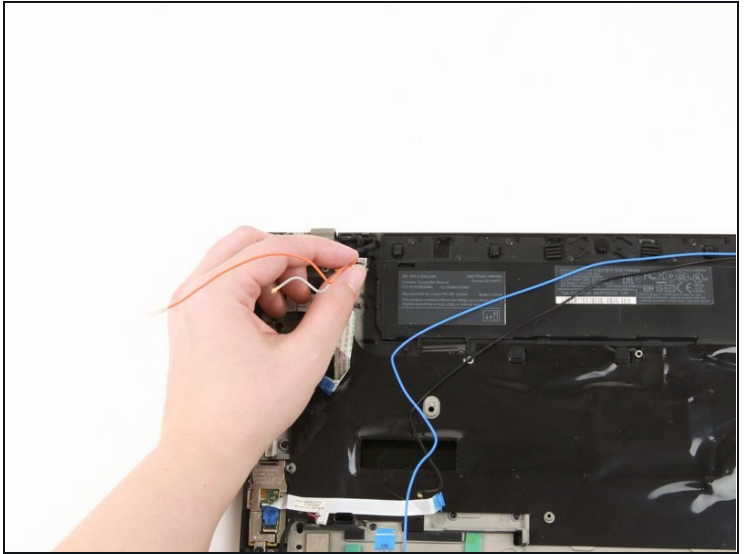
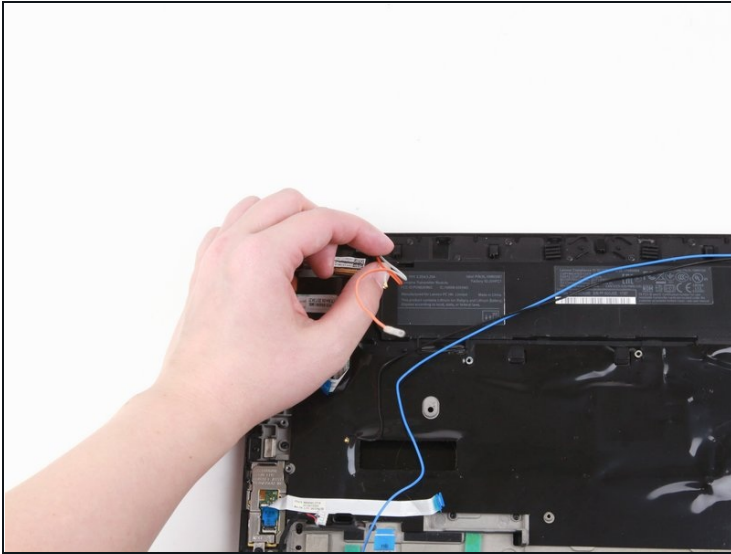
- Use your fingers to remove the camera cable from its slot.

Step 49



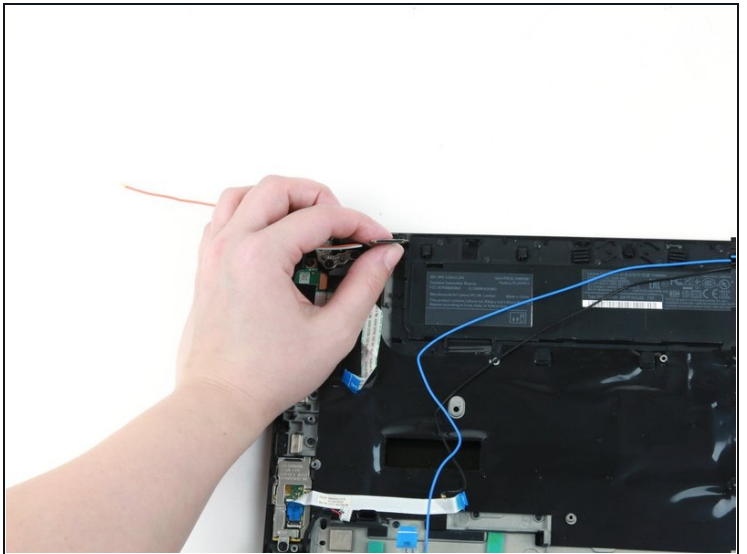
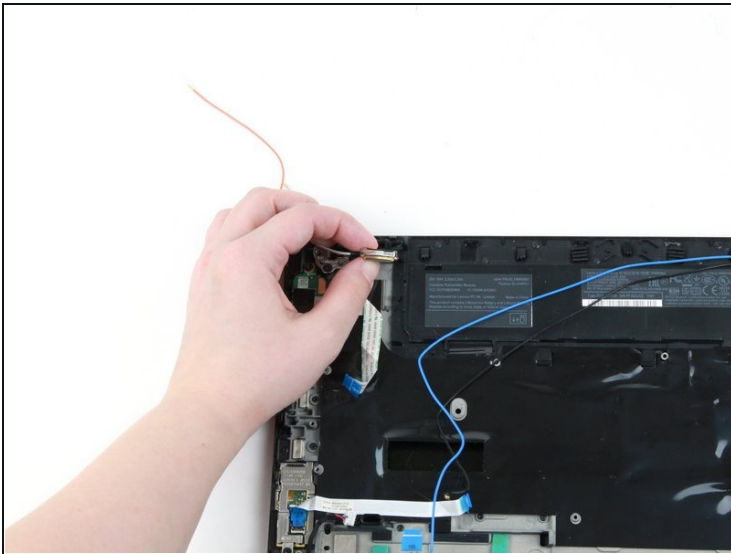
- Use your fingers to lift the black and blue wires out of their slots along the top of the laptop.

Step 50



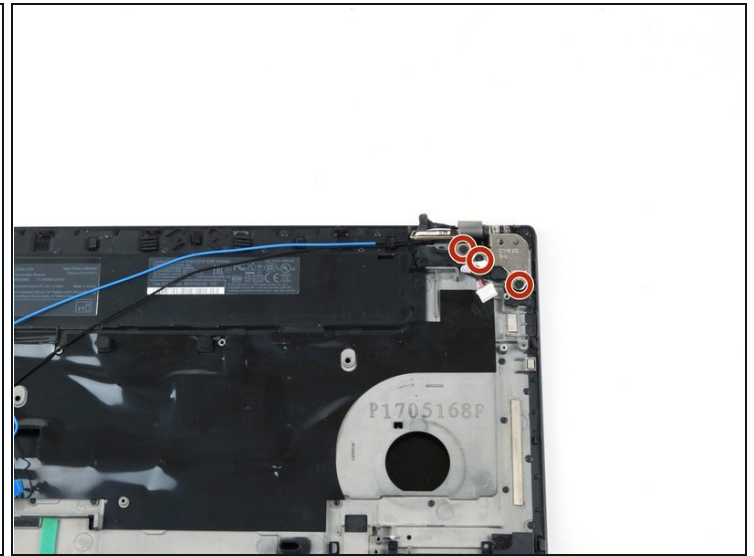
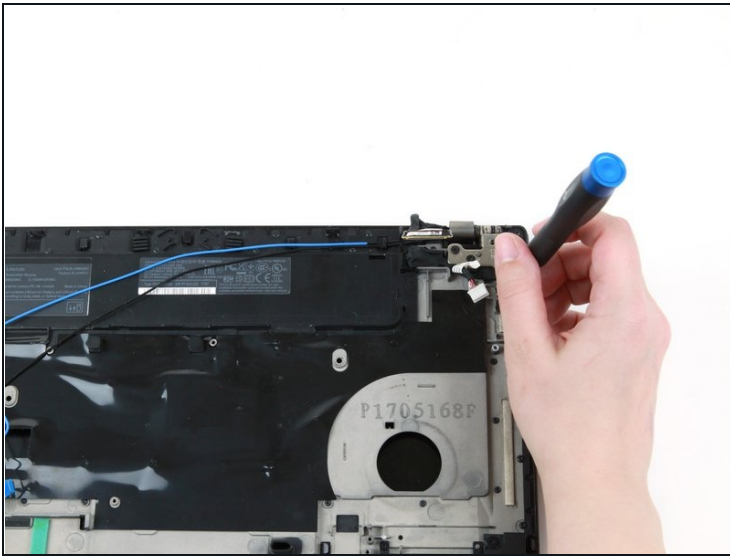
- Use your fingers to lift the red and gray wires out of their slots.

Step 51



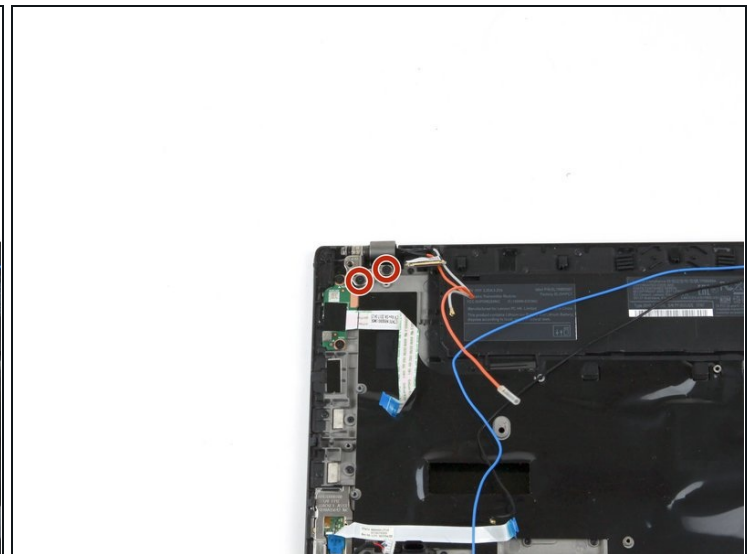
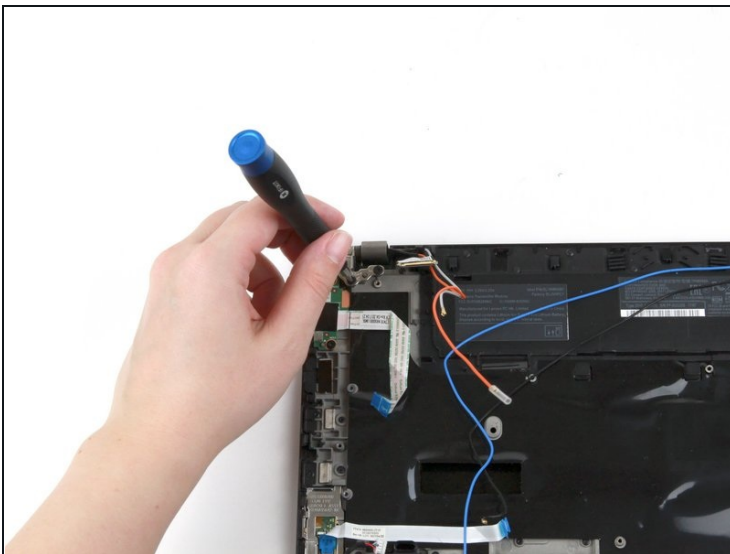
- Use your fingers to lift the LCD cable out of its slot.

Step 52



- Use a Phillips #1 screwdriver to remove three 4.5 mm screws from the hinge in the upper right corner.

Step 53



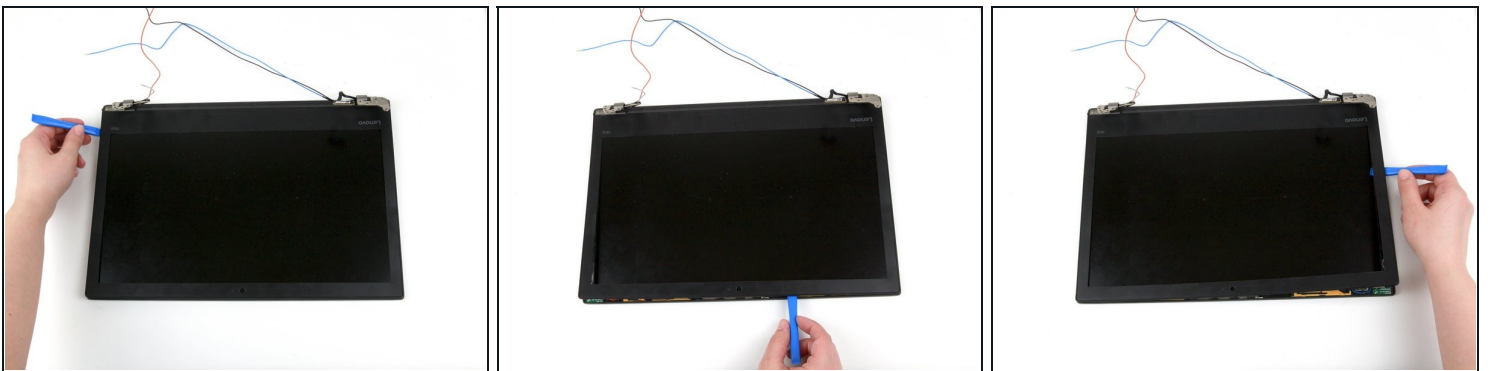
- Use a Phillips #1 screwdriver to remove two 4.5 mm screws from the hinge in the upper left corner.

Step 54



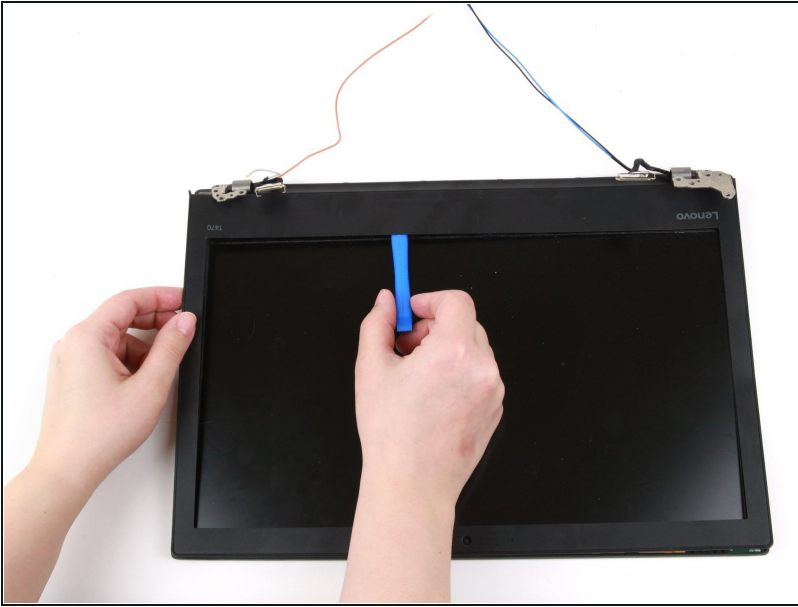
- Use both hands to lift the laptop body up and away from the display assembly.

Step 55 — Display Bezel



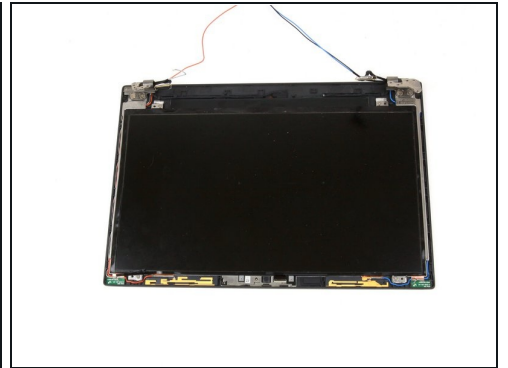
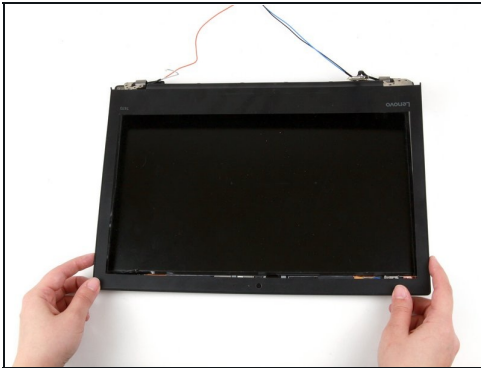
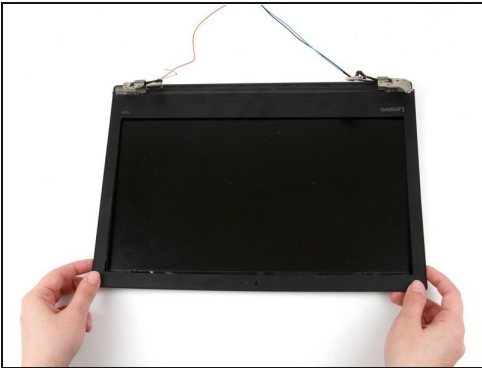
- Use the iFixit opening tool to create a gap between the bezel and the display, starting in the upper left corner.
 - Continue to use the iFixit opening tool around the left side, bottom, and right side of the laptop to detach the clips securing the bezel to the display.
- ⓘ You may hear loud snaps when detaching the clips; this is normal.

Step 56



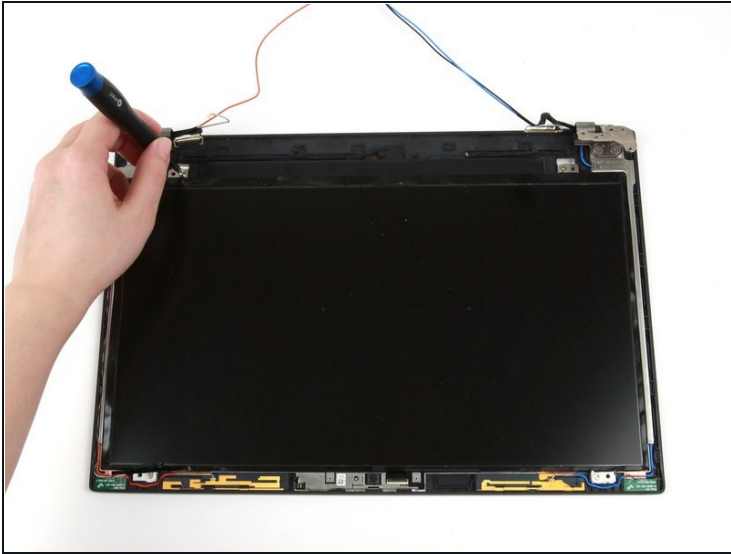
- Insert the iFixit opening tool between the bezel and display on the top side.
- ⓘ This part of the bezel is attached to the display with adhesive, so you may need to use your hands to gently peel the bezel away.

Step 57



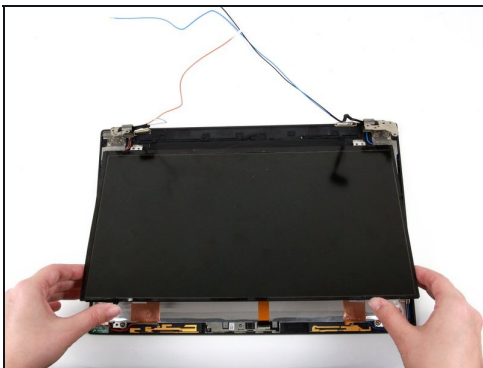
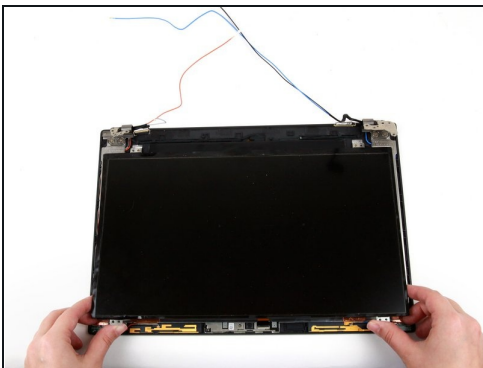
- Use both hands to lift the bezel up and away from the display assembly.

Step 58 — Display Panel



- Use a Phillips #1 screwdriver to remove the four 3 mm screws from each corner of the screen.

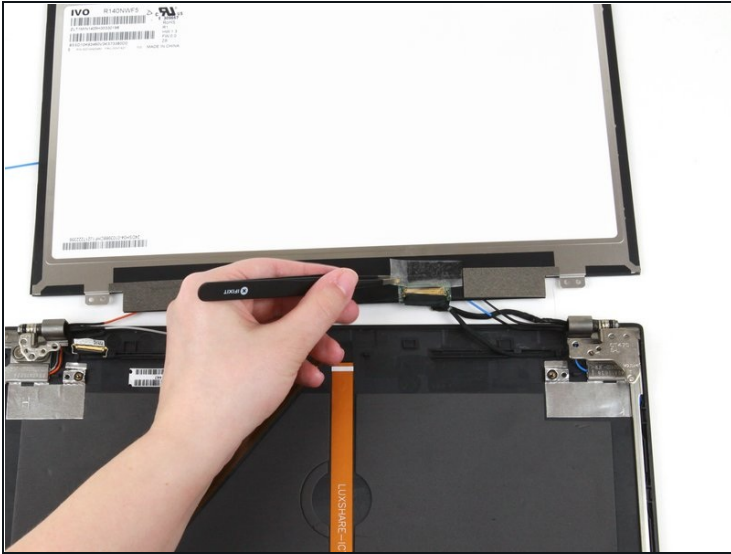
Step 59



- Use both hands to lift the bottom corners of the display panel
- Gently flip the display panel over.

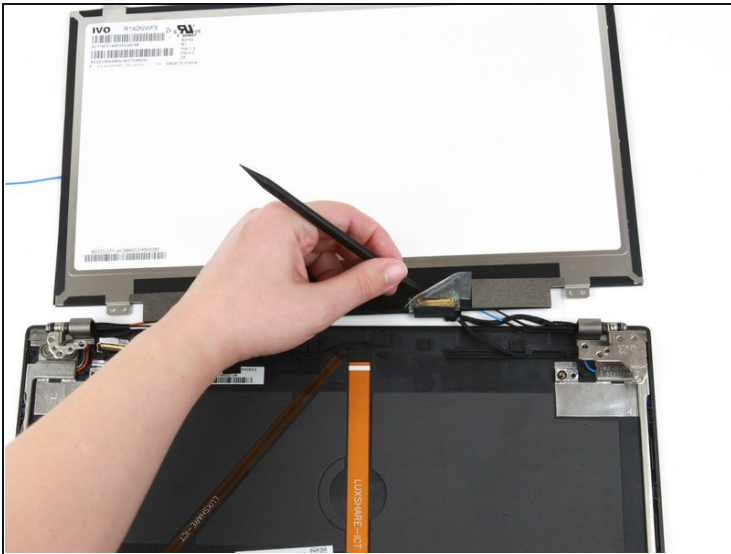
⚠ Potential for device damage: The display cable is still connecting the display panel to the rest of the display assembly, so be sure to flip the display panel over with caution.

Step 60



- Use a pair of blunt nose tweezers to remove the clear tape from the display cable.

Step 61



- Use the flat end of a spudger to flip up the metal bar securing the connector.
- Use the flat end of a spudger to disconnect the display cable from its socket.

Step 62



- Use your hands to remove the display panel from the rest of the display assembly.

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

Take your e-waste to an [R2 or e-Stewards certified recycler](#).

Repair didn't go as planned? Try some [basic troubleshooting](#), or ask our [Answers community](#) for help.