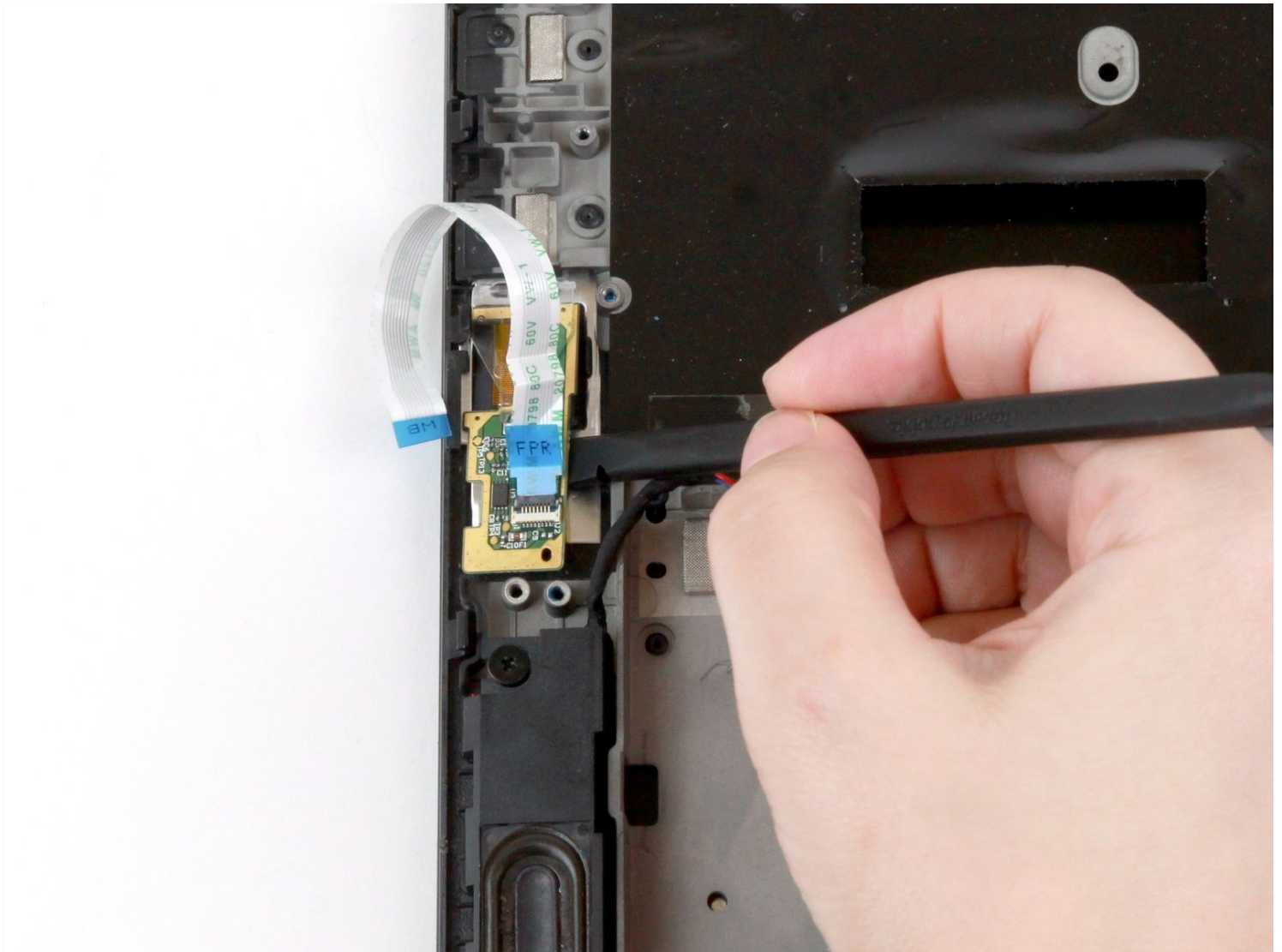




Lenovo ThinkPad T470 Fingerprint Reader Replacement

Use this guide to remove the fingerprint reader...

Written By: Kristen Gismondi



INTRODUCTION

Use this guide to remove the fingerprint reader from a Lenovo ThinkPad T470 laptop.

The fingerprint reader allows you to log into a laptop installed with Windows 10 by scanning your unique fingerprint. The fingerprint reader may be faulty if you notice error messages and an inability to log in when attempting to use the fingerprint reader. This issue may not require a replacement, so be sure to visit Lenovo's [troubleshooting manual](#) for the fingerprint reader.

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

TOOLS:


Phillips #1 Screwdriver (1)

ESD Safe Blunt Nose Tweezers (1)

Spudger (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.

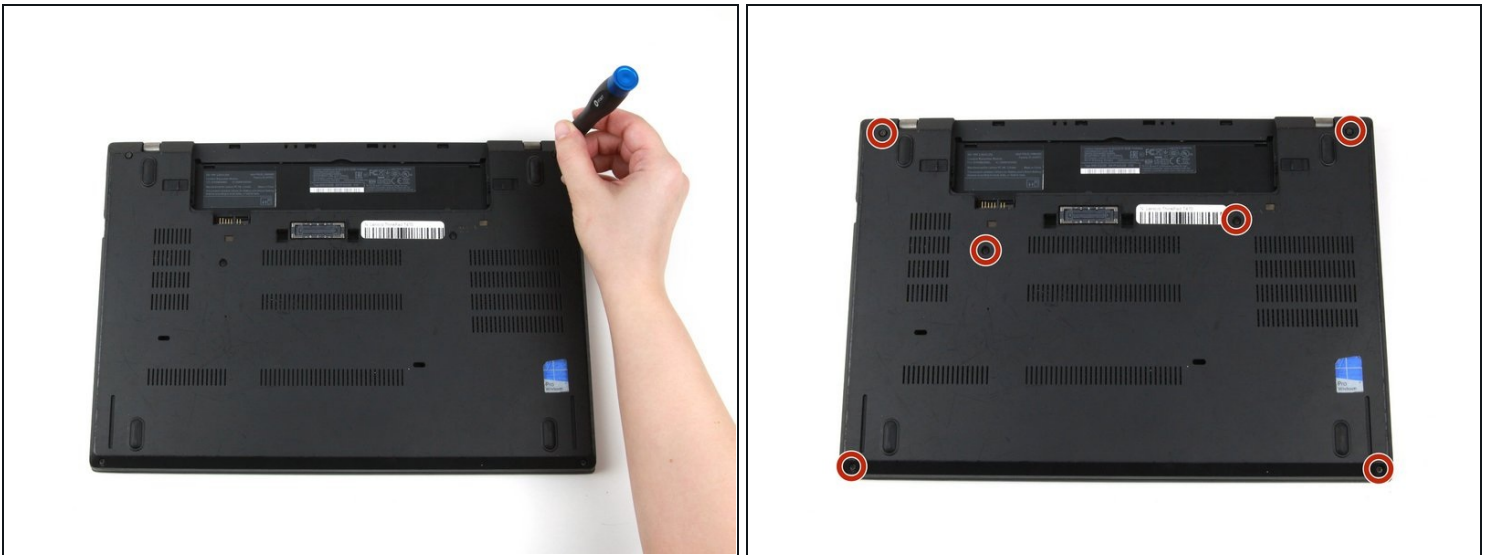
- Place the laptop so that the bottom is facing upwards.
- Slide the latch on the left side of the battery to the left until it clicks in place.

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



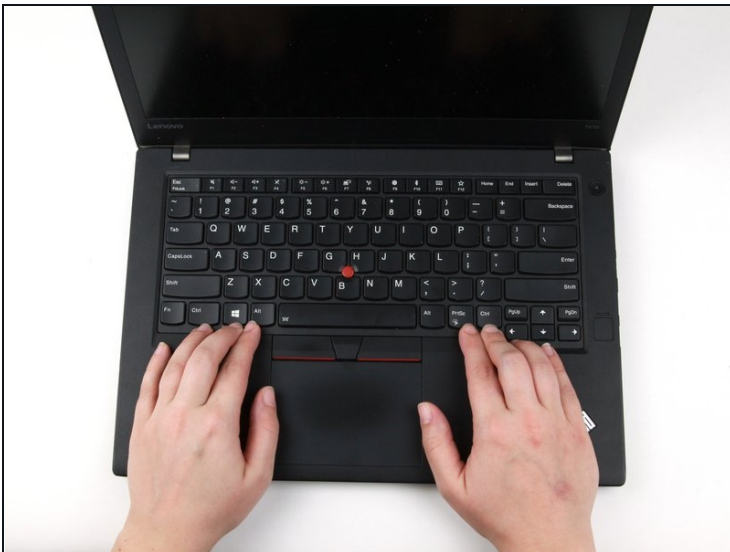
- Use a Phillips #1 screwdriver to loosen the six captive screws on the bottom cover of the laptop.

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.

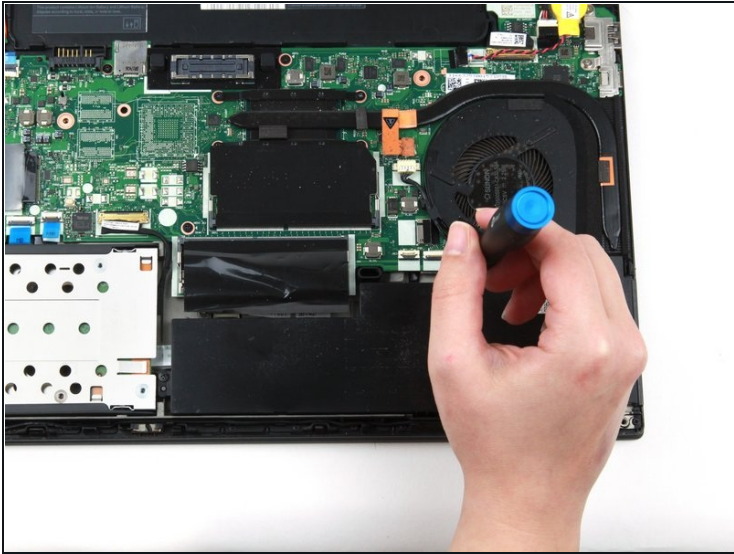
- Use your hands to pull up on the right side of the bottom cover to release the plastic clips.
- Use your hands to pull up on the left side of the bottom cover to release the plastic clips.

Step 11



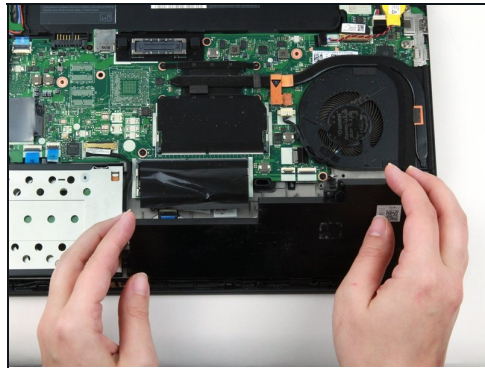
- Remove the bottom cover from the laptop.

Step 12



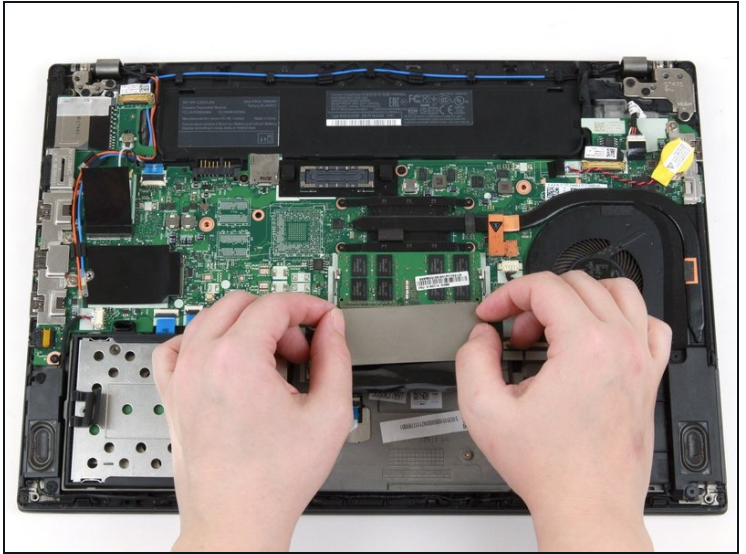
- Use a Phillips #1 screwdriver to remove two 5 mm screws from the internal battery.

Step 13



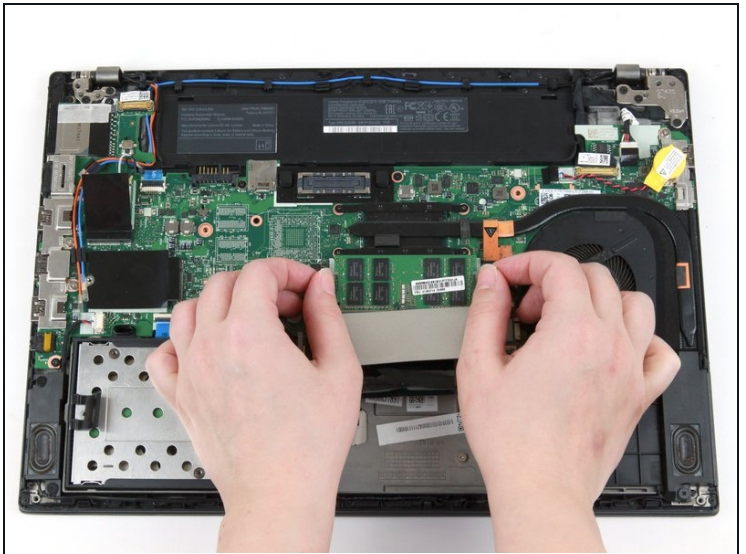
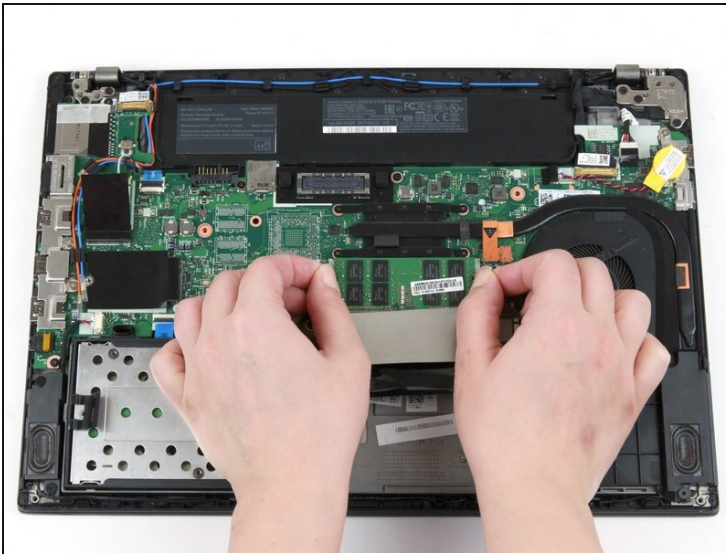
- Use your hands to lift the battery up and away from the laptop.

Step 14



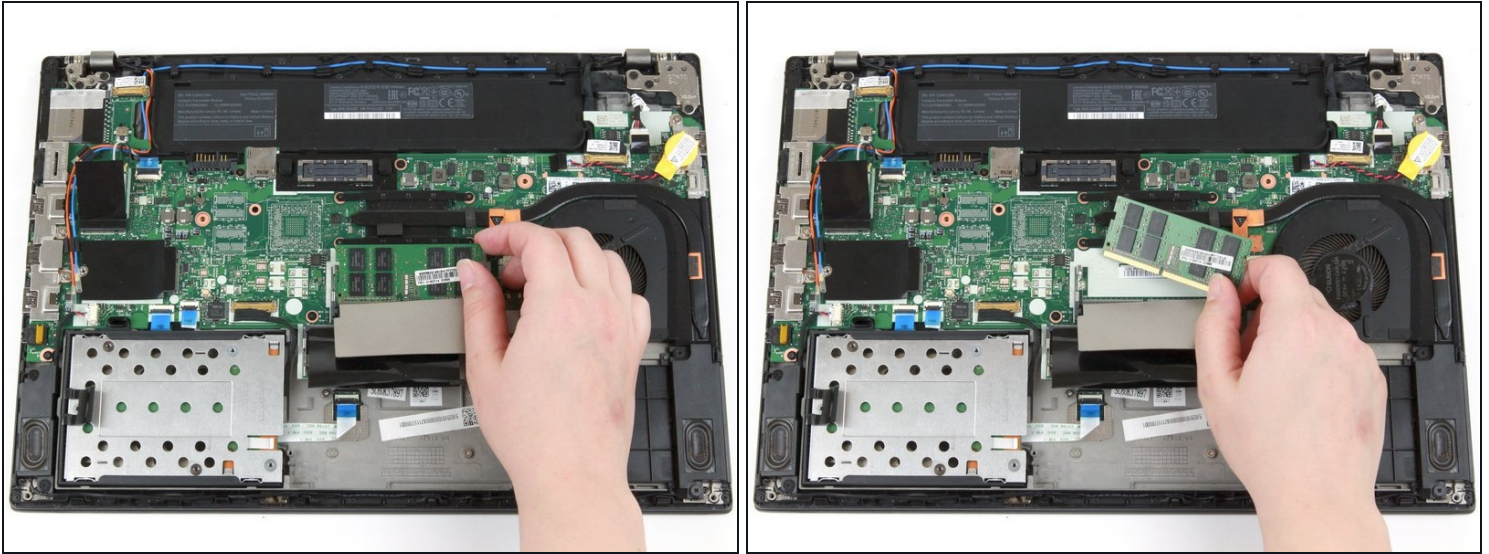
- Use your fingers to flip the black flap covering the top stick of RAM down.

Step 15



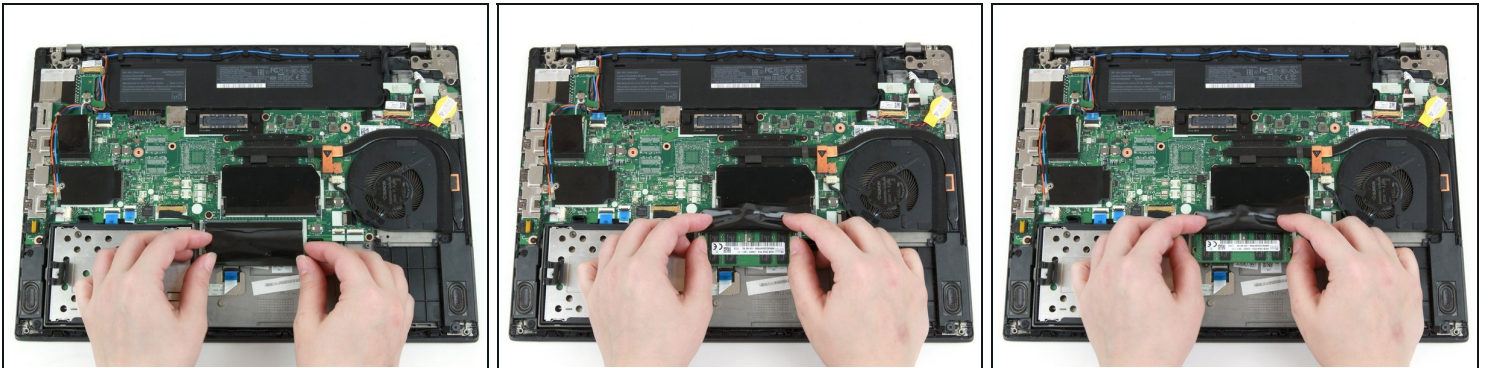
- Use your thumbs to push the metal clips on either end of the RAM outwards.
- ① The RAM will pop up by a few millimeters.

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



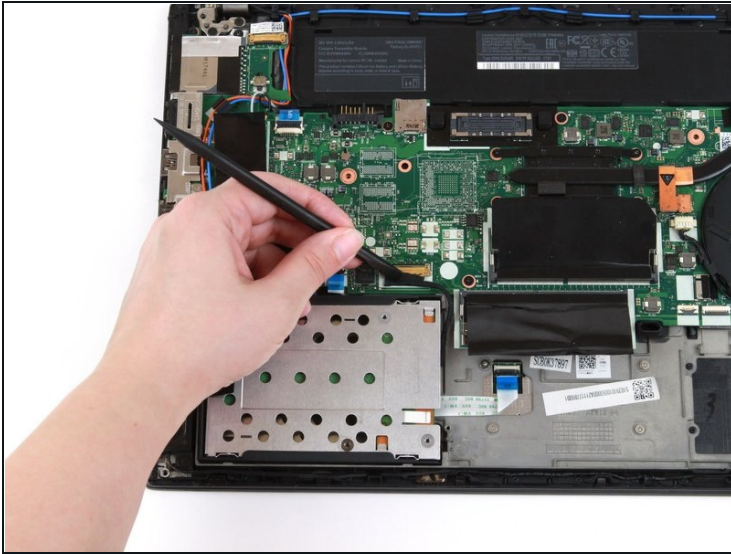
- Use your fingers to lift the RAM out of its socket and away from the laptop to remove it.

Step 19



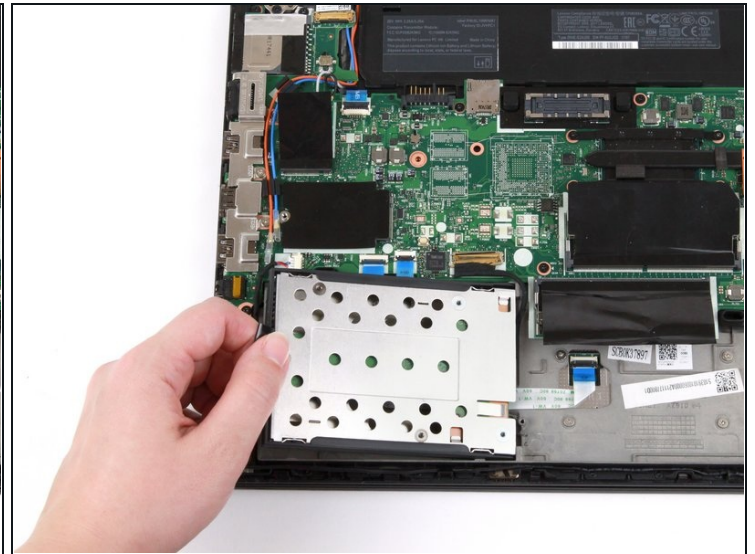
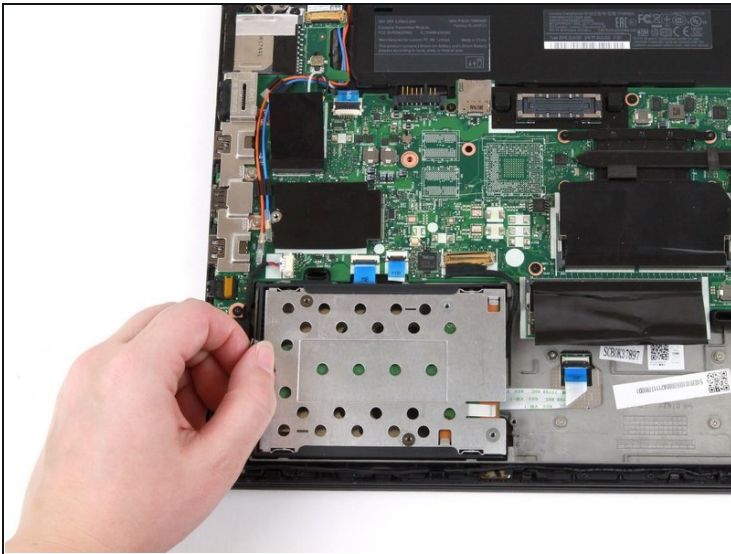
- Use the flat end of a spudger to flip up the metal clip securing the SSD connector to the motherboard.

Step 20



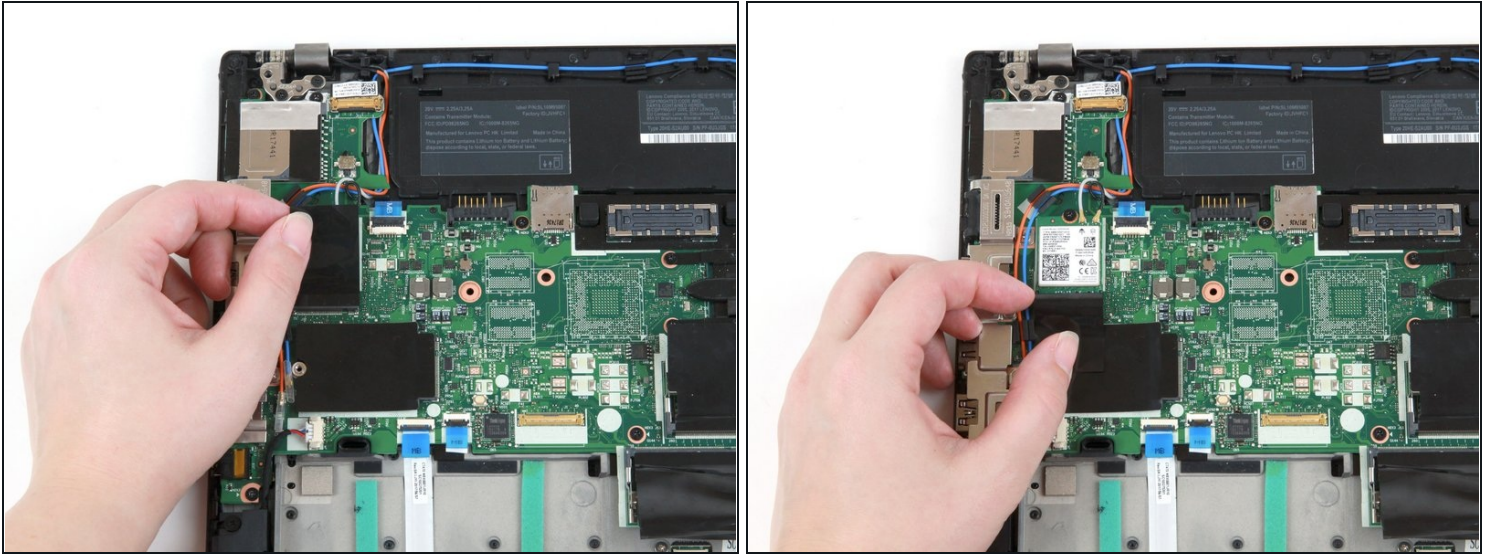
- Use the flat end of a spudger to separate the connector from its socket.

Step 21



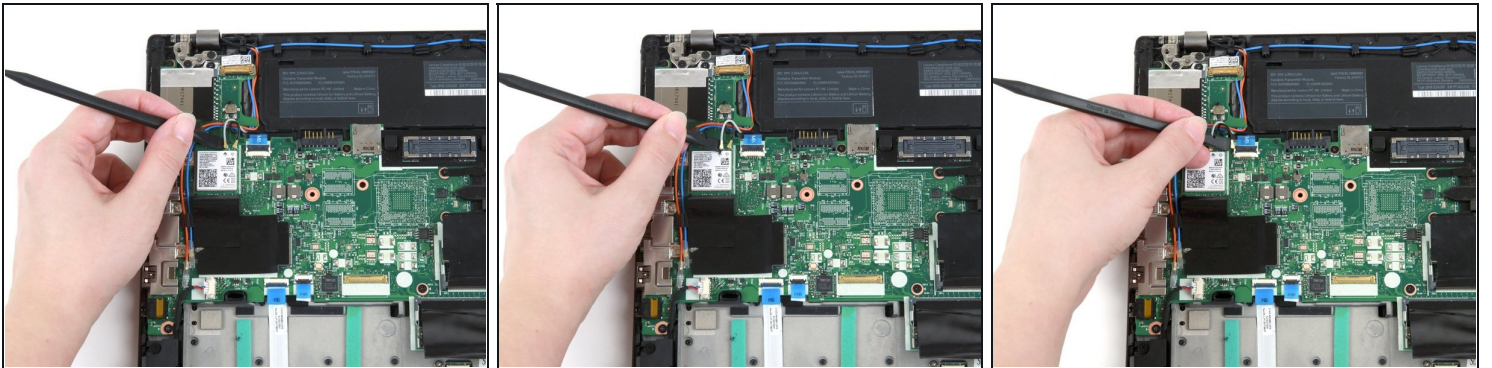
- Grab the tab on the left side of the hard drive, and pull up to remove it from the laptop.

Step 22



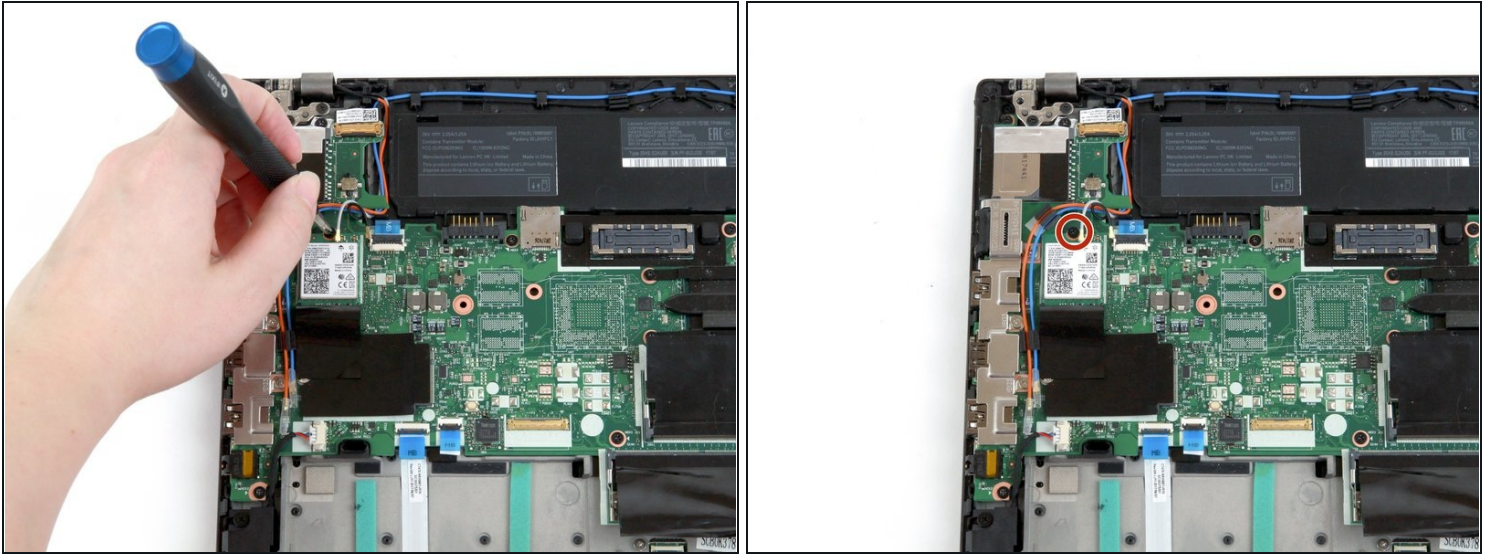
- Use a finger to press the black flap covering the Wi-Fi card down.

Step 23



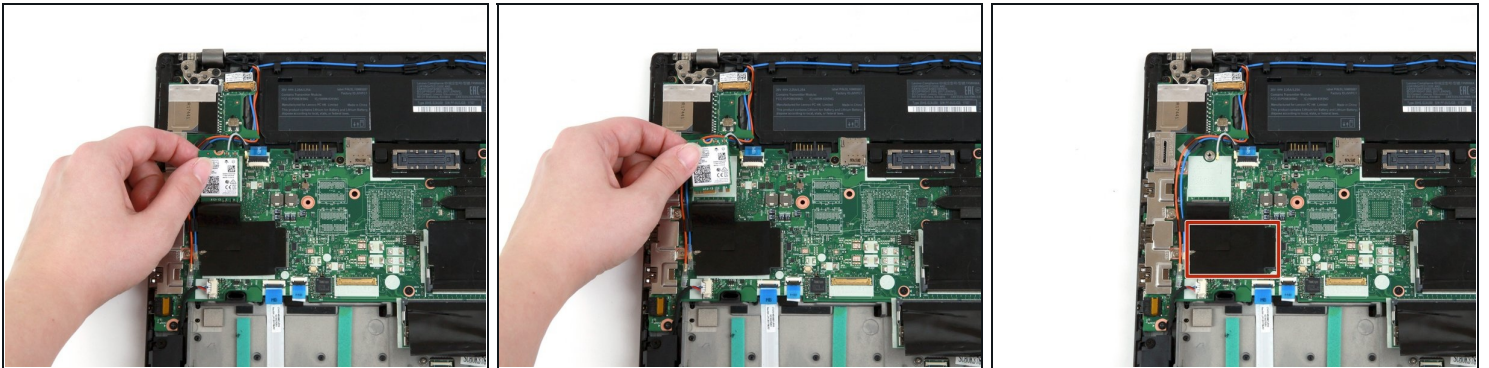
- Use the flat end of a spudger to disconnect the two coaxial wires from the Wi-Fi card.
- ☒ When reassembling, reattach the gray wire on the left and the black wire on the right.

Step 24



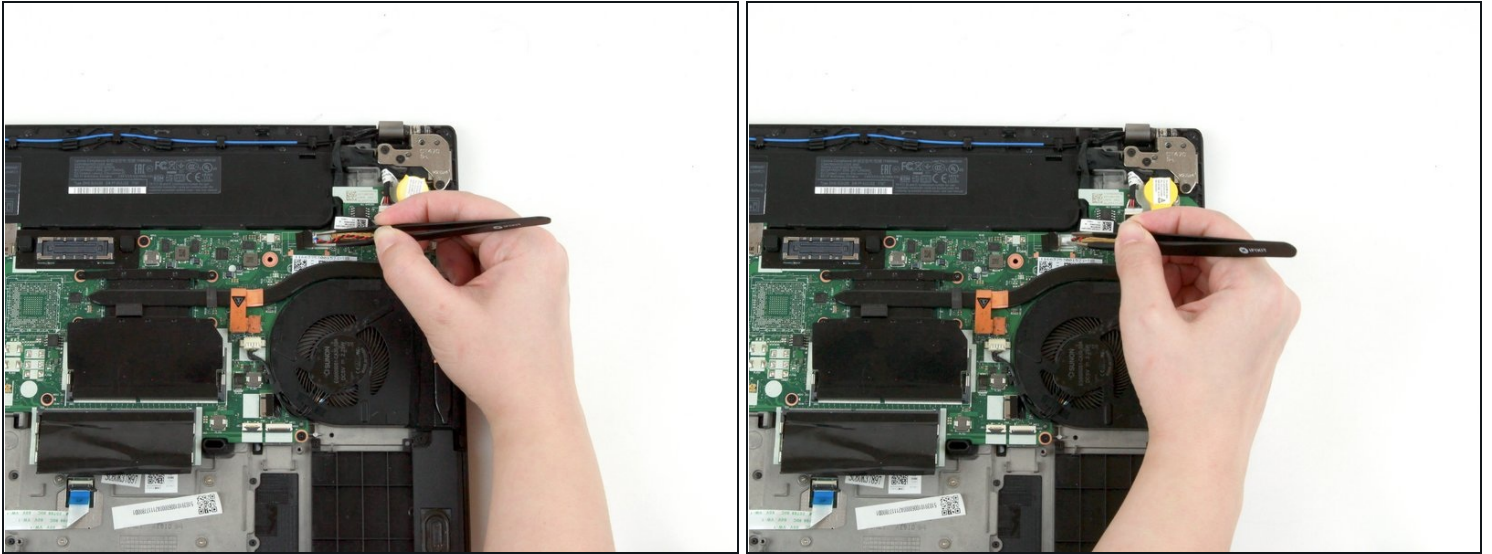
- Use a Phillips #1 screwdriver to remove the single 4 mm screw from the Wi-Fi card.

Step 25



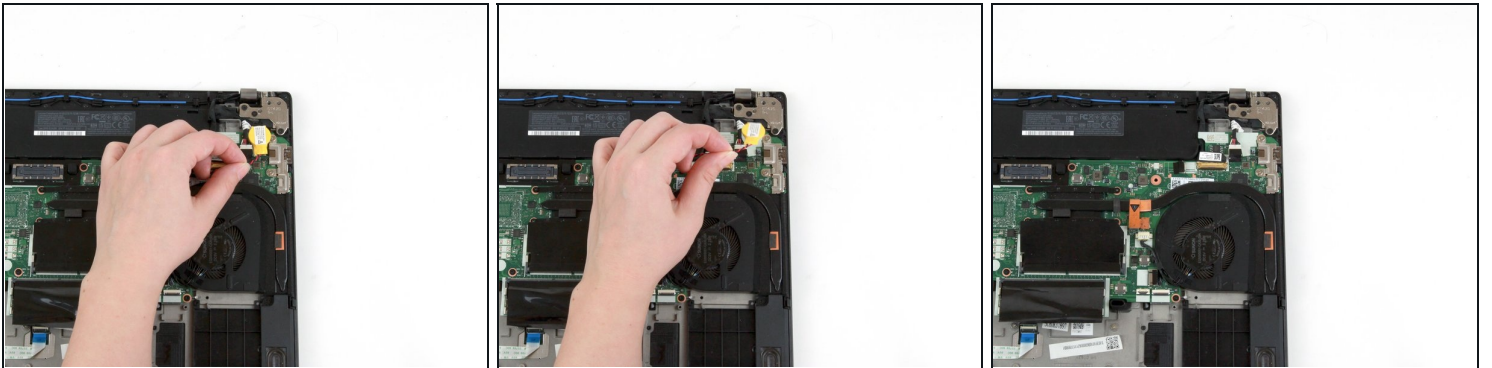
- Use your fingers to lift the Wi-Fi card up and out of its slot.
- This laptop does not include a WWAN card, but if yours does, follow the same procedure as Steps 9-12 to remove it.

Step 26



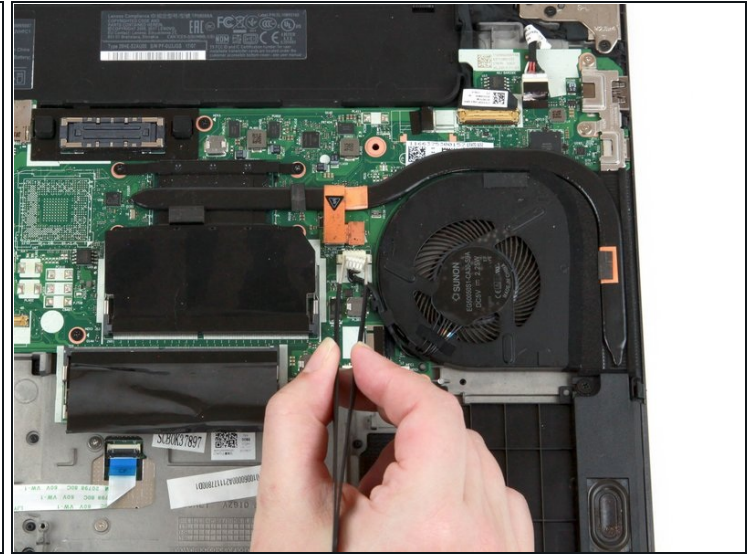
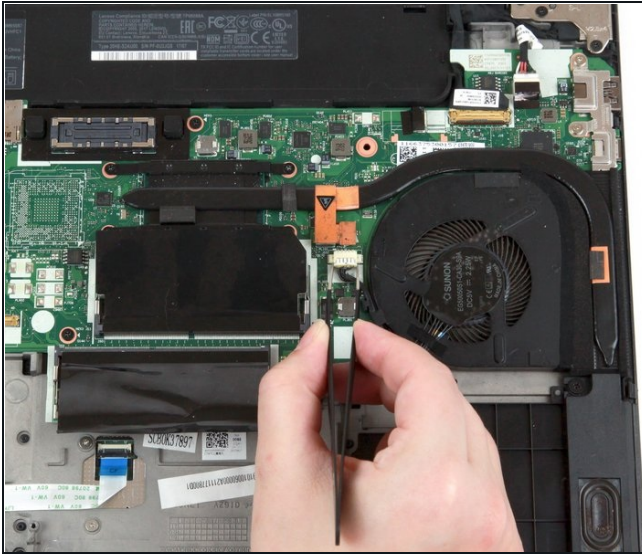
- Use a pair of blunt nose tweezers to pull the white connector out of its socket.

Step 27



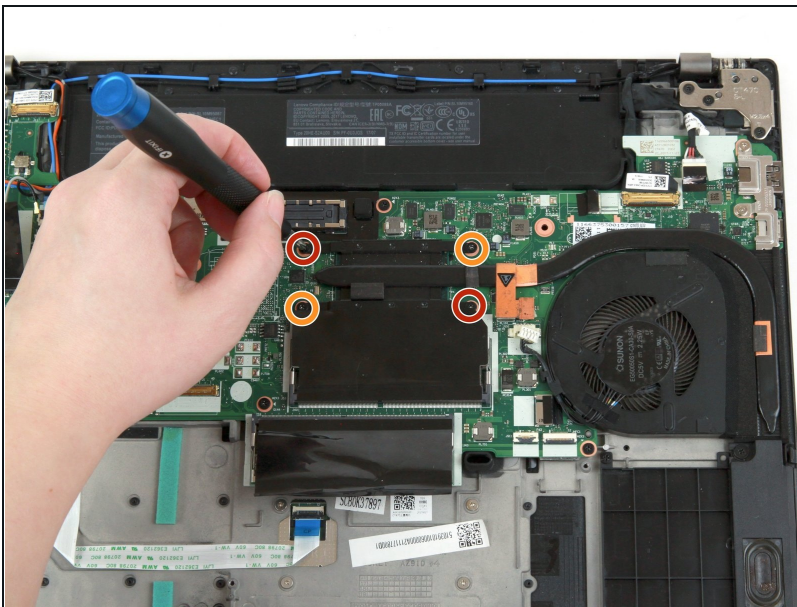
- Grab the wire attached to the coin cell battery, and lift it up and out of the laptop.

Step 28



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

Step 29



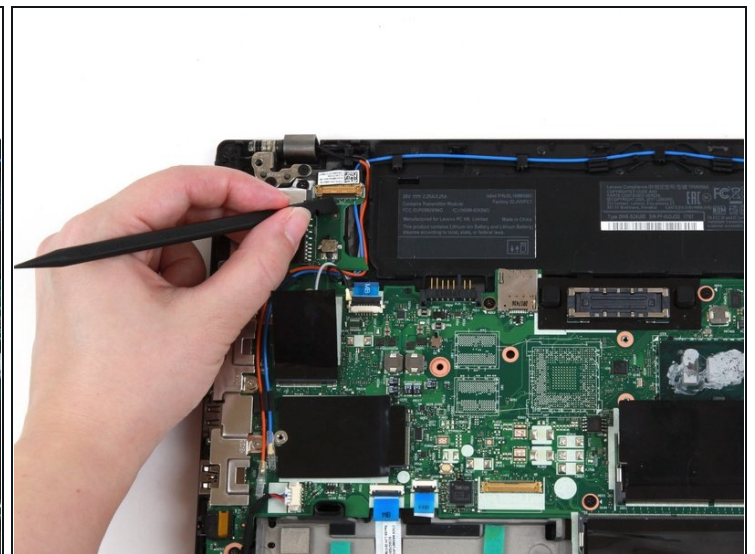
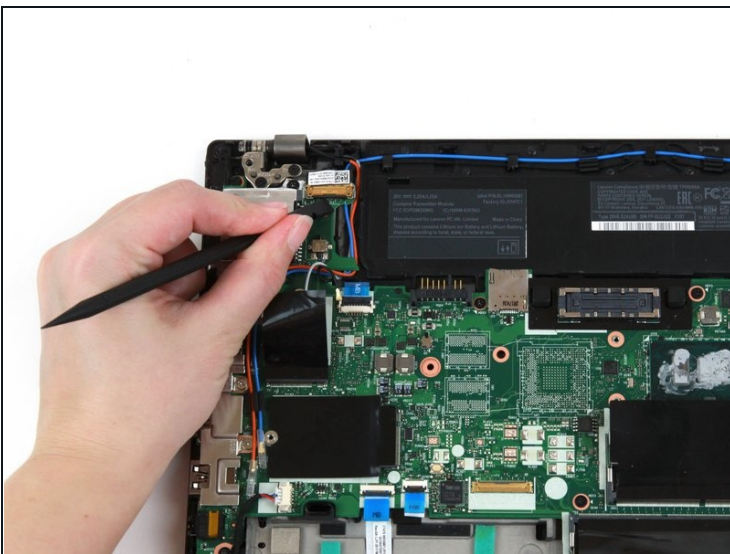
- Use a Phillips #1 screwdriver to loosen the first pair of captive screws on the fan and heat sink assembly in a crosswise pattern.
- Use a Phillips #1 screwdriver to loosen the second pair of captive screws on the fan and heat sink assembly in a crosswise pattern.

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



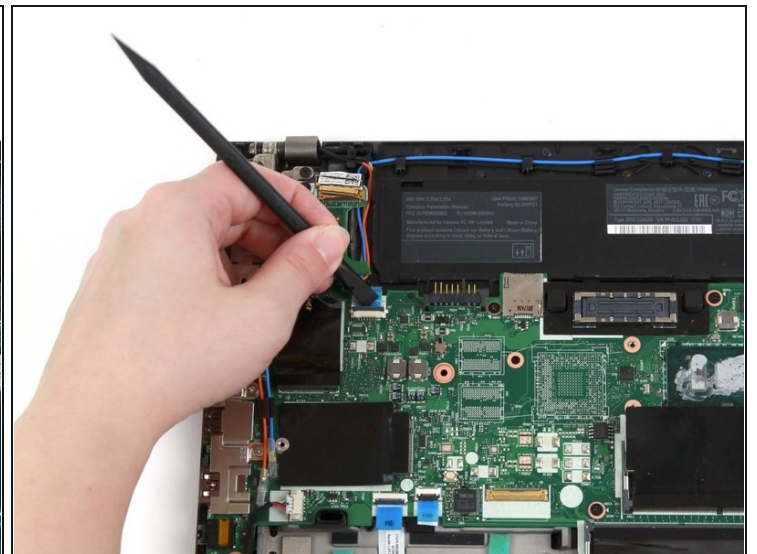
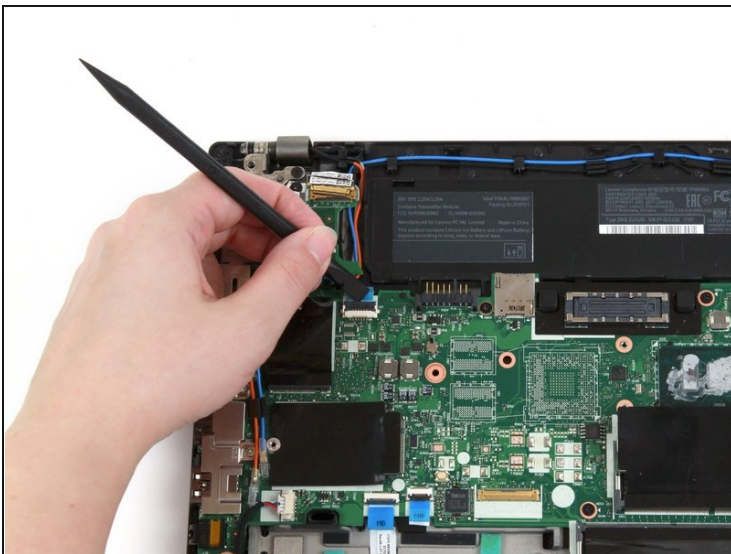
- Use the flat end of a spudger to flip up the metal clip securing the LCD cable to the motherboard.

Step 32



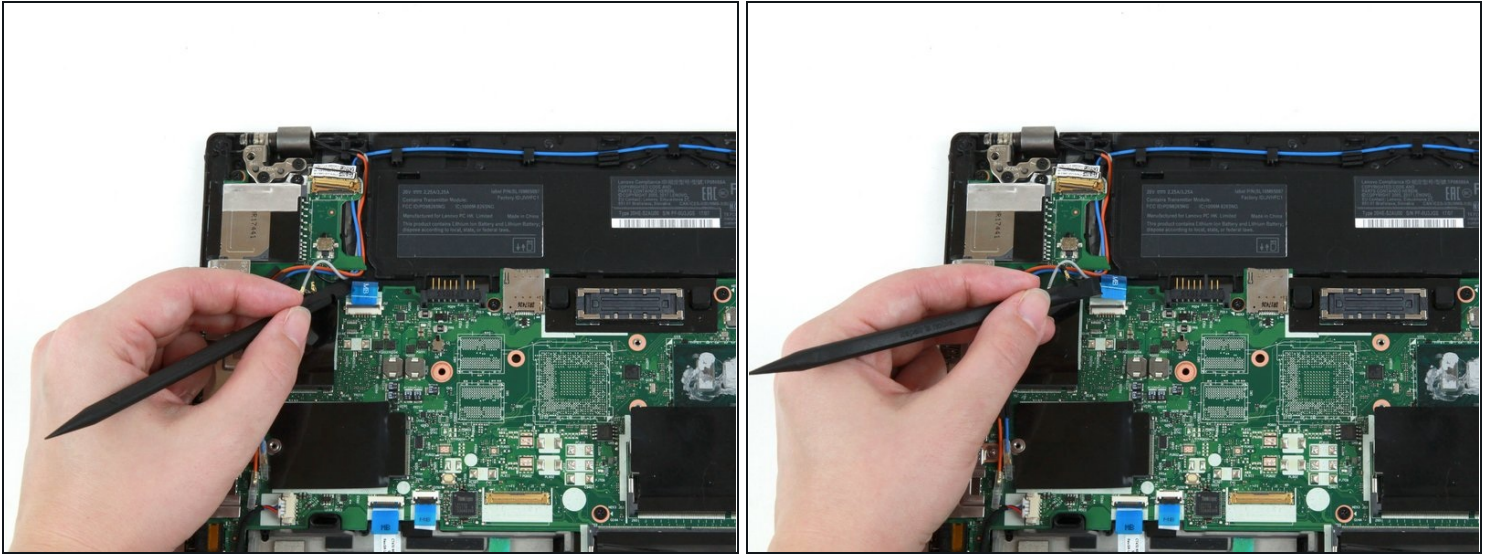
- Use the flat end of a spudger to disconnect the LCD cable from its socket on the motherboard.

Step 33



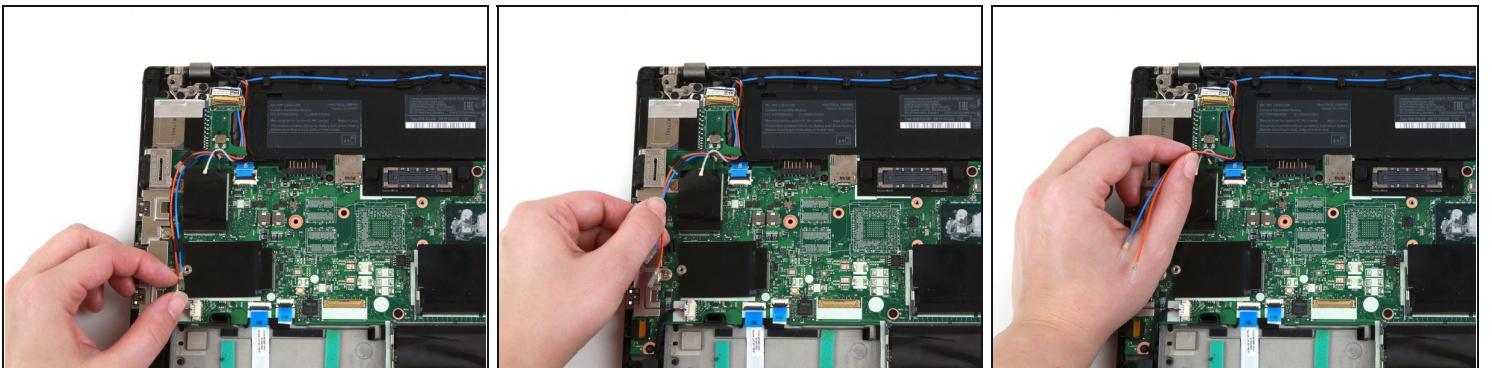
- Use the flat end of a spudger to flip the power button cable's black tab up.

Step 34



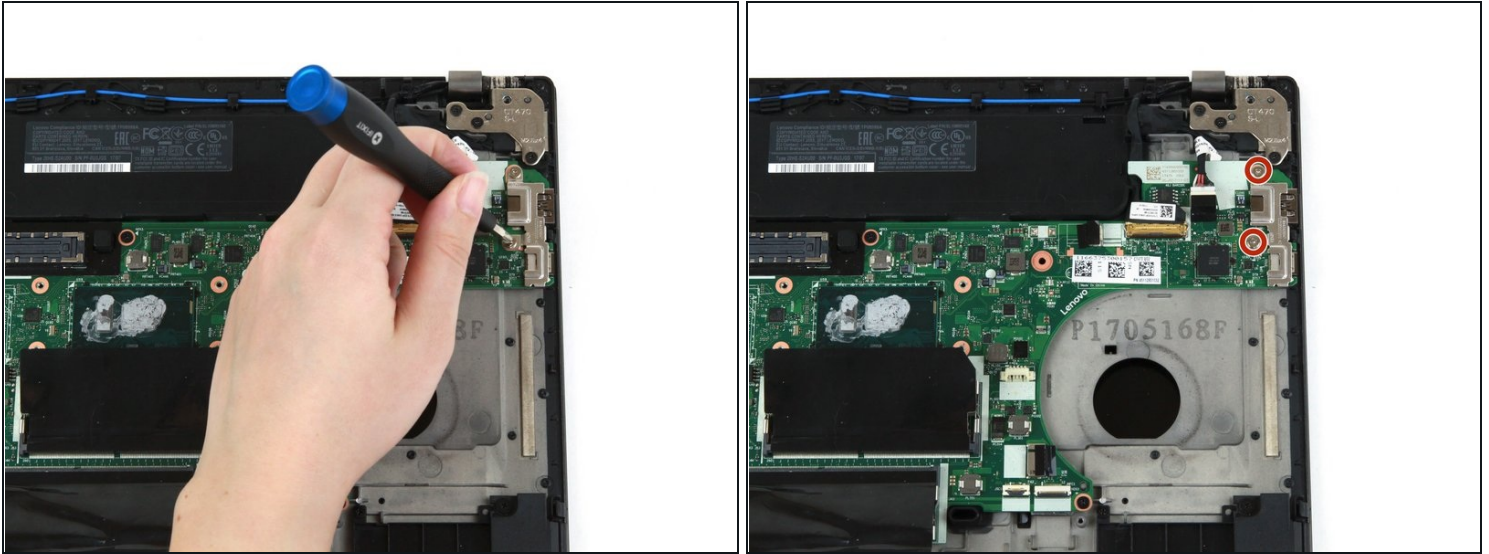
- Use the flat end of a spudger to slide the power button cable out of its connector on the motherboard.

Step 35



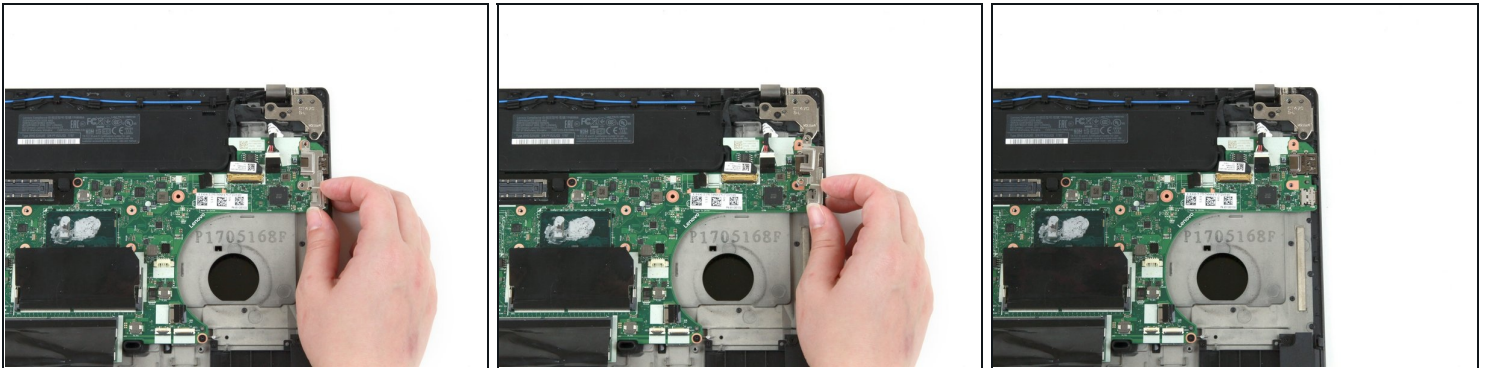
- Use your fingers to detach the red and blue antenna cables from their slots.

Step 36



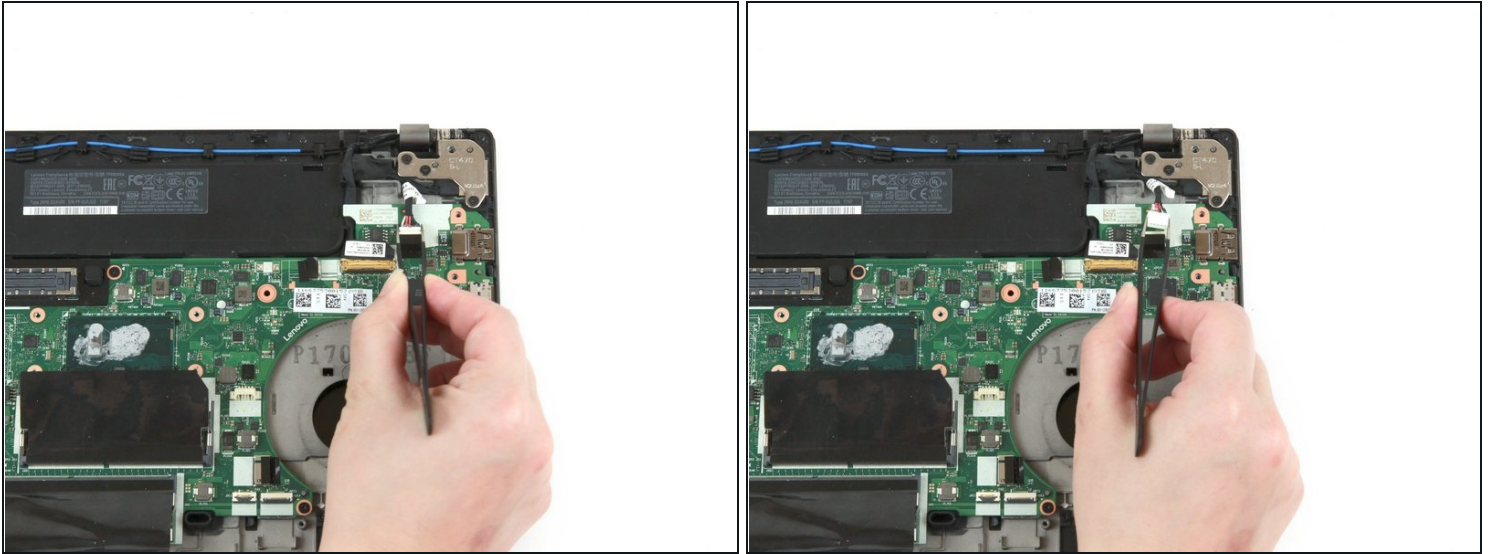
- Use a Phillips #1 screwdriver to remove the two 4 mm screws from the USB bracket.

Step 37



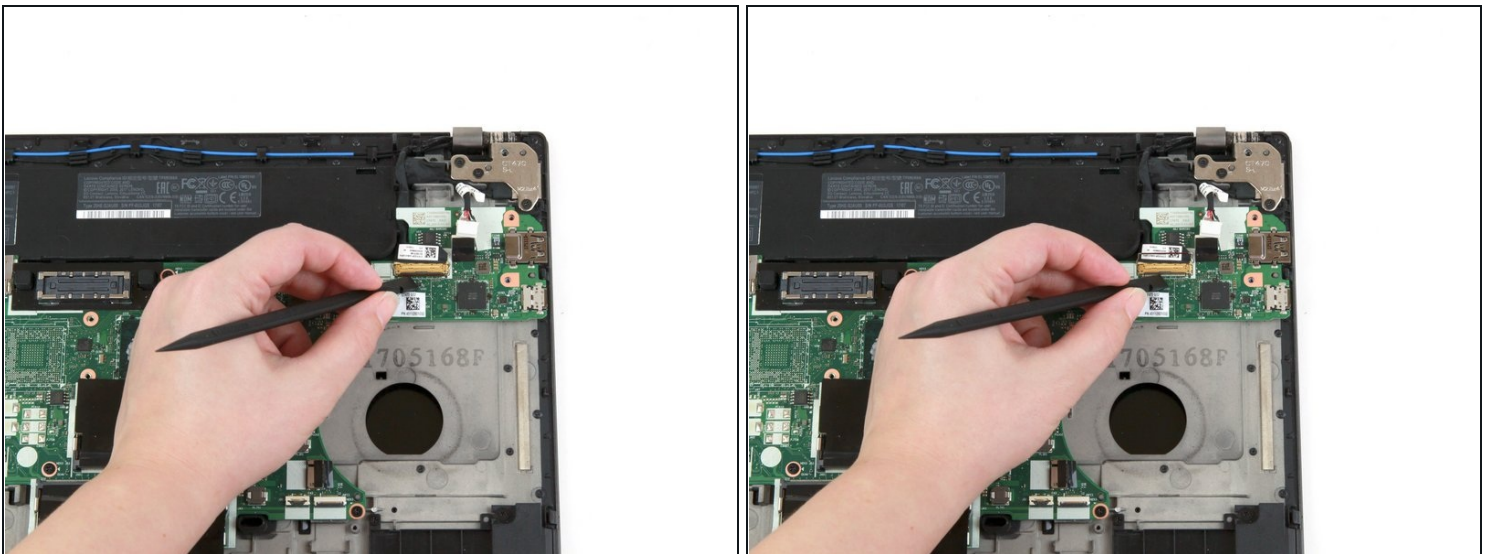
- Use your fingers to lift the USB bracket up and away from the laptop.

Step 38



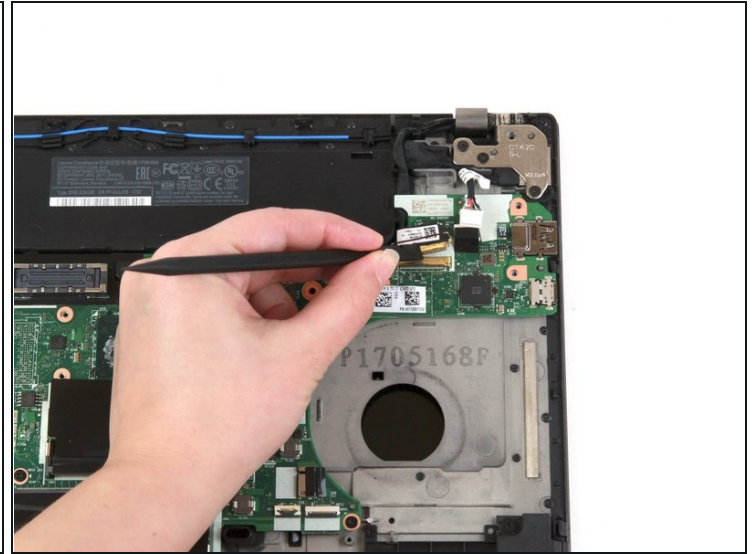
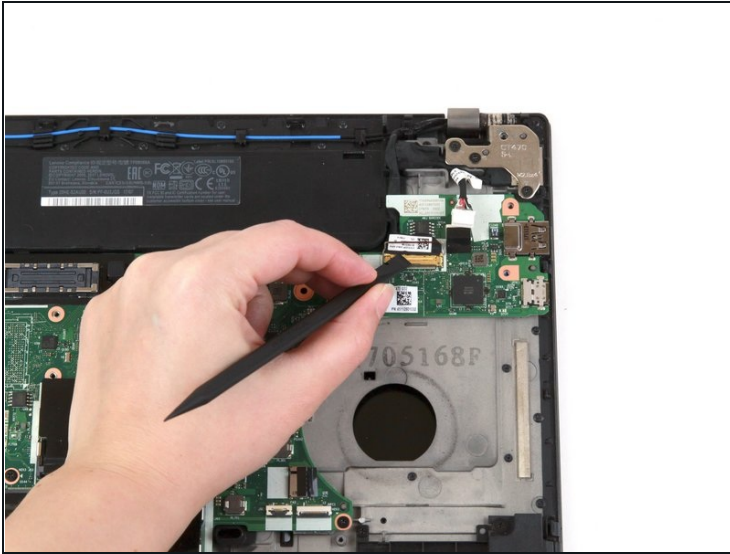
- Use a pair of blunt nose tweezers to disconnect the DC-in cable from its socket on the motherboard.

Step 39



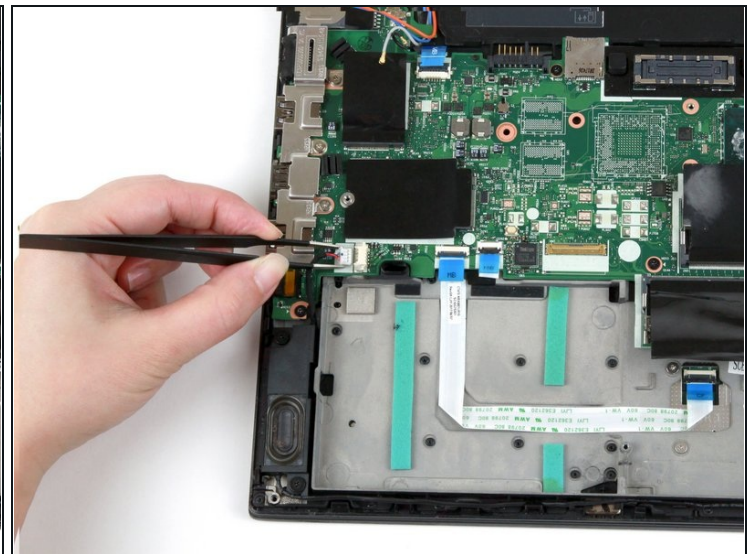
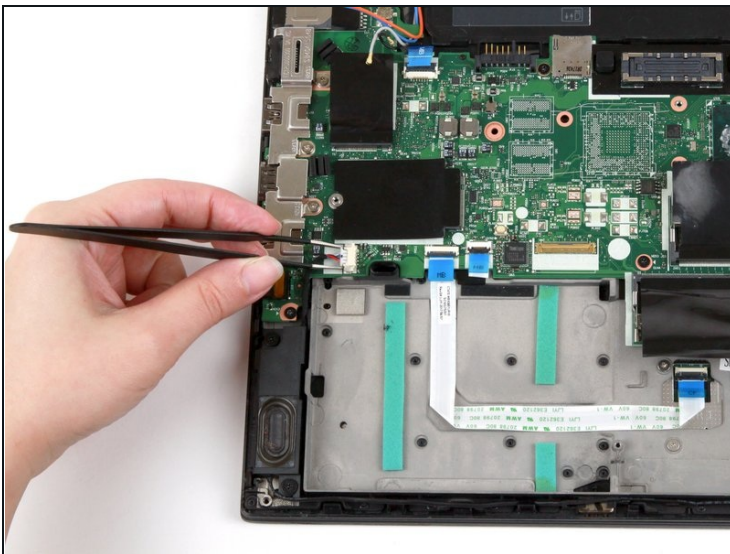
- Use the flat end of a spudger to flip up the metal bracket securing the camera cable to the motherboard.

Step 40



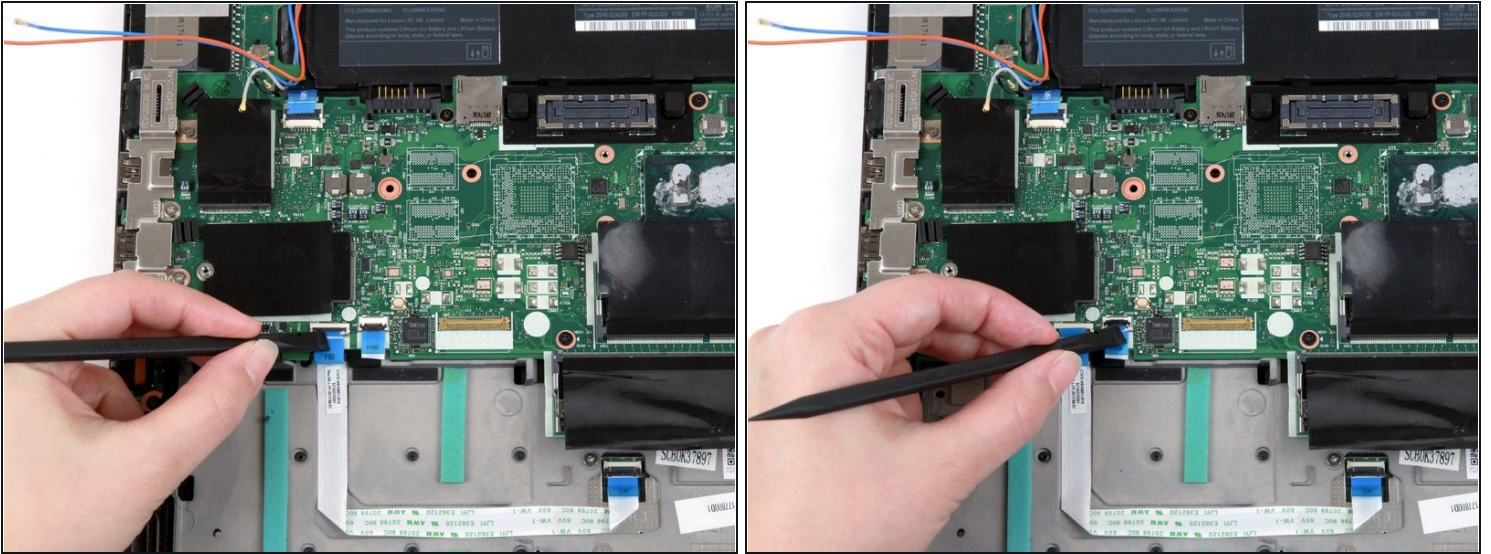
- Use the flat end of a spudger to disconnect the camera cable from its socket on the motherboard.

Step 41



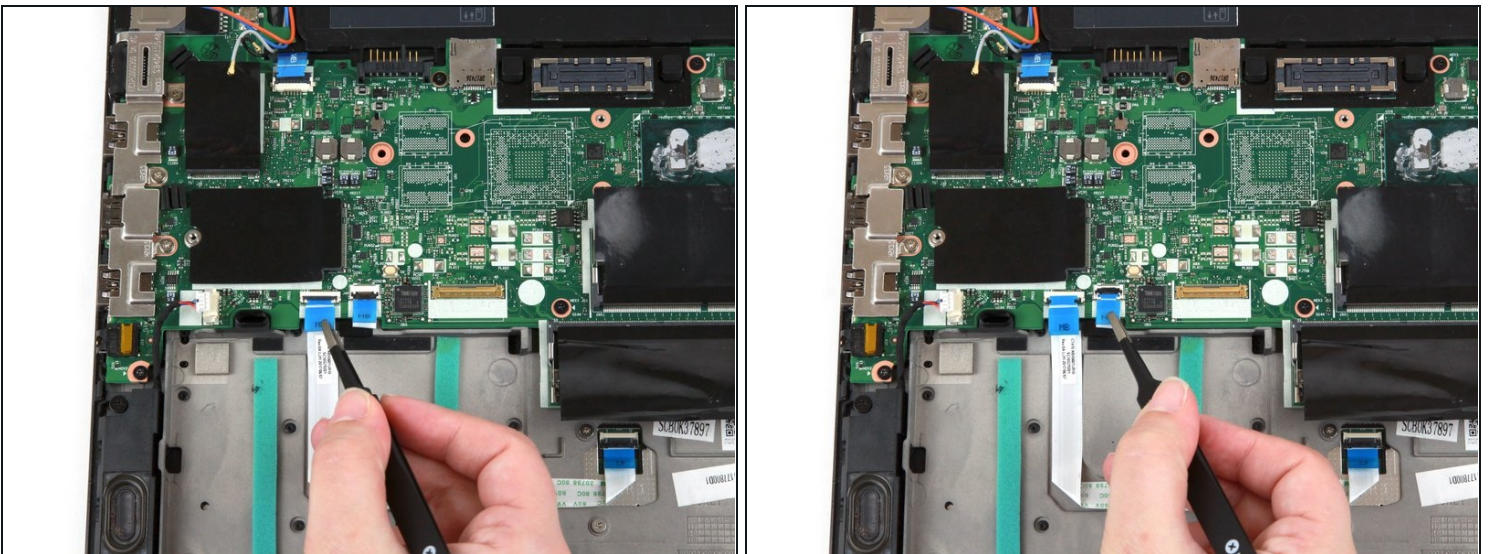
- Use a pair of blunt nose tweezers to disconnect the speaker cable from its socket on the motherboard.

Step 42



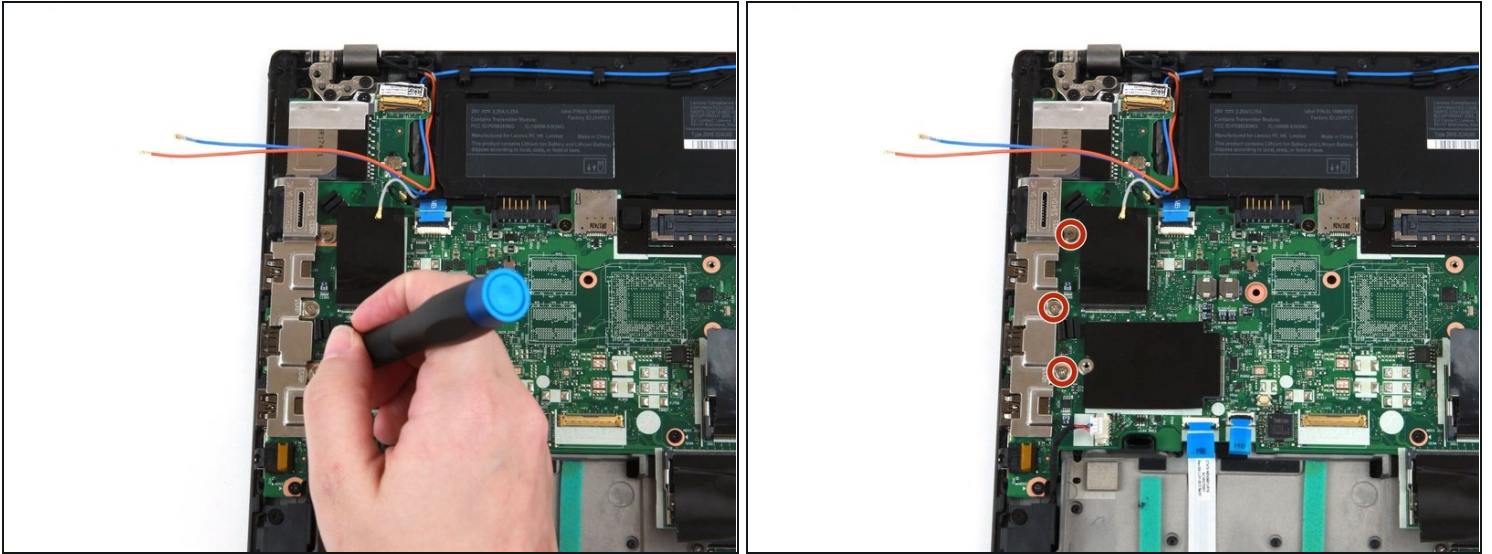
- Use the flat end of a spudger to flip up the black tabs on the trackpad and fingerprint reader cables.

Step 43



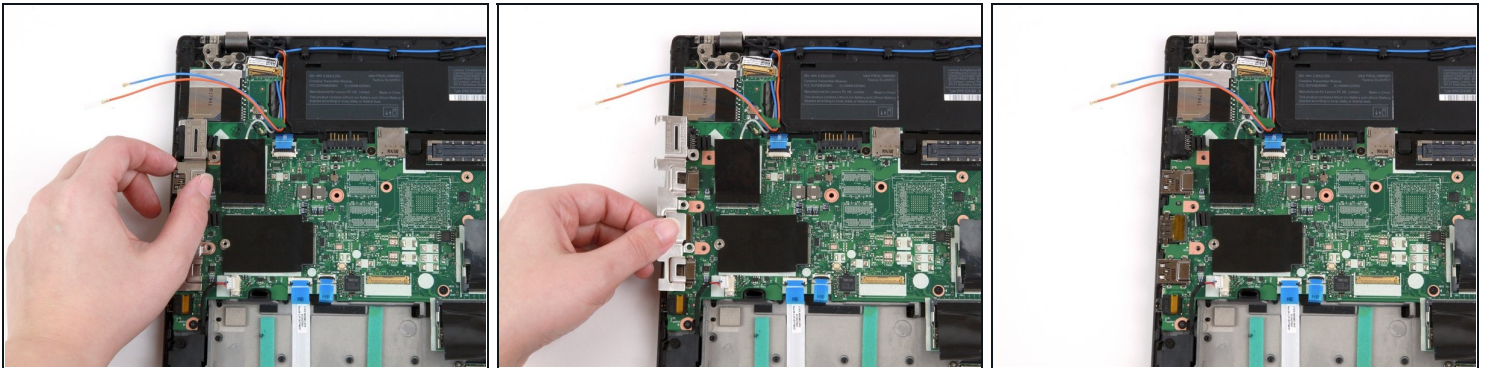
- Use a pair of blunt nose tweezers to slide the trackpad and fingerprint reader cables out of their connectors on the motherboard.

Step 44



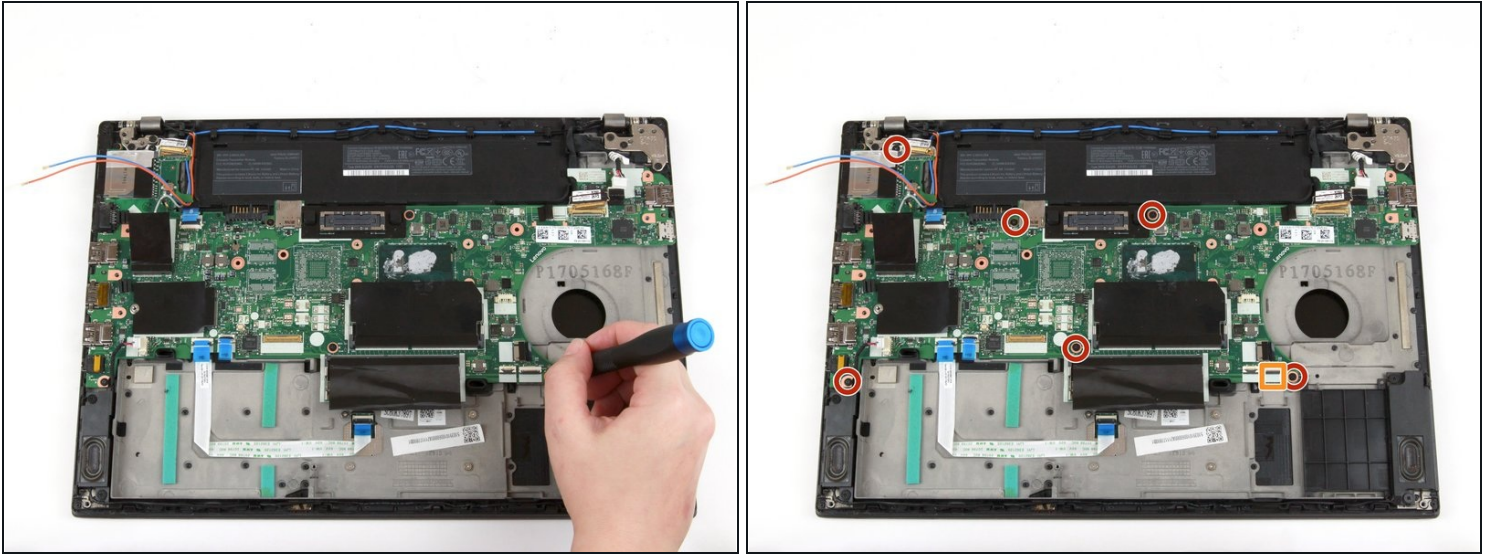
- Use a Phillips #1 screwdriver to remove the three 4 mm screws from the I/O bracket.

Step 45



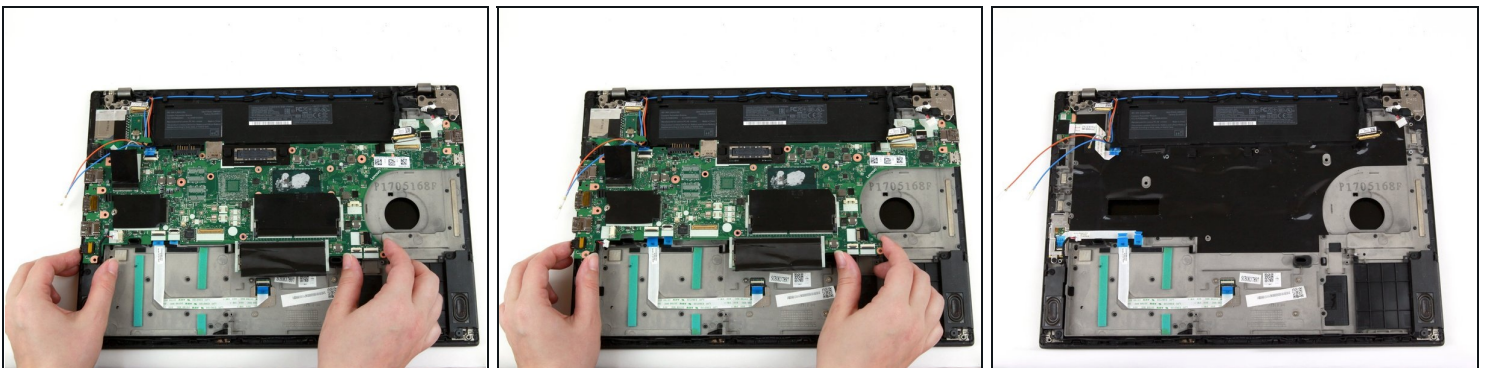
- Use your fingers to slide the I/O bracket to the left.
- Lift the I/O bracket up and away from the laptop.

Step 46



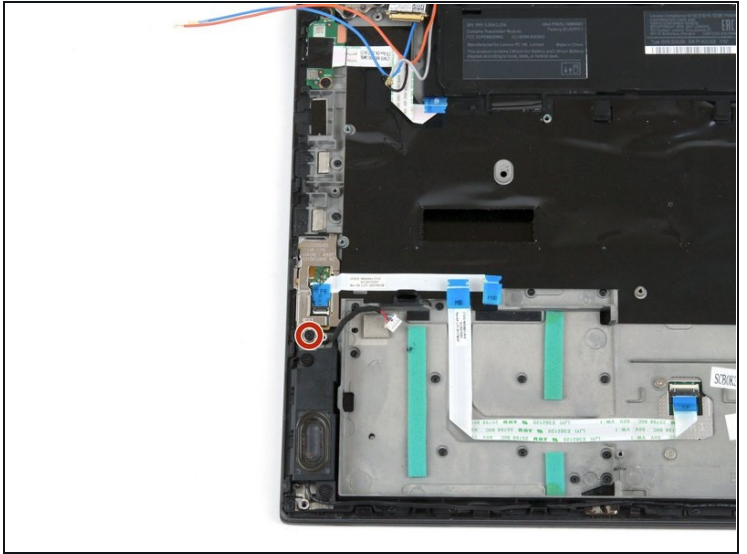
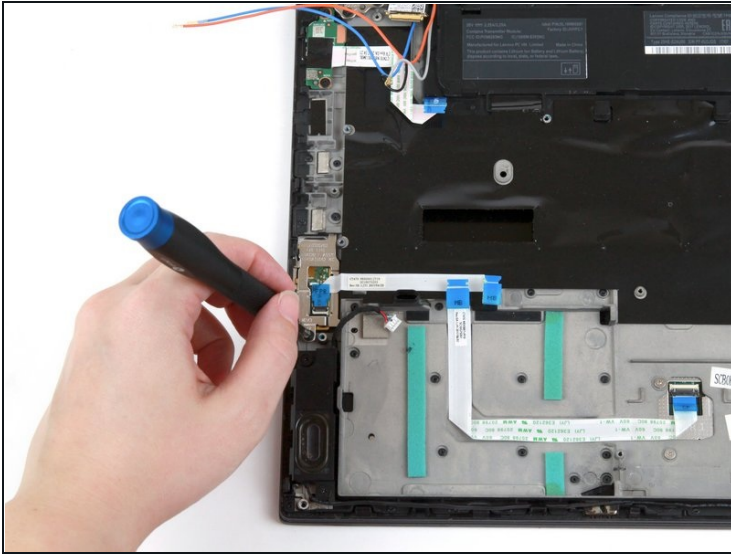
- Use a Phillips #1 screwdriver to remove the six 4 mm screws from the motherboard.
- This laptop does not have an NFC cable, but if yours does, use the flat end of a spudger to flip up the tab and slide the cable out of its connector.

Step 47



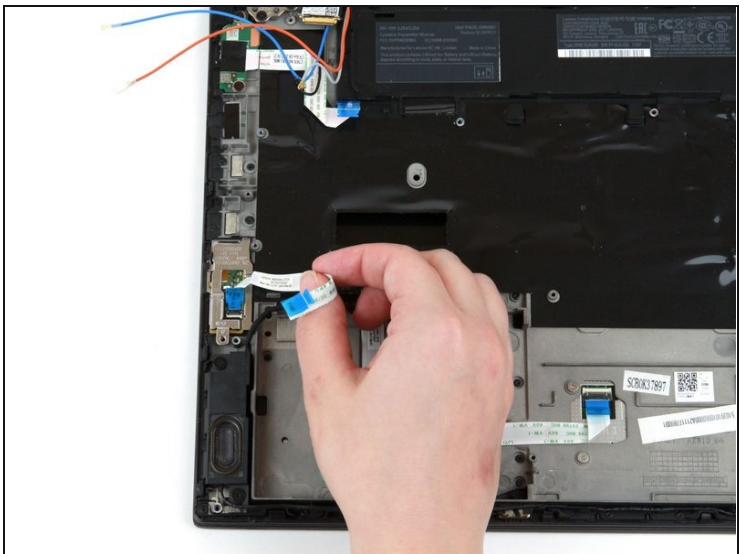
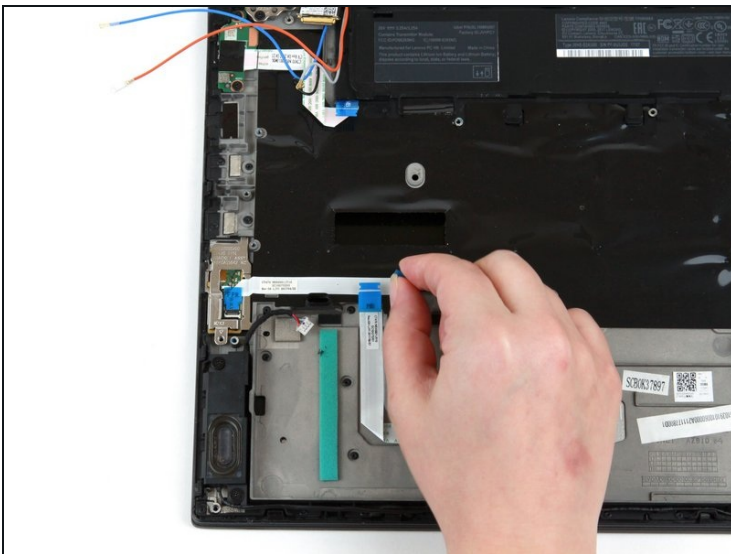
- Use both hands to lift the motherboard up and away from the laptop.

Step 48 — Fingerprint Reader



- Use a Phillips #1 screwdriver to remove the single 4 mm screw from the fingerprint reader bracket.

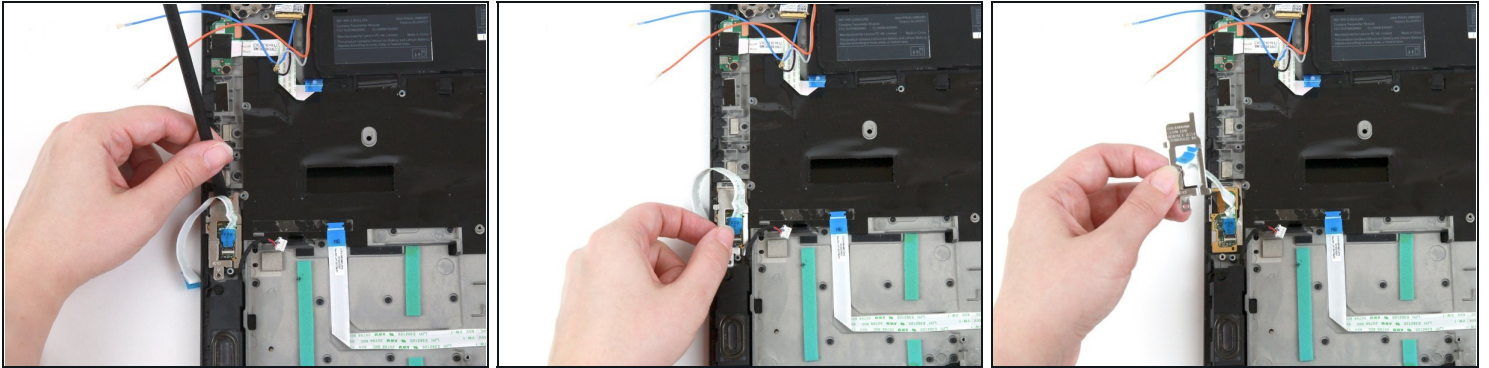
Step 49



- Peel up the white ribbon cable.

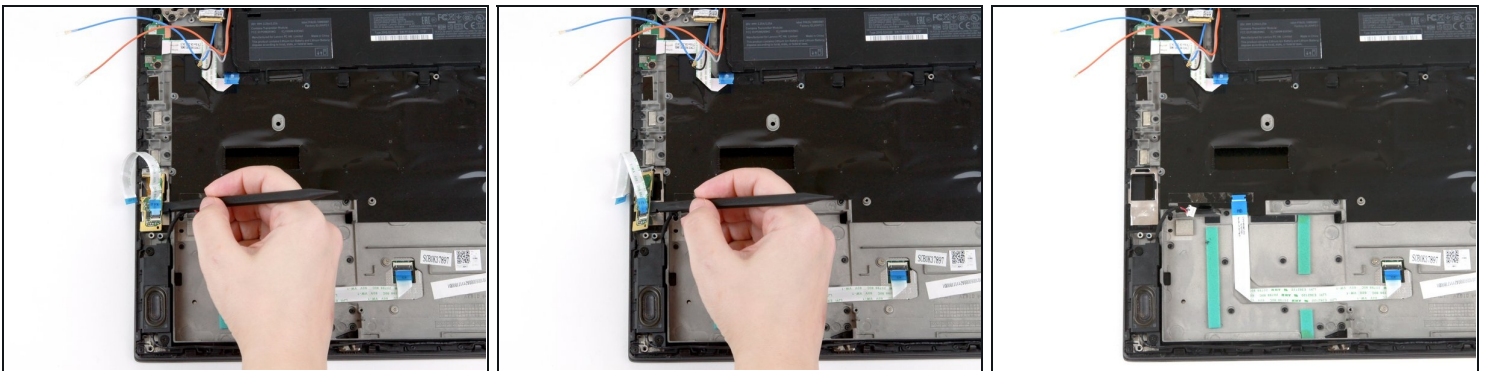
⚠ Potential for device damage: The cable may be attached to the laptop with strong adhesive, so be cautious not to tear it.

Step 50



- Use the flat end of a spudger to pry the metal bracket away from the fingerprint reader.
- Use your fingers to lift the bracket up and away from the fingerprint reader.

Step 51



- Use the flat end of a spudger to pry the fingerprint reader up and away from the laptop.

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.