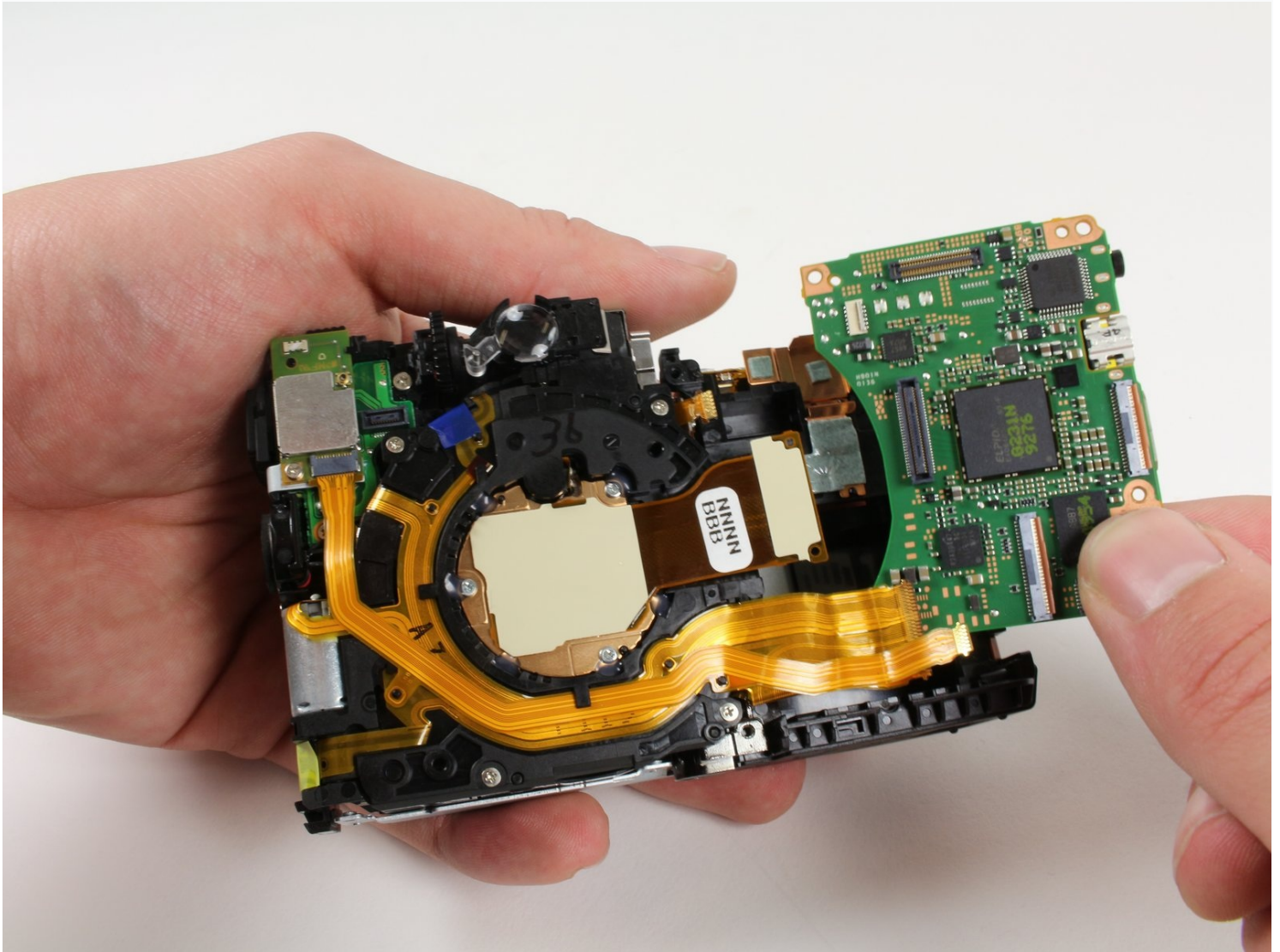# Canon PowerShot G16 Motherboard Replacement

This guide will show you how to replace the...

Written By: Jonathan Harger

INTRODUCTION

This guide will show you how to replace the motherboard in your Canon PowerShot G16 which may be necessary if the motherboard has stopped working. A broken motherboard may result in a camera that doesn't turn on, frozen menus, or general unresponsiveness.

🔧 TOOLS:

Tweezers (1)
Phillips #00 Screwdriver (1)
Phillips #000 Screwdriver (1)
Spudger (1)
Anti-Static Wrist Strap (1)
iFixit Opening Tool (1)

Step 1 — Battery

- Open the battery flap on the bottom of the camera by applying pressure and pushing in the direction of the arrow.

- Remove your finger and allow the flap to pop open.

Step 2

- Push the brown lever so that it pivots counterclockwise.

- Grip and remove the battery.

Step 3 — Button Circuit Board

- Remove the ring around the lens by simultaneously pressing the black button located at the bottom right of the ring and rotating the ring counterclockwise.

Step 4

- Remove the four 3.3 mm screws on the bottom of the camera using a Phillips #00 screwdriver.

Step 5

- Remove the 3.3 mm screw on the right side of the viewfinder using a Phillips #00 screwdriver.
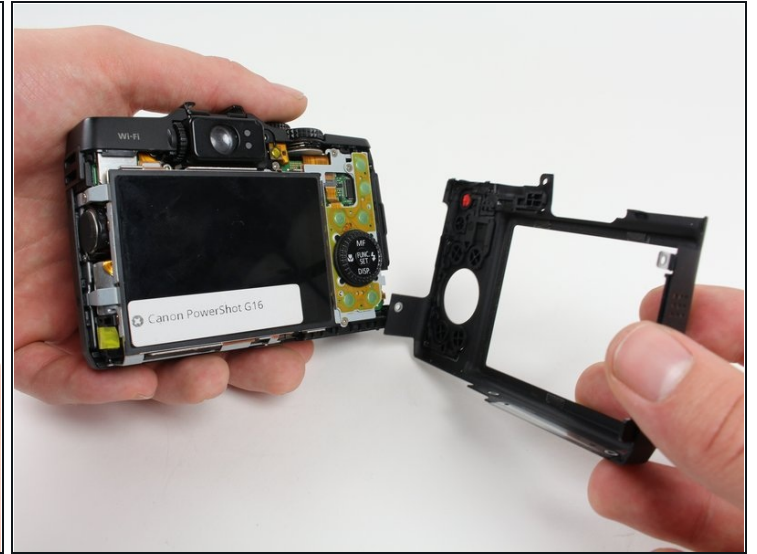
Step 6

- Remove the two 3.3 mm screws near the speaker using a Phillips #00 screwdriver.

Step 7

- Open the port cover by lifting up the tab with your finger and remove the 3.3 mm screw underneath the cover using a Phillips #00 screwdriver.

- Remove the other 3.3 mm screw below the ports using a Phillips #00 screwdriver.
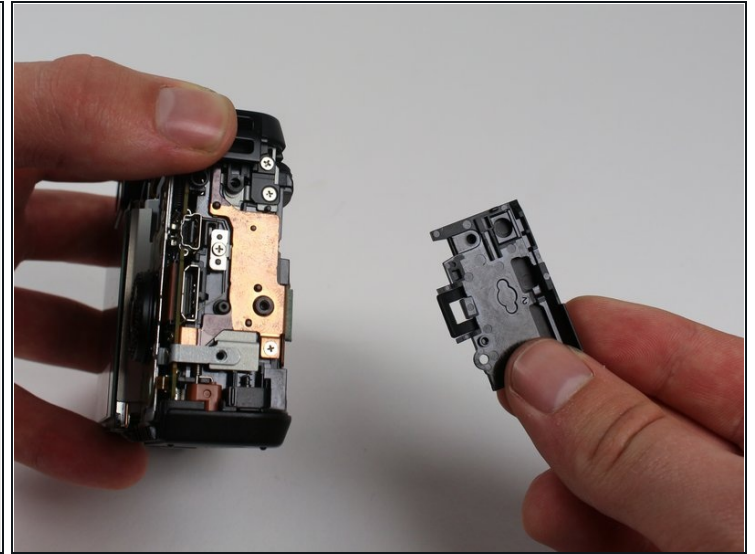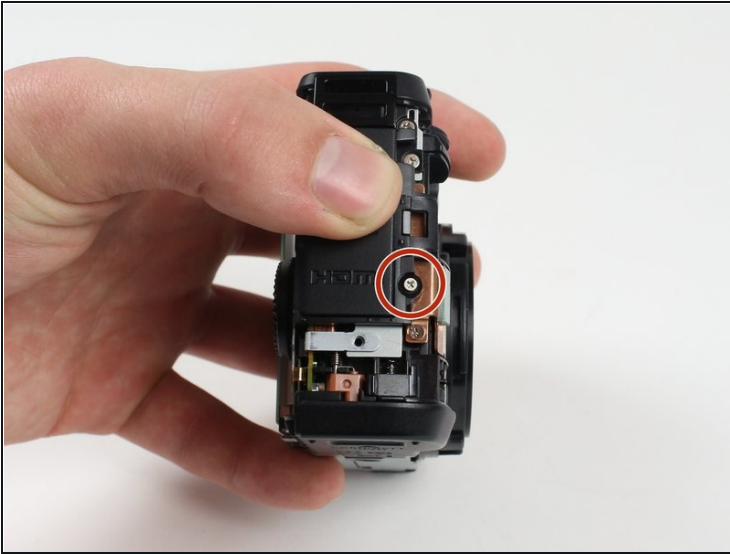
Step 8

- Using your fingers, carefully pull the the back cover off by grabbing the bottom left of the back cover and pulling outwards.
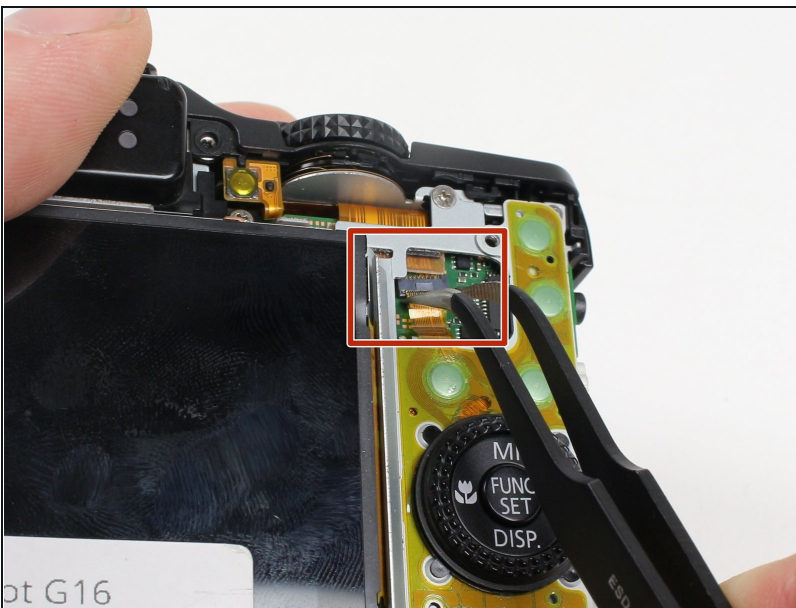
Step 9

- Using your fingers, carefully pry the front cover off starting at the bottom right.

Step 10

- Remove the 3.8 mm screw at the bottom right of the port cover housing using a Phillips #00 screwdriver.

- Lift away the port cover housing.

Step 11

- Reorient the camera so that you are looking at the back.

- ⚠ Make sure to pull the connector straight down as pulling up may cause harm to the connector.

- Unplug the button circuit board from the motherboard by unlocking the ZIF connector (gently lift the brown lock that keeps the cable in place).

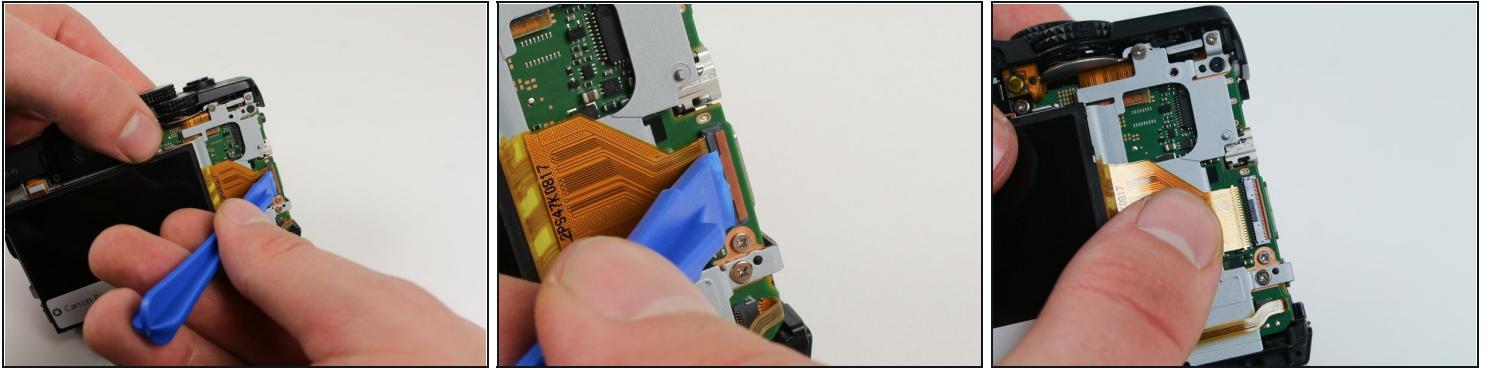- Pull the connector downwards with the [tweezers](#).

Step 12

- Remove the 3.0 mm screw on the top of the button memory board using a Phillips #00 screwdriver.

- Remove the 2.8 mm screw on the bottom of the button memory board using a Phillips #00 screwdriver.

Step 13

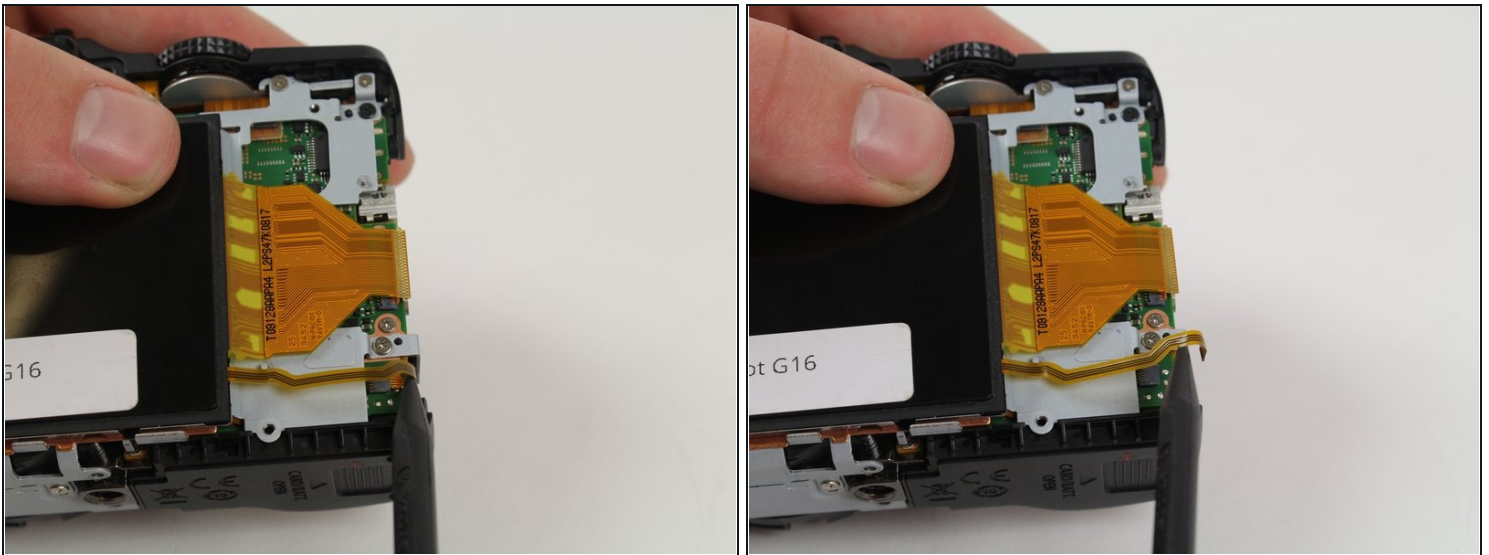- Lift the button circuit board away from the camera.

Step 14 — LCD

⚠ Do not pull the connector upwards as doing so may harm the connector housing.
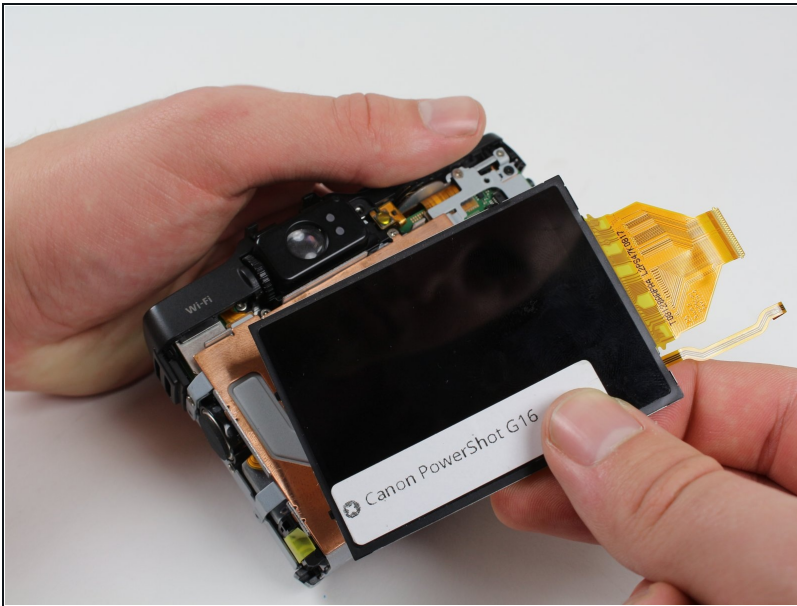
- Unlock the ZIF connector for the large connector ribbon by lifting up on the brown flap with the plastic opening tool.

- Gently pull the connector straight out of the housing with your fingers.

Step 15

- Unplug the small connector ribbon by pulling the cable outwards from the camera using a spudger or your fingers.
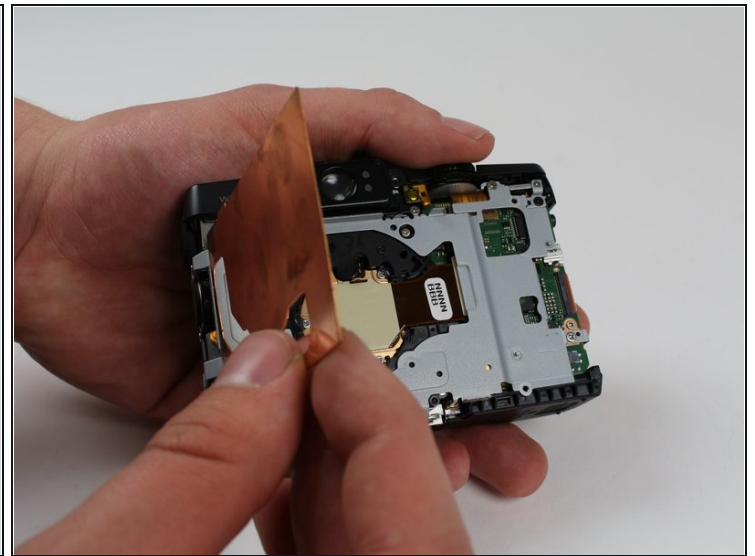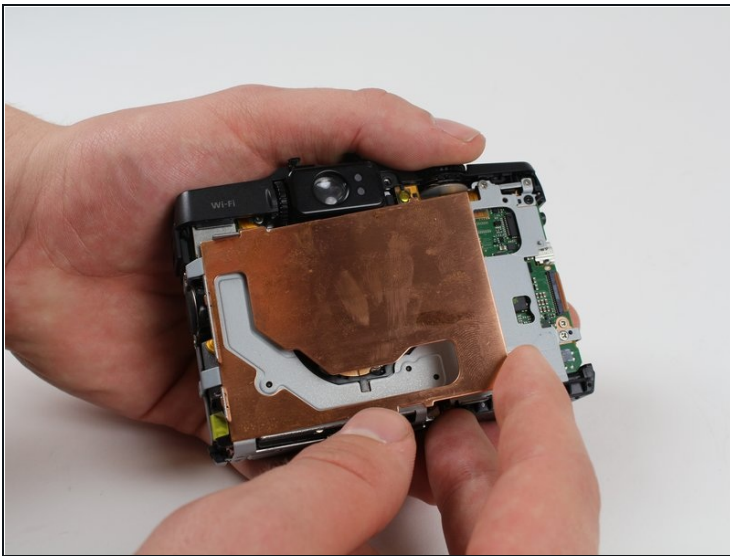
Step 16

⚠ Be careful of the copper plate that may fall out once you lift the LCD screen away.

- Gently lift the LCD away from the camera housing.

Step 17 — Motherboard

⚠ Be careful not to bend the EMI shield.

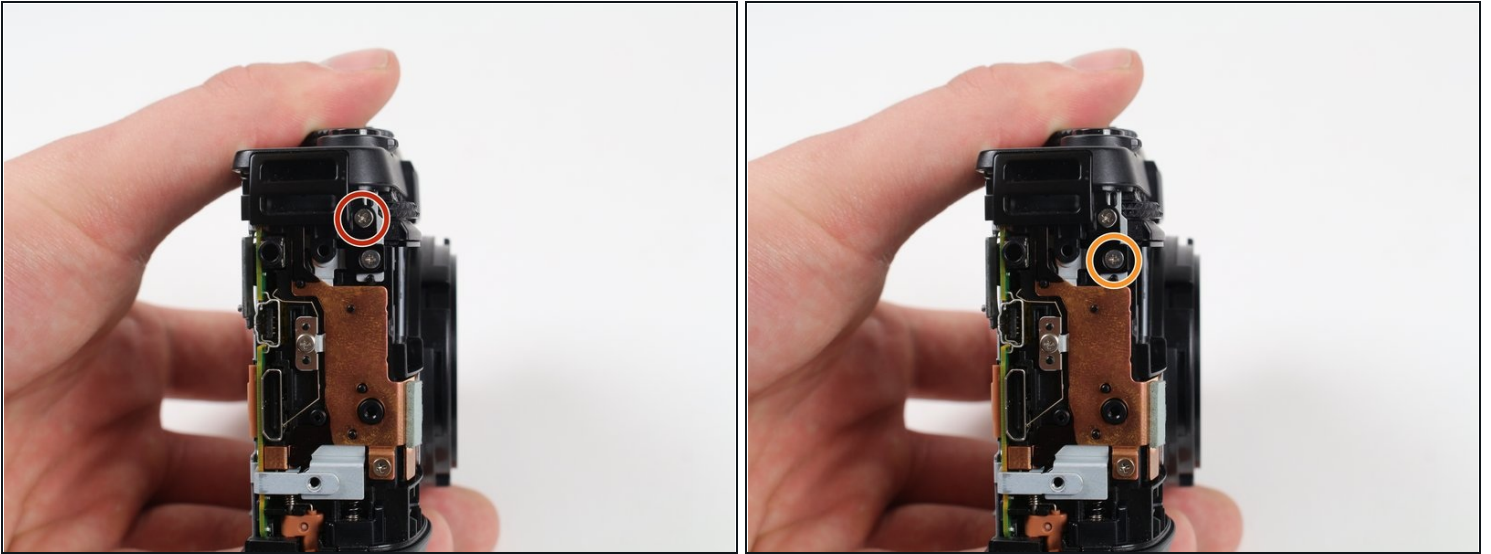- Lift and remove the copper EMI shield.

Step 18

- Reorient the camera so that you are looking at the front.

- Remove the 2.8 mm screw right above the screw holding the lens on using a Phillips #00 screwdriver.

- Remove the 3.3 mm black screw to the left of the front viewfinder using a Phillips #000 screwdriver.
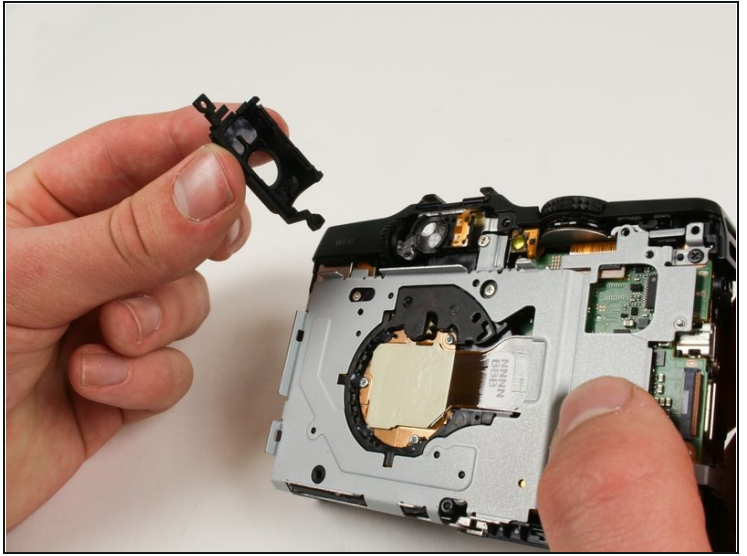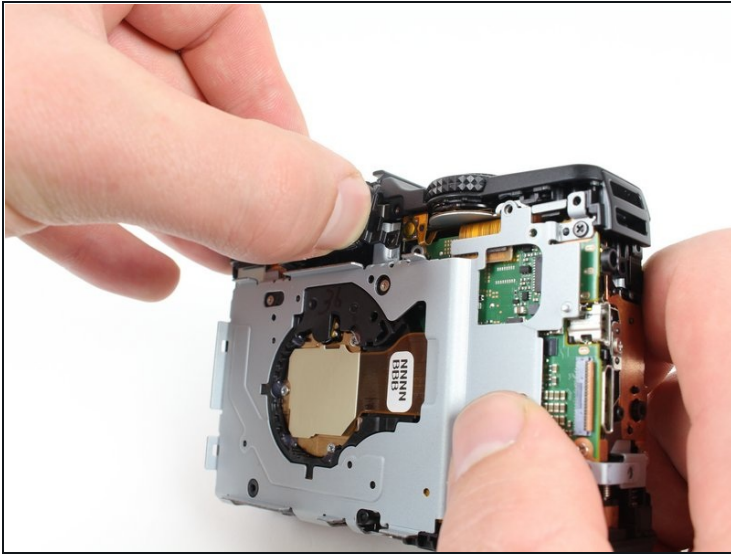
Step 19

- Reorient the camera so that you are looking at the back.

- Remove the 6.8 mm screw to the left of the rear viewfinder using a Phillips #00 screwdriver.

- Remove the 5.2 mm screw to the right of the rear viewfinder using a Phillips #00 screwdriver.
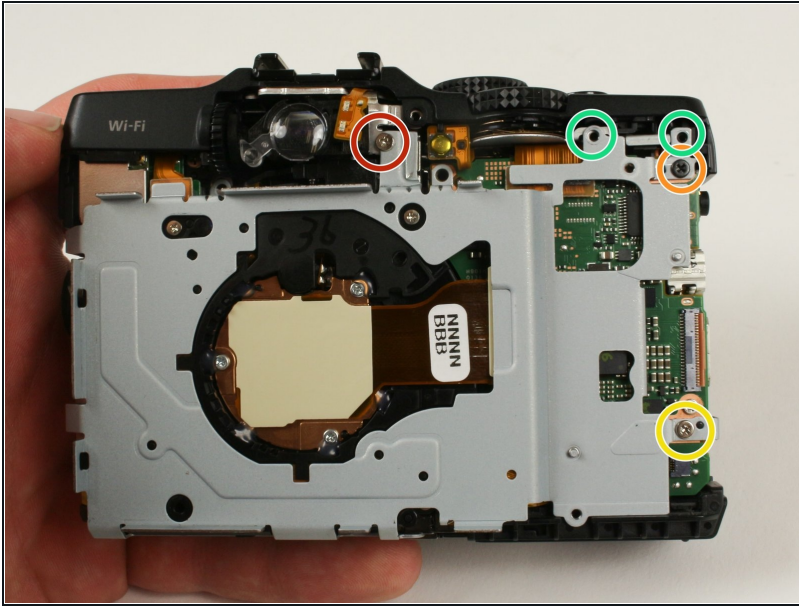
Step 20

- Remove the top 2.3 mm screw from the side with the ports using a Phillips #00 screwdriver.

- Remove the 4 mm screw right below the one you just removed using a Phillips #00 screwdriver.
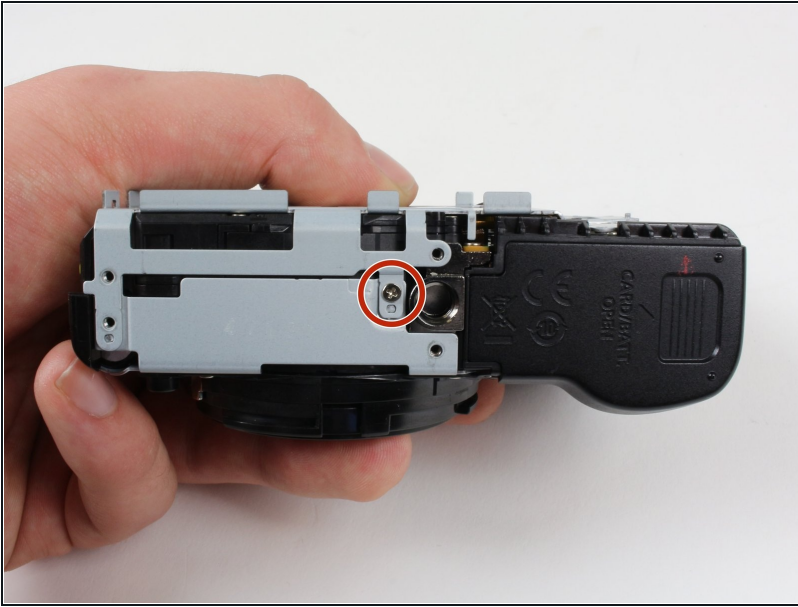
Step 21

- Reorient the camera so that you are looking at the back of the camera.

- Remove the rear viewfinder casing by firmly gripping it and pulling it out bottom first.

- ☑ When reassembling, make sure that the viewfinder is fitted correctly beneath the top cover.
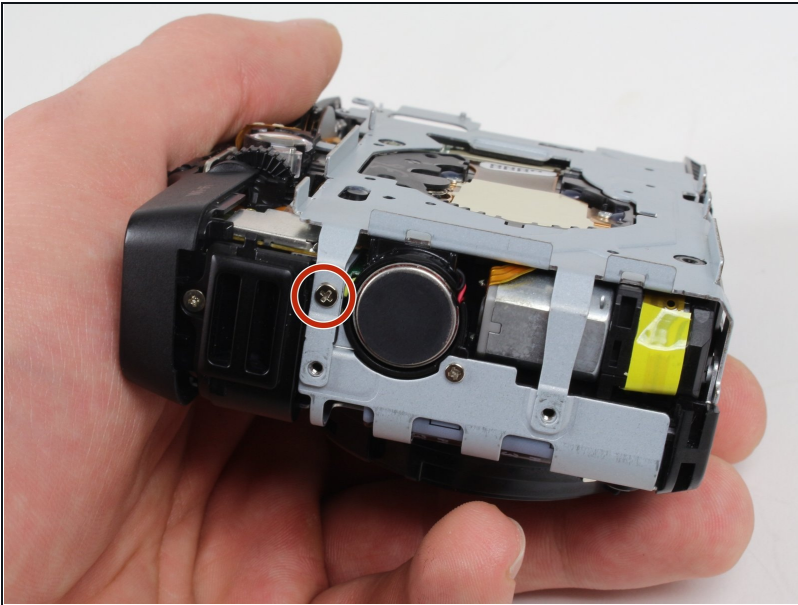
Step 22

- Remove the newly uncovered 2.8 mm screw from the right of the viewfinder using a Phillips #00 screwdriver.

- Remove the 4.9 mm screw from top right of the metal casing on the back using a Phillips #00 screwdriver.

- Remove the 4.3 mm screw from bottom right of the metal casing on the back using a Phillips #00 screwdriver.

- Remove the newly uncovered screws from the right of the viewfinder using a Phillips #00 screwdriver. (Note, they're already removed on the picture)
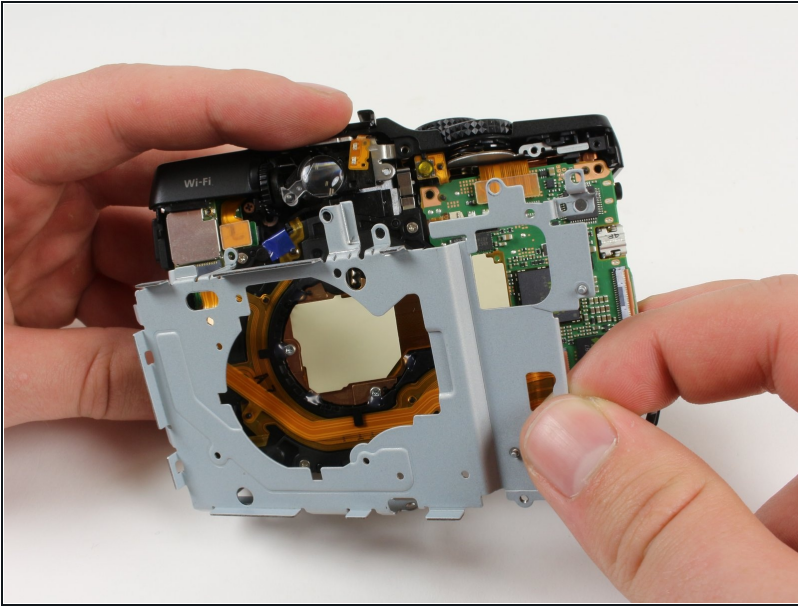
Step 23

- Remove the 2.7 mm screw from the bottom of the camera using a Phillips #00 screwdriver.
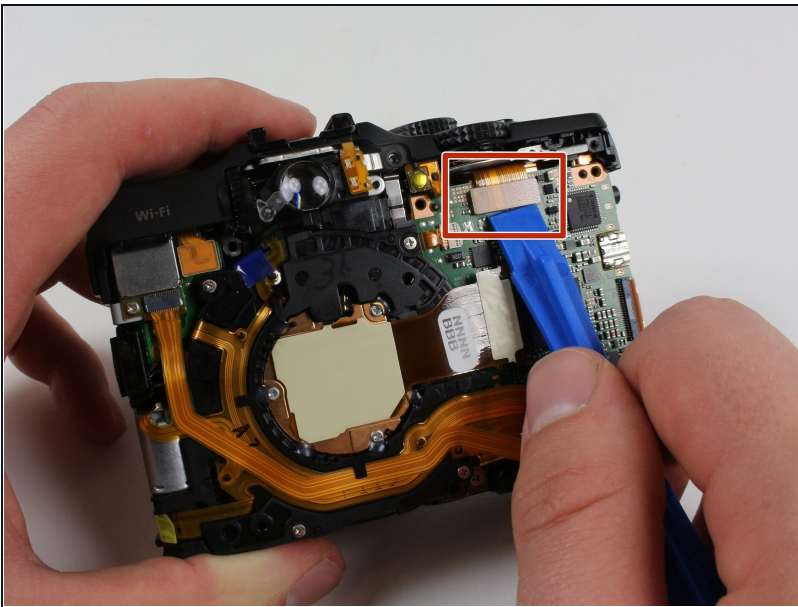
Step 24

- Reorient the camera so that you are looking at the side with the black felt circle.

- ⚠ Use caution around this black felt covered circle that is right below the screw to be removed. This is the speaker and can easily be damaged if pressed too hard or poked with a screwdriver.

- Remove the 2.8 mm screw from the right side of the camera if you are looking at the front lens using a Phillips #00 screwdriver.
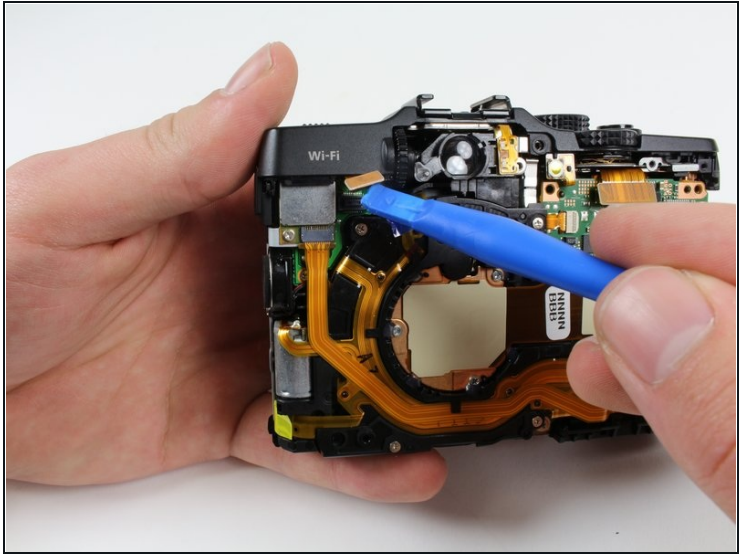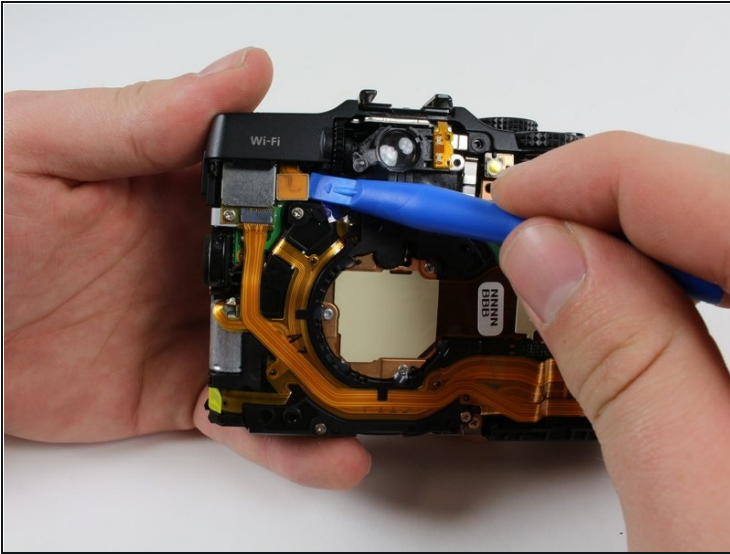
Step 25

- Reorient the camera so that you are looking at the back of the camera.

- Remove the metal casing from the back by lifting it away from the camera.
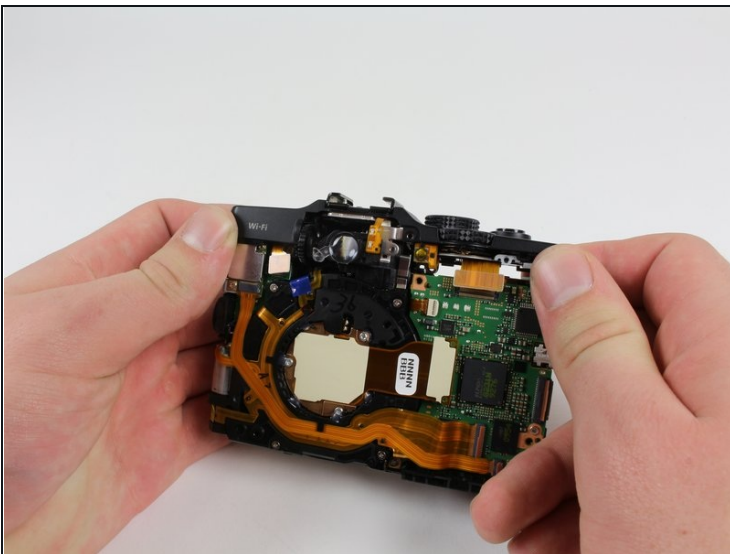
Step 26

- Disconnect the cable on the top of the motherboard by lifting it up vertically using a plastic opening tool.

Step 27

- Disconnect the cable on the back of the camera to the left of the viewfinder by lifting it up vertically using a plastic opening tool.
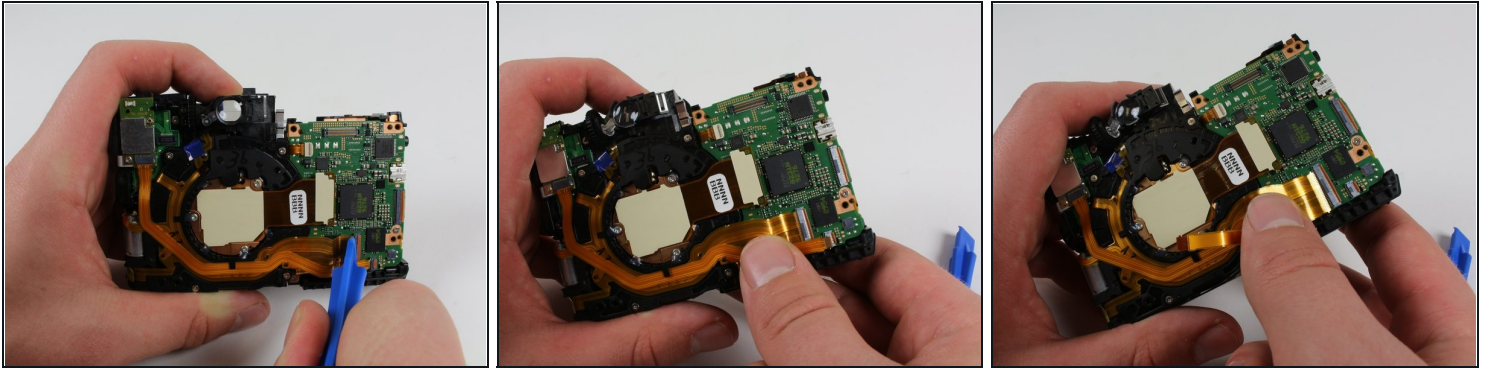
Step 28

- Remove the top portion of the casing by firmly grasping it and pulling it upward to lift it off.
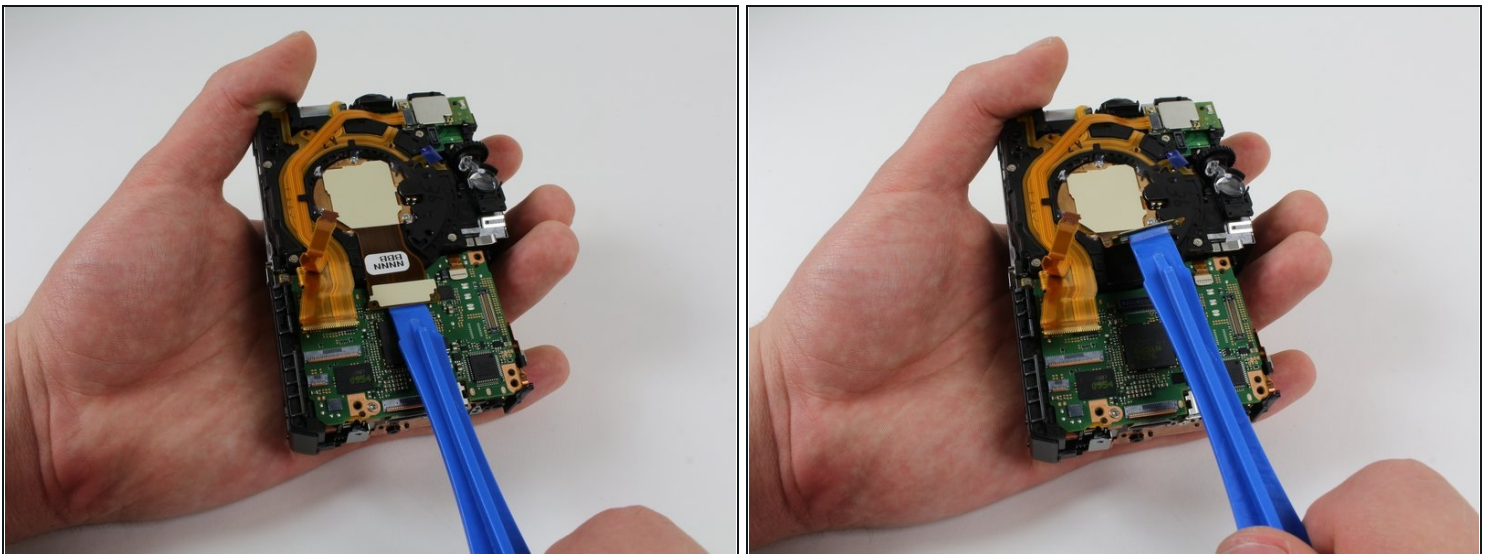
⚠ Some force may be required, but be careful to not bend either side of the top casing up too much or you will damage it.
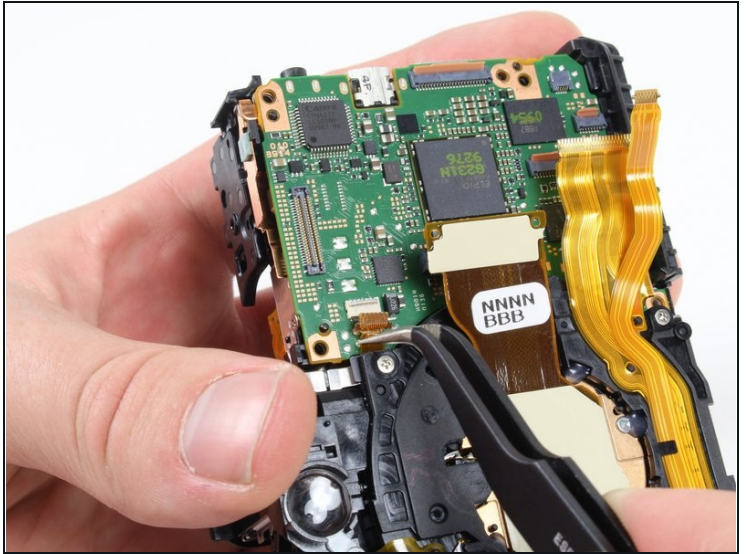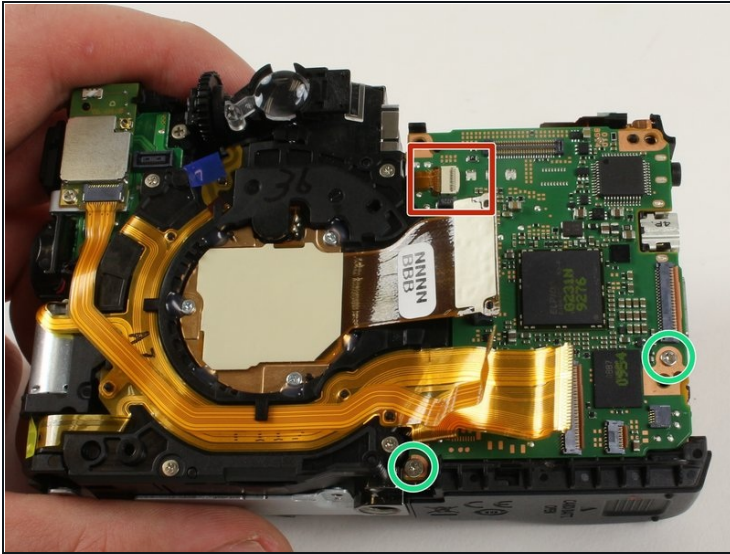
Step 29

- Open the two ZIF connectors by flipping them up using a plastic opening tool on the motherboard.

⚠ Make sure to pull the cable ribbon straight out and not up because pulling it up may harm the connector.

⚠ Be careful not to pinch the cable while pulling it out because it can easily be damaged if pinched. It is helpful to pull it out by the tabs that are built into the connector ribbon.

- Disconnect the two cable ribbons by pulling them straight out.
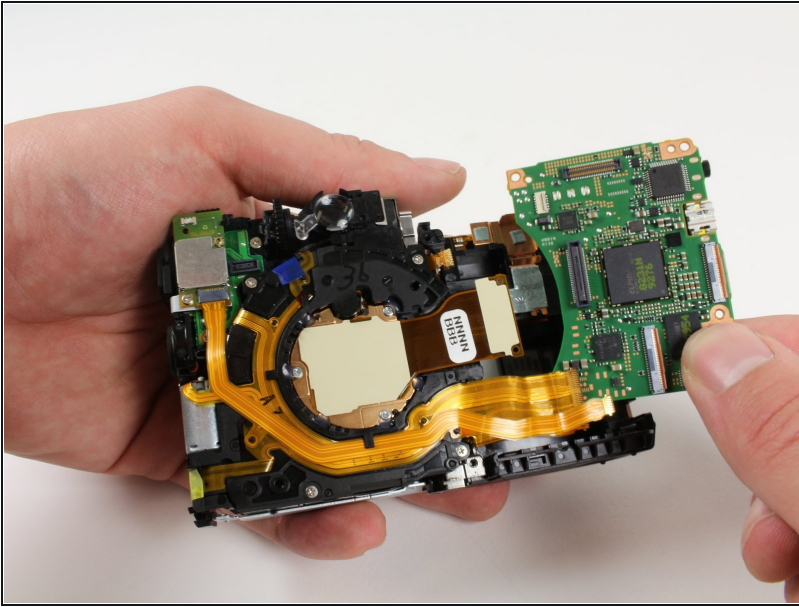
Step 30

- Disconnect the lens cable from the motherboard by lifting it up vertically from the motherboard using a plastic opening tool.

Step 31

⚠ Be careful not to pinch the cable while pulling it out because it can easily be damaged. It is helpful to pull it out by the tabs that are built into the connector ribbon.

⚠ Make sure to pull the cable ribbon straight out and not up because pulling it up may harm the connector.

- Remove the small cable towards the top by pulling it straight out of its connector using [tweezers](#) or your fingers.

- Remove both Screws on the bottom side of the motherboard

Step 32

- Lift the motherboard out of the camera.

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