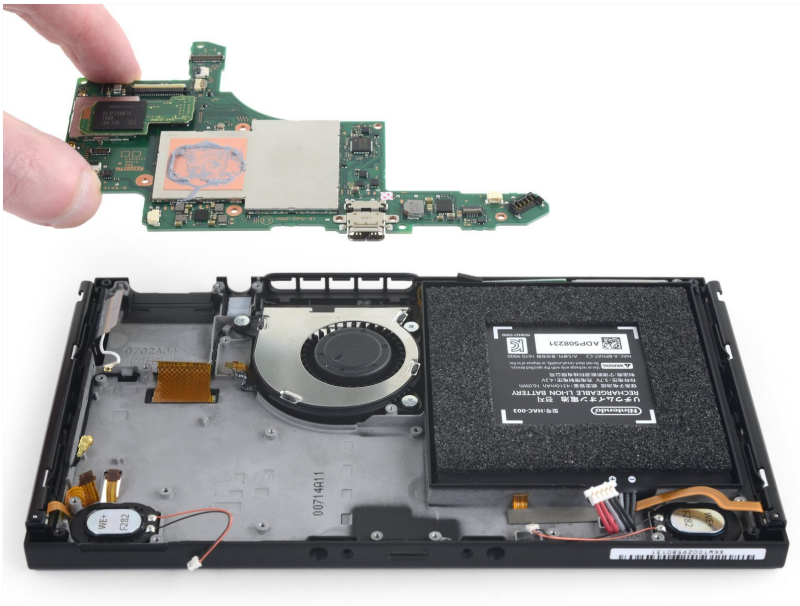




Nintendo Switch Motherboard Replacement

Follow this guide to replace a faulty...

Written By: Craig Lloyd



INTRODUCTION

Follow this guide to replace a faulty motherboard in the Nintendo Switch game console.

The Switch uses JIS screws. A JIS 00 driver works best, but you can also use a JIS 000 driver. If you use a Phillips driver, you'll risk stripping the screws.

Note: When you remove the shield plate, you'll need to replace the thermal compound between the plate and the heatsink. Normal thermal paste isn't designed to bridge large gaps, so you'll need thermal putty or viscous thermal paste. You will, however, need regular replacement thermal paste for the CPU.

Note: There are two different models for the Nintendo Switch (model HAC-001, released in 2017, and model HAC-001(-01), released in 2019). Make sure your replacement motherboard is compatible with your specific Switch console.



TOOLS:

[Tri-point Y00 Screwdriver](#) (1)
[Tweezers](#) (1)
[Spudger](#) (1)
[Microfiber Cleaning Cloths](#) (1)
[Isopropyl Alcohol](#) (1)
[iFixit Opening Tool](#) (1)
[Thermal Paste](#) (1)
[JIS 00 Screwdriver Bit](#) (1)



PARTS:

[Nintendo Switch \(2017 HAC-001\)](#)
[Motherboard](#) (1)
[iFixit Thermal Putty](#) (1)

Step 1 — Release the Joy Con controller locking tabs



ⓘ Before you begin this repair, make sure the device is completely powered off.

- Press and hold down the small round button on the back of the Joy Con controller.
- While you hold down the button, slide the controller upward.

Step 2 — Remove the Joy Con controllers



- Continue sliding the Joy Con upward until it's completely removed from the console.

ⓘ Repeat this same process for the other Joy Con.

Step 3 — Remove the back-side screws



- Use a Y00 screwdriver to remove the four 6.3 mm-long screws securing the rear panel.
- ① Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from.
- ① If you do happen to strip one of the four 6.3 mm-long Y00 screws, If you are lucky and careful, you may be able to use a Y0 bit to remove the screw(s). Please note that if you do attempt this, a bit of extra pressure will need to be applied to the screwdriver so that the screwdriver bit catches the screw.
- ⚠ If you do end up removing the stripped screw with this method, **PLEASE** do not reuse the screw again and instead replace the screw.

Step 4 — Remove the top and bottom screws



- Use a JIS 00 driver to remove the following screws securing the rear panel:
 - One 2.5 mm-long screw on the top edge of the device
 - Two 2.5 mm-long screws on the bottom edge of the device
- ⓘ To prevent these tight screws from [stripping](#), apply firm downward force, work slowly, and try another JIS 00 driver if the screws won't come out. Make sure the driver is fully inserted.
- ⓘ You can use a Phillips #000 screwdriver in a pinch, but you risk damaging or [stripping the screws](#). Push down firmly on the screwdriver and twist slowly. Often, switching drivers may help, even if they are the same size.

Step 5 — Remove the center side screws



- Use a JIS 00 driver to remove the two 3.8 mm center screws on the sides of the device (one on each side).

Step 6



- Use your finger to flip up the kickstand on the back of the device.
- If there's a microSD card in the microSD card slot, remove it now before you continue to the next step.

Step 7 — Remove the kickstand well screw



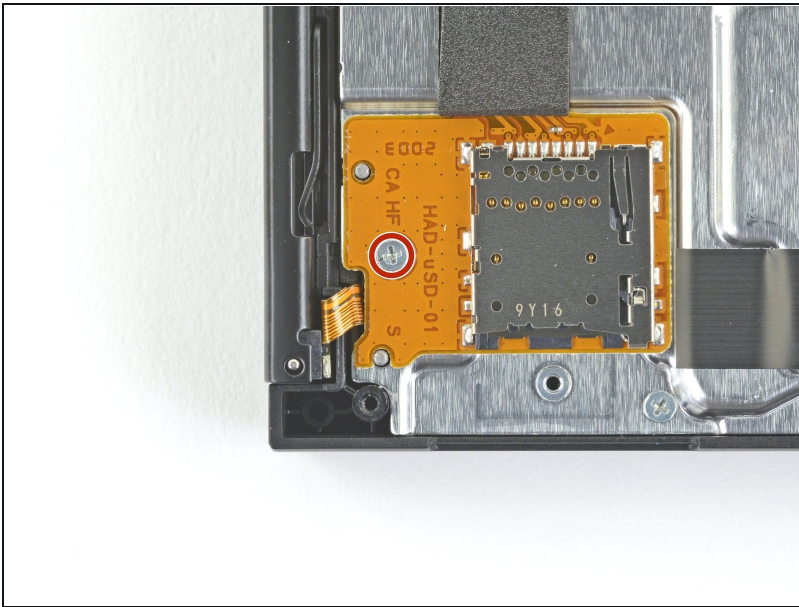
- Use a JIS 00 driver to remove the 1.6 mm screw in the kickstand well.
- Close the kickstand.

Step 8 — Remove the rear panel



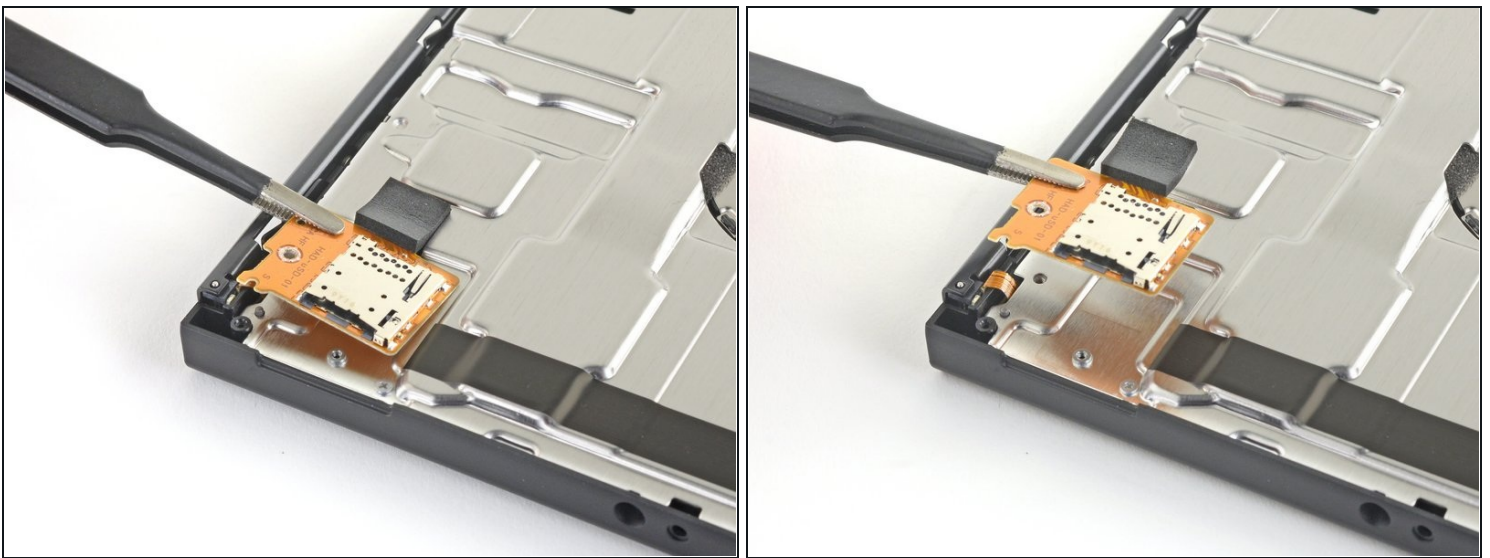
- Open the game card cartridge flap.
 - ① The game card cartridge flap attaches to the other half of the plastic shell, preventing you from completely lifting up the rear panel if it's closed.
- Lift the rear panel straight up from the bottom of the device and remove it.
 - ① Don't tilt it upwards while opening or else you risk breaking the plastic tabs on the top edge of the panel.

Step 9 — Remove the microSD card reader



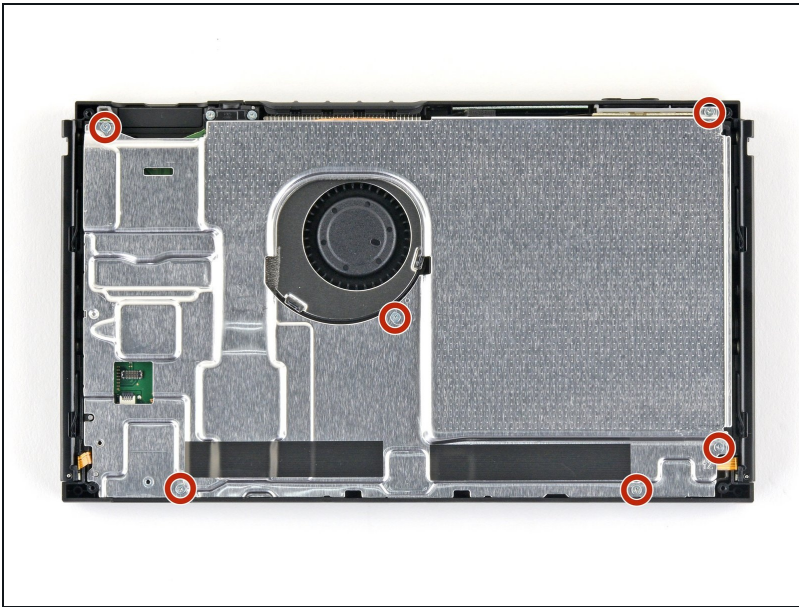
- Use a JIS 00 driver to remove the 3.1 mm screw securing the microSD card reader to the device.

Step 10



- Use your fingers or a pair of [tweezers](#) to lift the microSD card reader straight up from the device to disconnect and remove it.
- ☑ During reassembly, remove the foam pad before connecting the press connector to the motherboard. Set the foam pad back in place after you verify it's connected.

Step 11 — Remove the shield plate



- Use a JIS 00 driver to remove the six 3 mm screws securing the shield plate to the device.

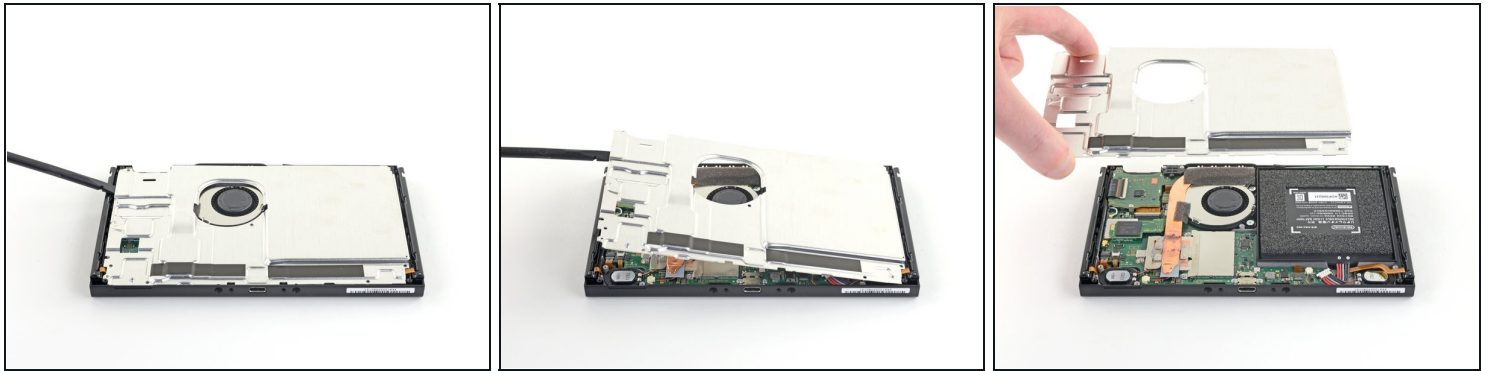
Step 12



 If the console doesn't have this foam, skip this step.

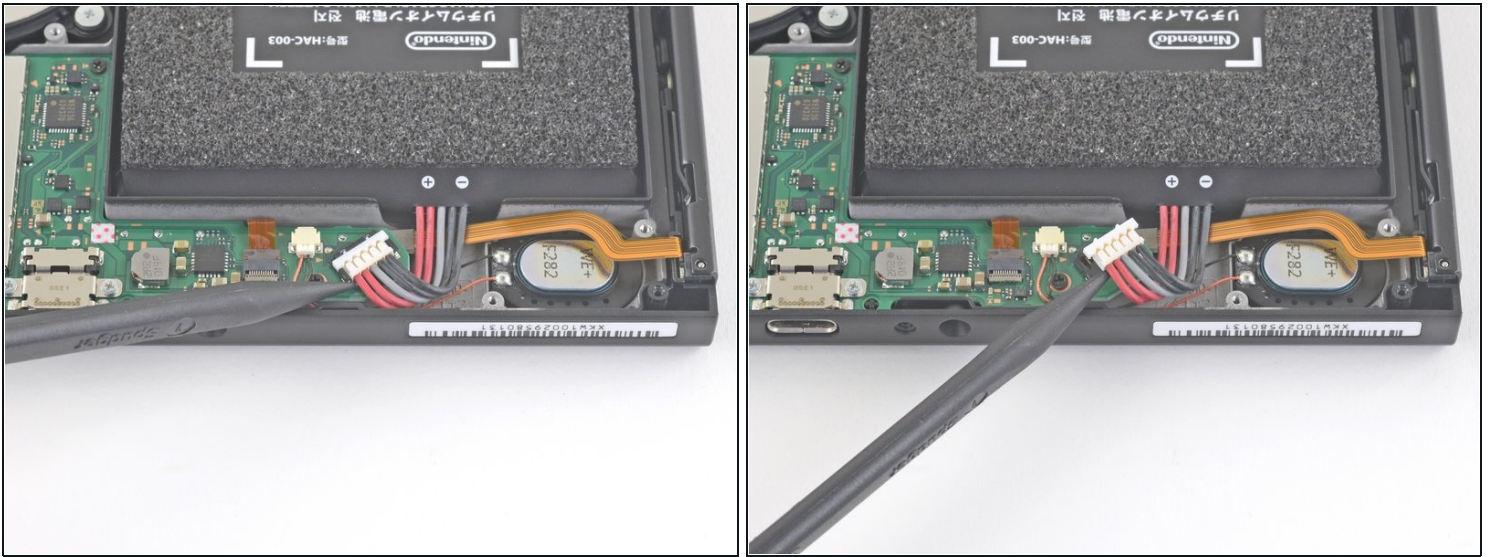
- Use your fingers or a pair of [tweezers](#) to peel back the piece of foam on the top edge of the device near the fan exhaust port.
 If the foam doesn't easily peel away, don't force it as it might end up tearing. Carefully peel at different spots to pull back the foam.

Step 13



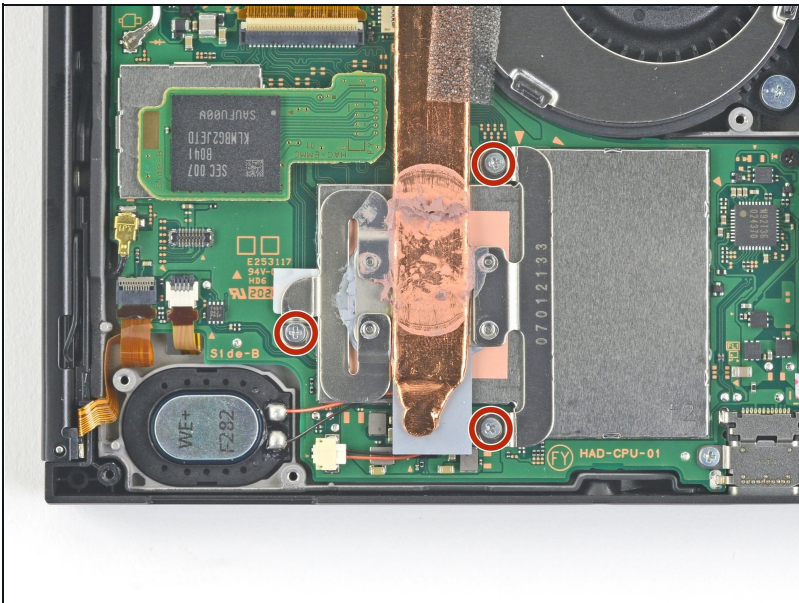
- Insert a spudger underneath the shield plate along the edge of the device.
- Pry up to lift the shield plate and remove it from the device.
 - ① You may feel a bit of resistance. This is normal, since the shield plate is slightly bonded to the heat sink with thermal paste.
- ① A thick pink thermal compound bridges the gap between the shield plate and the copper heat sink underneath. This helps prevent the Switch from overheating.
- During reassembly, if you don't have replacement thermal compound, use the flat end of a spudger to distribute the old compound evenly across the heat pipe, as thick as possible to ensure proper contact. Repeat this process on the shield plate.
- If you need to replace it, refer to our [thermal paste guide](#) to remove the old thermal compound and replace it with an appropriate compound, such as [thermal putty](#) or [K5 Pro](#), during reassembly.

Step 14 — Disconnect the battery



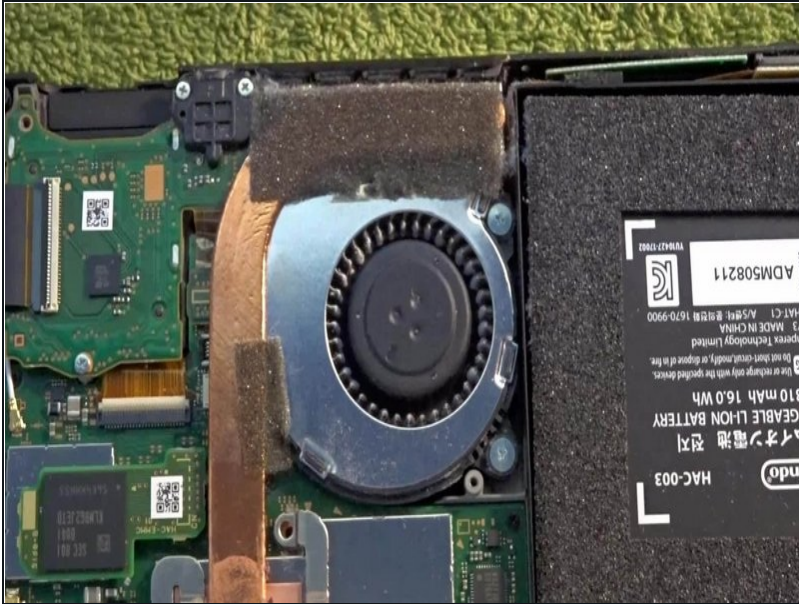
- Use the point of a spudger to pry the battery connector straight up and out of its socket on the motherboard.

Step 15 — Remove the heat sink



- Use a JIS 00 driver to remove the three 3 mm screws securing the heat sink to the motherboard.

Step 16



- Carefully peel the two foam pieces stuck over both the heatsink and the fan away from the fan.

① The foam only needs to be peeled back enough to clear the fan.

⚠ The foam is really delicate and tears easily. Use the following technique to peel the foam:

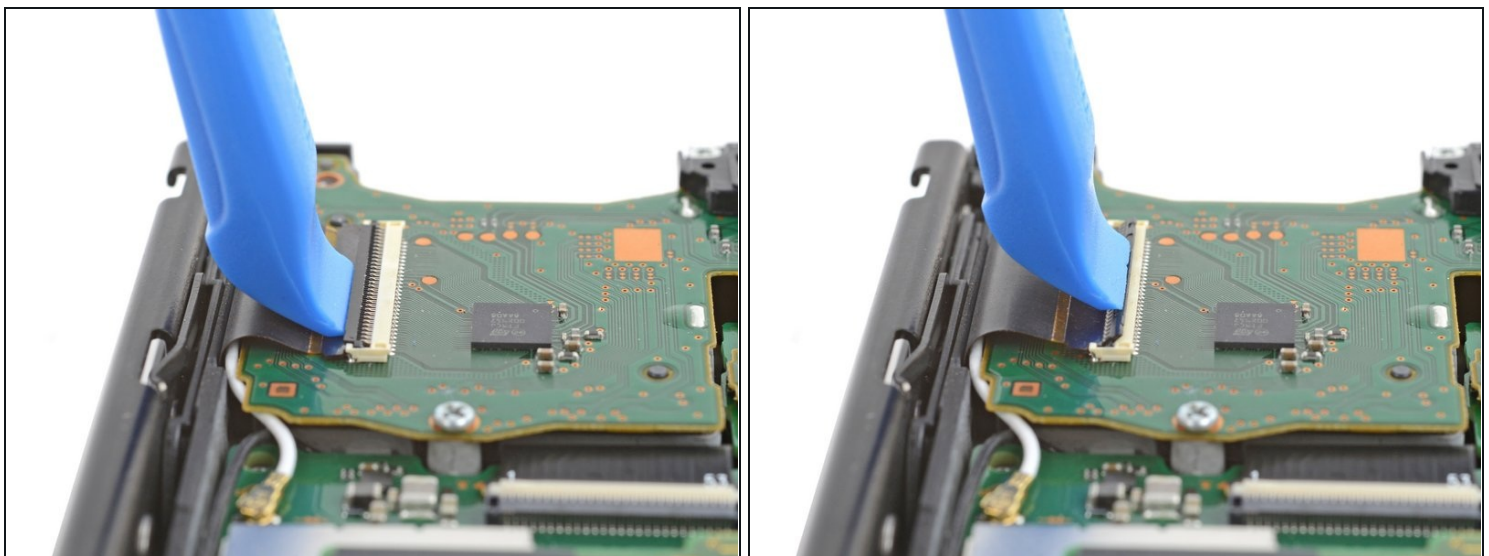
- If you have some, dip the point of a spudger in [adhesive remover](#) or isopropyl alcohol (90% or greater).
- Insert the point of a spudger underneath a part of the foam that isn't stuck to anything.
- Press the top of the foam with your finger to hold it in place.
- Roll the spudger tip underneath the foam all the way to the other end of the foam to release it.

Step 17



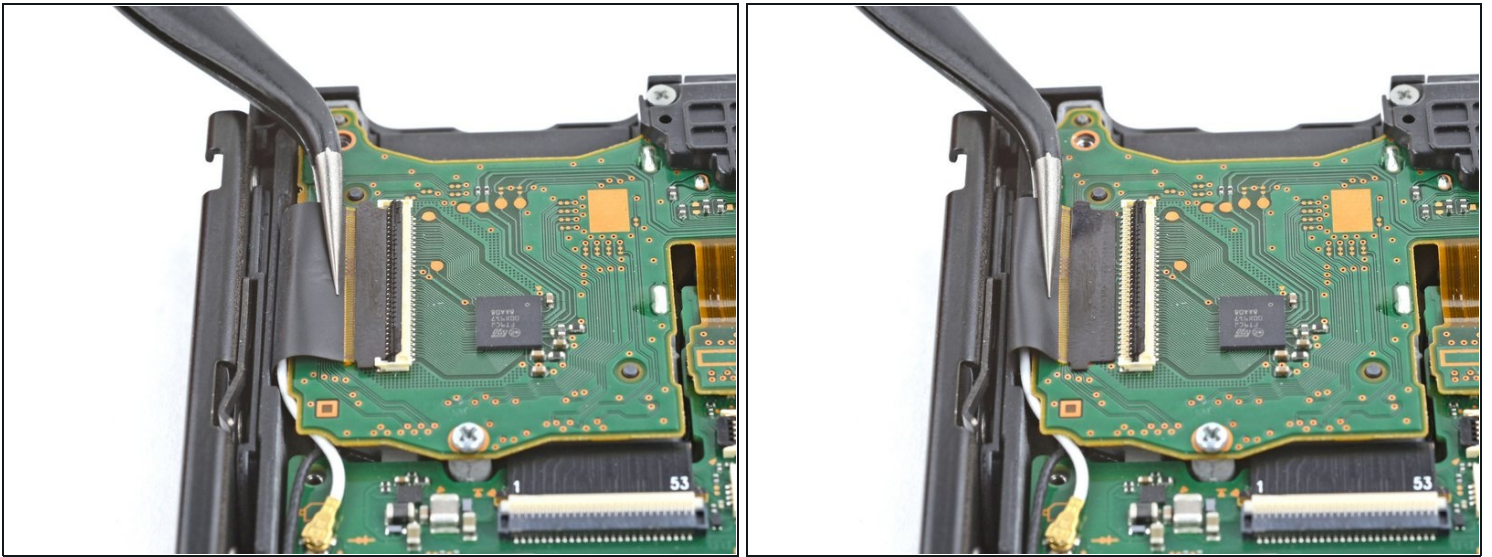
- Use a spudger or your fingers to lift the heatsink up and off the motherboard to remove it.
 - ① You may feel a bit of resistance. This is normal, since the heat sink is slightly bonded to the CPU with thermal paste.
- ☑ Clean off the old thermal paste from the heat sink and CPU using high-concentration (90% or higher) isopropyl alcohol and a microfiber cloth. [Apply new thermal paste](#) to the CPU before reassembly. **Don't reuse the old thermal paste.**
- Apply thermal paste to all surfaces that had thermal paste applied previously. This includes between the heatpipe and aluminum shield, which the Switch uses as additional heatsinking.

Step 18 — Remove the headphone jack and game card reader



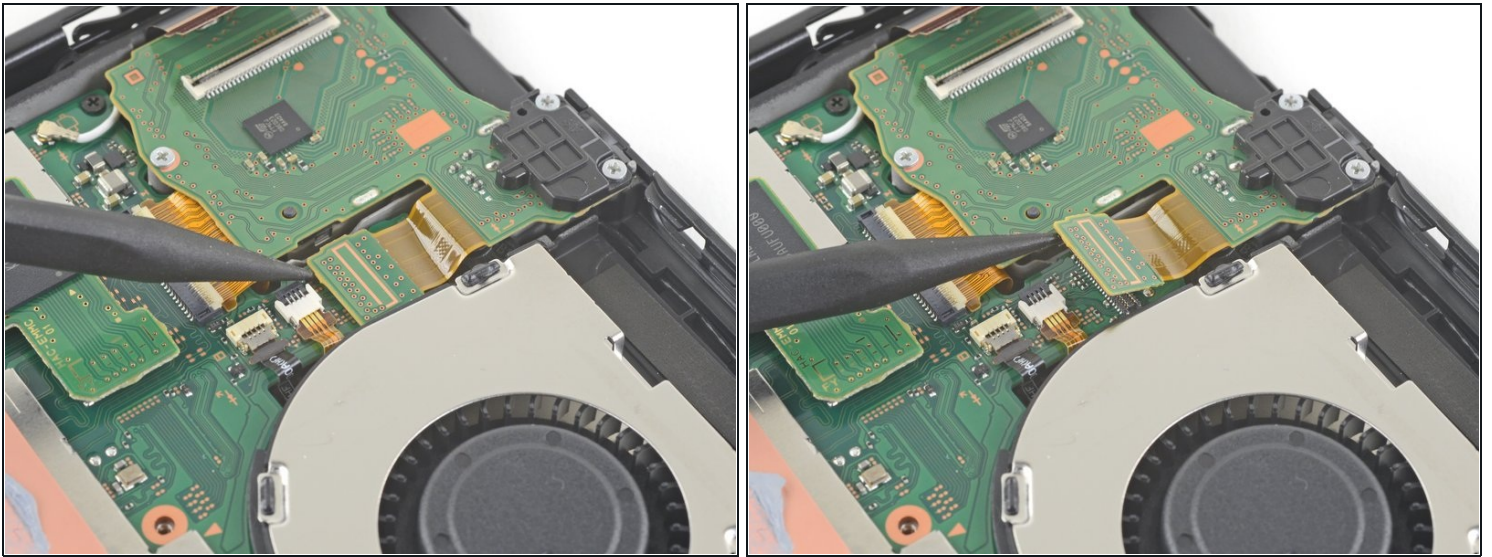
- Use an opening tool or your fingernail to flip up the small, hinged locking flap on the digitizer cable's [ZIF connector](#).

Step 19



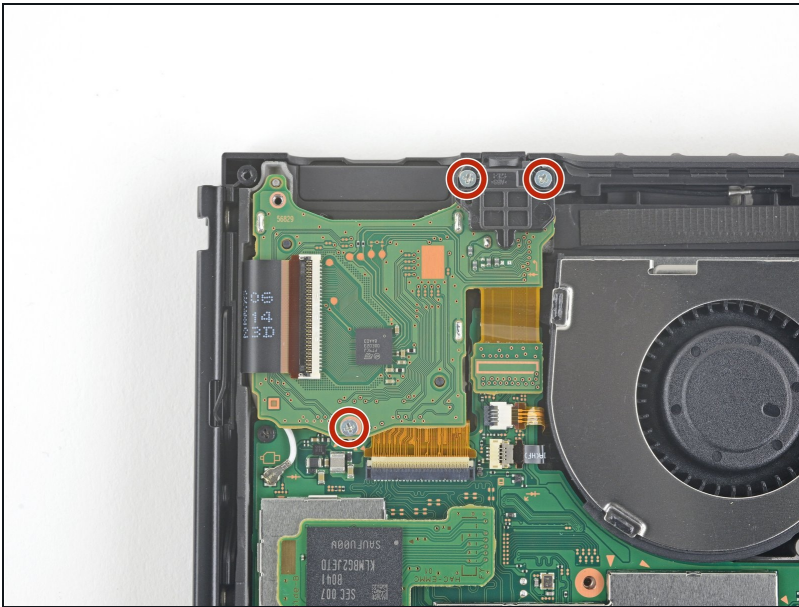
- Use a pair of [tweezers](#) to slide the digitizer cable horizontally out of its connector on the game card reader board.
- ☑ Before inserting the cable during reassembly, make sure the ZIF connector locking flap is [flipped up](#).
- ☑ With the cable **parallel to the board**, gently slide it into its connector.
 - ⚠ **Don't force the cable into the connector. If it doesn't insert, ensure the locking flap is flipped up, reposition the cable, and try again.**
- 📄 If your touchscreen doesn't work after the repair but your Game Card reader does, make sure this cable is properly inserted. If your Game Card reader also doesn't work, check the Game Card connector in the next step instead.

Step 20



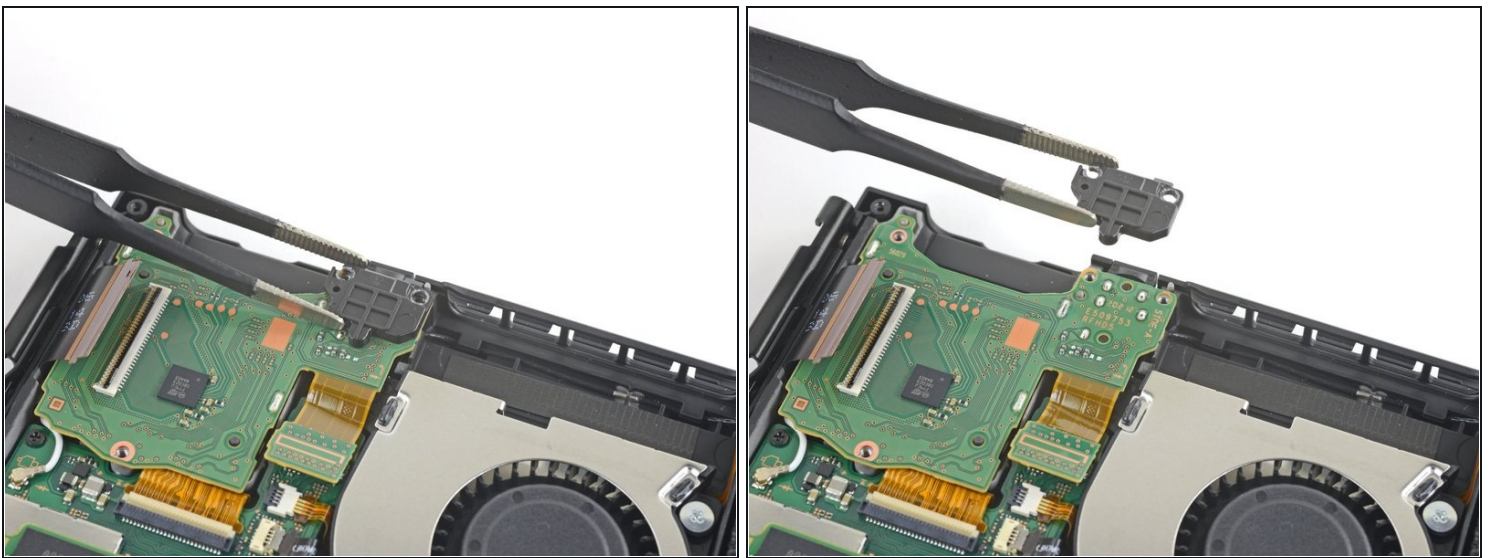
- Use the point of a spudger to pry the headphone jack and game card reader connector straight up to disconnect it from the motherboard.
- ✪ To re-attach [press connectors](#) like this one, carefully align and press down on one side until it clicks into place, then repeat on the other side. Do not press down on the middle. If the connector is misaligned, the pins can bend and cause permanent damage.
- ⓘ If the touch screen doesn't work and/or game cards aren't detected after reassembly, you might have not fully reconnected this press connector. Carefully disconnect it and try again.

Step 21



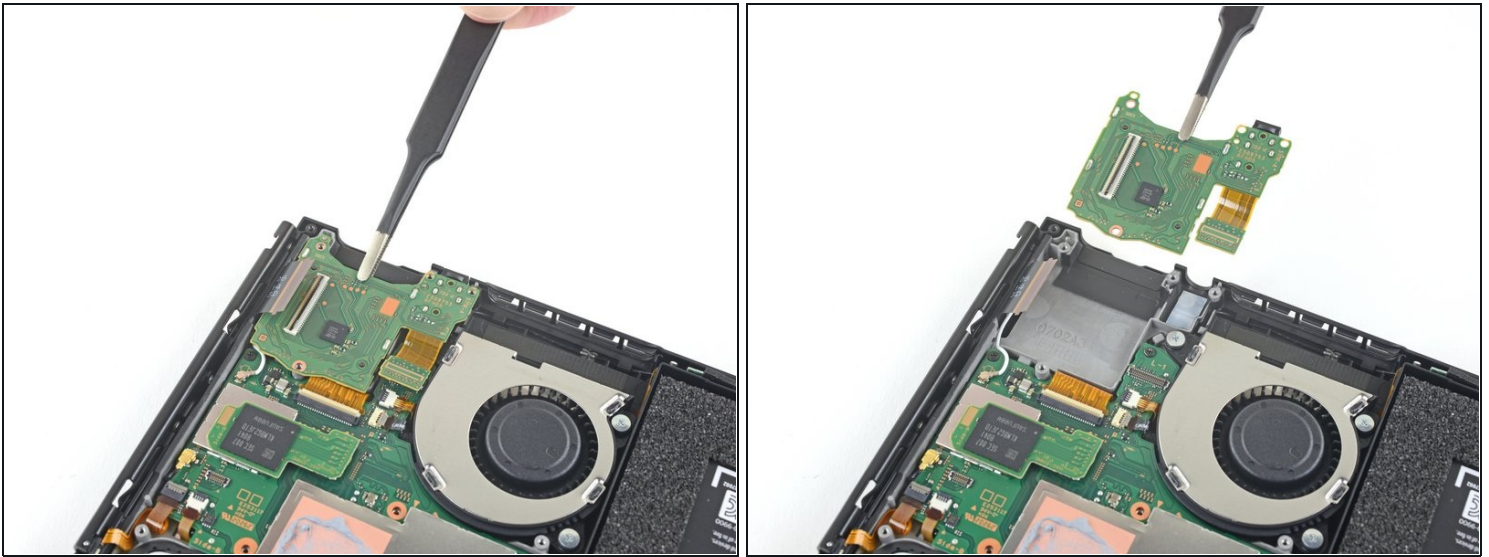
- Use a JIS 00 driver to remove the three 3.1 mm screws securing the headphone jack and game card reader board to the device.

Step 22



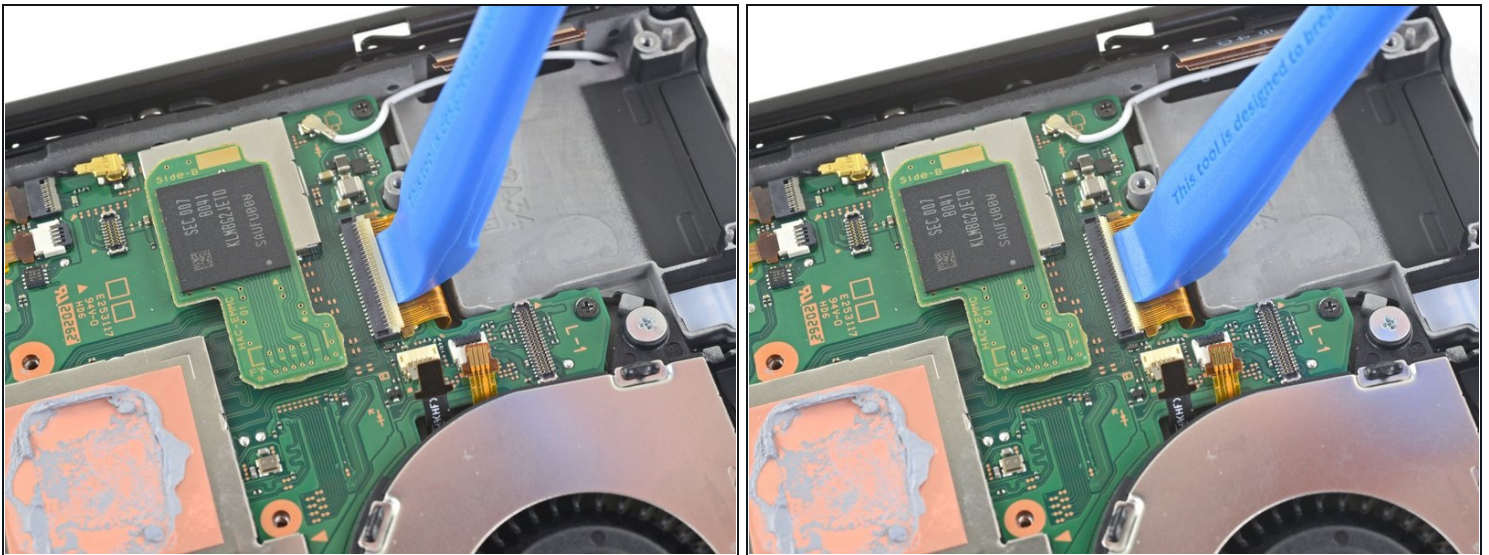
- Use a pair of tweezers or your fingers to remove the headphone jack bracket.

Step 23



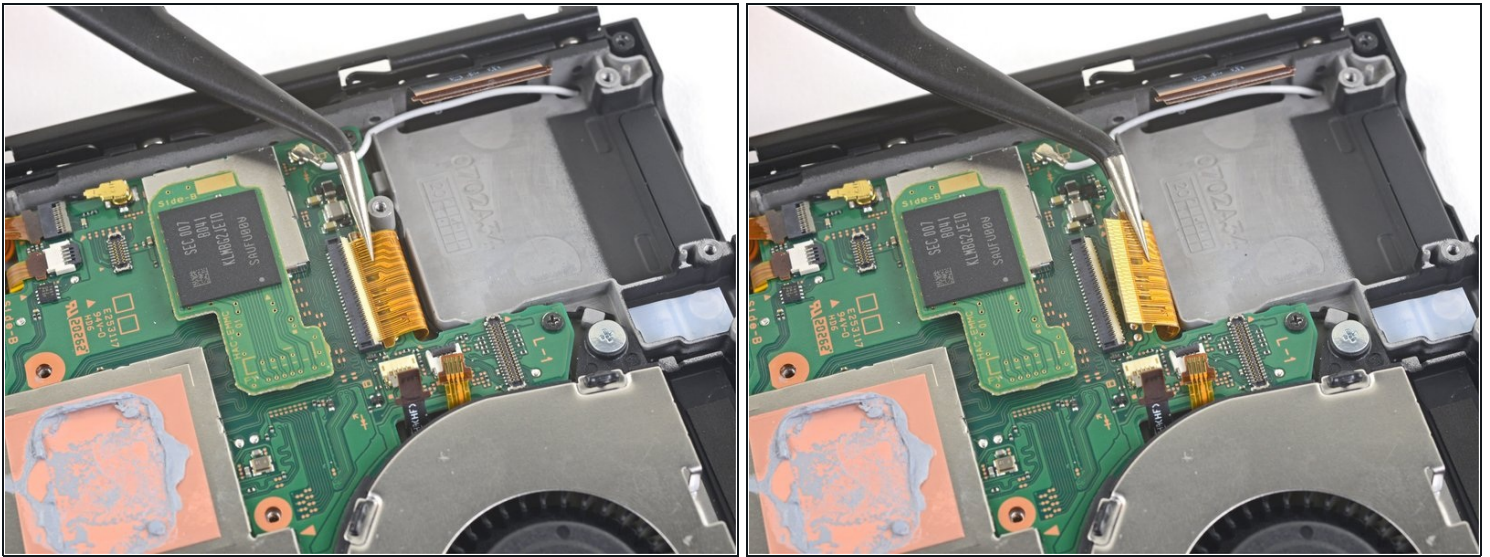
- Use a pair of tweezers or your fingers to remove the headphone jack and game card reader board.

Step 24 — Remove the motherboard



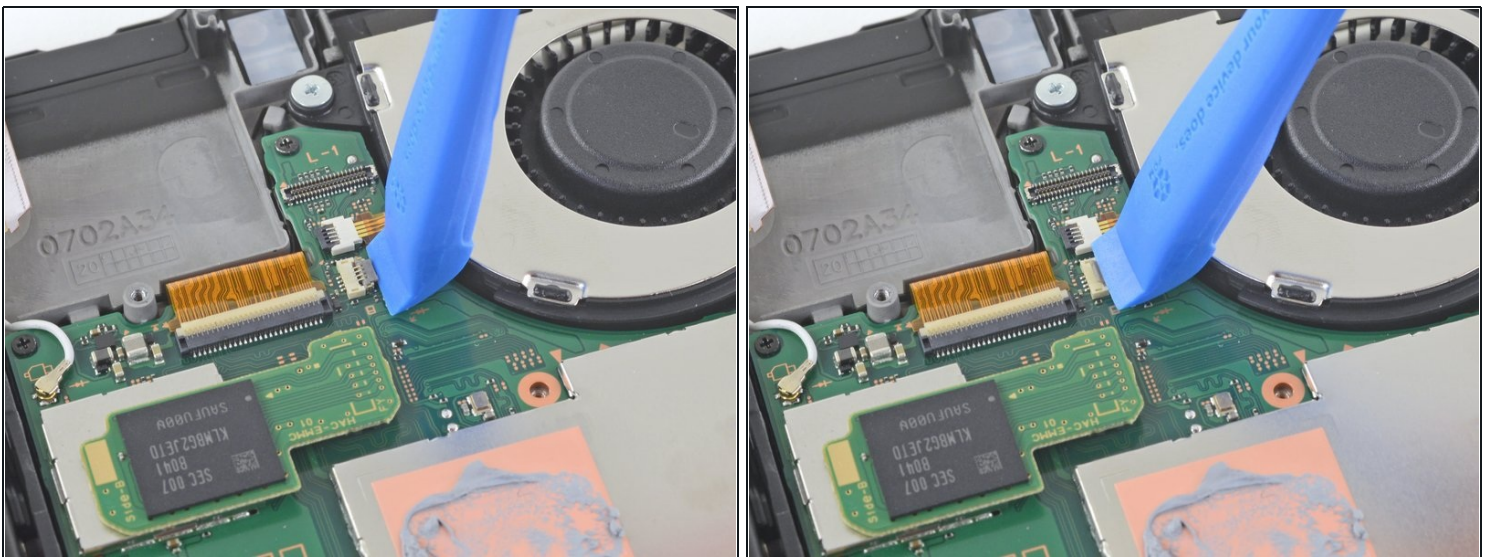
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the LCD ribbon cable [ZIF connector](#).

Step 25



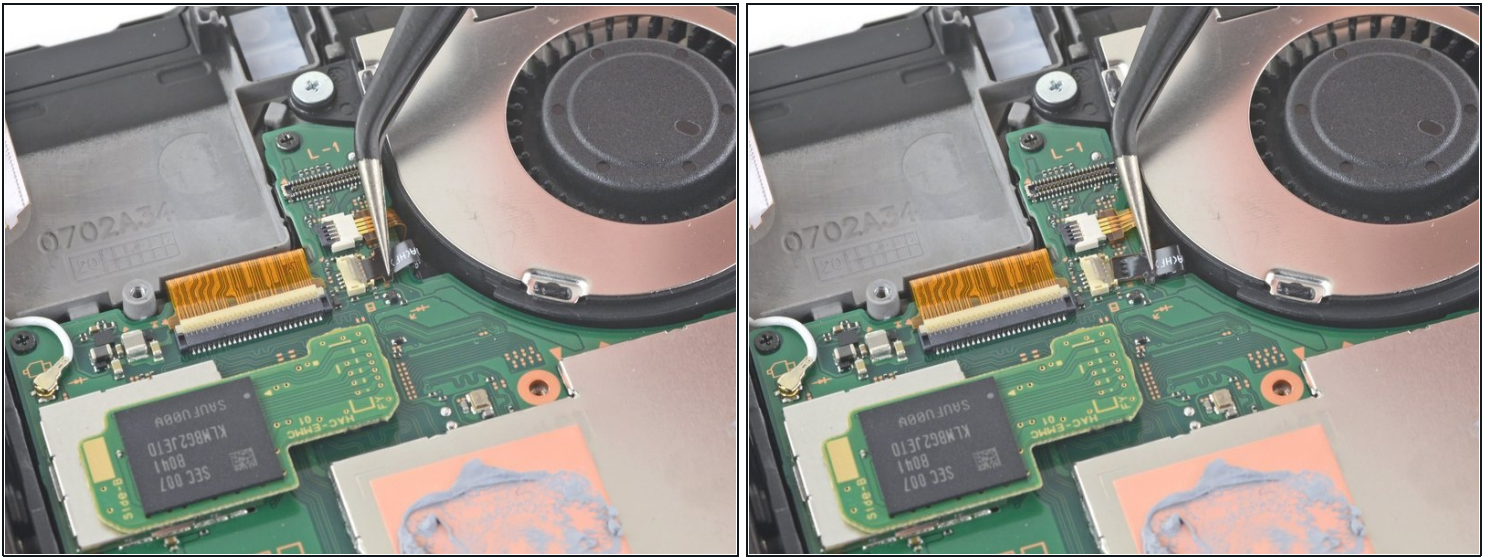
- Use a pair of [tweezers](#) to pull the ribbon cable straight out of its connector on the motherboard.

Step 26



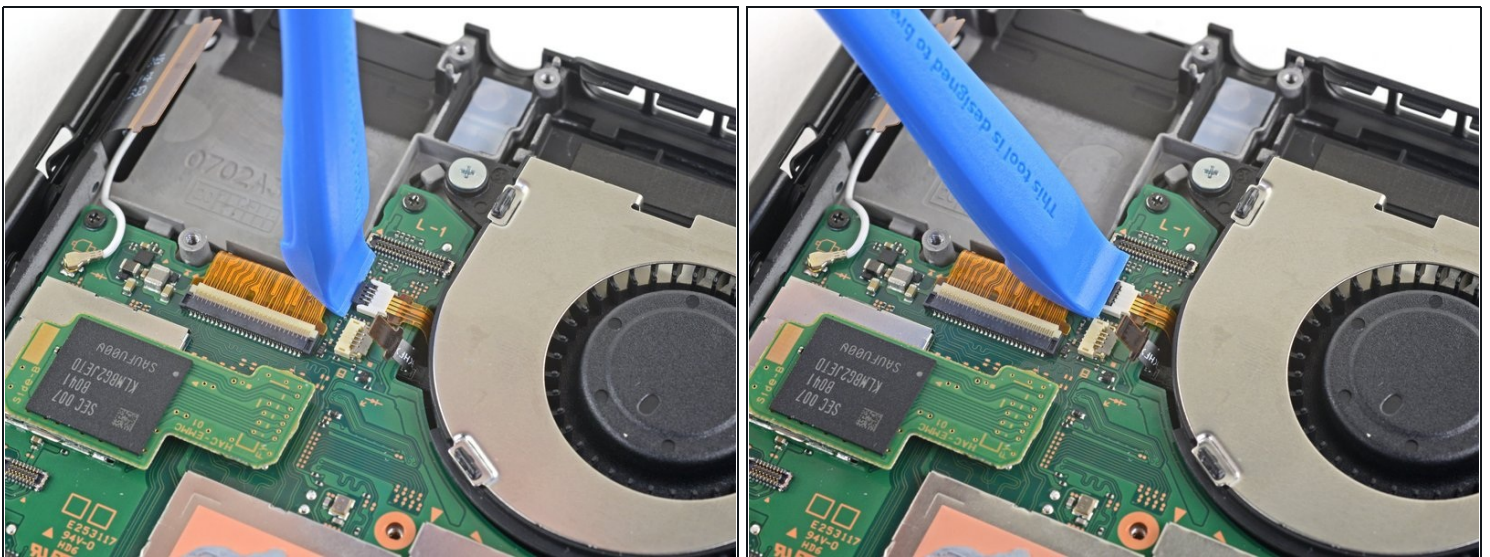
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the fan cable [ZIF connector](#).

Step 27



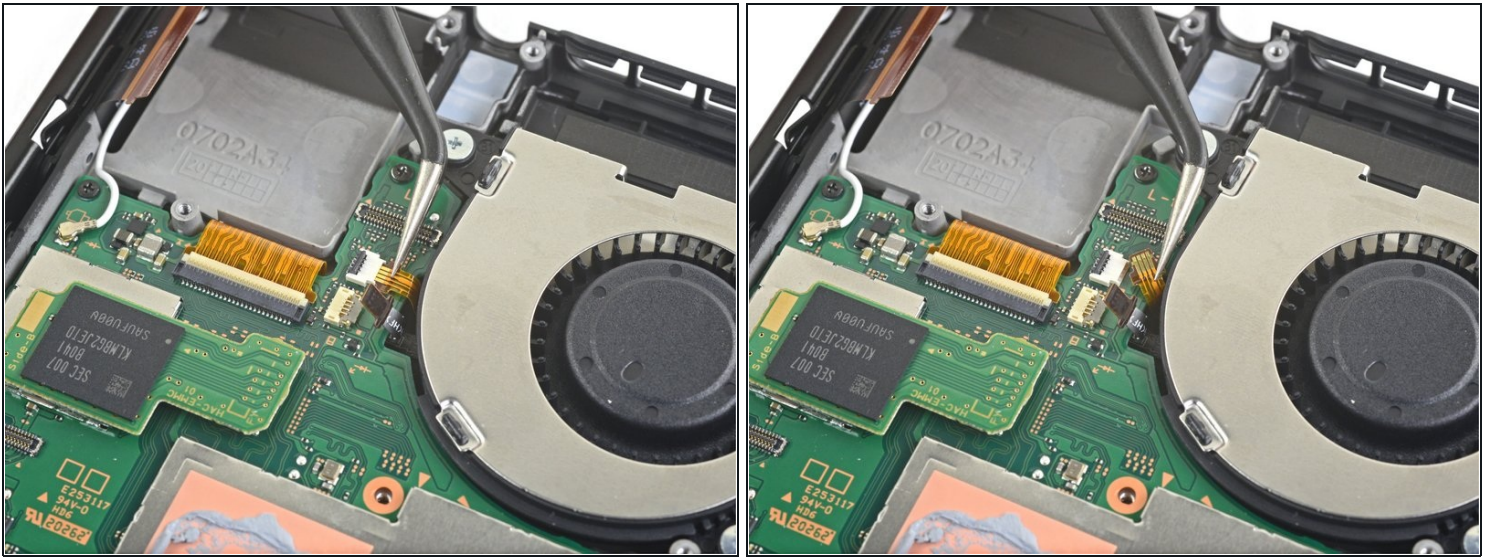
- Use a pair of tweezers to pull the fan cable straight out of its connector on the motherboard.

Step 28



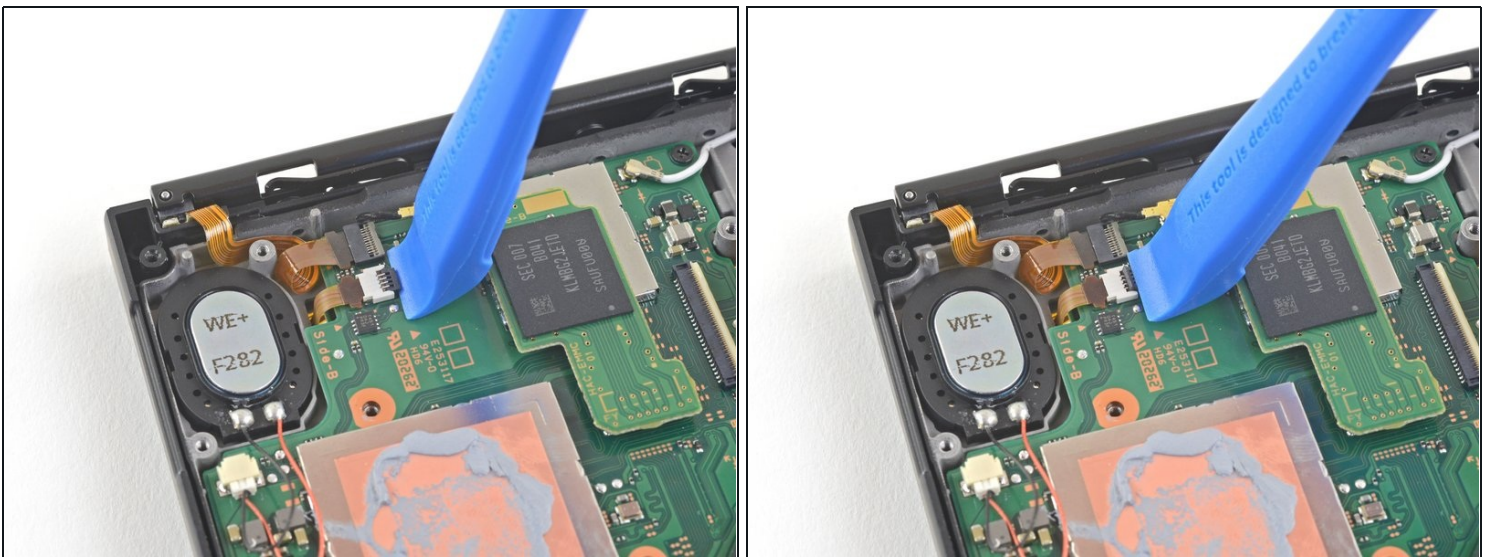
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the power and volume button ribbon cable [ZIF connector](#).

Step 29



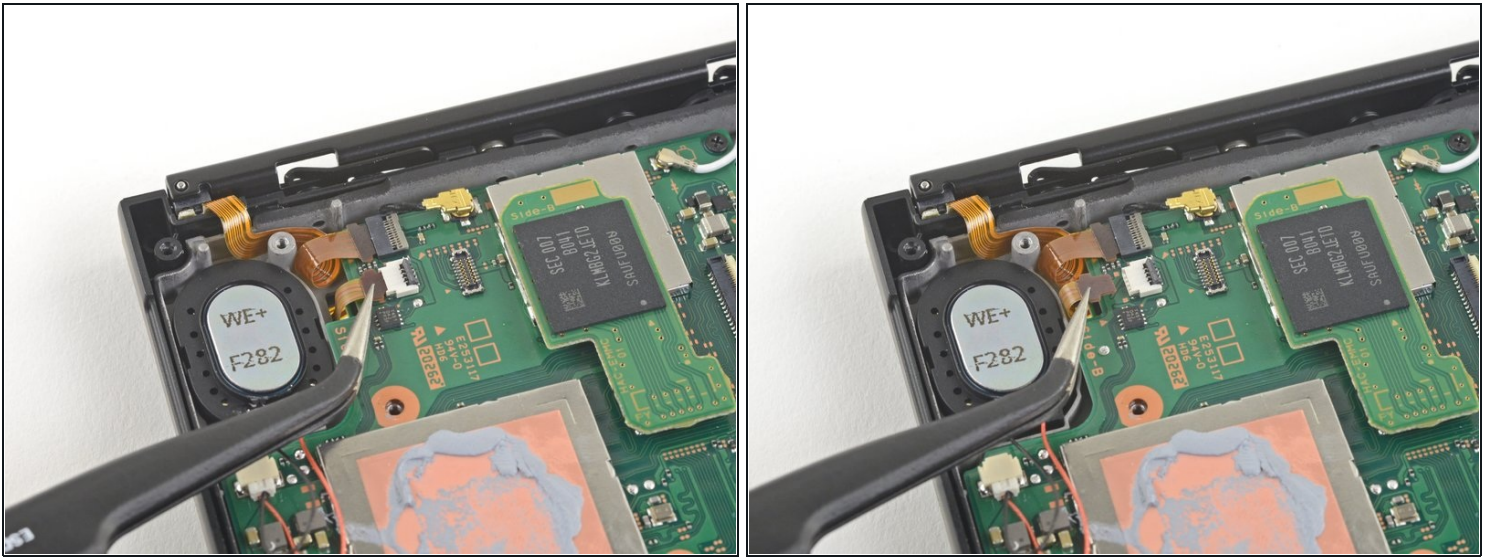
- Use a pair of tweezers to pull the ribbon cable straight out of its connector on the motherboard.

Step 30



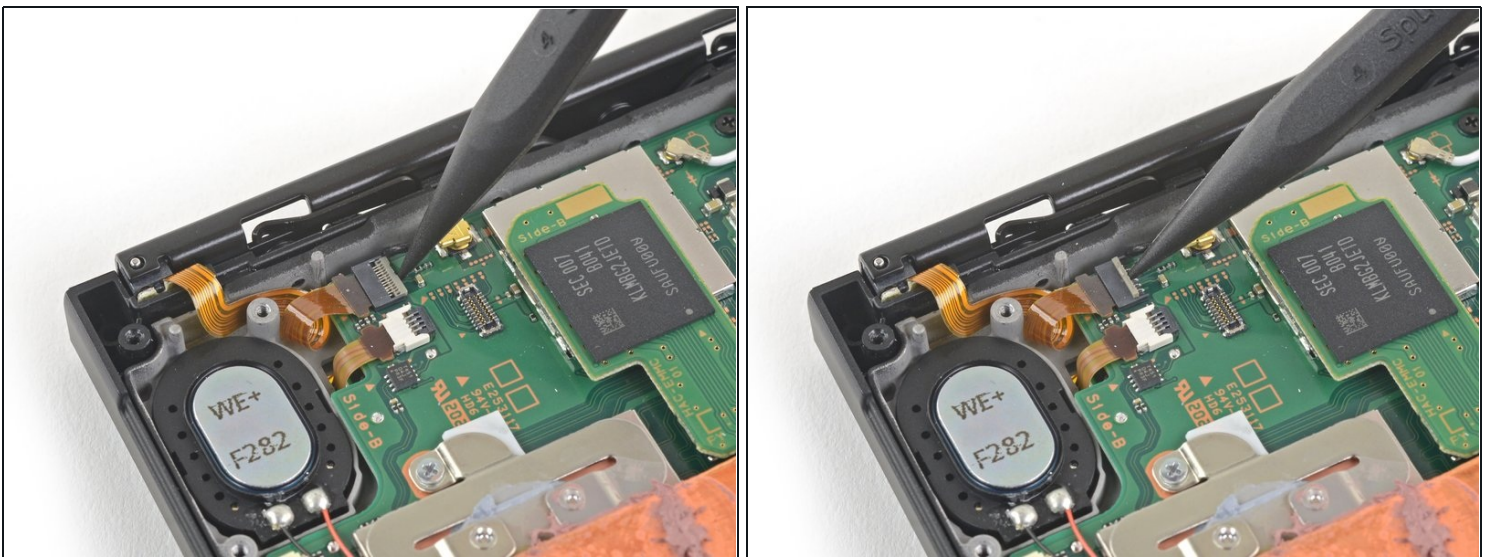
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the smaller LCD ribbon cable [ZIF connector](#).

Step 31



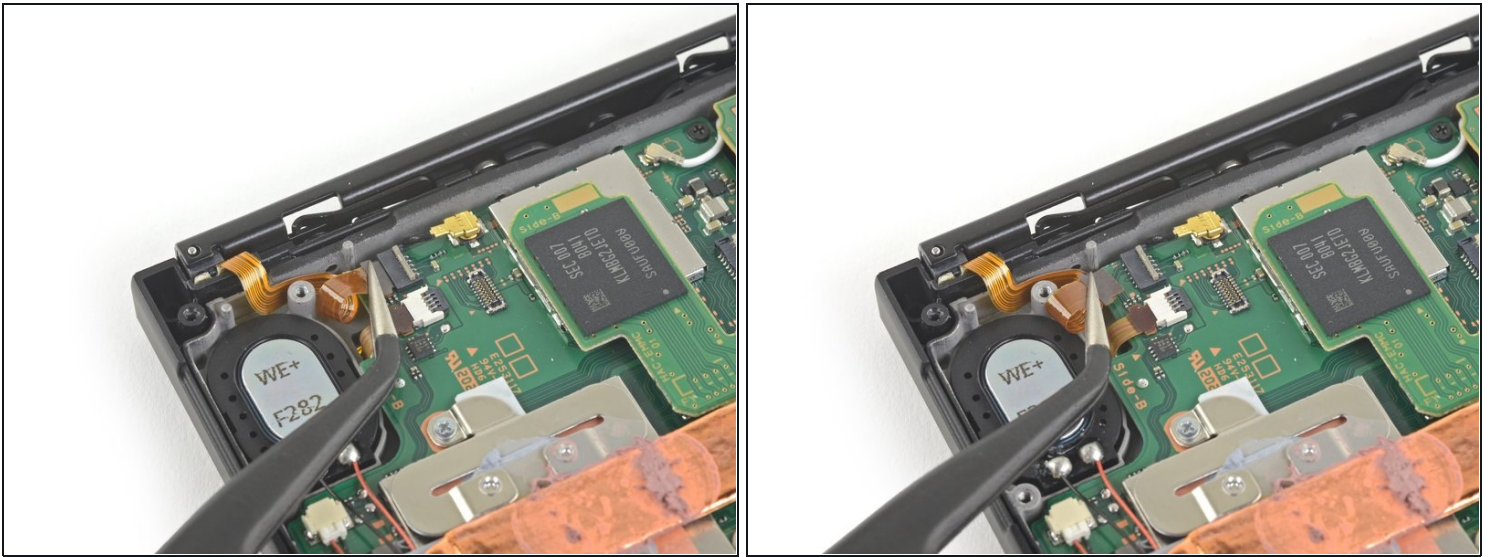
- Use a pair of tweezers to pull the ribbon cable straight out of its connector on the motherboard.

Step 32



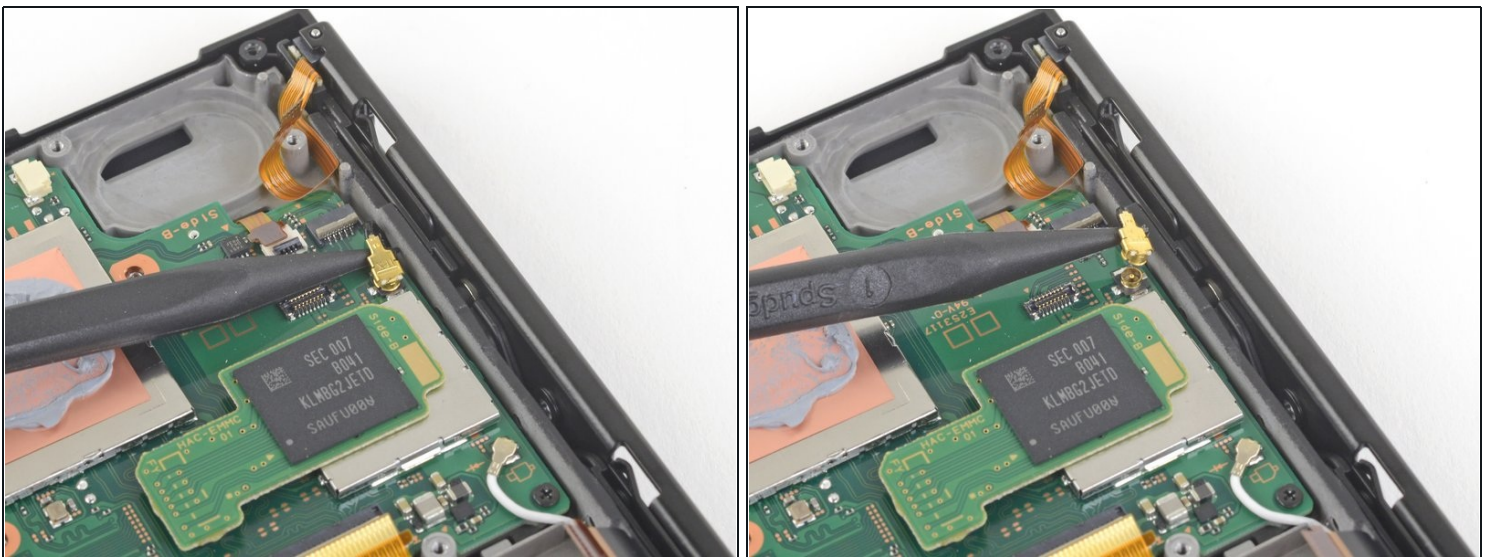
- Use the point of a spudger, an opening tool, or your fingernail to flip up the small, hinged locking flap on the Joy Con sensor rail's data cable [ZIF connector](#).

Step 33



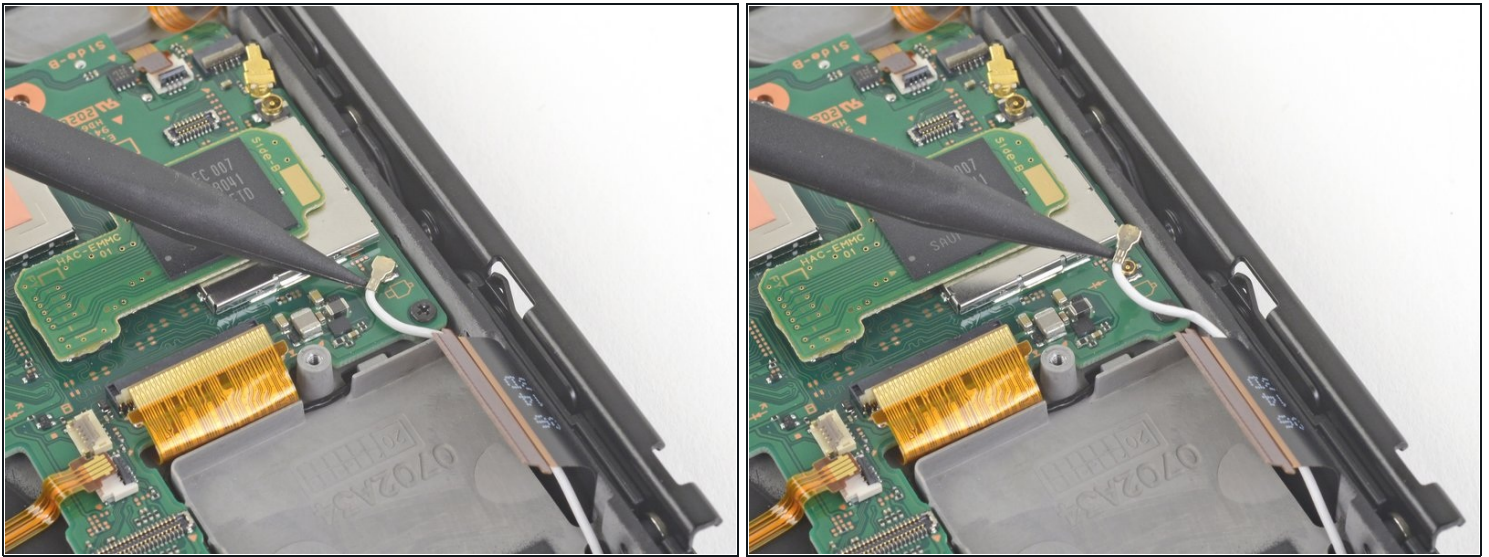
- Use a pair of tweezers to pull the ribbon cable straight out of its connector on the motherboard.

Step 34



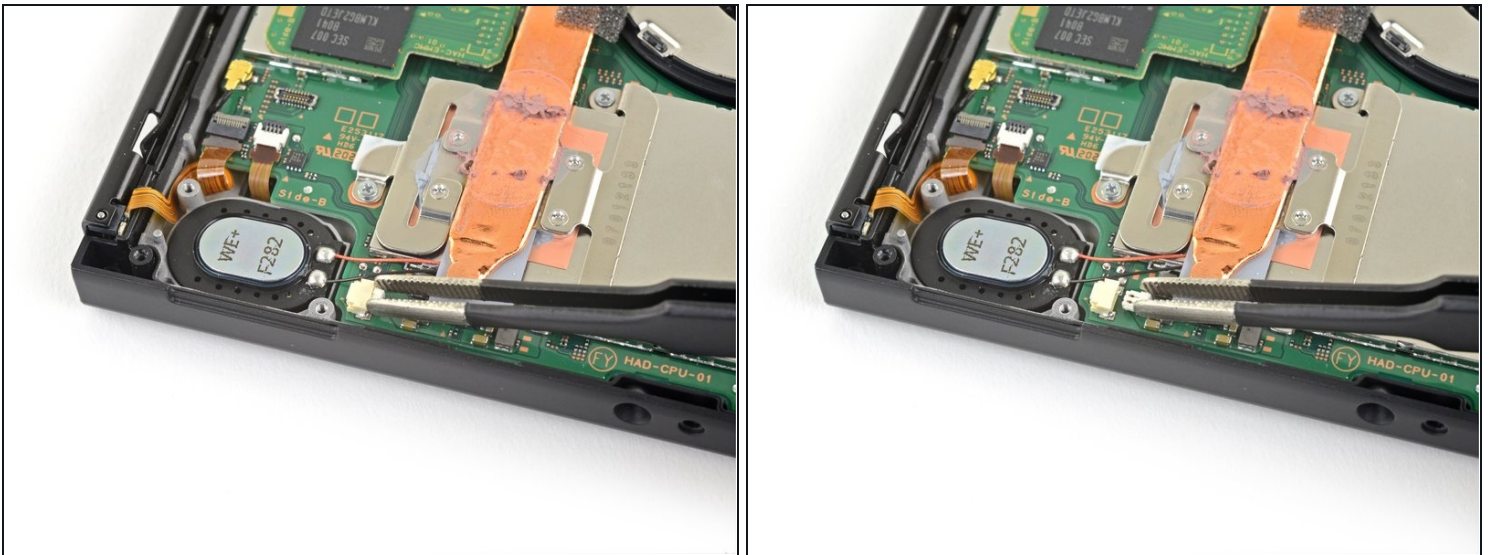
- Use the point of a spudger to pry up the black antenna cable straight up out of its socket on the motherboard.

Step 35



- Use the point of a spudger to pry up the white antenna cable straight up out of its socket on the motherboard.

Step 36



- Use your fingers or a pair of tweezers to pull the right speaker connector straight out of its socket on the motherboard.

⚠ Do not pull on the connector by the speaker wires. They're very thin and can easily snap off the connector.

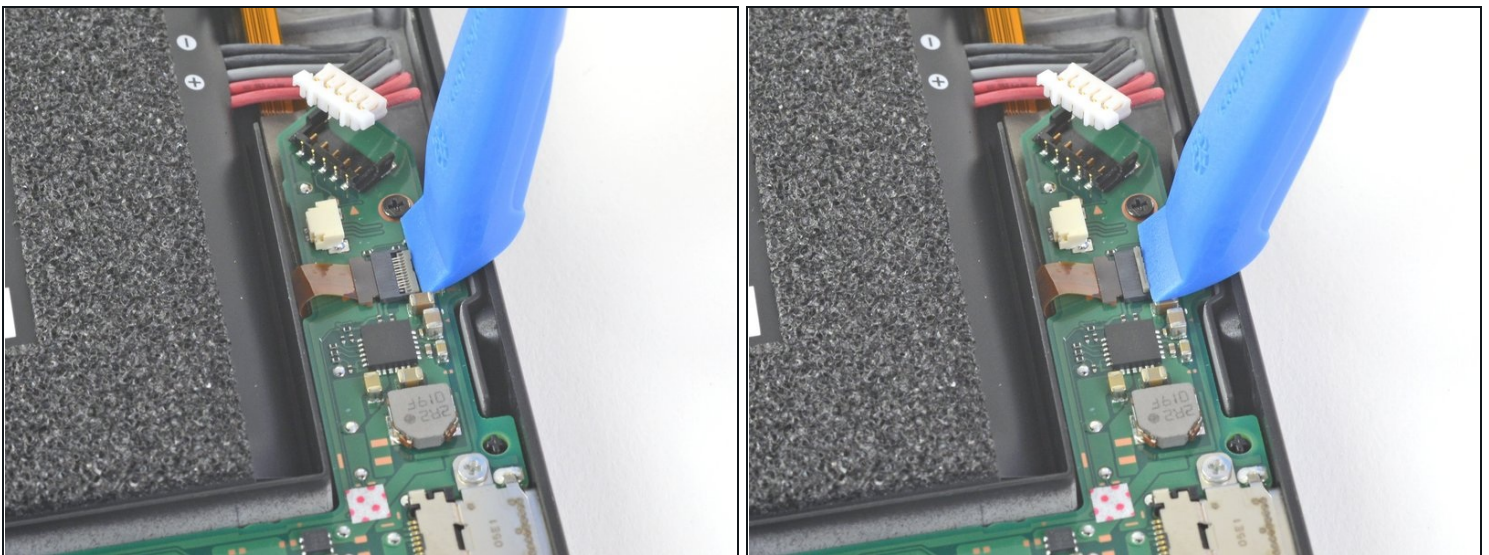
Step 37



- Use your fingers or a pair of tweezers to pull the left speaker connector straight out of its socket on the motherboard.

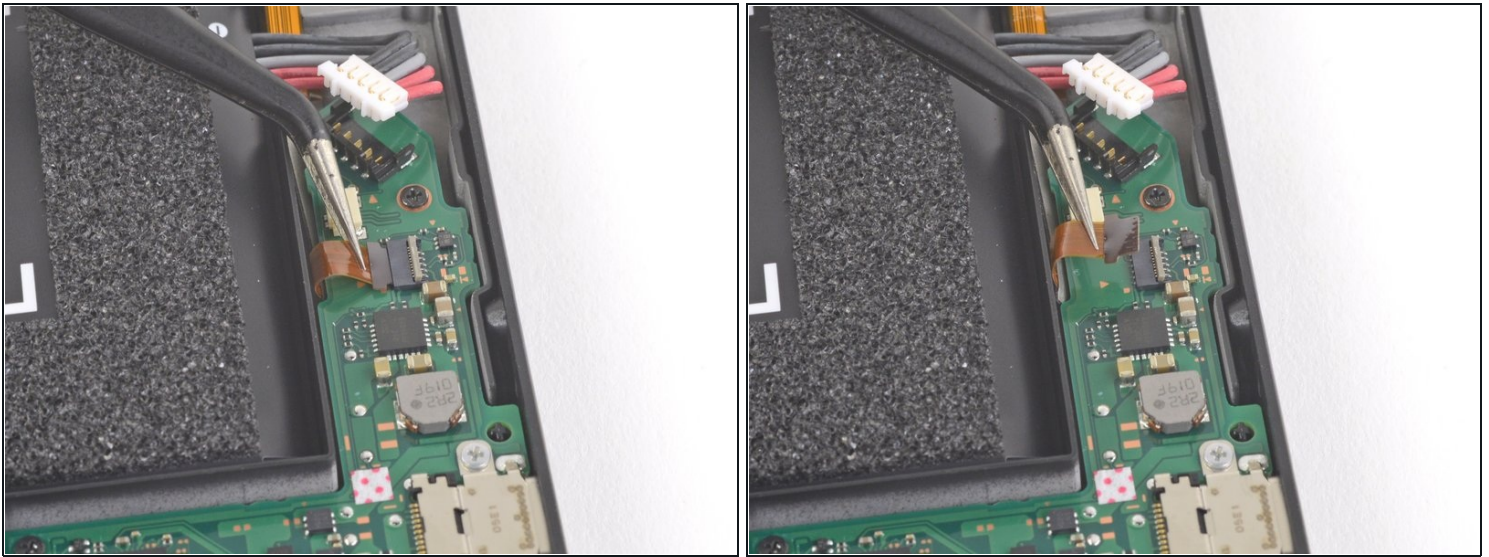
⚠ Do not pull on the connector by the speaker wires. They're very thin and can easily snap off the connector.

Step 38



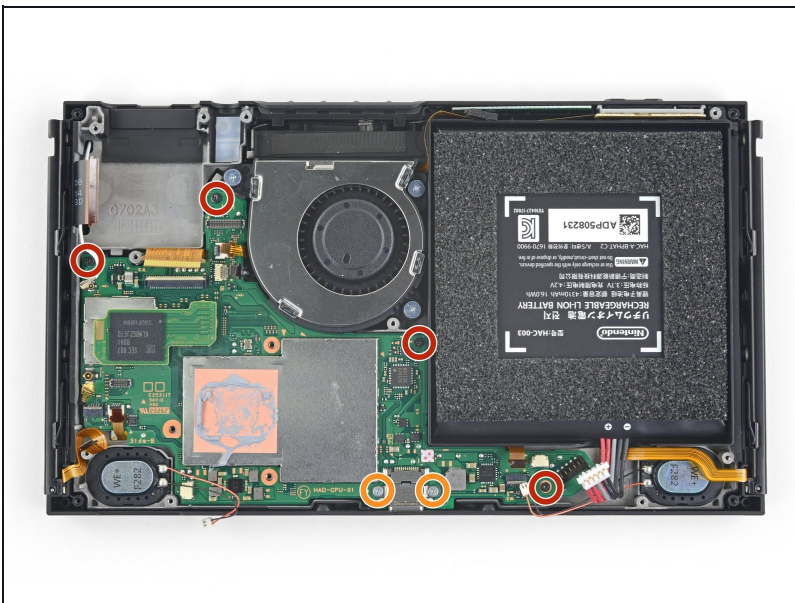
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the Joy-Con sensor rail data cable [ZIF connector](#).

Step 39



- Use a pair of tweezers to slide the Joy Con rail data cable straight out of its connector on the motherboard.

Step 40



- Use a JIS 00 driver to remove the following screws:
 - Four 2.5 mm screws
 - Two 3.1 mm screws

Step 41



- Insert a spudger into a gap between the motherboard and the frame.
 - Carefully lift up the motherboard and remove it from the frame.
-

Compare your new replacement part to the original part. You may need to transfer remaining components or remove adhesive backings from the new part before installing.

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 [Nintendo Switch Answers community](#) for help.