



# Sony Vaio Duo 13 Battery Replacement

Sony Vaio Duo 13 Li-ion Battery Replacement. Li-ion battery pack: VGP-BPS36. Spec: 7.5 V, 6320 mAh, 48 Wh.

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## INTRODUCTION

This is a brief guide for the Li-ion battery replacement of Sony Vaio Duo 13.

In this guide, a swollen Li-ion battery is replaced with a new one as a demonstration.

Replacing the old or damaged Li-ion battery is not only improves the performance of the laptop, but also keeps the battery in a healthy state for safety, avoiding the risk of thermal runaway.

## Step descriptions:

1. **Step 1:** Check the appearance of the laptop before replacement
2. **Step 2:** Check the status of the battery before replacement (optional)
3. **Step 3~11:** Teardown the laptop until the Li-ion battery appears
4. **Step 12~13:** Remove the old or damaged Li-ion battery
5. **Step 14~15:** Replace the old double-sided tapes (optional)
6. **Step 16:** Install new Li-ion battery
7. **Step 17~18:** Stick back the plastic sheet and double-sided tape
8. **Step 19:** Spacing fixing (optional)
9. **Step 20:** Check the laptop after replacing the battery
10. **Step 21:** Check the status of the battery after replacement (optional)

## NOTE:

1. There is a "destructive" teardown that cannot be restored to its original state in step 9.
2. Steps 2 and 21 can be skipped when users don't want to know the status of the battery or don't have the software.
3. Steps 14~15 and 19 can be skipped when old double-sided tapes still provide sufficient stickiness.

### TOOLS:

- [Phillips Screwdriver](#) (1)
- [Flat-blade Screwdriver](#) (1)
- [Plastic Crowbar](#) (1)

### PARTS:

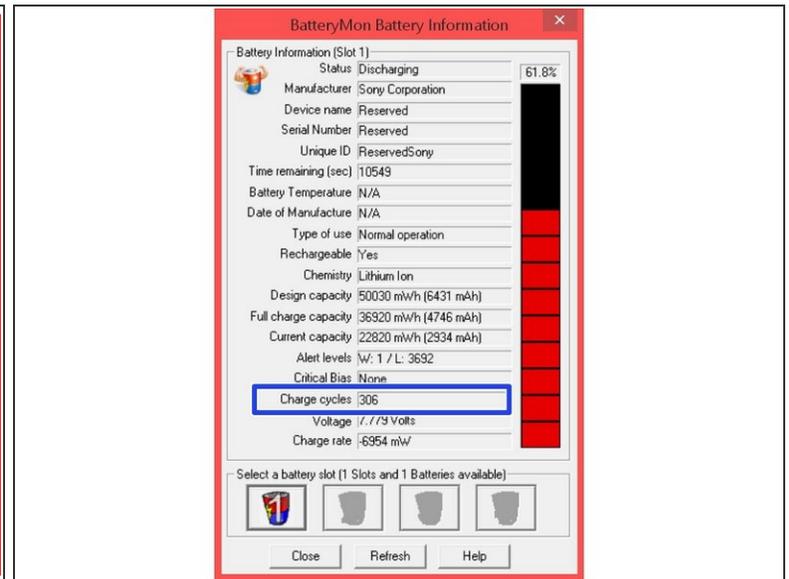
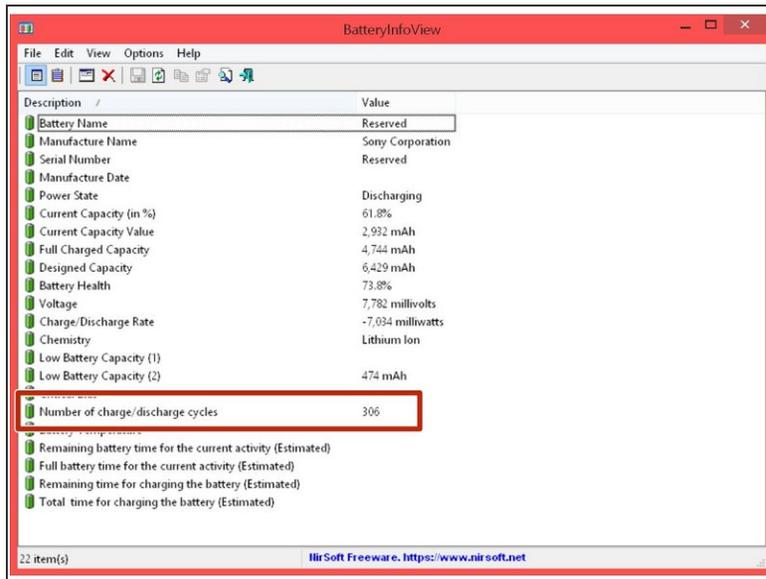
- [VGP-BPS36](#) (1)

## Step 1 — Check the appearance of the laptop before replacement



- Please check the appearance before fixing the laptop. For example: The laptop has been spread by the battery inside (up to 5 mm).

## Step 2 — Check the status of the battery before replacement (optional)



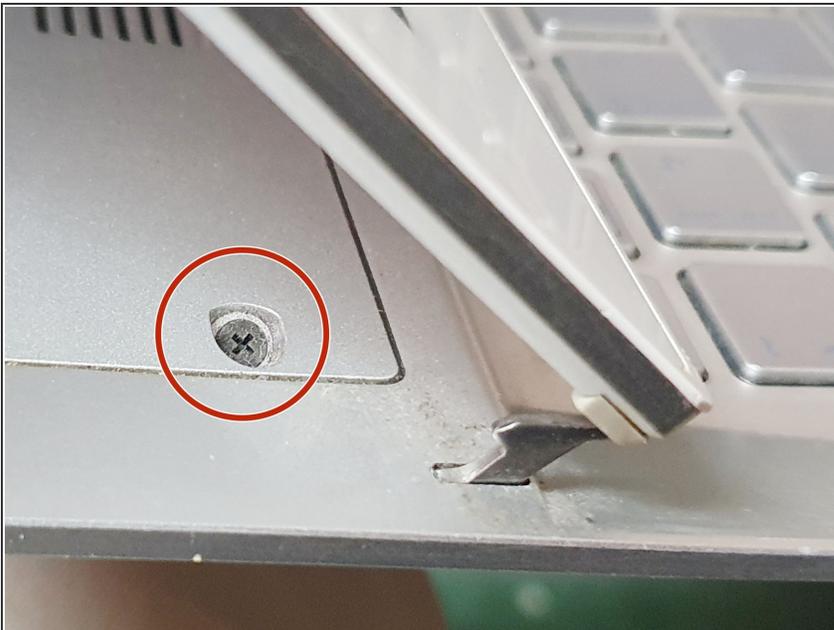
- This is an optional step. This step can be skipped when users don't want to know the battery status or don't have the software.
- Check the "cycle times" by battery software.
- Suggested software: (1) BatteryInfoView, (2) BatteryMon.
- Background: The number of "cycle times" depends on battery usage. It usually > 0. A Li-ion battery usually has "cycle times" about 500~1000. REF: <https://doi.org/10.31224/osf.io/swcyyg>
- For example: BatteryInfoView shows that "Number of charge/discharge cycles" is 306 (red box). BatteryMon shows that "Charge cycles" is 306 (blue box).

### Step 3 — Teardown the laptop until the Li-ion battery appears



- Go to the back side of the laptop.
- Remove the screw with a "+" screwdriver (the red circle).
- Number of screws: 1

### Step 4



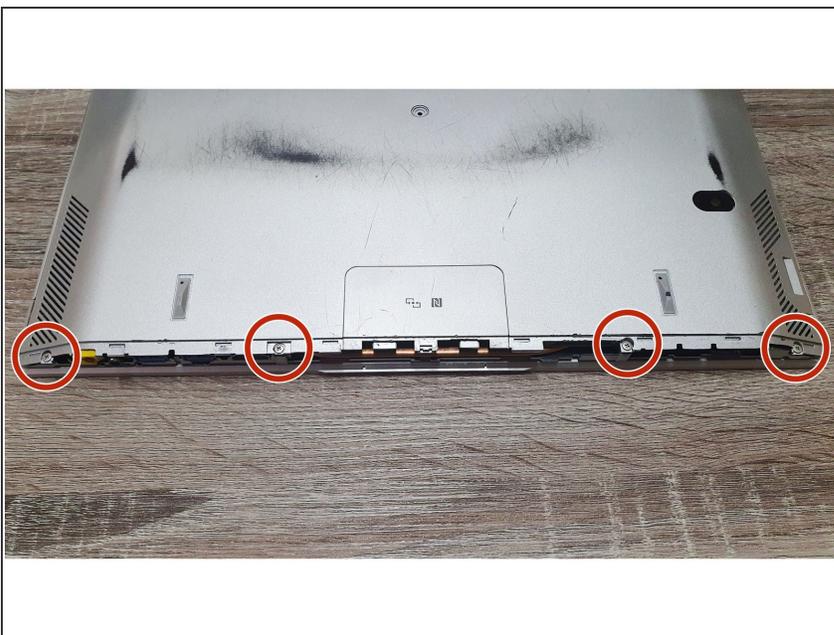
- Go to the front side of the laptop. Behind the LCD monitor.
- Remove the screw with a "+" screwdriver (the red circle).
- Move to the other side and remove the screw with a "+" screwdriver (not shown).
- Number of screws: 2

## Step 5



- Go to the back side of the laptop.
- Lever the plastic part by crowbar gently.
- Suggested tools: (1) Crowbar, (2) "-" screwdriver.

## Step 6



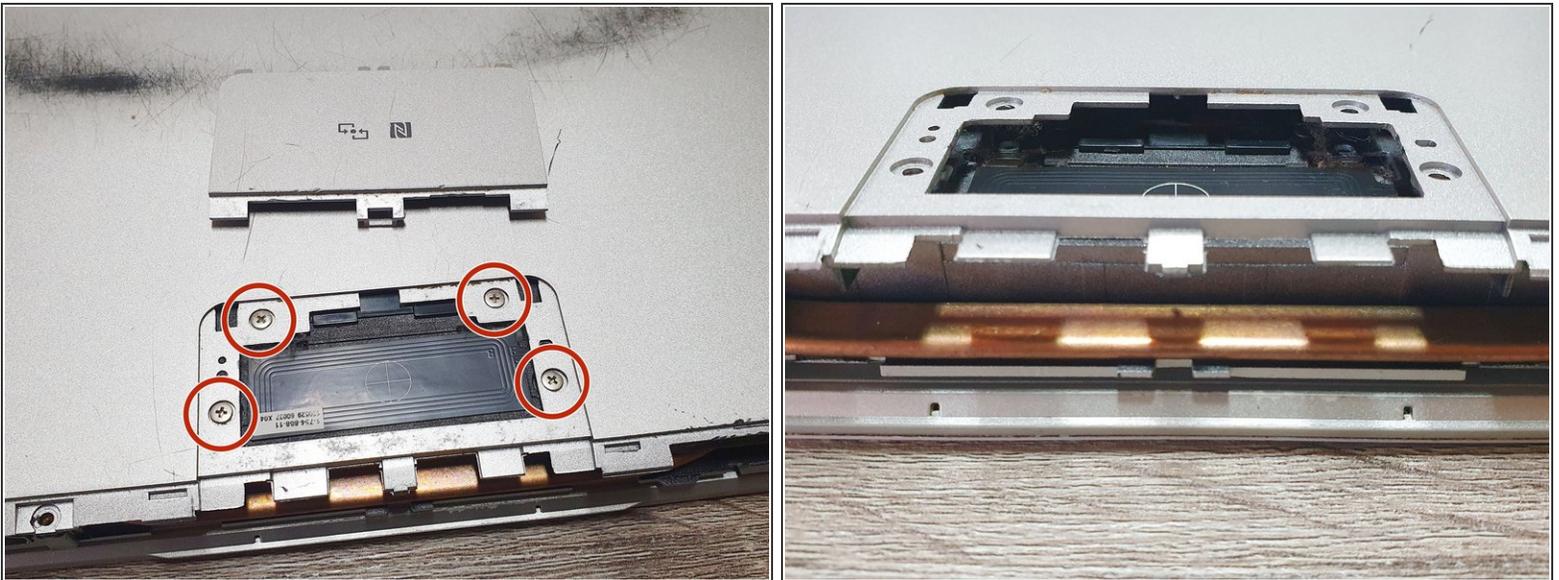
- Rotate the laptop 180°.
- Remove the screws with a "+" screwdriver (red circles).
- Number of screws: 4

## Step 7



- Remove the "NFC cover" with a lever gently. Do not break the retaining buckle.
  - Suggested tools: (1) fingernail, (2) "-" screwdriver.
- (i) NOTE:** Do not break the retaining buckle.

## Step 8



- Remove the screws with a "+" screwdriver (red circles).
  - Number of screws: 4
- (i) NOTE:** If the battery is severely swollen, you will see the back of the laptop stretched open after the screws are removed.

## Step 9



- Rotate the laptop 180°.
  - Tear off the plastic sheet (silver) and double-sided tape (black). The main thing is to let the screws hidden underneath show up.
- i** NOTE: It is difficult to remove the double-sided tape completely, and some remain on the surface, but it does not affect entire the repair process.

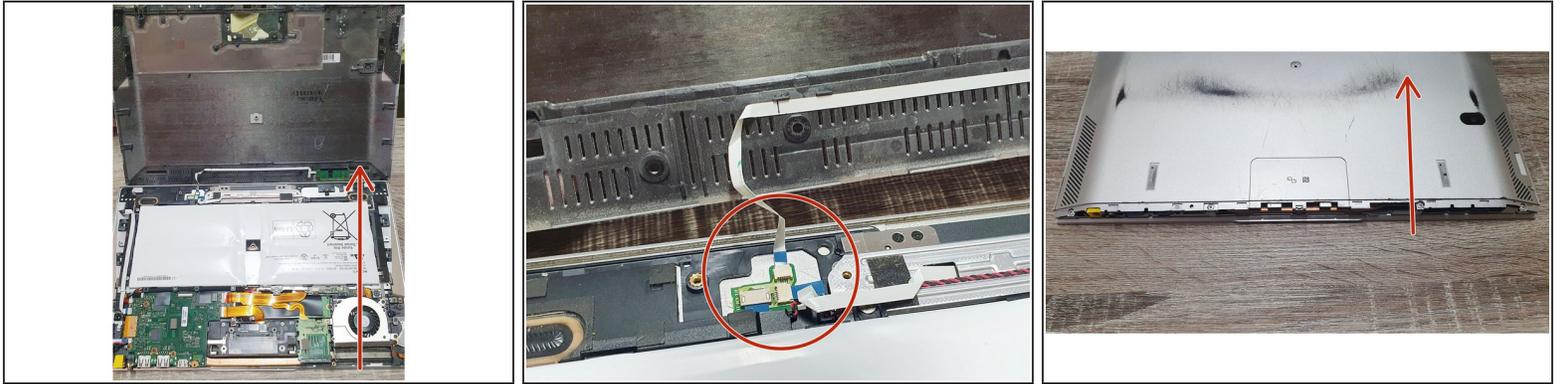
**⚠ CAUTION:** This step is a "destructive" teardown and cannot be restored to its original state.

## Step 10



- Remove the screws with a "+" screwdriver (red circles).
- Number of screws: 6

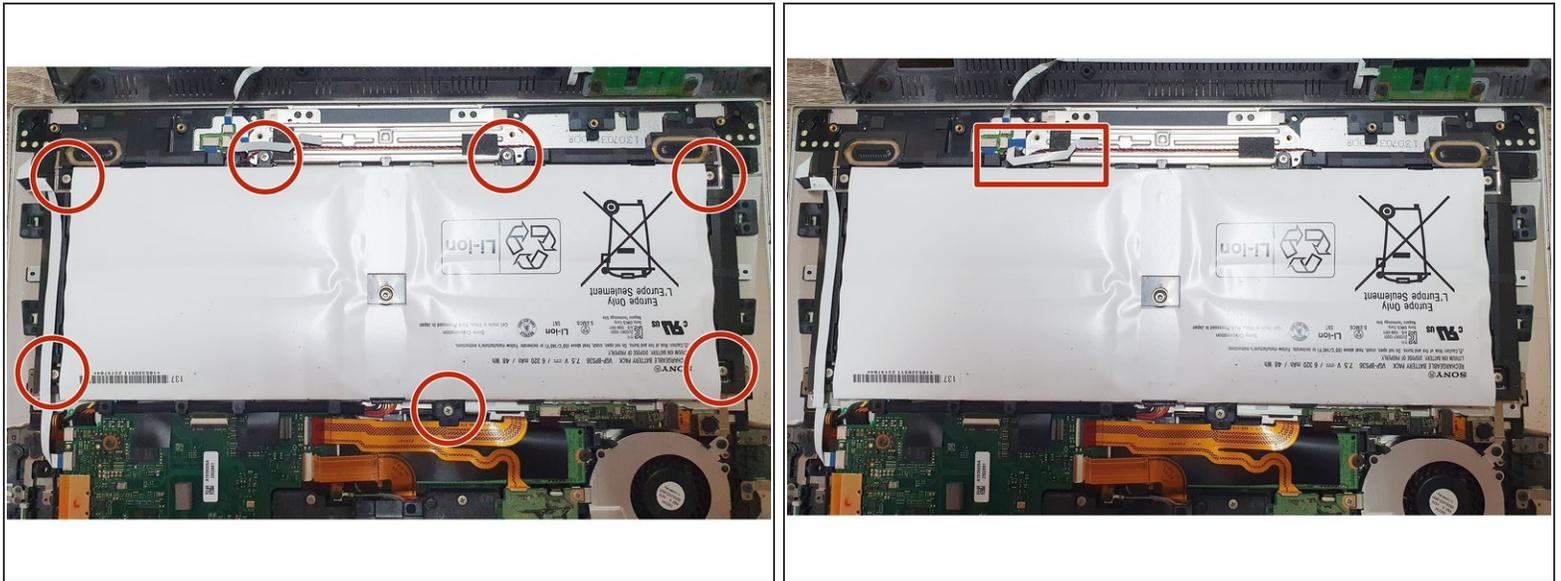
## Step 11 — Open the back side of the laptop



- Rotate the laptop 180°.
- Follow the direction of the red arrow and open the backside of the laptop from the open side, where the cooling cooper tube can be obviously been seen.
- The swollen Li-ion battery appears (the white package).

**⚠ CAUTION:** If the backside is opened from other directions, the flat cable may be broken or the plug may be damaged (the red circle).

## Step 12 — Remove the old or damaged Li-ion battery

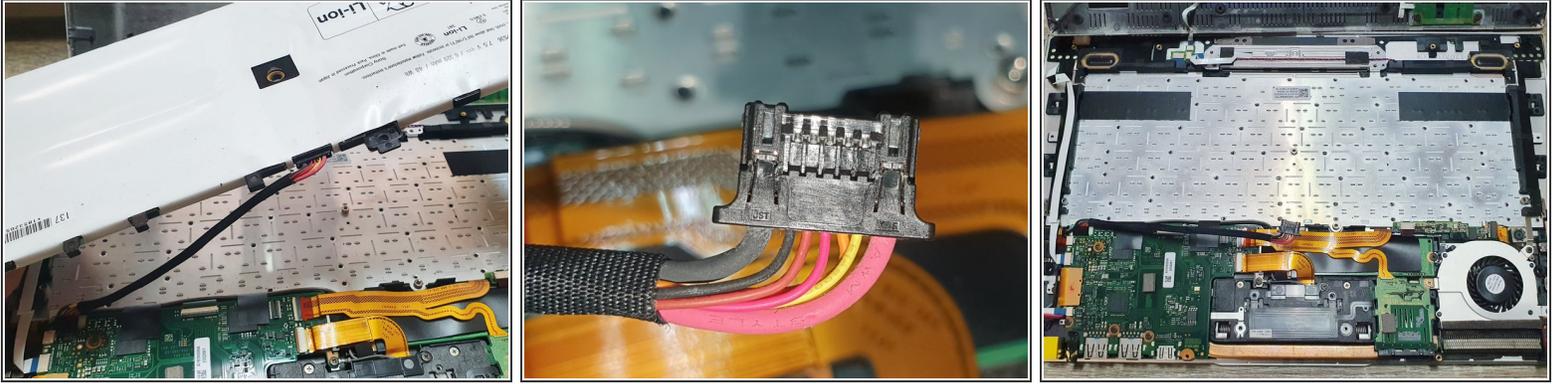


- Remove the screws with a "+" screwdriver (red circles).
- Number of screws: 7

**i** NOTE: Please avoid flat cables when removing screws. For example: see the red box.

**!** CAUTION: Don't damage the Li-ion battery or something bad will happen, such as gas leakage, electrolyte leakage, fire, and explosion. REF: <https://doi.org/10.31224/osf.io/swcyg>

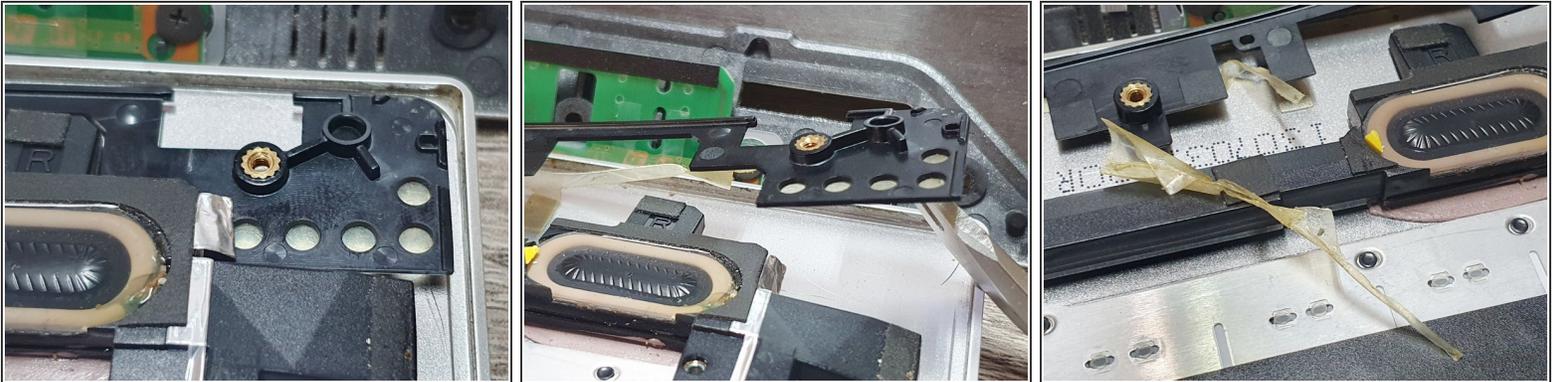
## Step 13



- Lift the Li-ion battery gently.
- Pull out the flat cable gently and then remove the Li-ion battery completely.
- Background: About the flat cable. Generally speaking, the red thick line is the "+" power line; the black thick line is the "-" power line; other thin lines are signal lines.

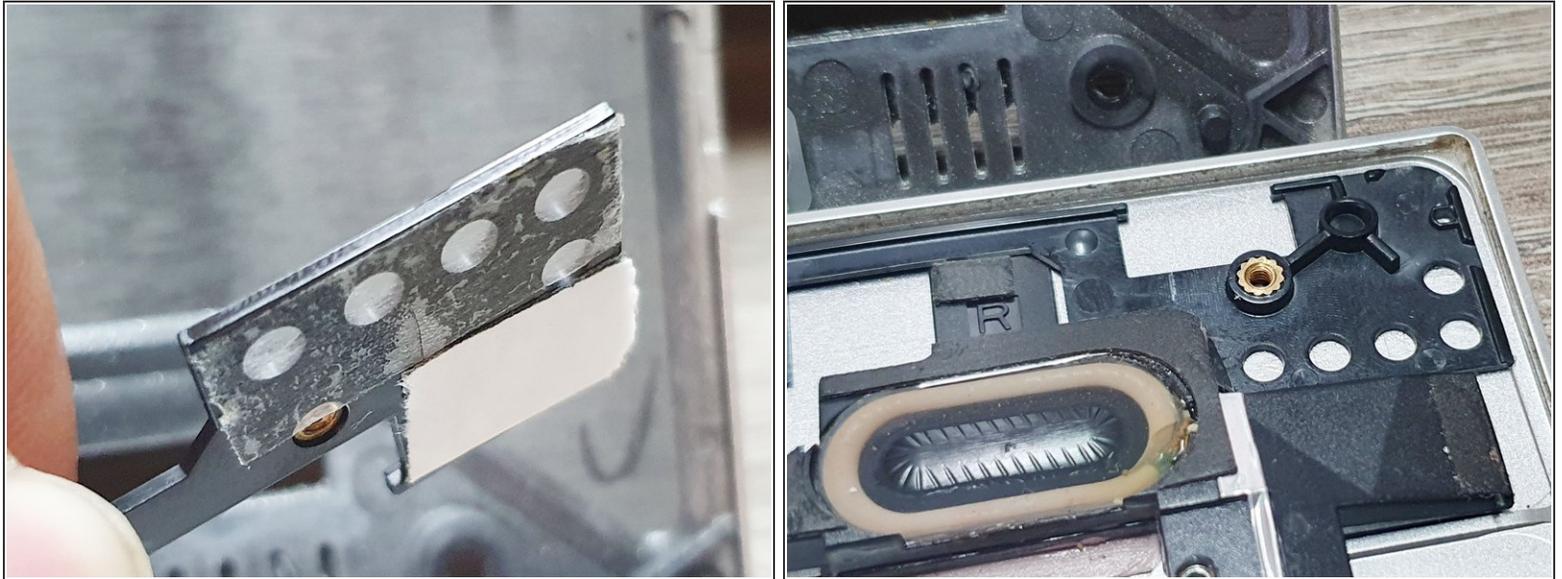
**⚠ CAUTION:** Don't damage the Li-ion battery or something bad will happen, such as gas leakage, electrolyte leakage, fire, and explosion. REF: <https://doi.org/10.31224/osf.io/swcyg>

## Step 14 — Replace the old double-sided tapes (optional)



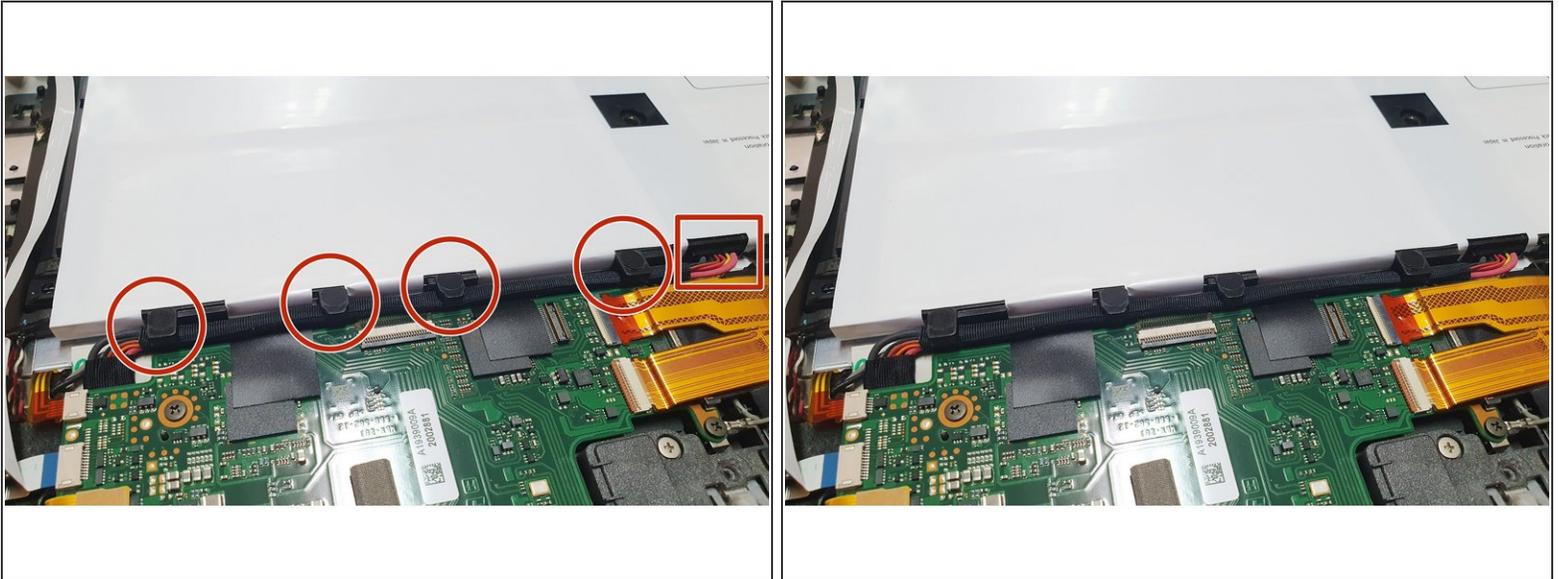
- Condition: The double-sided tape of the plastic part is degummed and has lost its stickiness. The plastic part clearly leaves the surface.
- Remove the double-sided tape that has lost its stickiness.

## Step 15



- Use new double-sided tape.
- Paste the plastic part back to its original position.
- Do the same on the other side if necessary.
- Suggestion: Do the same on the other side even though the plastic part sticks right on the surface. Because the old double-sided tape might not provide sufficient stickiness.
- Other methods: The epoxy AB glue can replace the double-sided tape.

## Step 16 — Install new Li-ion battery



- Plug the cable into the new Li-ion battery gently and tightly.
- To reassemble the laptop, follow steps 3~11 in reverse order. Some possible conditions and how to handle them will be described in the following steps.

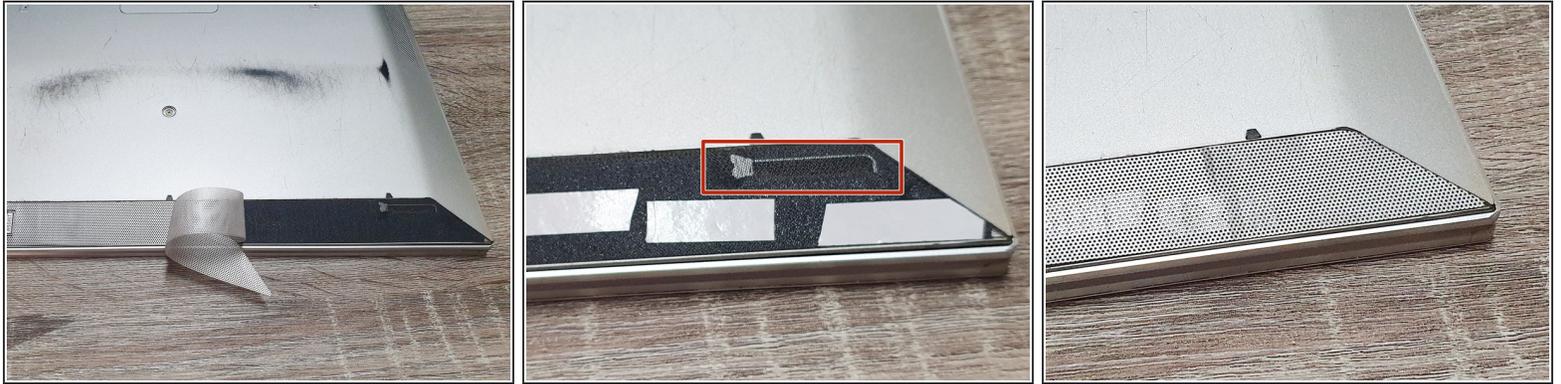
**(i)** NOTE: Make sure the cable is firmly inserted (the red box).

**⚠ CAUTION:** If the cable is not firmly inserted. Several worse conditions might happen. (1) Power failure (No electricity) and (2) Unstable connection cause an electric arc, fire, and explosion.

**(i)** NOTE: Make sure the cable is securely fastened (red circles).

**⚠ CAUTION:** If the cable is not securely fastened. The cable might be squeezed by other parts, causing an unstable power supply and even safety issues (arc, fire, and explosion). REF: <https://doi.org/10.31224/osf.io/swcyyg>

## Step 17 — Stick back the plastic sheet and double-sided tape



- Condition: The stickiness of the old double-sided tape (black) is not sufficient to stick back the plastic sheet (silver).
  - Use new double-sided tape (white) to stick the plastic sheet and the old double-sided tape.
- i** NOTE: The new double-sided tape should avoid the soundhole (red box).

## Step 18



- Condition: The damaged plastic sheet (silver) is caused by the "destructive" teardown in step 9.

## Step 19 — Spacing fixing (optional)



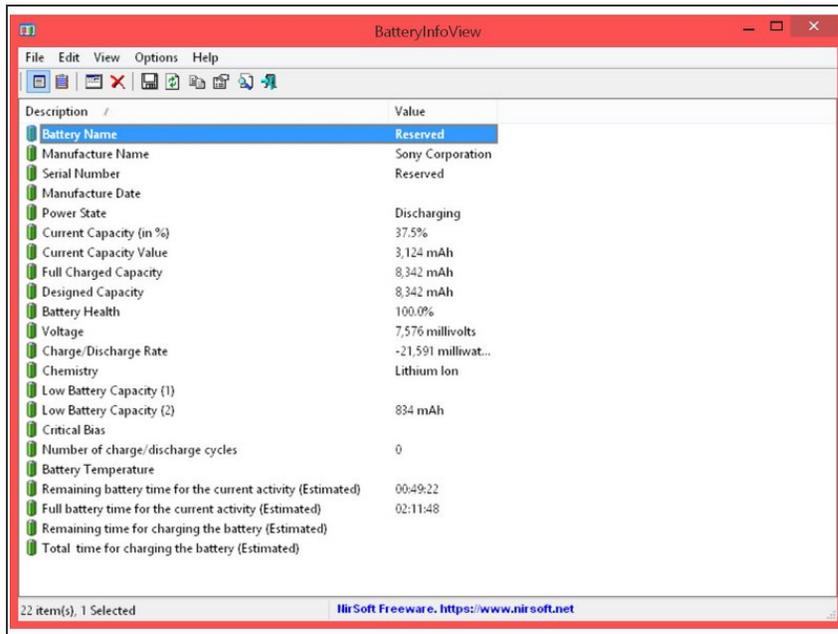
- Condition: If the stickiness of the double-sided tape is not sufficient, causing a spacing.
- Suggested method: Repeat steps 14 and 15.
- Other methods: Use tape to fix the problem. In this case, the yellow tapes are used for the clear demonstration. Users can use other color tapes.

## Step 20 — Check the laptop after replacing the battery



- After replacing the battery, please check the appearance of the laptop.
- Please turn on the laptop and unplug the AC power line to check the functionality of the battery.

## Step 21 — Check the status of the battery after replacement (optional)



- This is an optional step. This step can be skipped when users don't want to know the battery status or don't have the software.
- Check the "cycle times" by battery software.
- Suggested software: (1) BatteryInfoView, (2) BatteryMon.
- For example: BatteryInfoView shows that "Number of charge/discharge cycles" is 0 (red box), indicating that the laptop treats the battery as a new one.

This brief guide provides a simple Li-ion battery replacement procedure for Sony Vaio Duo 13.