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# How to replace a blower fan (SL1)



[help.prusa3d.com/g127607](https://help.prusa3d.com/g127607)

Scan the QR code to  
display the latest  
version of this  
chapter.



## STEP 1 Introduction



**i** This guide will take you through the replacement of the **blower fan** on the **Original Prusa SL1**.

◆ All necessary parts are available in our eshop [shop.prusa3d.com](http://shop.prusa3d.com)

**i** Note that you have to be logged in to have access to the spare parts section.

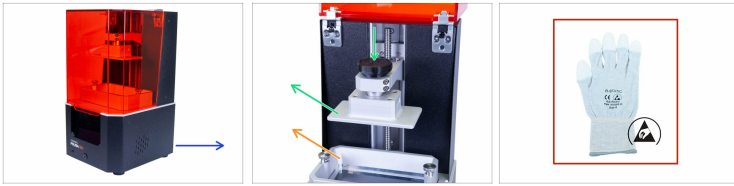
**!** **WARNING:** This device utilizes UV light, which can harm your eyesight or skin. Do not turn the device ON until it is fully reassembled with all the covers installed!!!

## STEP 2 Tools necessary for this chapter








- Cutting pliers
- 2.0mm Allen key
- 2.5mm Allen Key
- Zip tie (3x)
- Cardboard or similar soft pad (*e.g. a piece of cloth*)
- 3.0mm Allen key *for units shipped until July 2019*
- 4.0mm Allen key *for units shipped between July - August 2019*
- Bowl or box for the screws - *keep all removed fasteners for later use*

## STEP 3 Preparing the printer

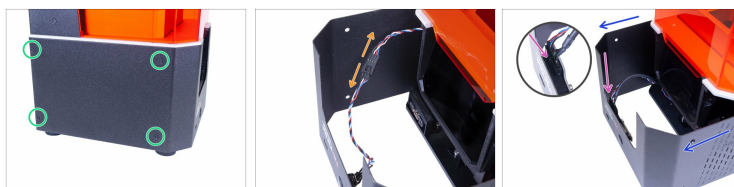


### Before you start, make sure that:

-  Printer is plugged off
-  Remove the resin tank
-  Remove the print platform
-  Use ESD gloves (recommended)

 ESD gloves are anti-static (prevent damage to the electronics).

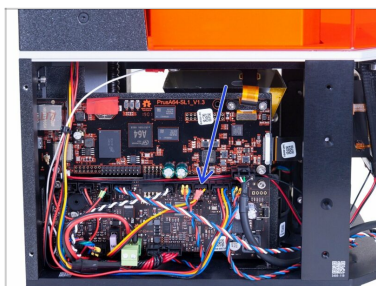
## STEP 4 Removing the cover



**⚠** Proceed carefully with these screws, preferably use an Allen key with straight sharp edges, there is a risk of stripping the screw's head.

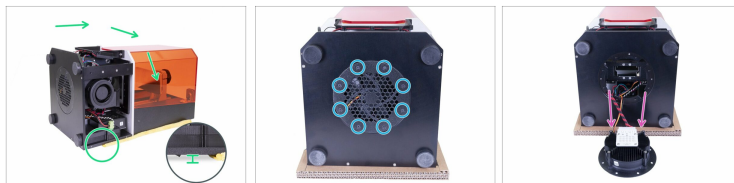
- Turn the left side of the printer towards you.
- Locate, release, and remove four screws.
- Turn the printer to the other side (180 °) and again remove four screws.
- Slide the cover just a few cm/inches out.
- **(i)** **There are two designs of USB and power button:**
  - **NEW DESIGN:** The USB and the power button have the same connector. Disconnect the cable and remove the cover completely.
  - **OLD DESIGN:** The USB and the power button are separated. Disconnect the power button cable from the extension cable and remove the cover completely.

## STEP 5 Disconnecting the blower fan



- ◆ Press the safety pin on the connector and disconnect the blower fan from the board. **Do not pull out the connector without pressing the pin**, it may damage the connector or the board.

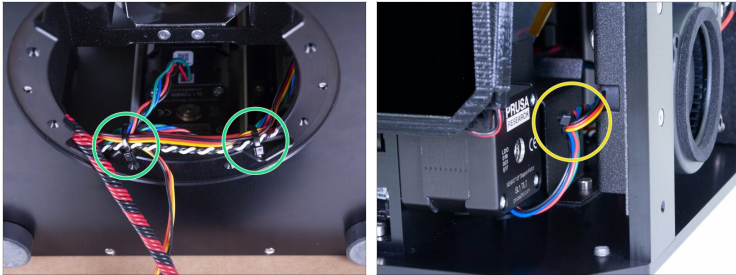
## STEP 6 Removing the UV LED assembly



- ◆ Use any soft pad (e.g. a towel) and place the back of the printer on it. Make sure there is a gap between the PSU power button and the surface beneath it. Avoid laying the printer directly on the button. Kit owners can use the cardboard.
- ◆ Release all screws on the UV LED assembly.
- ◆ Carefully put the UV LED assembly out of the printer. Do not disconnect it.

 **WARNING: Do not touch the LED panel on the UV LED assembly!**

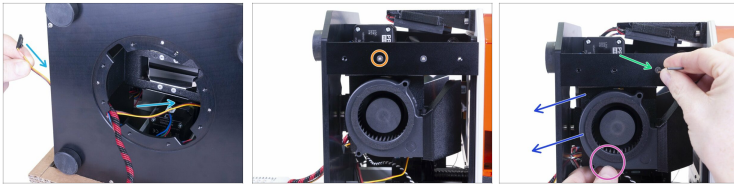
## STEP 7 Releasing the blower fan cable



- ◆ Carefully cut both zip ties on the cable bundle.
- ◆ Carefully cut the zip tie on the cable from the tilt motor and right blower fan.

 **CAUTION: Avoid cutting cables!**






## STEP 8 Removing the blower fan assembly



- i** The blower fan is part of an assembly (fan + metal sheet + printed part). Let's remove it as one piece and disassemble it to parts later on.
- ◆** Carefully push out the fan cable from the electronics to the right blower.
- ◆** Release the first screw on the support.
- ◆** Hold the blower fan assembly with one hand.
- ◆** Use the other hand to release the second screw on the support.
- ◆** Remove the blower fan assembly.







## STEP 9 Blower fan disassembly



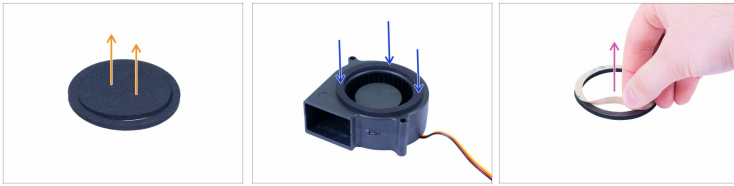
-  Release and remove two screws from the front side of the blower fan.
-  Remove the blower (printed part).
-  **NEW version:** Release and remove two screws M3x20r from the front side of the blower fan.
-  **OLD version:** Release and remove two screws M5x10r from the backside of the blower fan holder.
-  Some old versions might be with two M5x16r screws and two black screws M4.8x22.

## STEP 10 Blower fan parts preparation



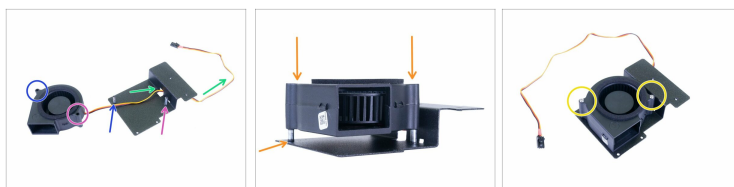
-  **For the following steps, please prepare:**
-  New right blower fan (1x)
-  Blower (1x)
-  New blower fan holder (1x) *with columns*
-  New blower gasket (1x)
-  The list continues in the next step...

## STEP 11 Blower fan gasket



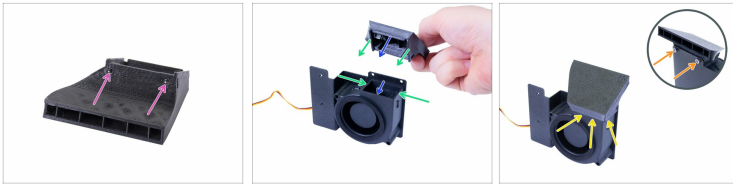
- ◆ Use isopropyl alcohol (IPA) and paper towel to clean the surface of the fan (the side with the turbine), before you apply the gasket.
  - ◆ Remove the centre part of the gasket, you will need just the outer "rim".
  - ◆ Peel off the protective film (paper).
  - ◆ Place the gasket on the fan as in the picture, with the glue facing down. Press it all around to ensure full contact between the gasket and the fan.
- ⚠ **Make sure no part of the gasket is interfering with a spinning (central) part of the fan!**

## STEP 12 Fan assembly



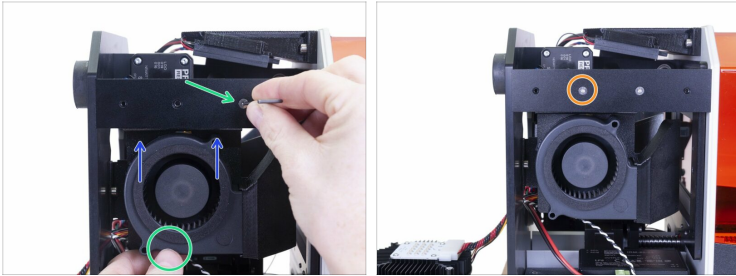
- ◆ Place the fan and the fan holder like in the picture. See the arrows to ensure the correct orientation of the fan.
  - ◆ The left side is of the fan.
  - ◆ The right side is of the fan.
  - ◆ Guide the cable through the hole.
  - ◆ Secure the fan using two M3x20 screws. Tighten them very carefully, or you might break the fan's casing.
  - ◆ Place the fan on the columns and slide it carefully all the way down. Try to push equally to ensure the fan is always levelled.
- i** If you had the old version of the blower fan holder (without columns), the Mx20r screws are included in the replacement set.

## STEP 13 Blower assembly



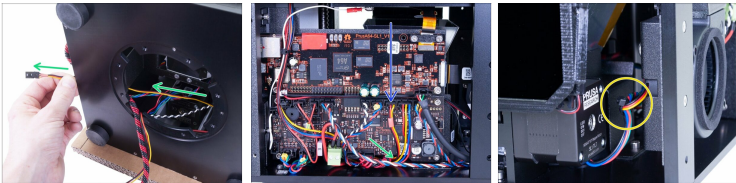
- ◆ Make sure that both square nuts are still inserted in the blower.
- ◆ Rotate the fan assembly like in the picture and assemble the blower from the top, while:
  - ◆ The front edge has to fit inside the fan's casing.
  - ◆ The left and right edges will be outside the fan's casing.
- ⓘ The assembly must be smooth, don't apply unnecessary force or you will break the fan or the printed part.
- ◆ Once the blower is seated, ensure there is no visible gap or deformation.
- ◆ To mount the blower, turn the assembly carefully around and secure it with the M3x5 screws.

## STEP 14 Mounting the fan assembly



- ◆ Insert the fan assembly inside the printer. The metal sheet (fan holder) has to be behind the support.
- ◆ Hold the fan assembly with hand and secure with the M3x10b countersunk screw to the right screw hole.
- ◆ Insert and tighten the second M3x10b countersunk screw to the left screw hole.

## STEP 15 Guiding the fan cable



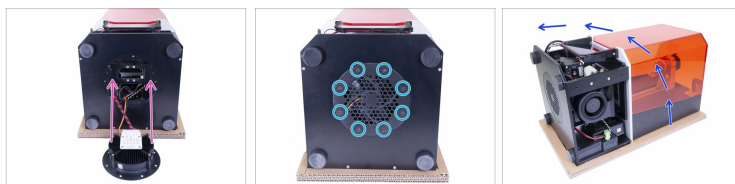
- ◆ Guide the fan cable from the blower through the space under the electronics.
- ◆ Connect the cable to the electronics.
- ◆ Tie together cable from the tilt motor and right blower fan on the front side of the printer.

## STEP 16 Guiding the fan cable



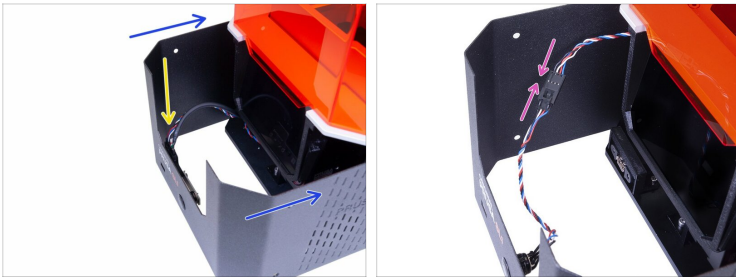
- Gently pull the cables out and place zip tie around them near the right edge of the circular opening.
- Use another zip tie on the other side.
- Put the cable bundle back inside the printer, make sure it is all the way back and won't interfere with the UV LED, which will be mounted to the circular opening in the upcoming steps.

## STEP 17 Mounting the UV LED assembly



- Insert the UV LED assembly back into the printer. Orientation as shown in the picture. **Be careful not to pinch the cables!**
- Mount the UV LED assembly with eight M3x5b countersunk screws.
- Now you can carefully put the printer back on its feet.

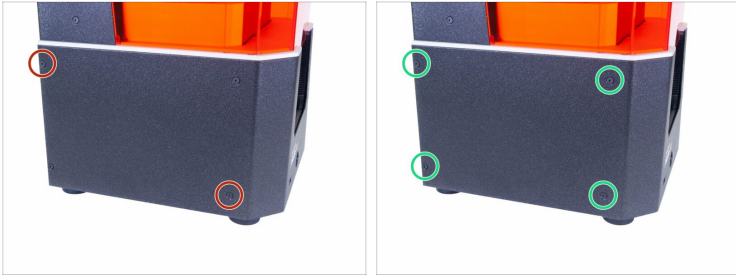
## STEP 18 Connecting the power button



- ◆ Slide the cover half-way to the printer and stop, we need to connect the front USB and power button first.
- ◆ **NEW DESIGN:** Look from above in the front cover and connect the USB & Power cable. Make sure the safety pin "clicks".
- ◆ **OLD DESIGN:** Connect the power cable button to the extension cable. Make sure the safety pin "clicks".

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## STEP 19 Assembling the cover



- ◆ Slide the cover on the printer and secure it on one side using two M3x5b countersunk screws. Don't tighten them firmly and move on the other side, repeat the procedure.
- ◆ As soon as the cover is aligned and partly secured, add the remaining screws and tighten them all.
- ◆ Turn the printer over (180 °) and use the same procedure.

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## STEP 20 It is done!



- ◆ **Great job!** You've just changed the blower fan on the SL1 printer.



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