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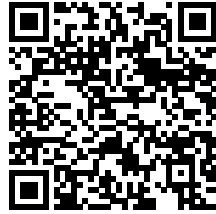


# How to replace the hotend fan (CORE One L)



[help.prusa3d.com/g942475](https://help.prusa3d.com/g942475)

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chapter.**



## STEP 1 Introduction



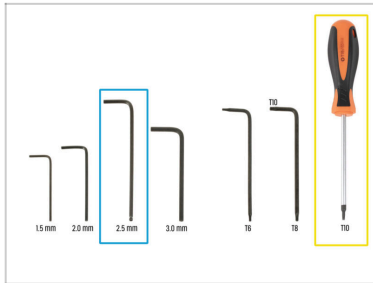
- ◆ This guide will take you through the hotend fan replacement on your Prusa CORE One L.
- ◆ All necessary parts are available in our eshop [prusa3d.com](https://prusa3d.com).



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

- ⓘ Keep all the fasteners that you remove from the printer during the replacement process at hand; they will be reused.

## STEP 2 Tools necessary for this guide



### ● Prepare these tools for this guide:

- 2.5mm Allen key
- T10 Screwdriver

## STEP 3 Printer preparation (part 1)



- Close the door.
- Navigate the screen to **Filament** -> **Unload filament**
- Unload the filament from the printer.
- Remove the filament spool from the printer.
- ⚠ **Ensure that the printer has completely cooled down.**
  - On the printer screen, navigate to **Preheat** -> **Cooldown** and wait for the temperatures to drop to ambient levels. This may take several minutes.

## STEP 4 Printer preparation (part 2)



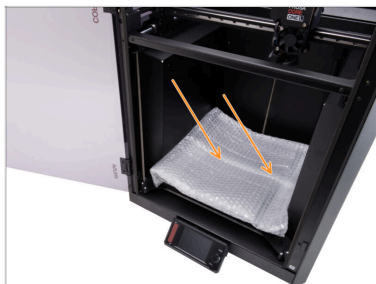
- ◆ Open the menu **Control -> Move Axis -> Move Z** and move the heatbed all the way down.
- ◆ Wait until the heatbed moves down.
- ◆ Flip the power switch OFF (symbol "O").
- ◆ From the rear side of the printer, unplug the PSU cable.

## STEP 5 Removing the printer top cover



- ◆ Open the door and reach in to the front of the top cover.
- ◆ **i** The cover is held in place by a set of plastic security latches.
- ◆ Locate two of the plastic latches at the bottom front of the cover. Squeeze them together simultaneously.
- ◆ Lift the front of the cover just enough to unhook it from the printer and pull the cover 2 cm / 0.8 inch towards you.
- ◆ Remove the top cover from the outside.

## STEP 6 Protecting the heatbed



**⚠** Before proceeding any further, it is recommended to protect the heatbed first!

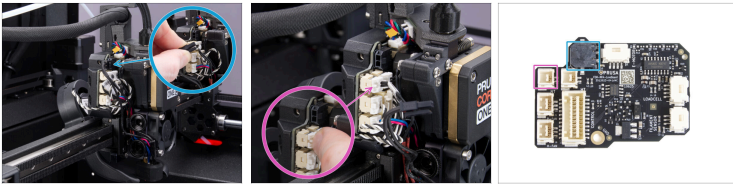
- Use a piece of fabric, cardboard, bubble wrap, or any soft material to cover the heatbed. This will prevent damaging the heatbed/print sheet during the process.


## STEP 7 Accessing the hotend fan cable





- Adjust the printer so you have access to the left side of the Nextruder.
- Using the 2.5mm Allen key, remove the M3x10 screw on top of the Printhead-cover-left (cover).
- Unhook the cover from the bottom slot and remove it.

## STEP 8 Disconnecting the hotend cables







 Each connector has a safety latch. **It is necessary to press the latch before pulling the cables out.** Otherwise, the connector may get damaged.

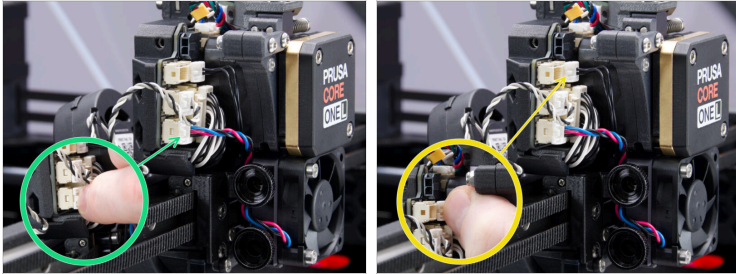
-  Press the safety latch and pull the hotend heater cable out.
-  Press the safety latch and pull the hotend thermistor cable out.

## STEP 9 Removing the hotend assembly



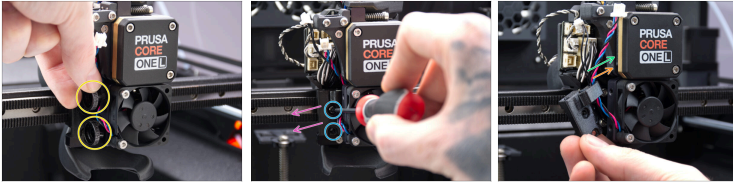
-  Unhook the hotend cables from the plastic cable guide behind the two thumb screws.
-  Hold the hotend with your hand to prevent it from falling down.
-  Use your other hand to slightly loosen the two thumb screws with a few turns.
-  Pull the hotend assembly down from the heatsink.

## STEP 10 Disconnecting the hotend fan and thermistor cables



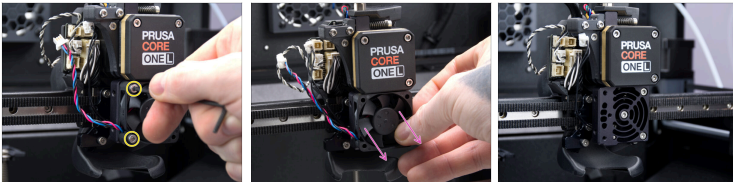
- ◆ Press the safety latch and pull the hotend fan cable from the love board.
- ◆ Press the safety latch and pull the heatbreak thermistor cable from the love board as well.

## STEP 11 Accessing the Hotend-cable-clip



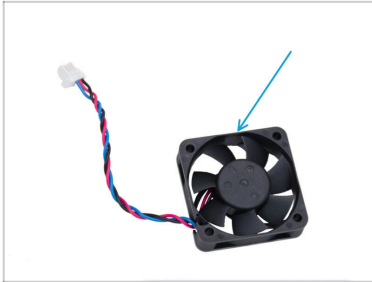
- ✦ Use your hand to completely remove the two thumbscrews from the heatsink.
- ✦ Use the T10 screwdriver to remove two M3x4rT screws that are holding the Hotend-cable-clip attached to the Nextruder.
- ✦ Carefully pull out the Hotend-cable-clip and remove the two cables from the slot:
  - ✦ Hotend fan cable
  - ✦ Heatbreak thermistor cable

## STEP 12 Removing the hotend fan



- ✦ Use the 2.5mm Allen key to remove the two M3x18 screws that attach the hotend fan to the heatsink.
- ✦ Remove the hotend fan from the nextruder.
- ⓘ We recommend disposing of the old hotend fan right away to avoid confusing it with the new one.

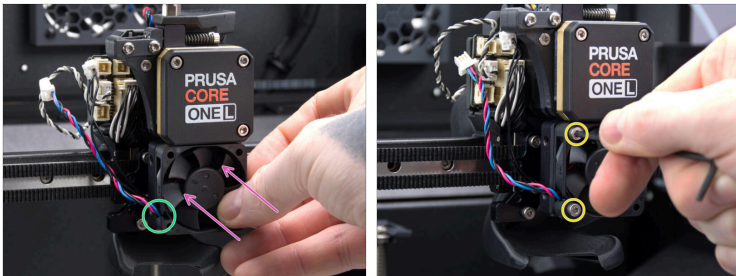
## STEP 13 Hotend fan parts preparation



◆ For the following steps, prepare:

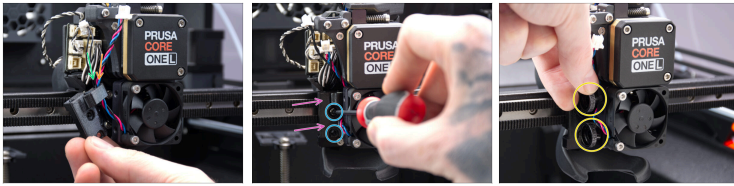
- ◆ Hotend fan

## STEP 14 Attaching new hotend fan



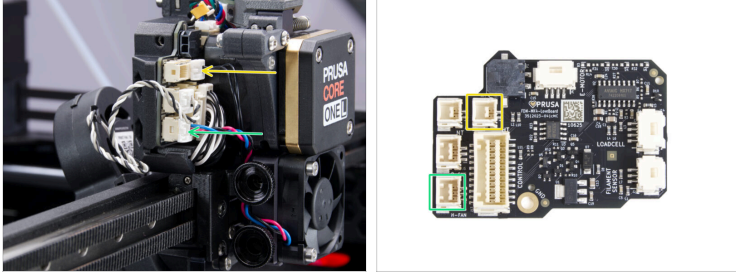
- ◆ Place the hotend fan on the heatsink. The sticker side of the hotend fan must be facing the heatsink.
- ◆ Ensure that the hotend fan is positioned with the cable protruding from the bottom left corner of the fan.
- ◆ Use the 2.5mm Allen key to tighten the two M3x18 screws that fix the hotend fan in place.

## STEP 15 Attaching the Hotend-cable-clip



- ◆ Insert the hotend fan cable and the heatbreak thermistor cable into the slot in the hotend-cable-clip:
  - ◆ Hotend fan cable.
  - ◆ Heatbreak thermistor cable.
- ◆ Carefully slide the Hotend-cable-clip back onto the nexttruder.
- ◆ Use the T10 screwdriver to tighten the two M3x4rT screws.
- ⓘ With the Hotend-cable-clip in place, make sure that no cables are pinched.
- ◆ Use your hand to screw in the two thumbscrews to the heatsink. **Do not tighten them all the way yet.**

## STEP 16 Connecting the hotend fan and thermistor cables



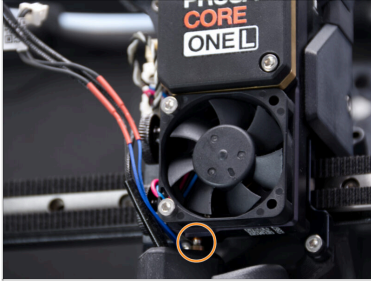
- Connect the heatbreak thermistor cable to the upper right slot on the love board. Ensure that the safety latch clicks securely into place.
- Connect the hotend fan cable to the bottom left slot in the love board. Ensure that the safety latch clicks securely into place.

## STEP 17 Inserting the hotend



- ◆ Locate the hole on the bottom of the extruder heatsink and insert the hotend assembly.
- ⓘ Ensure that there is enough free space between the hotend assembly and the fan shroud.
- ◆ Once the hotend assembly is completely inserted into the nextruder, tighten both thumbscrews.
- ◆ Double-check that the hotend assembly is fully inserted into the heatsink. It has to align with the fan shroud.

## STEP 18 Checking the nozzle

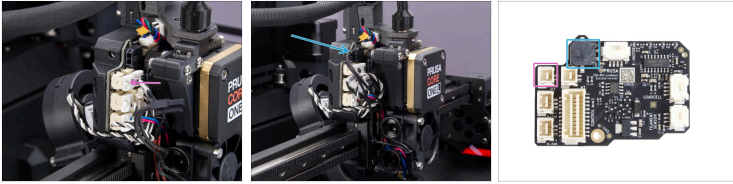


- Verify that the nozzle is fully inserted into the heatsink. The copper ring on the nozzle has to be barely visible.

**⚠** If not inserted properly, the nozzle can cause poor heat transfer and potentially lead to nozzle clogs.

- i** To adjust the nozzle position, loosen the thumbscrews on the side and push the hotend assembly up. Then tighten the thumbscrews again.

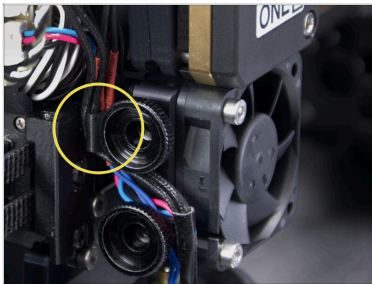
## STEP 19 Connecting the hotend cables



- ◆ Connect the hotend thermistor cable to the top left slot on the love board. Ensure that the safety latch clicks securely into place.
- ◆ Connect the hotend heater to the black slot on the upper part of the love board. Ensure that the safety latch clicks securely into place.

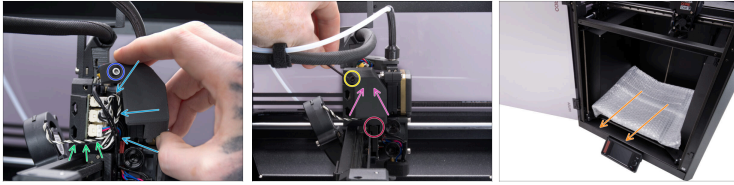
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## STEP 20 Guiding the hotend cables



- ◆ Insert the hotend cables behind the plastic cable guide hook. Guide the thermistor cable first, then the hotend heater cable.

## STEP 21 Attaching the Printhead-cover-left



- ◆ Organize the cables to ensure they are not sticking out to prevent pinching them once you attach the Printhead-cover-left (cover).
- ◆ Ensure that the print fan cable is led through the ridge in the Printhead-cover-rear.
- ◆ Tip: Prepare the M3x10 screw and set it up in the cover before attaching the cover.
- ◆ Insert the cover into the bottom slot in the Printhead-cover-rear first.
- ◆ Place the cover on the Nextrunder.
- ◆ Fix the cover in place using the M3x10 screw.
- ◆ Remove the protective material from the heatbed.


## STEP 22 Attaching the printer top cover






- Place the cover on the printer with the ventilation grille in the front and slide the cover towards the back.
- Align the cover so that the two plastic latches at the rear of the cover slide in and lock the cover in place.
- Once the back is secured in place, lower the front of the cover and gently push the cover down, so the front latches will snap in place.

## STEP 23 Turning the printer on



 Make sure that the printer is placed in a stable place where no ambient vibrations are transmitted (for example, where other printers are printing).

-  Close the door.
-  From the rear side of the printer, plug in the PSU cable.
-  Turn the power switch ON (symbol "I").

## STEP 24 Final check



◆ To test out the print fan functionality, visit the menu **Control -> Calibrations & Tests -> Fan test.**

ⓘ The test will take just a moment.

📌 **Great job!** You just replaced the hotend fan on your PRUSA CORE One L.



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