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How to replace the hotend fan (CORE One L)

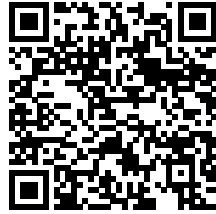
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chapter.**



STEP 1 Introduction



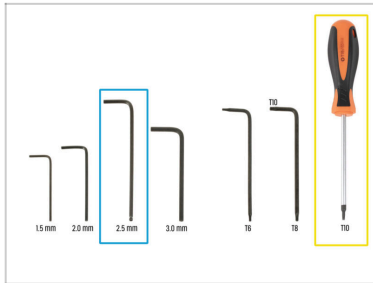
- ◆ This guide will take you through the hotend fan replacement on your Prusa CORE One L.
- ◆ All necessary parts are available in our eshop prusa3d.com.



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)



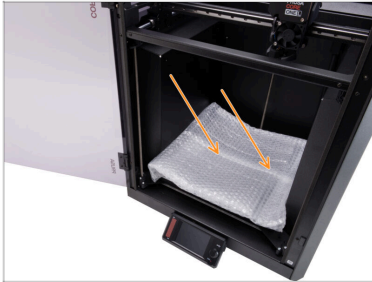
- ◆ Open the menu **Control -> Move Axis -> Move Z** and move the heatbed all the way down.
- ◆ Wait until the heatbed moves down.
- ◆ From the rear side of the printer, unplug the PSU cable.
- ◆ Flip the power switch OFF (symbol "O").

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!

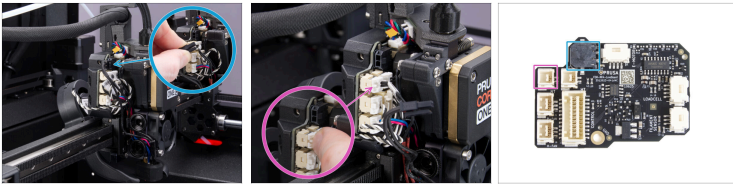
- Use a piece of fabric, cardboard, bubble wrap, or any soft material to cover the heatbed. This will prevent damaging the heatbed/print sheet during the process.


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.

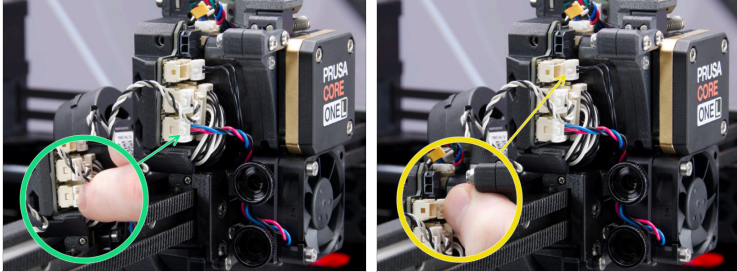
-  Press the safety latch and pull the hotend heater cable out.
-  Press the safety latch and pull the hotend thermistor cable out.

STEP 9 Removing the hotend assembly



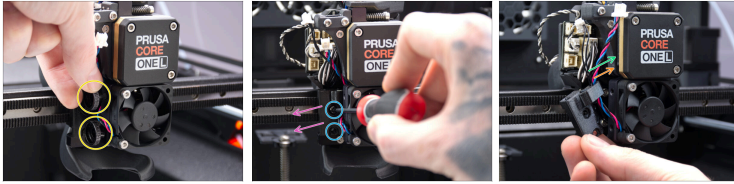
-  Unhook the hotend cables from the plastic cable guide behind the two thumb screws.
-  Hold the hotend with your hand to prevent it from falling down.
-  Use your other hand to slightly loosen the two thumb screws with a few turns.
-  Pull the hotend assembly down from the heatsink.

STEP 10 Disconnecting the hotend fan and thermistor cables



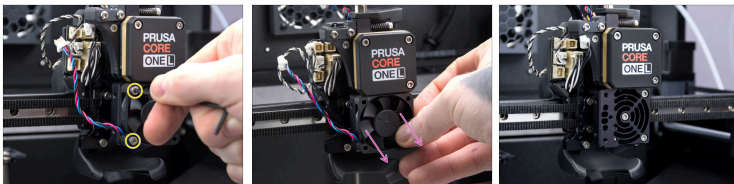
- ◆ Press the safety latch and pull the hotend fan cable from the love board.
- ◆ Press the safety latch and pull the heatbreak thermistor cable from the love board as well.

STEP 11 Accessing the Hotend-cable-clip



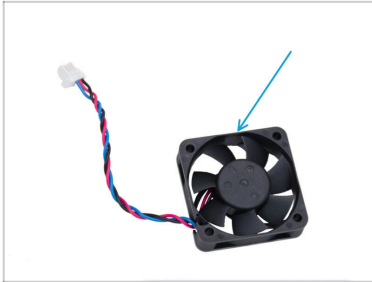
- ✦ Use your hand to completely remove the two thumbscrews from the heatsink.
- ✦ Use the T10 screwdriver to remove two M3x4rT screws that are holding the Hotend-cable-clip attached to the Nextruder.
- ✦ Carefully pull out the Hotend-cable-clip and remove the two cables from the slot:
 - ✦ Hotend fan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

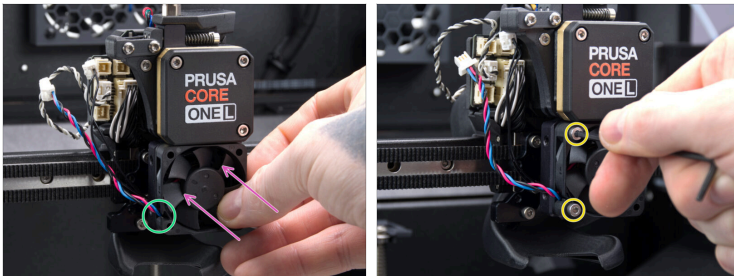
STEP 13 Hotend fan parts preparation



◆ For the following steps, prepare:

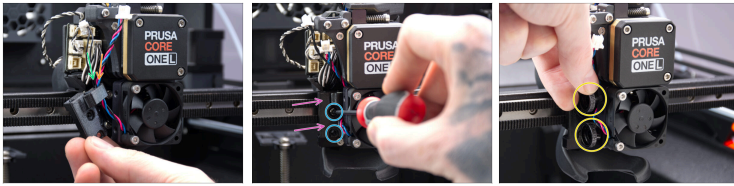
- ◆ Hotend fan

STEP 14 Attaching new hotend fan



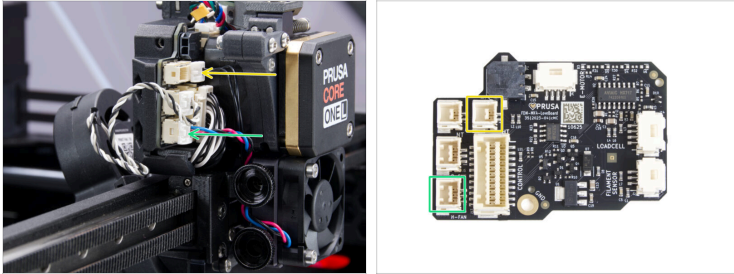
- ◆ Place the hotend fan on the heatsink. The sticker side of the hotend fan must be facing the heatsink.
- ◆ Ensure that the hotend fan is positioned with the cable protruding from the bottom left corner of the fan.
- ◆ Use the 2.5mm Allen key to tighten the two M3x18 screws that fix the hotend fan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



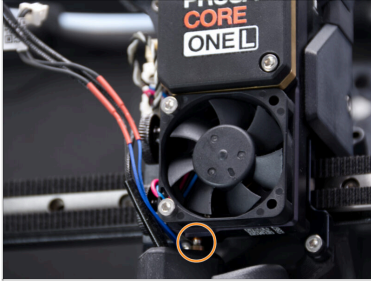
- Connect the heatbreak thermistor cable to the upper right slot on the love board. Ensure that the safety latch clicks securely into place.
- Connect the hotend fan cable to the bottom left slot in the love board. Ensure that the safety latch clicks securely into place.

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

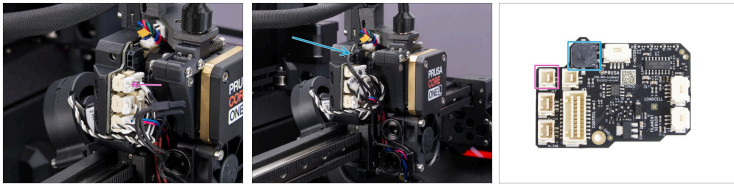


- Verify that the nozzle is fully inserted into the heatsink. The copper ring on the nozzle has to be barely visible.

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

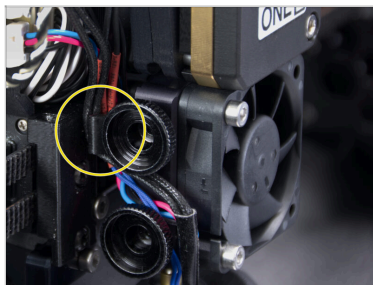
- i** To adjust the nozzle position, loosen the thumbscrews on the side and push the hotend assembly up. Then tighten the thumbscrews again.

STEP 19 Connecting the hotend cables



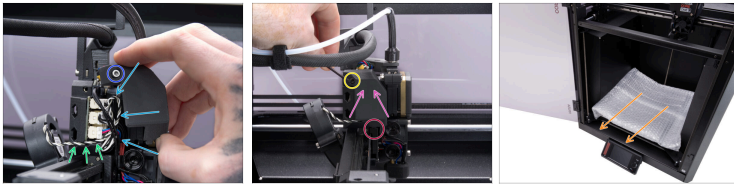
- ◆ Connect the hotend thermistor cable to the top left slot on the love board. Ensure that the safety latch clicks securely into place.
- ◆ Connect the hotend heater to the black slot on the upper part of the love board. Ensure that the safety latch clicks securely into place.

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.
