# Table of Contents

# How to replace a Hotend Thermistor (CORE One)

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# STEP 1 Introduction

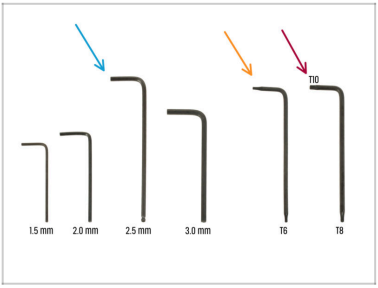
- This guide will take you through the **Hotend thermistor replacement** on your Original Prusa **CORE One**.

The following instructions are compatible with all Prusa Nozzle diameters.

- 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.

# STEP 2 Tools necessary for this guide




- **Please prepare tools for this guide:**
  - 2.5mm Allen key
  - T6 Key
  - T10 Key / Screwdriver

## STEP 3 Printer Preparation (Part 1)



- Close the printer's door.
- Unload the filament. Visit the menu **Filament** and select **Unload filament.**
- Unload the filament from the printer.
- Remove the filament spool from the printer.
- ⚠ Ensure 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)



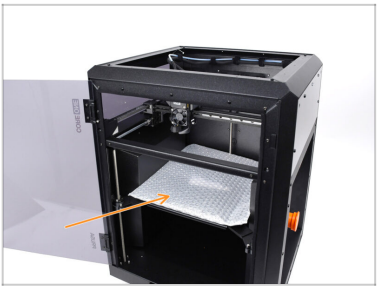
- Open the menu **Control > Move Axis > Move Z** and set it to 100mm or more.
- Wait until the heatbed moves down.
- Turn the printer off using the switch on the back.
- Disconnect the printer from power.

# STEP 5 Top Cover Removal



- Open the printer. From the inside, reach for the nylon rivet on the front right of the top cover. Push it out to unlock it.
- Then, remove the rivet from the outside.
- Remove the remaining nylon rivets on the top cover using the same technique.
- Remove the top cover.

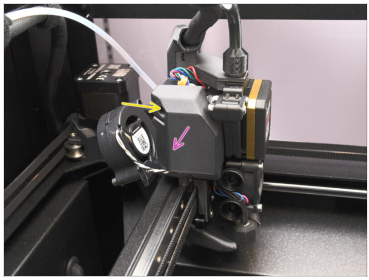
## STEP 6 Heatbed Protection

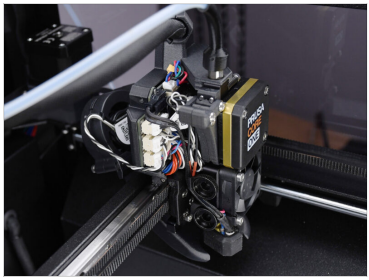


⚠ Before proceeding any further, it is recommended to protect the heatbed first!

- Use a piece of fabric or other material thick enough to cover the heatbed. This will ensure you won't damage (scratch) the surface during the process.

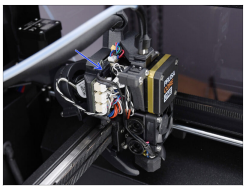
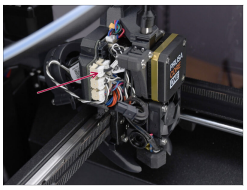
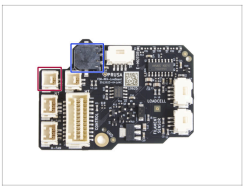
## STEP 7 Nextruder Uncovering





- Let's move onto the left side of the Nextruder.
- Using the 2.5mm Allen key, remove the M3x10 screw holding the side cover.
- Remove the cover.

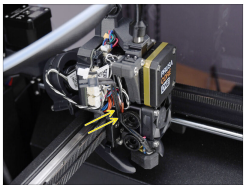
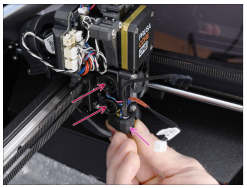
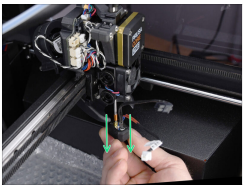
## STEP 8 Cables Disconnecting

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

- Disconnect the hotend heater cable.
- Disconnect the hotend thermistor cable.

## STEP 9 Hotend Assembly Removal

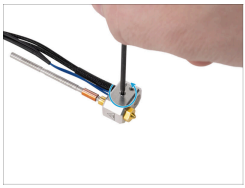
- Remove the hotend cables from the cable guide.
- Grasp the hotend with your hand.
- Use your other hand to loosen the two thumb screws. **There is no need to remove them completely**, a few turns are enough.

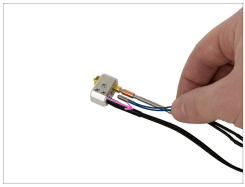
  ⓘ Watch out, the hotend assembly may fall out!
- Slide out the hotend assembly from the heatsink.

## STEP 10 Silicone Sock Removal

- Remove the Silicone sock, if you are using one.

## STEP 11 Thermistor Removal



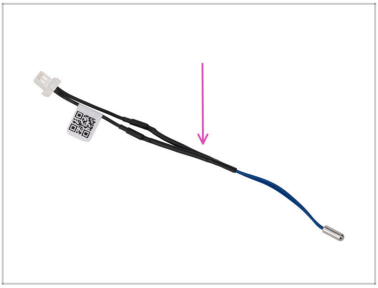


- Using the TX6 Torx key loose the screw. **Do not remove the screw**, a few turns are enough!

ⓘ If the thermistor cannot be pulled out, loosen the screw more.

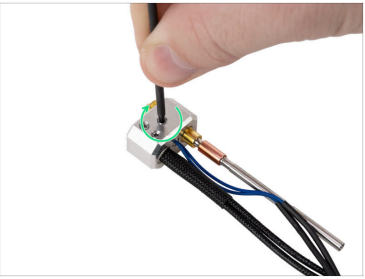
- Remove the thermistor from the heaterblock.

## STEP 12 Thermistor Preparation



- **For the following steps, prepare:**
- New hotend thermistor (1x)

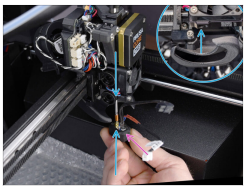
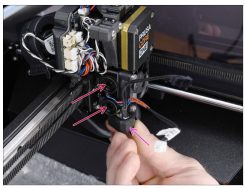
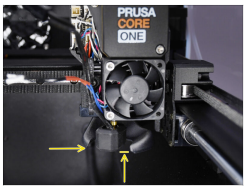
## STEP 13 Thermistor Installation



- Insert the new hotend thermistor all the way into the hole in the middle of the heaterblock.
- Using the longer side of the TX6 key, tighten the thermistor.

  ⚠ Use a reasonable force to prevent damaging the thermistor.

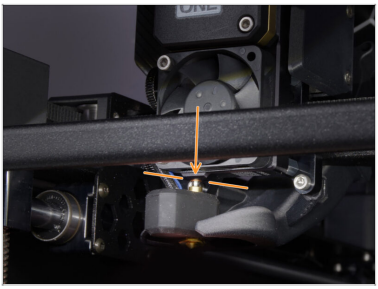
# STEP 14 Hotend Insertion


- Locate the corresponding opening on the bottom of the extruder heatsink and fully insert the hotend into the heatsink.
- At the same time, keep the hotend cables pointing to the front, at a slight angle.

  ⓘ Ensure that there is enough free space between the new hotend assembly and the fan shroud.
- Keep pushing the hotend assembly upward and tighten both thumbscrews to secure it in place.
- Ensure the hotend is fully inserted into the heatsink. It should align as shown in the picture and must not protrude below the fan shroud.

## STEP 15 Nozzle Insertion Check

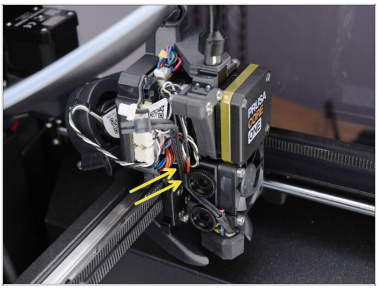


- Check the nozzle seating in the heatsink.
  The copper ring on the nozzle should be **slightly visible** (just barely) if the nozzle is correctly seated.

  ⚠ If not fully inserted, it can cause poor heat transfer, potentially leading to nozzle clogs.

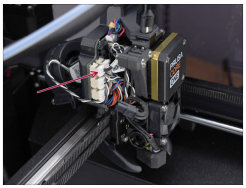
  ⓘ To adjust the nozzle position, loosen the thumbscrews, reposition the nozzle, and then retighten the screws, while pushing the hotend assembly up.

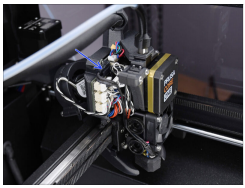
## STEP 16 Hotend Cables Guidance

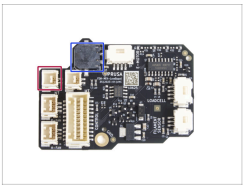


- Locate the cable guide (plastic hook) behind the thumb screws. Guide the thermistor cable through the channel first. Then insert the hotend heater cable.

## STEP 17 Cables Connection

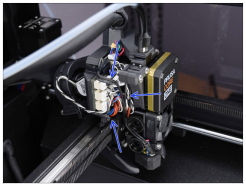
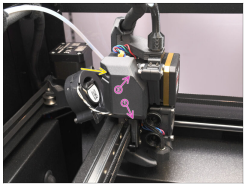
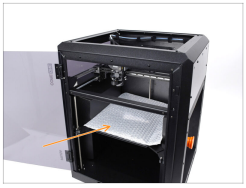






- Connect the hotend thermistor to the top left slot on the LoveBoard.
- Connect the hotend heater to the black slot on the upper part of the LoveBoard.

## STEP 18 Nextruder Cover

- Organize the cables to ensure they do not protrude.
- Attach the cover to the left side of the Nextruder assembly.
  - Hook it at the bottom first.
  - Push it towards the Nextruder.
- Fix the cover in place using the M3x10 screw.
- Remove the protective material from the heatbed.

## STEP 19 Top Cover

- Now, we can reinstall the top cover.
- Align the cover with the metal frame in the far-right corner.
- Align the cover with the recess in the front part as well
- Secure the cover in place using two nylon rivets in the marked openings.

## STEP 20 Turning the Printer On

- Close the door.
- Connect the printer to electricity.
- Turn the printer on.

# STEP 21 Final check

- To verify the connections, navigate to **Control > Temperature > Nozzle Temperature** and set it to above 200°C.
- Return to the main screen and check the bottom bar to ensure the temperature is rising as expected.

**Great job!** You can now resume using your printer.

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