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How to replace a Heatsink Thermistor (CORE One L)

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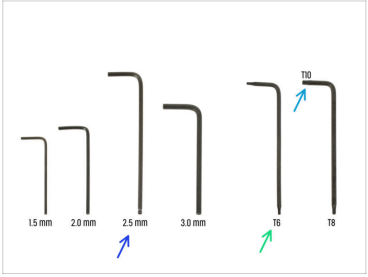
STEP 1 Tools Required



- **Prepare these tools for this guide:**
  - 2.5mm Allen key
  - T6 Key
  - T10 Key / Screwdriver
  - Prusa lubricant or other compatible grease (can be found in our e-shop)

STEP 2 Printer Preparation



- Close the door.
- Navigate to menu ***Filament -> Unload filament***.
- Pull out the filament.
- Remove the filament spool from the printer.

⚠ Ensure that the printer has cooled down.

- Navigate to ***Preheat -> Cooldown*** and wait for the temperatures to drop. This may take several minutes.

STEP 3 Printer Preparation 2



- Open the menu ***Control -> Move Axis -> Move Z*** and move the heatbed all the way down.
- Wait until the heatbed moves down.
- Turn off the printer using the switch on the back.
- Unplug the mains cable.

STEP 4 Top Cover Removal

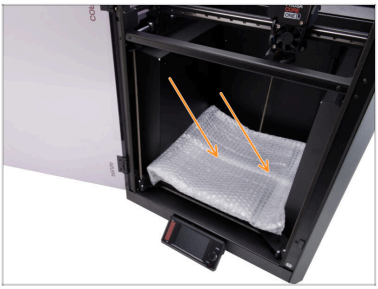


- Open the door and reach in to the bottom side of the top cover.

  The cover is held in place by a set of plastic latches.

- Locate two of the latches at the bottom front. Squeeze them together simultaneously.
- Lift the cover to unhook it. Pull the cover to the front.
- Remove the top cover.

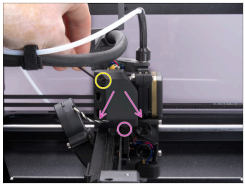
STEP 5 Heatbed Protection

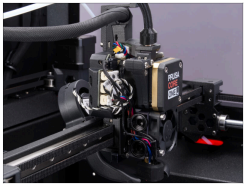


⚠ Before proceeding, it is recommended to protect the heatbed!

- Use a piece of fabric, cardboard, bubble wrap, or another suitable material to cover the heatbed to prevent any damage.

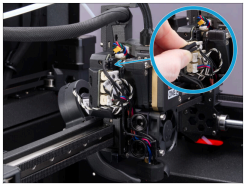
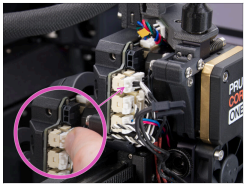
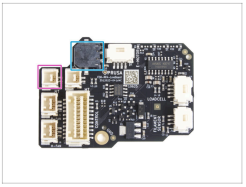
STEP 6 Nextruder Cover Removal





- Adjust the printer so that you can access the Nextruder from all sides easily.
- Using the 2.5mm Allen key, remove the M3x10 screw on top of the Printhead-cover-left (cover).
- Unhook the cover from the bottom and remove it.

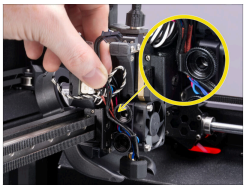
STEP 7 Hotend Disconnecting

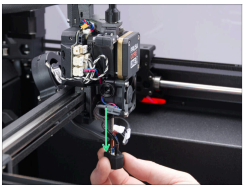




⚠ Each connector has a safety latch; **press the latch to remove the connector**, as pulling without pressing the latch may cause a damage.

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

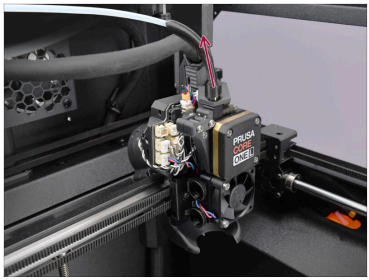
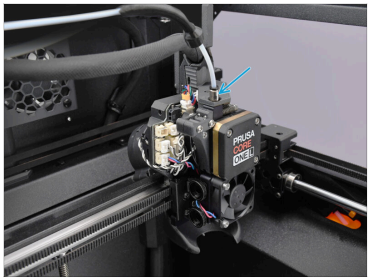
STEP 8 Hotend Assembly Removal





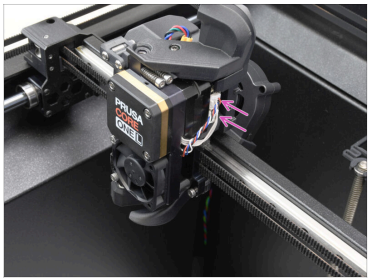
- Unhook the hotend cables from the plastic cable guide behind the two thumb screws.
- Hold the hotend securely with your hand to prevent it from falling.
- Using your other hand, loosen the two thumb screws by a few turns. **Do not remove them completely.**
- Pull the hotend assembly down and out of the heatsink.

STEP 9 PTFE Disconnection

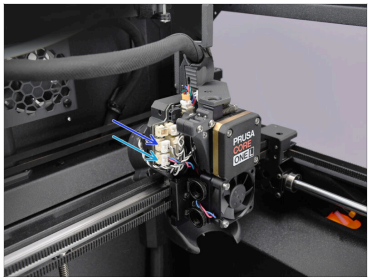
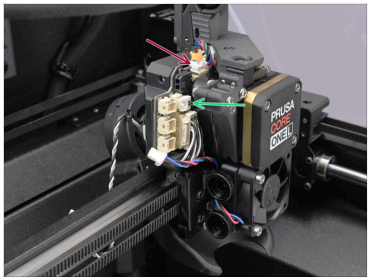
- Pull up the fitting cover on the extruder PTFE tube.
- Unscrew the PTFE fitting from the extruder and set the tube aside.

STEP 10 Cover Right Removal

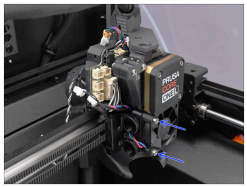
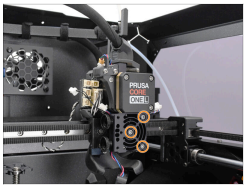
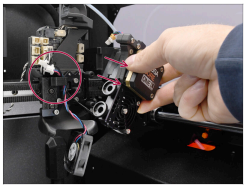
- Loosen the M3x6 screw on the right side of the Nextruder.
- Remove the extruder-side-cover-right.
- Disconnect the Loadcell and Filament Sensor cables.

STEP 11 Extruder Disconnecting

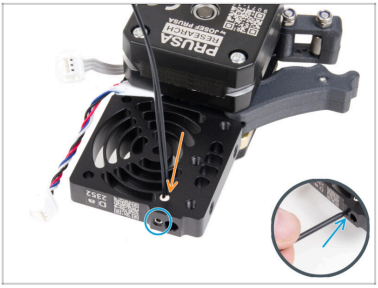
- Disconnect the print fan cable.
- Disconnect the extruder heatsink fan cable.
- Disconnect the Extruder motor cable.
- Disconnect the heatsink thermistor cable.

STEP 12 Extruder Removal

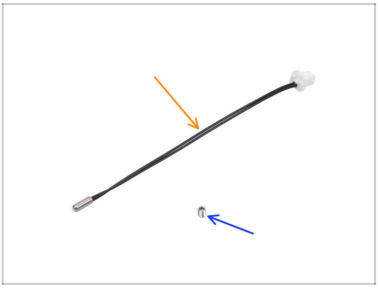
- Remove the two M3x18 screws securing the hotend heatsink fan, then remove the fan.
- Remove the three M3x10 screws securing the heatsink, then start removing the extruder **slowly and carefully.**
  - Dislodge the heatsink thermistor cable from the hook behind, then remove the extruder completely.

STEP 13 Nextruder Disassembly



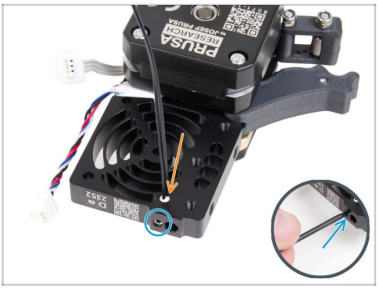
- Remove the M3x4T grub screw using the short side of the T6 Torx key.
- Remove the NTC heatsink thermistor.

STEP 14 NTC thermistor: parts preparation



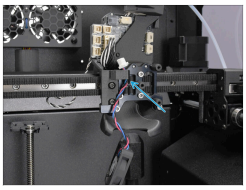
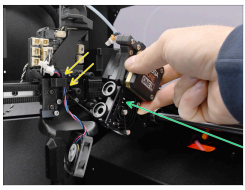
- **For the following steps, prepare:**
- NTC thermistor 90 mm (1x)
- M3x4T grub screw (1x)

STEP 15 Thermistor Installation



- On the extruder motor side, insert the NTC thermistor into the hole in the heatsink.
- Secure it using the M3x4T grub screw. Tighten it gently but firmly using two fingers on the short side of the T6 Torx key. Do not overtighten to prevent damaging the thermistor and threads.

STEP 16 Extruder Installation

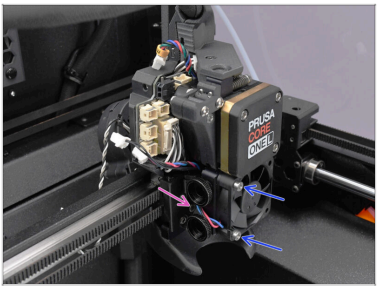




- Before installing the extruder, make sure the hotend heatsink fan cable is held by the right side of the hook on the carriage, as pictured.
- Move the Nextruder to the inside of the printer.
  - Guide the heatsink thermistor cable by the same hook.
- Align the heatsink with the carriage and fix it in place using three M3x10 screws.

  ⚠ Verify none of the cables and connectors behind the extruder is getting pinched.

  ⚠ **Tighten the screws carefully — they thread into plastic, so stop when snug to avoid stripping or otherwise damaging the threads.**

STEP 17 Fan Installation

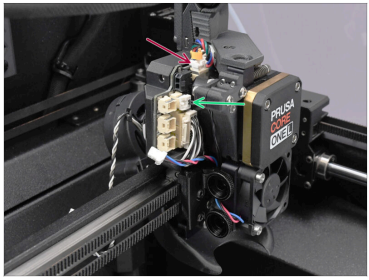


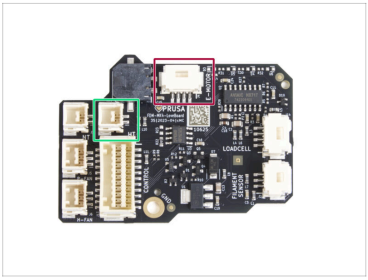
- Guide the hotend heatsink fan cable between the thumb screws.

  ⚠ Make sure the fan is positioned so that the cable is guided toward its left side.

- Attach the fan to the heatsink using two M3x18 screws.

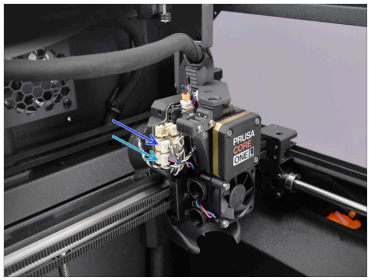
STEP 18 Extruder Connection

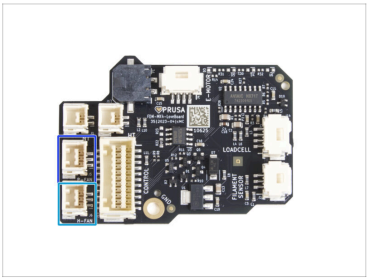




- Connect the extruder motor cable into the top of the LoveBoard.
- Connect the heatsink NTC thermistor into the corresponding plug on the LoveBoard.

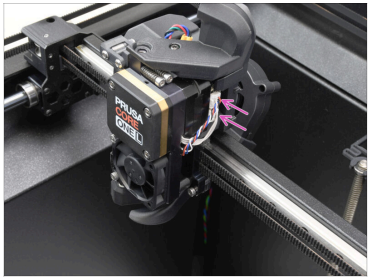
STEP 19 Extruder Connection 2





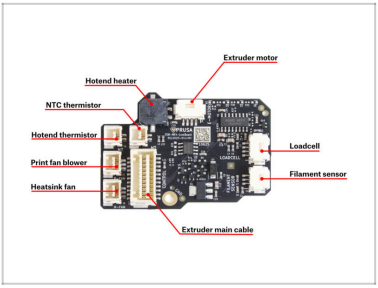
- Connect the Hotend heatsink fan into the bottom left connector on the LoveBoard.
- Guide the print fan cable from the back toward the LoveBoard and plug it into the connector directly above.

STEP 20 Cover Right Installation



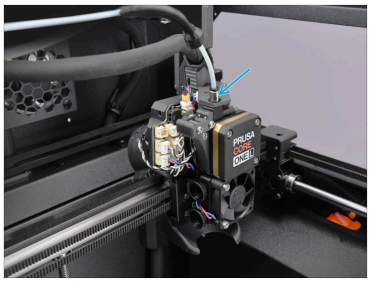
- Move to the right side of the extruder.
- Connect the Loadcell and Hall Filament Sensor cables into the right side of the LoveBoard.
- Cover the cables with the extruder-cover-right, center the cover, and secure it with one M3x6 screw.

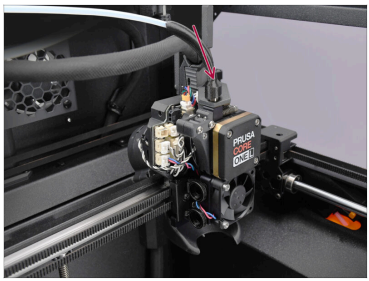
STEP 21 LoveBoard Connection Check



Check the connections to the LoveBoard according to the diagram.

STEP 22 PTFE Installation

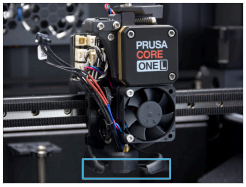




- Screw the PTFE fitting into the top of the extruder and tighten it until snug.
- Slide down the plastic cover to conceal the PTFE joint.

STEP 23 Hotend Assembly Installation



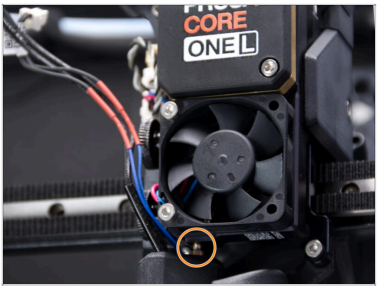


- Locate the hole on the bottom of the heatsink and insert the hotend assembly.

  Position the assembly to maintain a consistent gap between the fan shroud and the hotend.

- Once fully inserted, keep pushing the assembly upward and tighten both thumbscrews.
- Double-check that the hotend is fully inserted into the heatsink and properly aligned with the fan shroud.

STEP 24 Nozzle Check

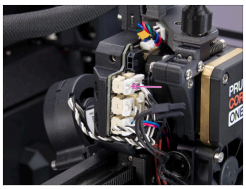
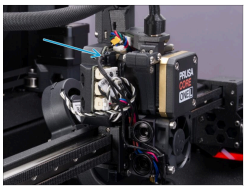
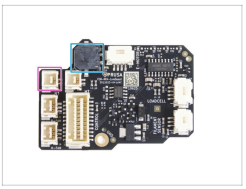


- **Verify that the nozzle is fully inserted** into the heatsink, with the copper ring on the nozzle barely visible.

  ⚠ If not inserted properly, the nozzle may suffer from a poor heat transfer potentially leading to clogs.

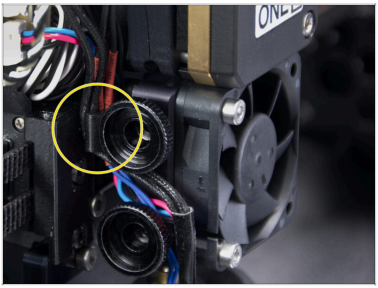
ⓘ To adjust the nozzle position, loosen the thumbscrews, push the hotend assembly upward, and then retighten the thumbscrews.

STEP 25 Hotend Connection

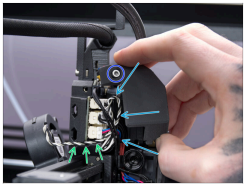
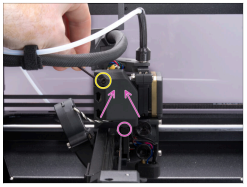
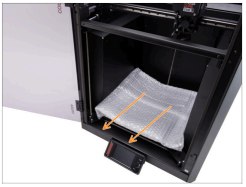
- Plug the hotend thermistor cable to the top left connector on the LoveBoard.
- Plug the hotend heater into the black connector on the upper part of the LoveBoard.

STEP 26 Hotend Cables Guidance



- Guide the hotend cables between the thumb screws. Hook them behind the plastic notch on the carriage. First, hook up the thinner thermistor cables, followed by the thicker heater cables.

STEP 27 Cover Left Attachment

- Organize the cables so they do not stick out, preventing them from being pinched when attaching the Printhead-cover-left.
- Ensure the print fan cable is routed through the ridge in the Printhead-cover-rear.
- Tip: Prepare the M3x10 screw and set it up in the cover before attaching it.
- Attach the cover to the left side of the nextruder assembly.
  - Insert the bottom of the cover into the slot on the Printhead first.
  - Press the cover towards the nextruder.
- Fix it in place using the M3x10 screw.
- Remove the protective material from the heatbed.

STEP 28 Top Cover Attachment

- Place the back of the top cover onto the printer, with the ventilation grille facing you.
- Slide the cover backward until the rear part hooks into place.
- Once the back is secured, lower the front of the cover and gently push it down until the front latches snap into place.

STEP 29 Power Up

Ensure the printer is placed on a stable surface where ambient vibrations, such as those from other printers, are minimized.

- Close the door.
- On the back of the printer, plug in the mains cable.
- Turn the power switch ON.

STEP 30 Final check

⚠ Visit the menu **Control -> Calibrations & Tests**

and run the Selftest.

- Follow the on-screen instructions, and once all tests pass with a green check mark, you may continue using the printer as usual.

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