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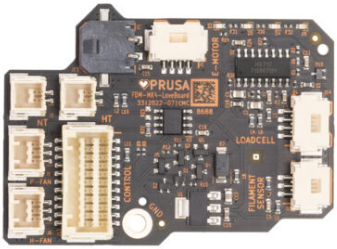
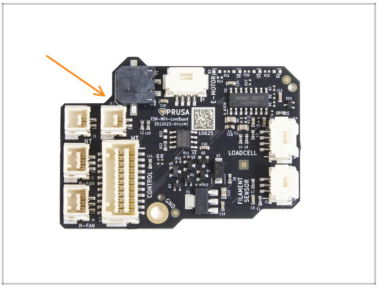
How to replace Loveboard (CORE One)



help.prusa3d.com/g958922

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

STEP 1 Introduction

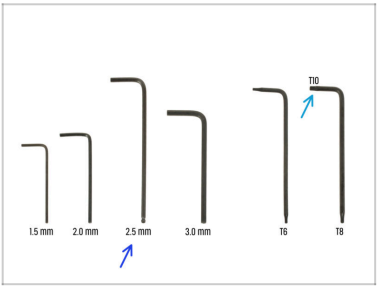


- This guide will take you through the **LoveBoard** replacement on the **Prusa CORE One**.

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
  - 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.

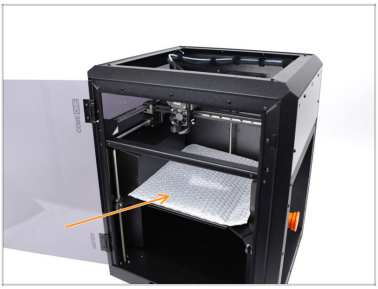
STEP 4 Printer Preparation (Part 2)

- 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.

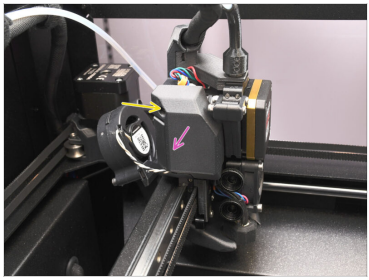
STEP 6 Heatbed Protection

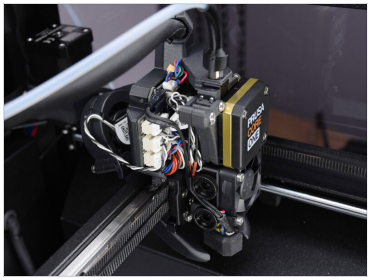


⚠ Before proceeding any further, it is recommended to protect the heatbed first!

- 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.

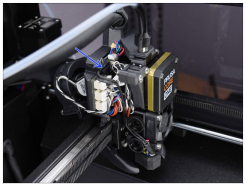
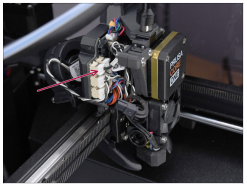
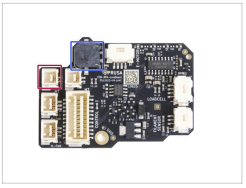
STEP 7 Nextruder Uncovering





- 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.

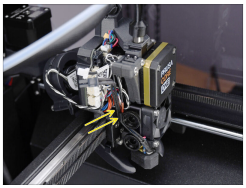
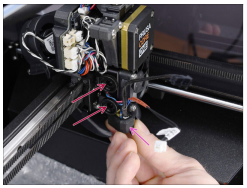
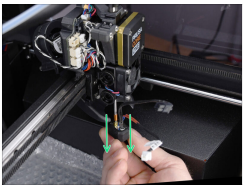
STEP 8 Hotend Disconnecting

⚠ 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.

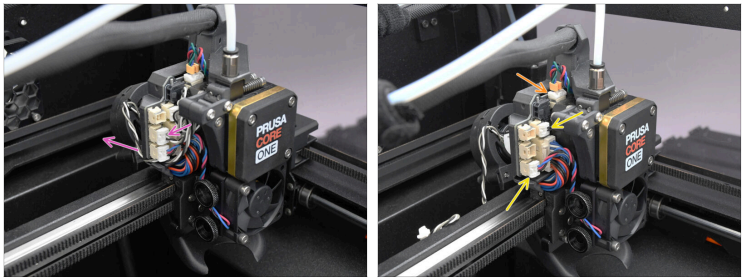
STEP 9 Hotend Assembly Removal

- 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.

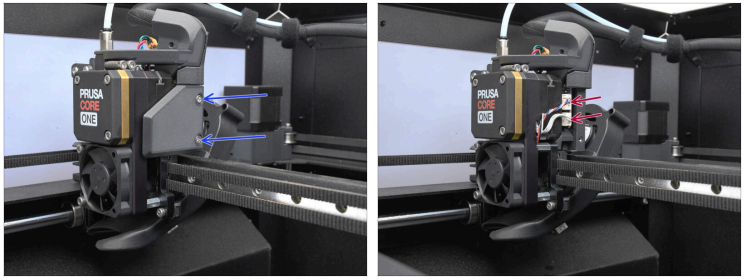
  ⚠ Watch out, the hotend assembly may fall out!
- Slide out the hotend assembly from the heatsink.

STEP 10 Nextruder Disconnecting



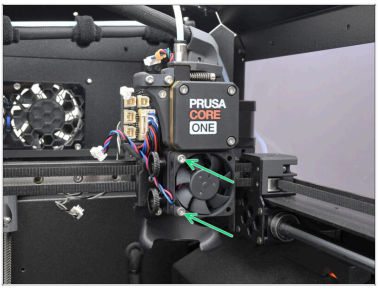
- Disconnect the print fan and move its cable away, to the back.
- Disconnect the Extruder motor on top.
- Disconnect the heatsink thermistor and the heatsink fan cables.

STEP 11 Nextruder Disconnecting 2



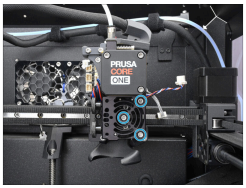
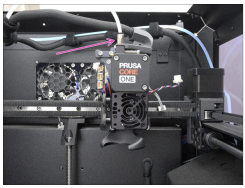
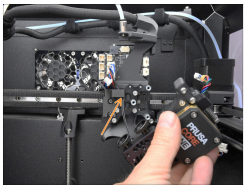
- On the right side, undo the two M3x6 screws and remove the side cover.
- Disconnect the loadcell and the filament sensor cables.

STEP 12 Hotend Fan Removal



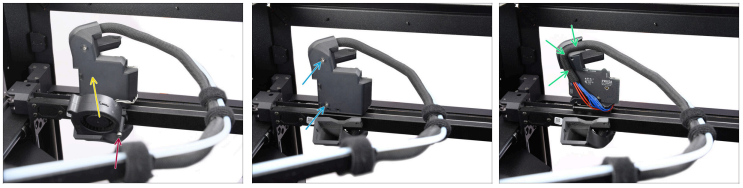
- Remove the two M3x18 screws and the hotend fan from the heatsink.

STEP 13 Nextruder Removal

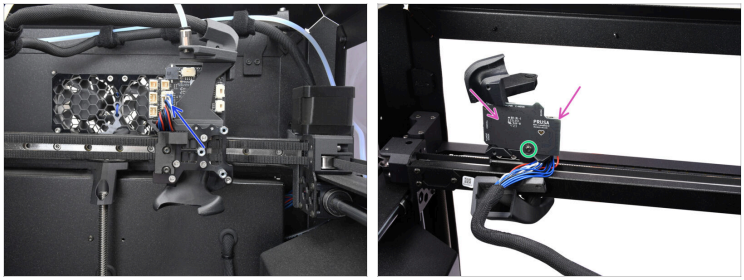
- Remove the three M3x10 screws on the front of the heatsink.
- Unscrew the PTFE fitting on top of the nextruder. The extruder will detach. Start removing it away from the carriage slowly.
  - Watch out for the thermistor cable. Remove it from the hook on the carriage, when removing the Nextruder.

STEP 14 Back Cover Removal



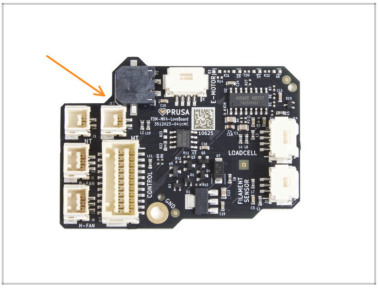
- On the back of the print head, remove the M3x20 screw holding the print fan.
- Remove the print fan by lifting it up.
- Remove the two M3x10 screws holding the cover on the back of the print head and set the cover aside.
- Dislodge the extruder main cable from the dedicated groove. Do not remove it entirely.

STEP 15 LoveBoard Removal



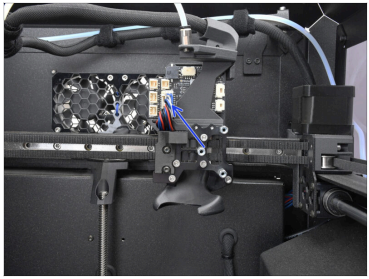
- On the front, disconnect the extruder main cable from the LoveBoard.
- On the back, using the T10 key, remove the M3x8rT screw.
- Remove the LoveBoard from the print head.

STEP 16 LoveBoard Preparation



- **For the following steps, prepare:**
- LoveBoard (1x)

STEP 17 LoveBoard Installation



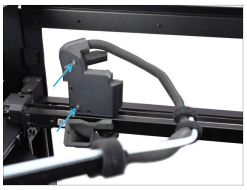
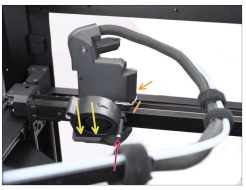
- On the back of the print head, install the new LoveBoard.

  ⚠ Make sure the extruder main cable is guided below the LoveBoard and no cable is getting pinched.

- Fix the LoveBoard in place using the M3x8rT screw.
- Connect the main cable into the LoveBoard.

  ⚠ Tidy up the cable to make sure there is no overhang on the front side of the extruder carriage, as seen in the picture. Otherwise, the other components might not fit properly.

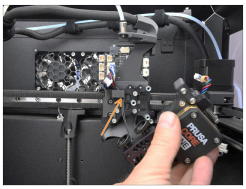
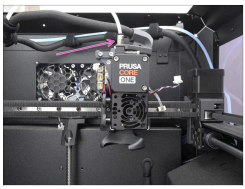
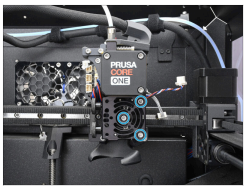
STEP 18 Back Cover Installation

- Guide the main cable through the groove on top of the print head.
- Fix the cable in place by installing the back cover onto the print head.

  ⚠ Fix the cover in place using the two M3x10 screws, while making sure none of the cables is getting pinched behind.
- Reinstall the print fan back into place.
  - Fix the fan in place using the M3x20 screw.
  - Guide the print fan cable towards the front, through the dedicated channel.

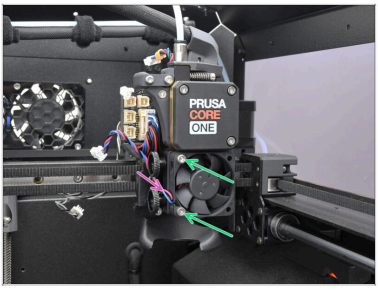
STEP 19 Nextruder Installation

- Move the Nextruder to the inside of the printer.
- Make sure to guide the Heatsink thermistor cable through the hook on the X carriage.

  ⚠ Keep an eye on the cable, while installing the Nextruder. The cable has to be guided freely. Make sure it doesn't get nicked behind the heatsink.
- Align the Nextruder with the carriage and fix it in place by screwing in the PTFE fitting.
- Align the heatsink with the threaded spacers. Fix it in place using the three M3x10 screws.

STEP 20 Hotend Fan Installation

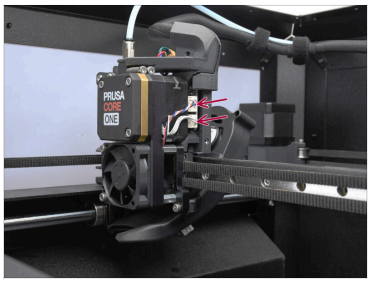


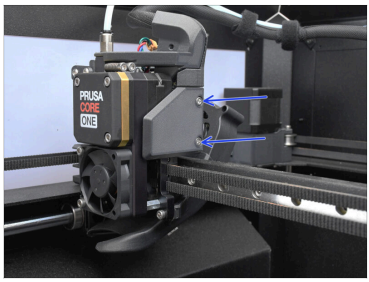
- Attach the fan onto the Heatsink using the two M3x18 screws.

  ⚠ The side of the fan with the silver sticker must face the heatsink.

  - Make sure the cable is oriented to the left.

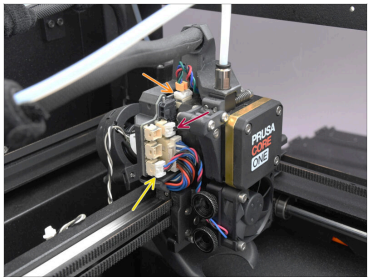
STEP 21 Nextruder Connection

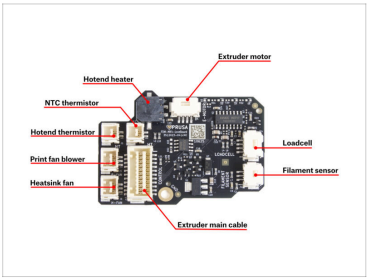




- On the right side of the Nextruder, connect the Loadcell and filament sensor cables.
- Attach the printed cover using the two M3x6 screws.

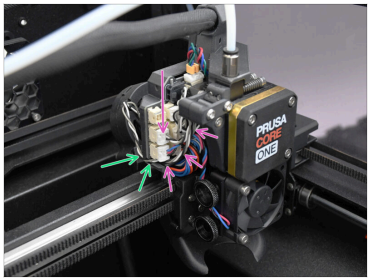
STEP 22 Nextruder Connection 2

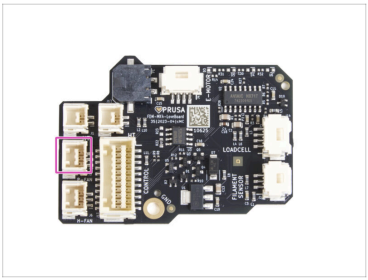




- On top of the Nextruder, connect the Extruder motor cable.
- On the left side, connect the NTC thermistor from the heatsink into the port closer to the inside.
- Connect the front heatsink fan into the lower connector on the left.

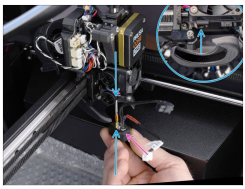
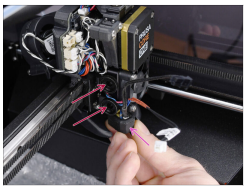
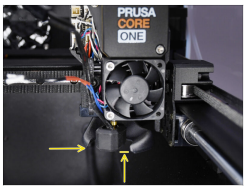
STEP 23 Print Fan Connection





- Guide the print fan cable through the channel in the plastic cover.
  - Create a loop with the print fan cable in the cable area and plug it into the middle connector in the LoveBoard.

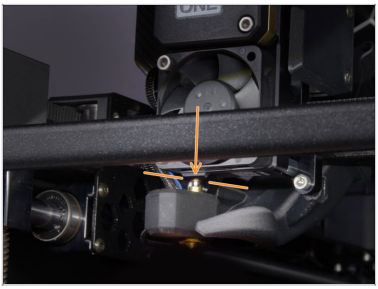
STEP 24 Hotend Insertion

- 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.

  ⓘ The assembly must fit into the recess in the fan shroud with appropriate clearance
- 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 25 Nozzle Insertion Check

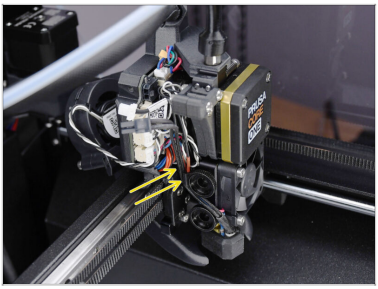


- Verify that the nozzle is **fully inserted** into the heatsink. The copper ring on the nozzle should not be visible if properly seated.

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

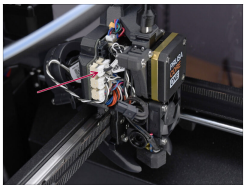
  ⓘ To adjust the nozzle position, loosen the thumbscrews, reposition the nozzle, and then retighten the screws, while pushing the hotend assembly up.

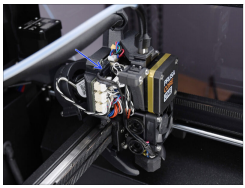
STEP 26 Hotend Cables Guidance

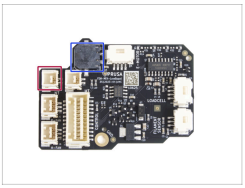


- Locate the cable guide (plastic hook) behind the thumb screws. Guide the thermistor cable through the channel first. Then insert the hotend heater cable.

STEP 27 Hotend Connection

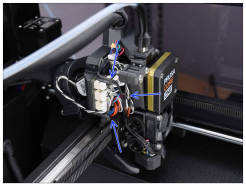
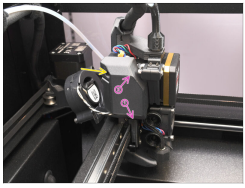
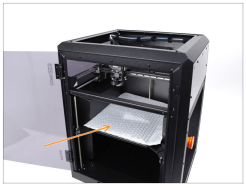






- Connect the hotend thermistor to the top left slot on the LoveBoard.
- Connect the hotend heater to the black slot on the upper part of the LoveBoard.

STEP 28 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 29 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 30 Turning the Printer On

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

STEP 31 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.

Notes:

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