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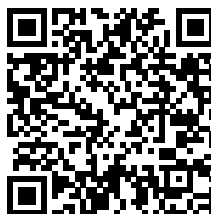


# How to replace a Nextruder (XL single-tool)



[help.prusa3d.com/g463037](https://help.prusa3d.com/g463037)

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## STEP 1 Introduction



◆ This guide will take you through the replacement of the **Nextruder** on the **Original Prusa XL**.

ⓘ Some parts might slightly differ. However, it does not affect the procedure.

◆ All necessary parts are available in our eshop [shop.prusa3d.com](http://shop.prusa3d.com)

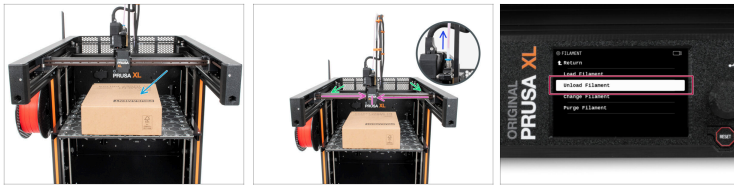
ⓘ Note that you have to be logged in to have access to the spare parts section.

## STEP 2 Tools necessary for this chapter



- **For this chapter, please prepare:**
  - Torx TX10 screwdriver
  - 2.5mm Allen key
  - A cardboard box for use as a heatbed protection during the assembly. *Hint: use the Prusament box.*

## STEP 3 Preparing the printer



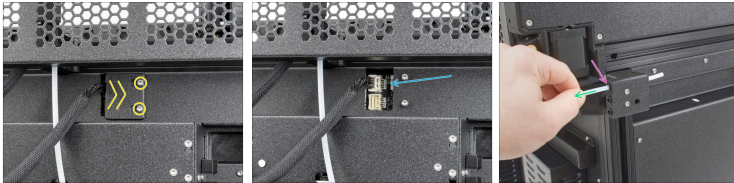
- ◆ Place the empty cardboard box approximately to the front center part of the heatbed.
- ◆ Manually move the X-axis assembly all the way to the front side of the printer.
- ◆ Move the extruder approximately to the center of the X-axis.
- ◆ If you have loaded the filament, unload it from the hotend. On the screen, navigate to *Filament* -> *Unload Filament*.
- ⚠ **WARNING: The hotend and heatbed are very HOT. Do not touch these parts!!!**
- ◆ Remove fully the filament from the hotend and the PTFE.
- ⚠ **Wait till the printer is cold!**

## STEP 4 Unplugging the printer



- Turn the power switch OFF ("O" symbol).
- On the rear side of the printer, unplug in the PSU cable.

## STEP 5 Disconnecting the extruder



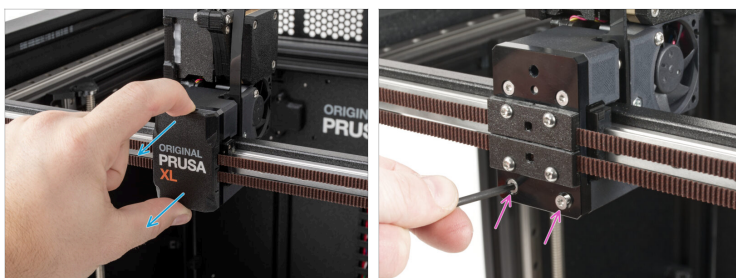
- Locate the xl-rear-cable-management-plug (cover) on the rear of the printer.
- Slightly loosen the two screws holding the cover. No need to remove them completely. Push the cover to the right and remove it from the printer. **Don't throw it away, we'll use it later.**
- Disconnect the extruder cable by pushing the security lever on the connector.
- Push the black collet to the right.
- Pull out the PTFE tube.

## STEP 6 Detaching the extruder cable



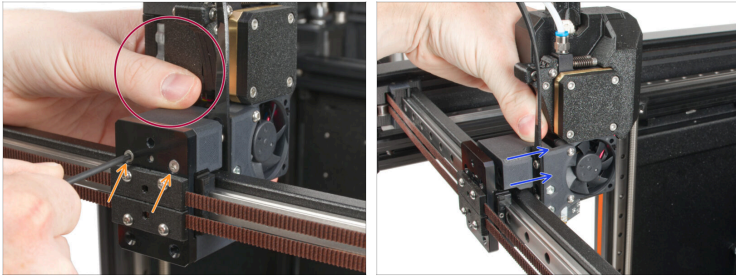
- Turn the printer around so that the PSU side is facing you.
- Push the 2,5mm Allen key all the way through a hole in the rear metal sheet as well as through the plastic part until you reach the screw. Untighten the screw.
- Take off the xl-dock-cable-router.




## STEP 7 Extruder detaching



- Turn the printer so that the LCD is facing you.
- Take off the x-carriage-cover from the X-carriage.
- With a TX10 screwdriver remove the bottom M3x12bT screws from the X-carriage.





## STEP 8 Extruder take off



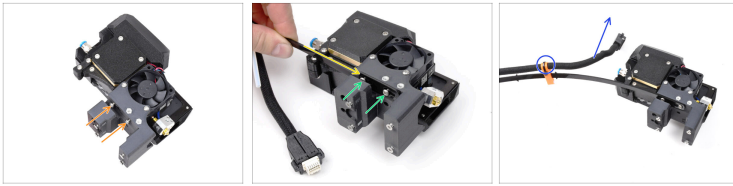
-  **Hold the extruder during detaching.**
-  Hold the extruder and with a TX10 screwdriver unscrew two M3x12bT screws.
-  Take off the extruder assembly from the X-carriage

## STEP 9 Preparing the new Nextruder



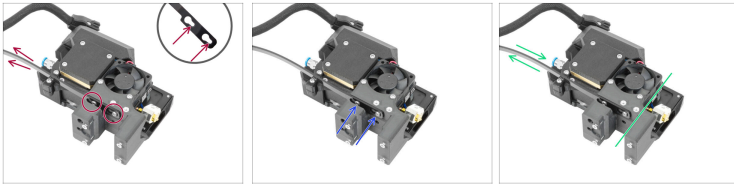
-  **For the following steps, please prepare:**
  -  Nextruder cable bundle (1x)
  -  Nextruder (1x)
-  This is the end of the nextruder cable bundle we are going to attach to the Nextruder in the next step. It consists of a cable connector, a flexible plate and a semi-transparent PTFE tube.

## STEP 10 Nextruder cable & PTFE tube



- ✦ Using the T10 screwdriver, loosen the marked two screws on the inside of the nextruder.
- ✦ Hook up the keyhole openings in the flexible plate of the cable bundle onto the screw heads.
- ✦ Make sure the part of the bundle with the cable and the connector is facing the top of the extruder; as seen in the picture.
- ✦ Using a T10 screwdriver, tighten marked two screws on the inside of the extruder.
- ✦ The cable bundle must be installed exactly the same way as in the picture; with the cable on top and the semi-transparent PTFE tube on the bottom.

## STEP 11 Nextruder cable bundle assembly



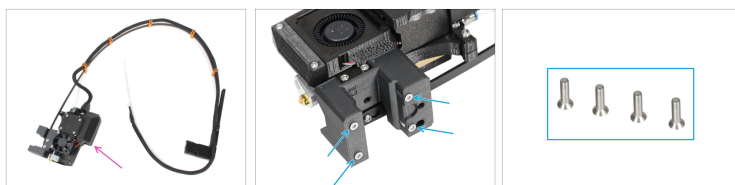
- ◆ Pull the flexible line up so that the screws engage into the narrower part of the keyhole openings.
- ⚠ Verify both screws have engaged.
- ◆ While the screws sit in the narrower parts of the openings, tighten them up using the T10 screwdriver.
- ◆ Verify the flexible part of the cable bundle is held tight to the extruder body.

## STEP 12 Nextruder cable bundle assembly



- ◆ Attach the cable connector into the top of the nextruder.
- ◆ Insert the semi-transparent PTFE tube into the fitting on the extruder. Push it all the way in.
- ◆ Good! Your nextruder assembly is ready to be installed.

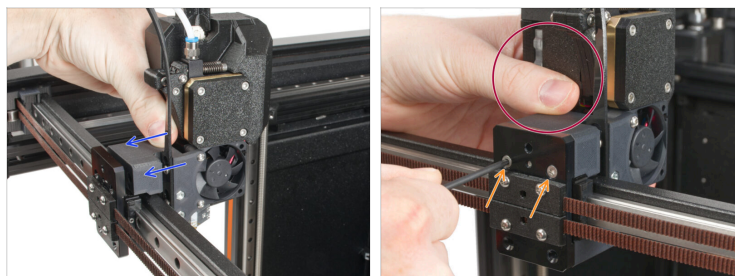
## STEP 13 Installing the extruder: parts preparation



### For the following steps, please prepare:

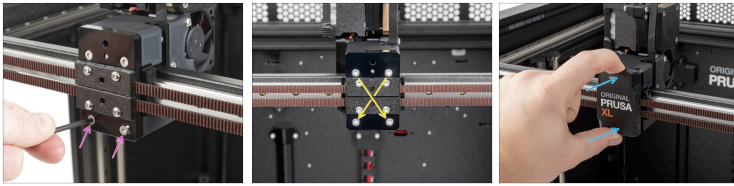
- Single tool extruder assembly (1x)
- i** Due to the careful testing of each printer before it is shipped, there may be a small filament residue on the extruder nozzle.
- From the extruder body, remove four M3x12bT (countersunk) screws and set them aside. You will need them in the next step.

## STEP 14 Installing the extruder



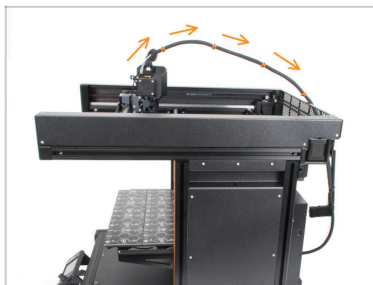
- Attach the extruder assembly to the X-carriage. See the correct orientation of the extruder.
- !** Hold the extruder during installation.
- Hold the extruder in place and secure it using two M3x12bT screws in the top two openings. Do not fully tighten the screws yet!

## STEP 15 Securing the extruder



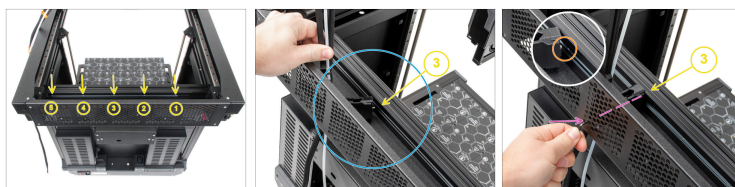
- ◆ Add the two remaining M3x12bT screws into the lower openings in the X-carriage to fix the extruder assembly in place. **Do not fully tighten the screws yet!**
- ◆ Tighten all four screws in a **diagonal pattern** to secure the extruder assembly.
- ◆ Attach the x-carriage-cover onto the X-carriage. Press it in until it clicks in.
- ⚠ **Remove the Prusament cardboard box off the heatbed.**

## STEP 16 Guiding the extruder cable



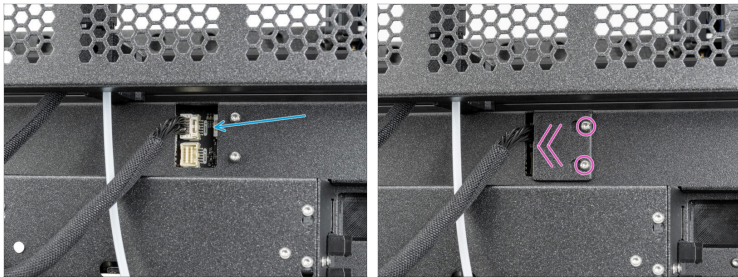
- ◆ Guide the extruder cable bundle with the PTFE tube freely over the printer to its rear side.

## STEP 17 Attaching the extruder cable



- ◆ Turn the printer around so that the PSU side is facing you.
- ◆ Locate the long metal profile (tch-mounting-insert) in the back of the top extrusion. It has five threaded openings in it.
- ◆ Place the xl-dock-cable-router (the plastic part) between the rear metal sheet and the aluminum extrusion.
- ◆ There is a screw protruding from the xl-dock-cable-router. The screw must be attached to the **third threaded opening** on the long metal profile. Look through the rear metal sheet to check if the cable holder is lined up with the correct opening.
- ◆ Push the Allen key all the way through a hole (bottom left in the pattern) in the rear metal sheet as well as through the plastic part until you reach the screw. Tighten it up.

## STEP 18 Connecting the extruder cable



- Locate the xl-rear-cable-management-plug (cover) on the rear of the printer.
- Connect the extruder cable into the upper connector labeled **DWARF 1**.
- Re-attach the cover onto the screws. Push it all the way to the left and tighten the screws back up.

## STEP 19 Attaching the filament sensor



- Insert the PTFE tube from the extruder into to the first collet on the rear of the filament sensor assembly.

## STEP 20 Well done!



- ◆ Good job! You made it!
- ◆ Now you need to go through the printer self-test and calibration. Use chapter First run from the printer assembly instructions.



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