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How to replace trapezoid nuts (XL)



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STEP 1 Introduction



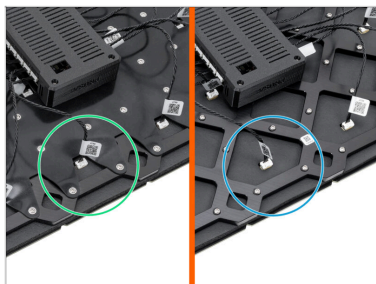
- This guide will show you how to exchange the trapezoid nuts on the modular bed on your Original Prusa XL printer.
- This guide is suitable for all XL printer versions.
- All necessary parts are available in our eshop prusa3d.com
- Preparing the printer:
 - From the rear side, turn the power switch OFF (symbol "O").
 - Unplug the power cable.

STEP 2 Tools necessary for this guide



- For this guide, please prepare:
 - 2.5mm Allen key
 - Torx screwdriver T10

STEP 3 Heatbed assembly versions



i Starting from April 2025, you may receive a new heatbed. The only difference is the black rubber band on a back side of the heatbed.

i **The replacement process remains the same for both versions.**

- ◆ New heatbed version with a rubber band.
- ◆ Old heatbed version without a rubber band. The assembly is the same as the new one.

! **Do not disconnect any of these heatbed cables yet. Photos are for illustrative purposes only.**

STEP 4 Detaching the bed frame mounts



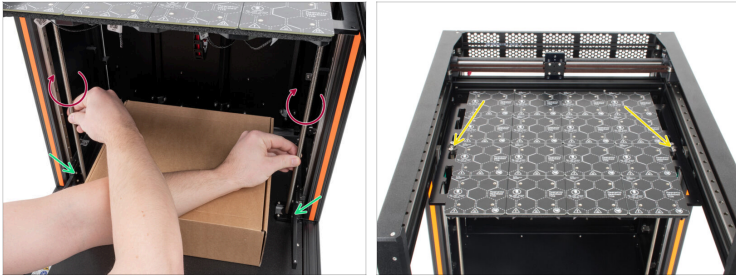
- Start by lightly loosening all four M3x12rT screws using the T10 screwdriver in a cross pattern. **Do not loosen them all the way yet.**
 - First, slightly loosen the front right and rear left screws.
 - Then, slightly loosen the front left and rear right screws.
- Hold the bed frame mount fixed (left) in place and completely loosen both M3x12rT screws.
- As you completely loosen both left M3x12rT screws, slowly slide the bed frame mount fixed (left) down.
- Loosen the bed frame mount rotary (right) from the heatbed frame using the same technique.
- ⓘ **Make sure that you detach both bed frame mounts before removing the heatbed in the further steps.**
- ⚠ **Removing the bed frame mounts from the threaded rods would lead to the bearings falling out!**
- ⓘ Set the four M3x12rT screws aside; we will need them later.

STEP 5 Removing the Z-Axis bearing housing



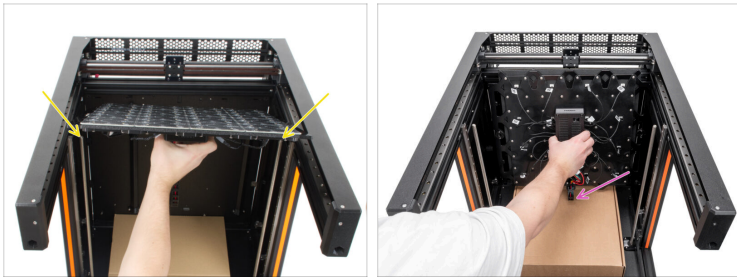
- ◆ To remove the bearing housing, loosen the two M3x10 screws using the 2.5mm Allen key.
- ◆ Move the HB M3nEs nuts away from the linear rail.
- ◆ Repeat the same process to remove the bearing housing on the other side
- ⓘ Put the four M3x10 screws aside, we will need them later.

STEP 6 Detaching the heatbed



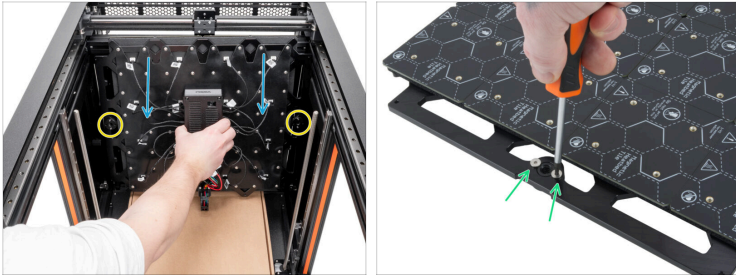
- i** Place a piece of cardboard below the heatbed to prevent any scratches or damage to the heatbed and the XL printer.
- ◆** By rotating the threaded rods clockwise on both sides, move the heatbed just below the top of the threaded rods.
- ◆** Double-check that the **bed frame mounts are not connected to the heatbed** and are resting at the bottom of the threaded rods.
- ⚠** **Make sure that the heatbed is always as leveled as possible while you are raising it by rotating the threaded rods with your hands.**
- ◆** The heatbed is now barely holding at the end of the threaded rods.
Hold the heatbed in place so it does not fall off.

STEP 7 Removing the heatbed



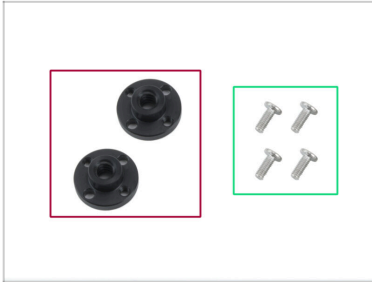
- Lift the heatbed off the top of the threaded rods. Both of the trapezoid nuts on the sides must disengage from a threaded rod.
- Carefully place the heatbed on the cardboard at the center of the printer, with the terminals facing down. Keep the heatbed in an upright position.
- Pay attention to the connected heatbed cables. Once you lower the heatbed, make sure not to damage or clamp the cables.

STEP 8 Removing the trapezoid nuts



- ◆ Lean the heatbed towards you slightly.
- ◆ You now have access to the two M4x12rT screws that hold the trapezoid nuts in place on the other side.
 - ⓘ Do not remove the heatbed completely. The heatbed in the photo is apart from the printer for illustrative purposes only.
- ◆ Detach the trapezoid nuts from the heatbed frame by removing the two M4x12rT screws using the T10 Torx screwdriver.
- ◆ Remove the two M4x12rT screws on the other side as well.
 - 📌 Put the four M4x12rT screws aside; you will need them in a moment.

STEP 9 Preparing the trapezoid nuts and screws



- **For the next step, please prepare:**
 - New trapezoid nuts (2x)
 - M4x12rT screws (4x)

STEP 10 Installing the new trapezoid nuts



- Lean the heatbed towards you slightly again to gain access to the other side of the heatbed.
- Attach the new trapezoid nuts to the heatbed frame by gently tightening the two M4x12rT screws using the T10 Torx screwdriver.

STEP 11 Re-attaching the heatbed



- ◆ Attach the heatbed to the top of the threaded rods. Both of the trapezoid nuts on the sides must engage with a threaded rod.
- ⚠ **Pay attention to the connected cables while you are attaching the heatbed!**
- ◆ Using your hand, slightly rotate the threaded rods counter-clockwise until both of the rods engage with the nut on the side of the heatbed.

STEP 12 Installing the heatbed



- ◆ The heatbed is now placed on top, holding onto the threaded rods.
- ◆ By rotating the threaded rods by hand counter-clockwise on both sides, move the heatbed approximately 5 cm / 1,9 inch below the top of the threaded rods.
- ⚠ **Make sure the heatbed is always as leveled as possible while you are moving it by rotating the threaded rods with your hands.**

STEP 13 Preparing the Z-Axis bearing housing



◆ For the following steps, please prepare:

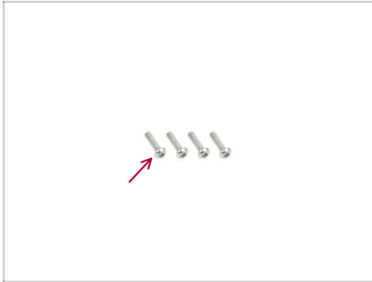
- ◆ Z-Axis bearing housing (2x)

STEP 14 Installing the Z-Axis bearing housing



- ◆ Move the HB M3nEs nuts towards the linear rail on both sides of the printer.
- ◆ Install the Z-Axis bearing housing onto the M3nEs nuts.
- ◆ Fix it in place by two M3x10 screws using the 2.5mm Allen key.
- ⓘ Repeat the same process for the other side too.

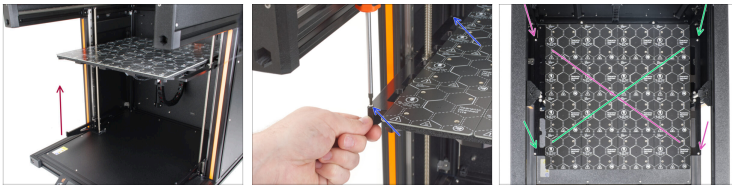
STEP 15 Preparing the heatbed screws



● For the following steps, please prepare:

- M3x12rT screw (4x)

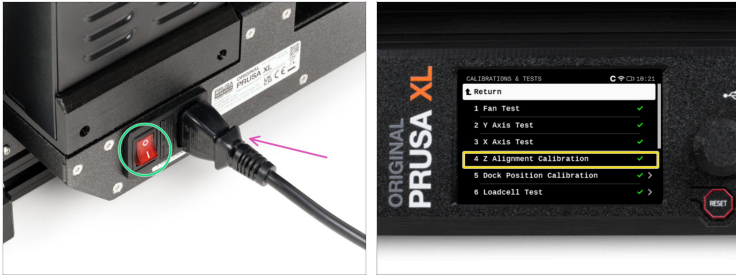
STEP 16 Fixing the bed frame mounts in place



- Take the bed frame mount fixed (left) and slide it up to the heatbed frame.
- Fix it to the heatbed frame with two M3x12rT screws using the T10 screwdriver. Do not tighten the screws all the way yet!
- Continue by fixing the bed frame mount rotary (right) to the heatbed frame using the same technique.
- Once the screws are in place, tighten them in a cross pattern:
 - Tighten the front right and rear left screws first.
 - Continue by tightening the front left and rear right screws.

How to replace trapezoid nuts (XL)

STEP 17 Testing the printer



- ◆ From the rear side, plug in the power cable.
- ◆ Turn the power switch ON (symbol "I").
- ◆ Run the Z alignment calibration from the menu.
Control -> Calibrations & tests -> Z alignment calibration.

STEP 18 Good job!



- ◆ Well done! You have just successfully replaced the trapezoid nuts on your Original Prusa XL.
