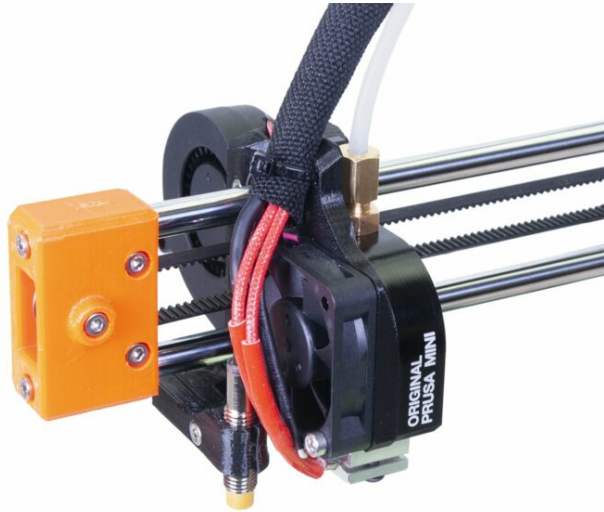


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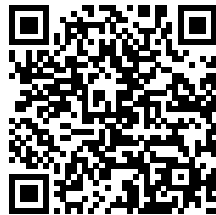
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How to replace a hotend fan (MINI)



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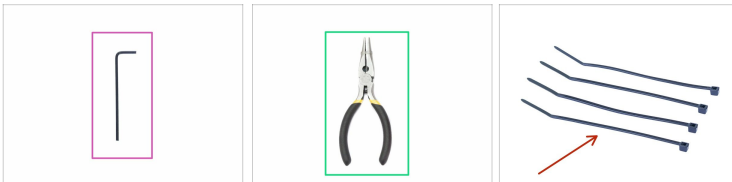


STEP 1 Introduction



- ◆ This guide will take you through the replacement of the **hotend fan** on the **Original Prusa MINI**.
- ◆ All necessary parts are available in our eshop shop.prusa3d.com
- ⓘ Note that you have to be logged in to have access to the spare parts section.

STEP 2 Tools and fasteners necessary for this guide



- ◆ 2.5mm Allen key (1x)
- ◆ Needle-nose pliers for zip ties (1x)
- ◆ Zip tie (4x) *will be used later*
- ◆ Cloth or piece of fabric 15x15 cm (1x)
- ⓘ The cloth will be used to protect the heatbed. You can use any similar material.

STEP 3 Additional heatbed protection



⚠ Make sure the printer parts - print head and heatbed are cooled down at room temperature.

⚠ Turn the printer off and unplug it from the socket!

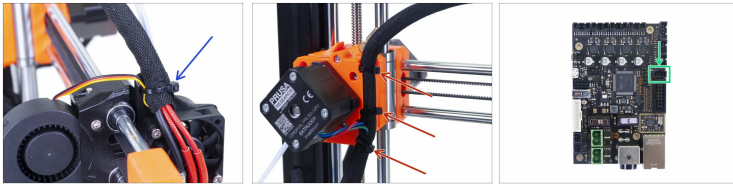
- ◆ **Before these steps, it is recommended to protect the heatbed!**
- ◆ Take off the flexible steel sheet.
- ◆ Use any cloth or piece of fabric, which is thick enough and cover the heatbed. This will ensure you won't damage (scratch) the surface during the disassembly.

STEP 4 Opening the box with the electronics



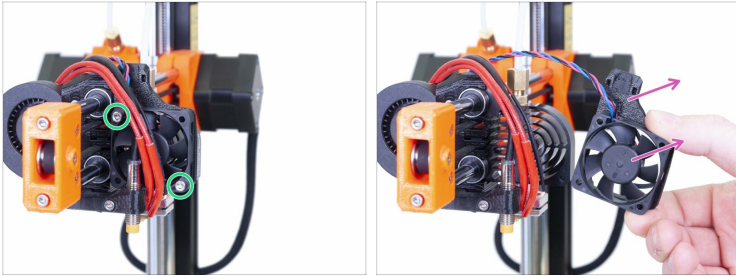
- Release and remove the M3 screw on the box with the electronics.
- Remove the printed cable cover.
- Lift the second electronics cover slightly. Before you remove it completely, pull it first towards the aluminium extrusion to release both pins from the holes.

STEP 5 Removing the textile sleeve (old design)



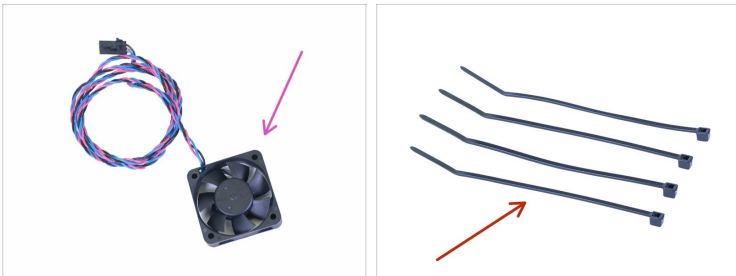
- ◆ Cut off the first zip tie on the hotend. **Avoid cutting the print fan cable!**
- ◆ Cut the remaining 3 zip ties attached to the extruder.
- ◆ **Carefully remove the entire textile sleeve** from the cable bundle. Avoid pulling the cables (e.g. you might accidentally change the position of the M.I.N.D.A. sensor)!
- ◆ **Press the safety pin** on the connector and disconnect the hotend fan from the board. **Do not pull out the connector without pressing the pin**, it may damage the connector or the board.

STEP 6 Removing the hotend fan



- ◆ Loosen and remove both screws on the hotend.
- ◆ Remove the hotend fan together with the MINI-fan-spacer (the plastic part between the fan and the heatsink).
- ⓘ Keep the printed part for a later use.

STEP 7 Hotend fan - parts preparation



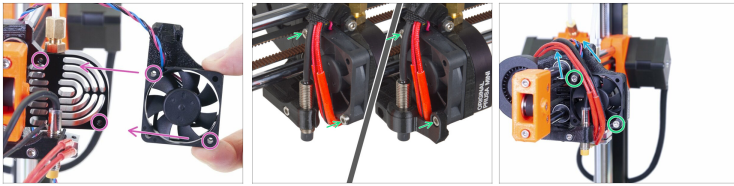
- ◆ **For the following steps, please prepare:**
 - ◆ New hotend fan (1x)
 - ◆ Zip tie (4x)
 - ◆ MINI-fan-spacer (1x)

STEP 8 Hotend fan - parts alignment



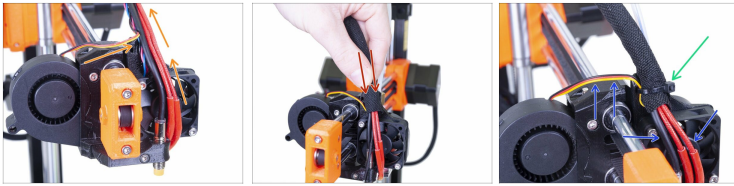
- ◆ Place the fan with the cable facing up as shown in the picture.
- ◆ Make sure the sticker on the fan is on the bottom side.
- ◆ Place the fan-spacer part as shown in the picture. The cable guide groove must face up.
- ◆ Place the fan on the fan-spacer and align the two marked holes on both parts against each other.

STEP 9 Hotend fan installation



- Place the hotend fan with fan-spacer on the heatsink. Align the screw holes on the fan with the screw holes on the heatsink.
- Insert and tighten the two screws. **Tighten carefully, you can crack the plastic frame of the fan, also ensure no cable is pinched.**
- Guide all the cables including the new fan cable upwards.

STEP 10 Guiding the cable bundle



- 🟡 Merge all cables leading from the hotend together and guide them up. **Don't pull the cables, leave some slack around the fan.**
- 🟠 Carefully wrap the sleeve around the cable bundle.
- ⚠️ **WARNING: Read this first, don't overtighten the zip tie around cables, leave some slack or you might break some of them!**
- 🟢 Secure with a zip tie to the fan-spacer.
- 🟦 **Double-check all cables aren't stretched**, if so, please cut the zip tie, make them slightly more loose and tighten the zip tie again.

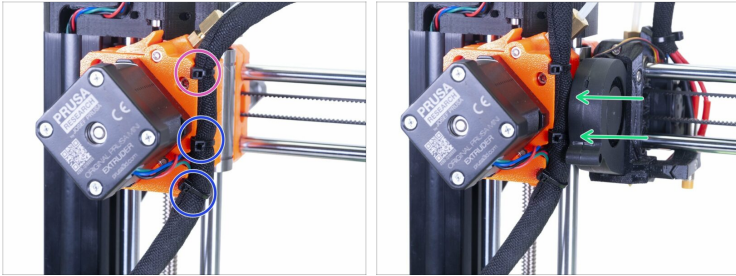
STEP 11 Guiding the cable bundle



⚠ WARNING: Follow these instructions carefully! If you mount the cable bundle at an incorrect position, you will have issues while printing!

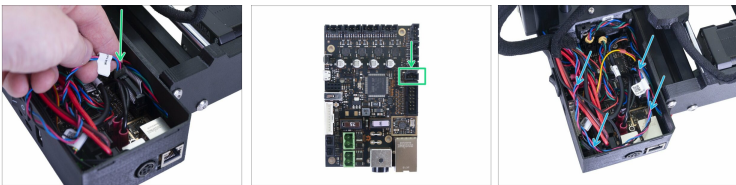
- ◆ Start by rotating the lead screw until the X-axis is all the way up.
- ◆ Move the print head all the way to the right and ensure it is touching the printed part.
- ◆ Bend the cable bundle slightly and use the upmost zip tie slot to partly tighten the entire bundle.
- ◆ Add the EXTRUDER motor cable to the bundle and use the textile sleeve to cover the cables all the way down to the electronics.
- ◆ Check whether the textile sleeve can reach the inner space of the electronics cover. If not, you left too much slack above the X-axis, readjust it.
- ◆ Go back to the X-axis and check once again, that the print head can move all the way to the right without being pulled back by the cable bundle.

STEP 12 Guiding the cable bundle



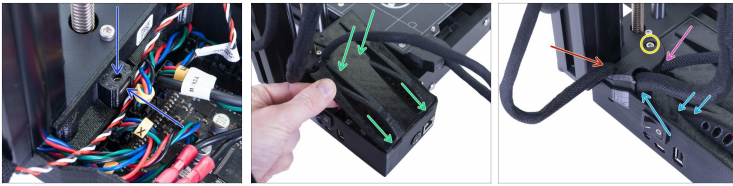
- ◆ Tighten the zip tie, you've installed in the previous step, but use a reasonable force or you might break the cables. Rotate the zip tie's head to the left.
- ◆ Add a second and third zip tie. Again, tighten carefully and rotate the heads to the left.
- ◆ Move the print head all the way to the left to ensure there is no collision between the zip ties and the fan's casing.

STEP 13 Connecting the new hotend fan



- ◆ Connect the fan connector to the appropriate socket. See the picture for more detail.
- ◆ Gently push the cables inside the box.

STEP 14 Covering the electronics



- ◆ Before covering the electronics, make sure the square nut is correctly positioned in the printed part. **The nut must not fall out!** This can cause fatal damage to the electronics.
- ◆ Insert the cover back in, make sure it is properly seated in the holes.
- ◆ **Place the second cover on the top and arrange the cables:**
 - ◆ **Extruder bundle**, ensure the textile sleeve is partially in. Also, it must be tilted away from the printer.
 - ◆ **Heatbed bundle**, ensure the textile sleeve is partially inside the box.
 - ◆ **Filament sensor cable** (optional), ensure that the textile sleeve wrapped around the cables is partially inside the box.
- ◆ Now, tighten the second cover. Check that no cable is pinched.
- ◆ **...and it's done! Enjoy your printer ;)**
