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How to lubricate the magballs (HT90)



help.prusa3d.com/g388440

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STEP 1 Introduction



- ◆ This guide will take you through the **lubrication of the magballs** on the **Prusa Pro HT90**.
- ◆ The SuperLube lubricant is supplied with the printer. If you don't have it, you can purchase it from our eshop prusa3d.com.

STEP 2 Tools necessary for this guide



- ◆ **For the following guide, please prepare:**
 - ◆ SuperLube (1x)
 - ◆ Pair of gloves (1x)

STEP 3 Additional tools

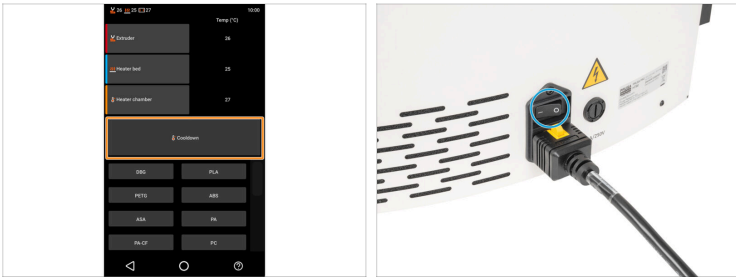


(i) Tools that are not supplied but can make maintenance easier.

◆ Additional tools:

- ◆** Paper towels *to wipe off grease.*
- ◆** Piece of cloth *to heatbed protection during assembly.*
- ◆** Flat screwdriver

STEP 4 Printer preparing



🟠 Cool down the printer. Go to *More > Temperature > Cooldown*. Wait till the printer is cooled down!

⚠️ **Make sure the heated bed is cooled down to ambient temperature.**

🔵 Turn the power switch OFF (symbol "0").

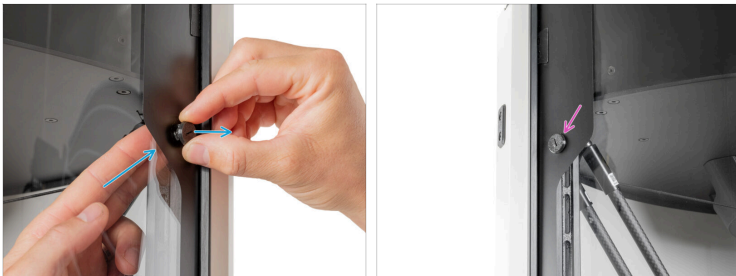
📘 From now on we will demonstrate the lubrication of the Magballs on the printer with the lights on for better visibility inside the printer. **Please note, do not switch ON the printer.** The printer in the pictures is shown with the lights on for better visualisation for customers.

STEP 5 Door opening stopper releasing



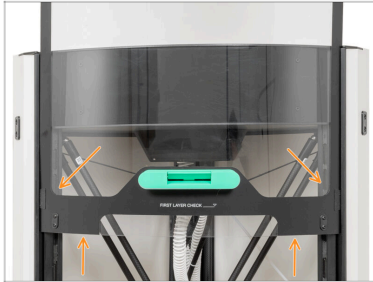
- ◆ Open the lid.
- ◆ Using a flat screwdriver, loosen the Door-opening-stopper by turning it 120° counter-clockwise.
- ⓘ The Door-opening-stopper is a printed part, just a slight twist will loosen this part.

STEP 6 Door opening stopper removing



- ◆ Remove the Door-opening-stopper by pushing from the inside of the printer.
- ◆ Repeat the process on the second Door-opening-stopper on the other side of the lid.

STEP 7 Lid opening



- Slowly pull the lid up to the second step.

STEP 8 Print head releasing



- Before you proceed, it is recommended to protect the heatbed.
- ⚠ Make sure the heatbed is cooled down to ambient temperature. Place the cloth approximately to the front center part of the heatbed.**
- Place the dust cloth approximately to the front center part of the heatbed.
- Put the gloves on both your hands.
- Carefully remove the first carbon rod from the print head magball by pulling it away.
- Remove all remaining carbon rods from the print head magballs.
- Leave the print head on the cloth.

STEP 9 Carbon rods removing



- i** Note that all carbon rods are numbered.
- i** The rods are attached to magnetic balls.
- ◆** Carefully remove the carbon rods 1 and 2 from the left carriage by pulling them away.
- ◆** Carefully remove the carbon rods 3 and 4 from the rear carriage by pulling them away.
- ◆** Carefully remove the carbon rods 5 and 6 from the right carriage by pulling them away.

STEP 10 Magballs cleaning



- ◆** Use a paper towel to clean the magballs on the print head.
- ◆** Use a paper towel to clean the magballs on the carriages.

STEP 11 Carbon rods cleaning



- ◆ Check the carbon rods one by one. If it's dirty, clean it.
- ◆ Use a paper towel to remove any old lubricant from the top and the bottom of the rod.
- ◆ The top and bottom of the carbon rod must be clean. Look at the picture.

STEP 12 Carbon rods lubricating



- Open the SuperLube.
- Gently squeeze the lubricant and apply a small amount to the carbon rod:
 - To the top end (with the QR code).
 - To the bottom end.
- Repeat this process for the remaining carbon rods.
- Carefully attach the first carbon rod to the magball head and rotate the carbon rod a few times to spread the SuperLube.
- Wipe off excess lubricant from surrounding parts to avoid greasing the printing plate.

STEP 13 Carbon rods attaching



- i Note that all carbon rods are numbered.
- ! Follow the same numerical order as the instructions.
- ⬢ Carefully attach the **second** carbon rod to the **rear** magball on the left carriage.
- ⬢ Carefully attach the **third** carbon rod to the **left** magball and the **fourth** carbon rod to the **right** magball on the rear carriage.
- ⬢ Carefully attach the **fifth** carbon rod to the **rear** magball and the **sixth** carbon rod to the **front** magball on the right carriage.
- ⬢ Wipe off excess lubricant from surrounding parts to avoid greasing the printing plate.

STEP 14 Print head attaching



- ◆ Attach the carbon rods one by one to the print head magballs.
- ◆ Attach remaining carbon rods (2-6).
- ⚠ Wipe off excess lubricant from surrounding parts using a paper towel to avoid greasing the printing sheet.

STEP 15 Lid closing



- ⚠ Before pulling down the lid, check that the plastic Door-guides on both sides are inserted into the rails. See the picture.
- ◆ Now slowly pull the lid downwards until the plastic cut-outs for the Door-opening-stopper are under the top panel. See the picture.

STEP 16 Door opening stopper securing



- ◆ Using a flat screwdriver, secure the Door-opening-stopper by turning it clockwise.
- ⓘ The Door-opening-stopper is a printed part, just a slight twist will secure this part.
- ◆ Repeat this process on the left side of the lid.
- ◆ Close the lid

STEP 17 Printer connecting



- ◆ Remove the dust cloth from the bottom.
- ◆ Turn the power switch ON (symbol "I").

STEP 18 Well done!



- ◆ Good job! The magballs are lubricated. Happy printing!
