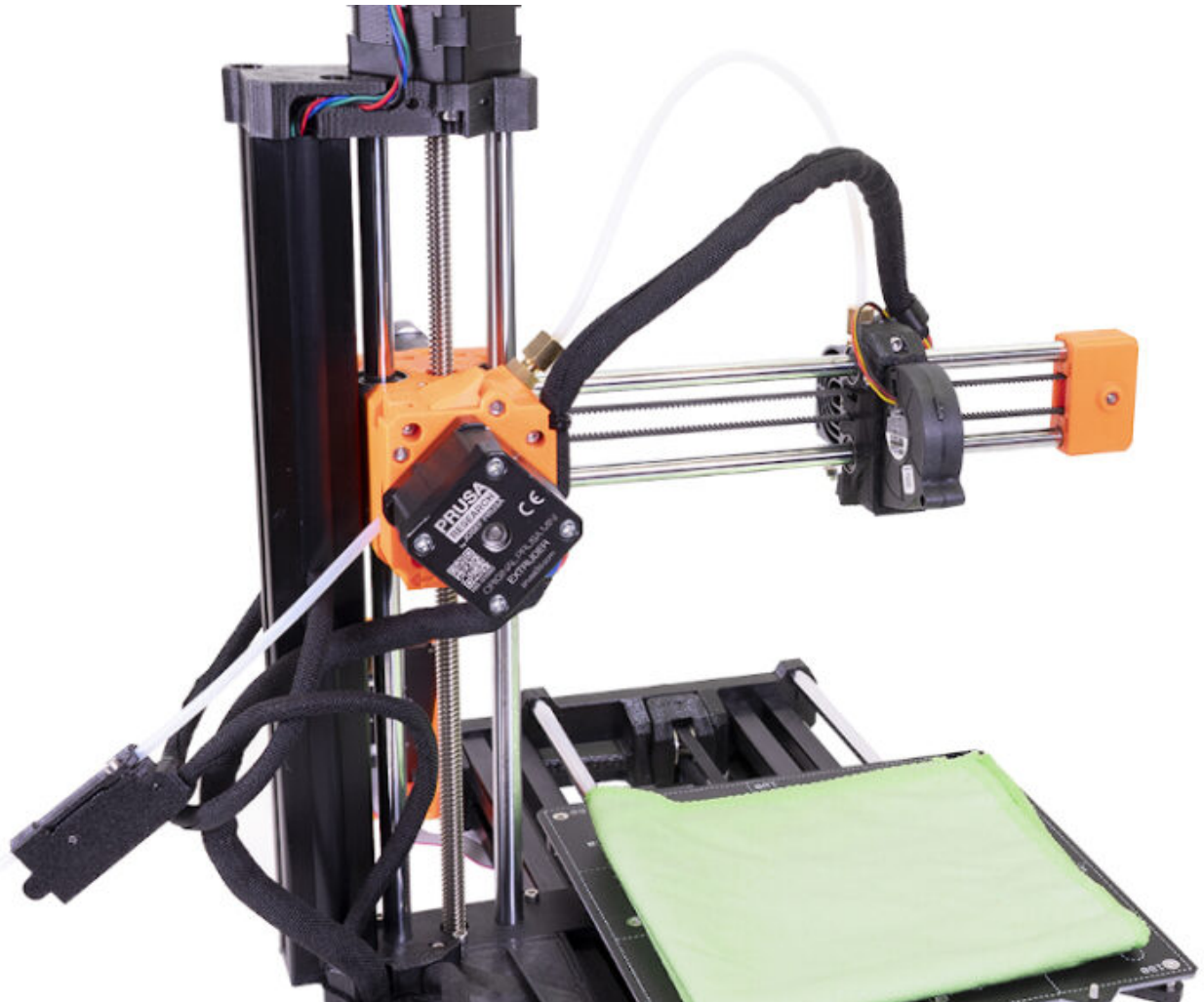


## How to access and clean the extruder-pulley (MINI)

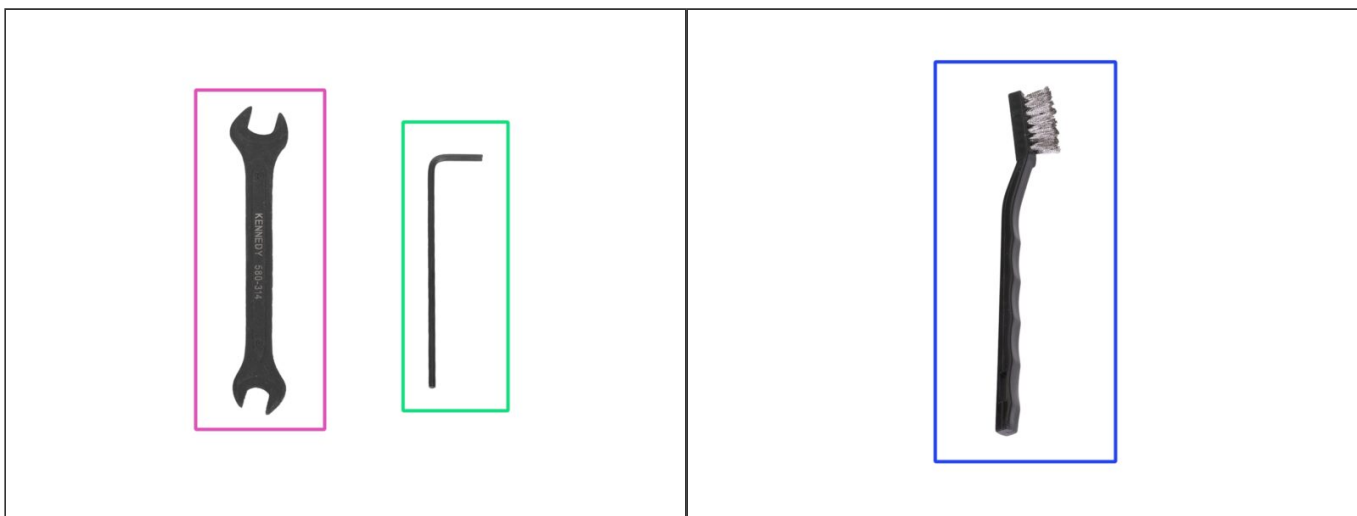


## Step 1 Introduction



- This guide will take you through the access and clean the **extruder-pulley** on the **Original Prusa MINI**.
- ◆ Before you proceed with the disassembly, make sure you have tried to clean the gears using the "inspection door" on the top. See the MINI Handbook, Chapter "Regular Maintenance" available at [prusa3d.com/drivers](https://prusa3d.com/drivers)

## Step 2 Tools and fasteners necessary for this guide



- ◆ Wrench size 10 mm (1x)
  - ◆ Allen key 2.5 mm (1x)
  - ◆ Stoll brush (1x)
  - Cloth or piece of fabric 15x15cm (1x)
- ❗ The cloth will be used to protect the heatbed. You can use any similar material.

### Step 3 Preparing the printer



#### Make sure that:

- The filament is unloaded from the printer.
- The printer parts - print head and heatbed are cooled down at room temperature!!!
- The printer is turned off and unplugged from the socket.

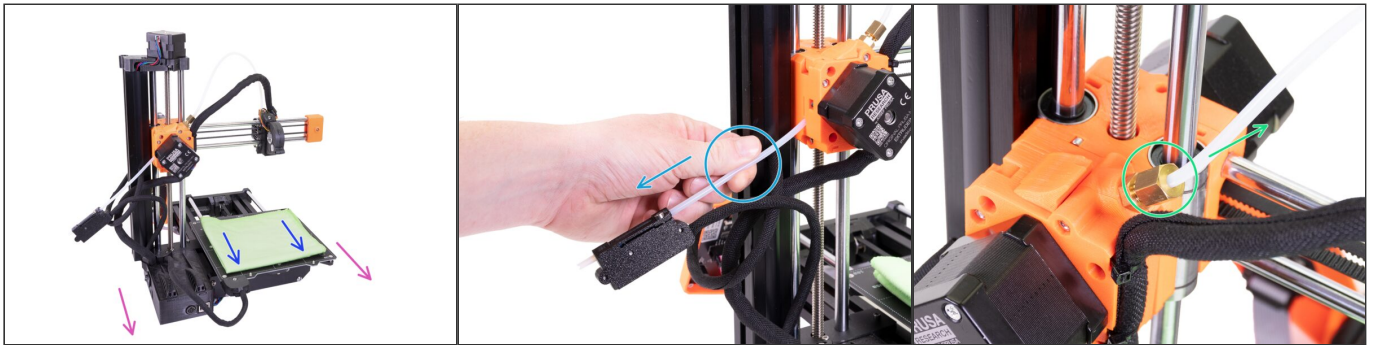
### Step 4 Protecting the heatbed



#### Before you proceed, 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 5 Disconnecting PTFE tubes



- Rotate the back of the printer towards you.
- Move the heatbed all the way towards you.
- Grab the short PTFE tube and carefully pull it out of the extruder.
- ⓘ If you have mounted the filament sensor, grab the tube between the sensor and the extruder as shown in the picture. **Do not pull the shortest tube leading out of the filament sensor!**
- Use the wrench to loosen the upper fitting and remove it together with the long PTFE tube from the extruder.

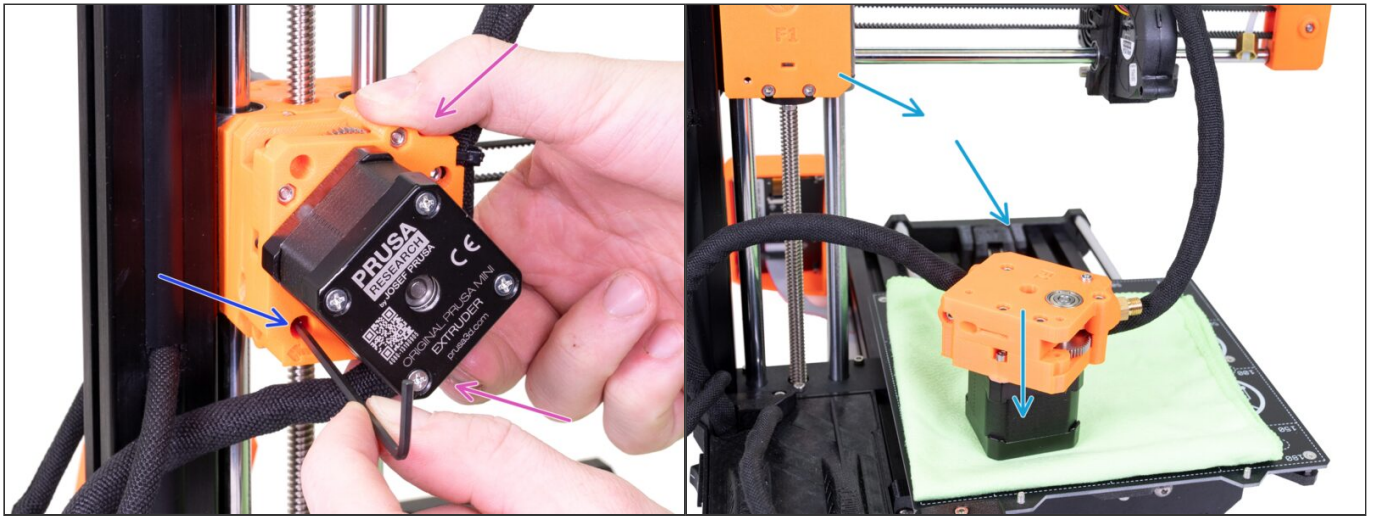
## Step 6 Disassembly of the extruder



- Release and remove the upper screw.
- Remove the inspection-door from the extruder.
- ⓘ Keep all the removed fasteners and printed parts for later use.



## Step 7 Disassembly of the extruder



- Release and remove the lower screw.
- Use your other hand to hold the extruder.
- Carefully place the extruder on a piece of cloth on the heatbed so that the motor faces down.
- ⓘ If the extruder does not reach to the heatbed, move the Z-axis down or the X-axis closer. Do it manually, no need to turn the printer on.

## Step 8 Extruder surgery



- Release and remove three screws on the top side of the extruder-rear part.
- Turn the extruder upside down with the motor facing up.
- Release and remove the last screw holding the assembly together.
- Hold the extruder in both hands and carefully pull the two parts apart.

## Step 9 Extruder surgery



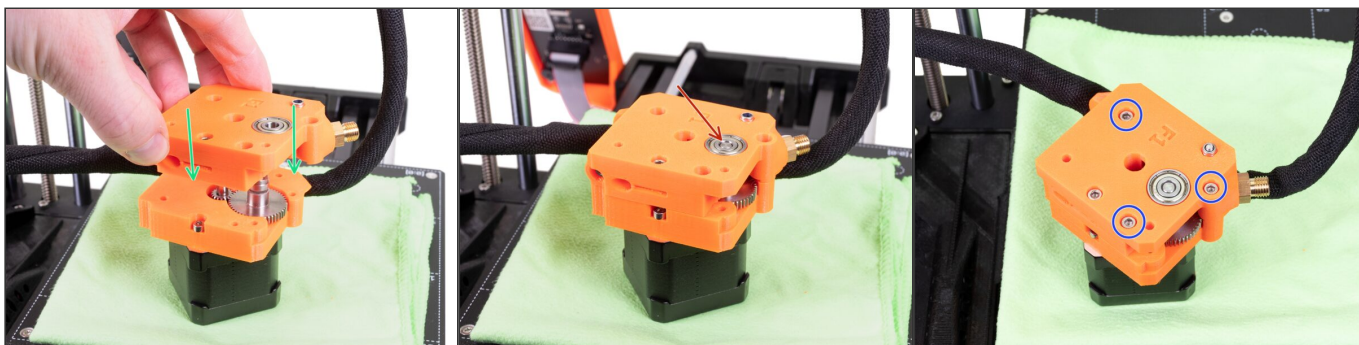
- Pull out the pulley from the "extruder-front" part.
- Use the steel brush to remove filament residues in the jagged groove on the pulley.
- Check the "extruder-rear" part for any impurities in the filament hole.

## Step 10 Installing the pulley



- Place the pulley back into the bearing. The longer part with the jagged groove must face up. See the picture.
- The gears must be aligned properly. Rotate with one pulley to ensure the second is moving as well.
- Make sure there are no filament residues and other debris around the gears. The area must be clean.

## Step 11 Reassembly of the extruder



- Place the extruder-rear on the extruder-front part. Check the correct orientation of the parts as shown in the picture.
- The pulley shaft must fit in the bearing.
- Secure both parts with three M3x25 screws.

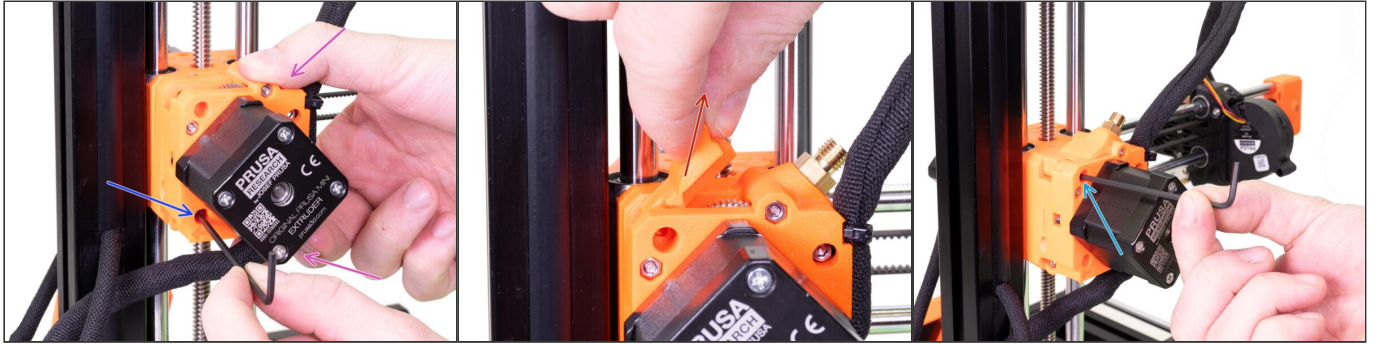
## Step 12 Reassembly of the extruder



- Turn the extruder upside down with the motor up.
- Insert and slightly tighten the M3x25 screw.
- ⚠ Overtightening this screw may cause problems with filament loading.



## Step 13 Mounting the extruder



- Place the extruder on the Z-carriage and secure it with the M3x25 screw in the lower hole.
- Place the inspection-door to the extruder.
- Make sure the holes are aligned.
- Secure it with M3x25 screw.

## Step 14 Mounting the PTFE tubes



- Mount the upper fitting with the PTFE tube and tighten it using the wrench. **Do not over-tighten the fitting, you might deform it!**
- Push the short PTFE tube all the way into the extruder.
- **Great job, it's done!**
- Heat the printer up and try it out ;)