# Maintenance Instructions of Flashforge FDM Machines

# （Creator 4）

FDM machines need to be maintained on time regularly. Accurate and timely maintenance can avoid the machine failures and printing problems effectively.

The following is the description of maintenance items and maintenance cycle of Flashforge FDM machines:

## 1. Cleaning the machine

After printing, the machine shall be cleaned every time as follows：

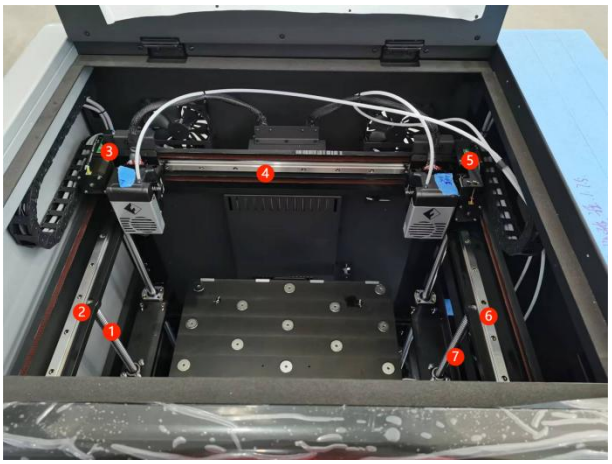
1) Remove the model from the platform in time

2) Clean up the filament residue and the model residue inside the machine.

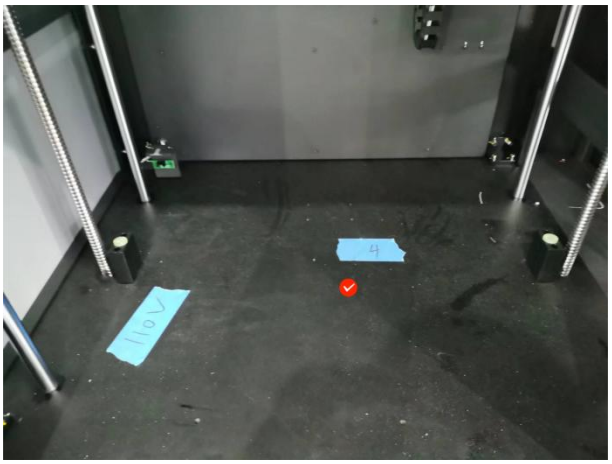
3) Clean up the foreign matter on the bearing of the guide rail, to make sure it can move smoothly without any sticking.

Empty the red box before the printer runs

Ensure it is clean and free of foreign matter in the following 7 parts



No materials or items placed under the platform



## 2. Nozzle/PTFE pipe maintenance

It is recommended to exit the filament out of the nozzle if the printer is not used for a long time. And filament inside needs to be extruded with the unclogging pin tool. If there is residual filament, it will cause nozzle blockage after heating carbonization. Normally we can clean it with the unclogging pin tool first. If the cleaning effect is not good, the nozzle and PTFE pipe need to be replaced.

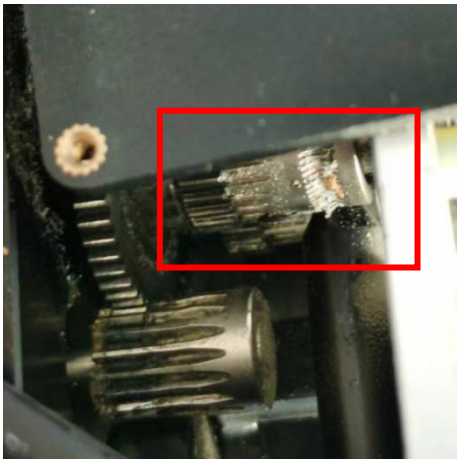
Cleaning cycle：every 200 printing hours or the nozzle has been blocked.

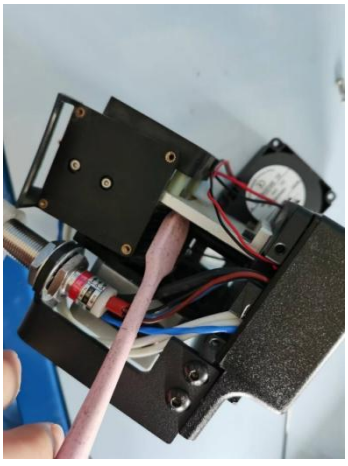
Replacement cycle：every 400 printing hours or the effect of coming out filament is not good.

If it is difficult to replace the nozzle and PTFE pipe separately, it is recommended to replace the heating assembly.

## 3. Wire feed gear cleaning

There will be residual filament dust in the gaps of the wire feed gear and idler gear after long-time used. When the dust reaches a certain amount, it will lead to insufficient wire feeding force, wire feeding slip and also unstable extrusion, so the gears need to be cleaned regularly. When cleaning, you can turn the gears manually to clean the filament dust.





## 4. Cleaning of nozzle cooling fan and turbo fan

There will be dust on the fan blades of the cooling fan and the turbo fan after a period of use. It will influence the rotating speed and air output. You can use a brush or a high pressure air gun to remove dust after the fan is taken down when the printer is power off.

Cleaning cycle：every 1000 hours

Replacement cycle:If the fan rotates abnormally or the blades are damaged, replace them in time.

## 5. Clean and lubricate linear bearing/lead rod/linear guide rail

**Cleaning of linear bearing**

Tools：dust-free cloth, grease

Cleaning method： first move the extruder to the rightmost(or the leftmost), wipe it with the dust-free cloth in a single direction until it is clean. Add a little grease to the linear bearing, and push the extruder around the reciprocating 3-5 times, so that the grease is evenly coated with the axis bearing.

Cleaning cycle：once every 3 months

**Cleaning of lead rod**

Tools：dust-free cloth, grease

Cleaning method：Use a dust-free cloth to wipe off the dirt powder and old grease which attached to the lead rod. Add a little grease to the lead rod, move the platform up and down for 3-5 times, so that the grease is evenly coated with the lead rod.

Cleaning cycle：once every 3 months

**Cleaning of linear guide rail**

Tools：dust-free cloth, grease

Cleaning method：Move the print platform to the top (or bottom) to find the linear guide rail. Wipe it with the dust-free cloth in a single direction until it is clean. Add a little grease to the linear guide rail, move the platform up and down for 3-5 times, so that the grease is evenly coated with the guide rail.

Maintenance cycle：once every 3 months

Recommended grease：White color lithium grease No.2

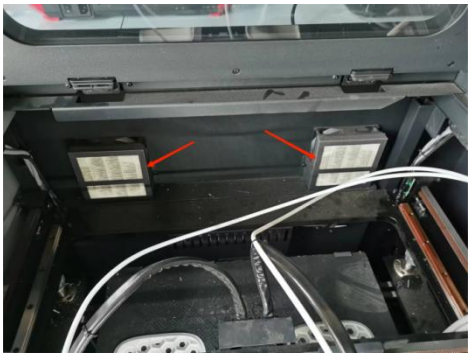


## 6. Replace the HEPA filter cotton

If the model is equipped with HEPA filter cotton, it is necessary to replace the HEPA filter cotton regularly.

Replacement cycle：every 3 months(frequently use) or every 6 months (use within 2 days a week)

When replacing HEPA filter cotton, the fans needs to be cleaned at the same time. Using a brush, brush the dust off the blades to make sure they are clean and they turn smoothly.



## 7. Replace the platform sticker

Platform stickers are wearing parts, which need to be replaced in time when there is any printing problem.

Replacement cycle：stickers damaged or the filament couldn’t be stuck to the platform.

When replacing stickers, it is necessary to tear off the old stickers first, clean up the residual glue on the platform, and then stick the new stickers on the platform to ensure smooth paste.

## 8. Filament storage and maintenance

If the printer is not used for a long time (more than 3 days), please exit the filament from the nozzle and keep them sealed to prevent the printing quality from being affected by moisture. Bake for dehumidification with the drying box before next time use.

The drying conditions of different filaments are as follows. If the drying box of Flashforge is used, the recommended baking temperature is according to that advised on the drying box.

ABS/PC/ASA/PA and other filaments：baking temperature：80℃, baking time:10-12 hours

PLA/PETG：Baking temperature：50-60℃, baking time：4-5 hours

Filaments including carbon fiber：baking temperature:100℃, baking time:10-12 hours